



Configuration Manager 7.40



en

User manual

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1 Introduction

1.1 About this manual

This manual is intended for persons responsible for configuring and managing a CCTV system. This manual describes how to configure the program.

This document assumes that the reader is familiar with both the CCTV system and the other programs that are integrated into the system.

1.2 Conventions in this document

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



Notice!

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

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

1.3 Additional documentation

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

More information

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

2 System overview

The Configuration Manager program is used to configure all IP devices and components in your CCTV network. With Configuration Manager you have access to all devices and software components.

2.1 Functions

Configuration Manager provides the following functions (the availability of these depends on the environment in which the program is used):

- **Network Scan**

The network scan is performed automatically every time Configuration Manager starts, and is repeated at regular intervals.

This function automatically detects all compatible devices present in a network, such as cameras or video senders, video receivers or VRM. The status of a device is also queried in each scan and then indicated by the icons in front of the devices.

- **Device information and configuration**

Comparable with the Web browser view, Configuration Manager shows the current configuration for each device and allows you to change the settings.

- **Device system integration**

You use the Device allocator in Configuration Manager to make devices accessible for use with Video Client.

- **MicroCA**

The MicroCA functionality in the Configuration Manager program is an easy-to-use tiny certificate authority (CA) that facilitates the management of small to medium systems.

- **Multiple configuration**

You can use Configuration Manager to make individual settings for multiple devices simultaneously (for example, time settings), allowing you to configure large systems more quickly.

- **Simpler access to devices**

The **Screenshot Scan** function gives an overview of all the cameras that provide video data. The screenshots can be used to identify the camera and device, and give you direct access to said camera or device.

- **Table View**

This allows you to compile specific parameter settings for selected devices. This provides you with a quick overview of the settings that are of interest to you and allows you to export this information for archiving at the push of a button.

- **Device Health Monitor**

This provides you with a quick overview of the status of selected devices, such as the encoder load and type of network connection.

- **System emulation**

The complete system configuration can be saved as a system image and emulated using a different Configuration Manager application. This function helps you to isolate problems without having to access the actual system.

- **Access to license management**

Firmware modules requiring a license, such as IVA (Intelligent Video Analysis), are set up using Configuration Manager.

3 Installation and starting

The Configuration Manager program is automatically part of the installation for all video IP devices that require the Configuration Manager program for configuration purposes. Furthermore, you can also use the Configuration Manager program to simplify the configuration in a CCTV system with many similar video senders.

3.1 System requirements

**Notice!**

All Microsoft updates and hotfixes must be installed on target PCs. Graphic card drivers must also have the latest officially released version described in the VideoSDK help.

3.2 Installation

You can install Configuration Manager on as many computers running Microsoft Windows as you wish.

**Notice!**

Using multiple Configuration Manager programs in the network, maintaining the same or an overlapping set of devices simultaneously can result in unpredictable effects when writing to the devices.

To install Configuration Manager:

1. Download the software package.
2. Close all other applications before starting the installation.
3. Select the extraction directory, then double-click *Setup_ConfigManager.exe*.
The Configuration Manager wizard dialog box appears.
4. On the **Welcome** dialog box, click **Next**.
5. Follow the instructions on the screen.
Note: We recommend using the default destination folder.
6. Click **Finish**.

3.3 Starting the program

After successful installation, you will find the Configuration Manager icon on your desktop:

To start the program:

- ▶ Double click the Configuration Manager icon.
or
- ▶ Click the Windows **Start** icon, then click Configuration Manager.

Note:

Several video IP devices enable you to start Configuration Manager directly within the relevant program.

Operation of Configuration Manager varies according to the context in which it is being used. In some cases, it is merely a tool that enables you to configure video IP devices more conveniently and more comprehensively. For certain programs and firmware modules, however, Configuration Manager is indispensable, as it is the only way to set these up.

3.4 Uninstalling the program

If you no longer wish to use the program on your computer, you can uninstall the program at any time.

To uninstall the program:

1. Right-click the Windows start icon, then click **Control Panel**.
The **Control Panel** window appears.
2. On the **Control Panel** window, click the **Uninstall a program** link.
The **Programs and Features** window appears.
3. In the program list, right-click **Configuration Manager**, then click **Uninstall/Change**.

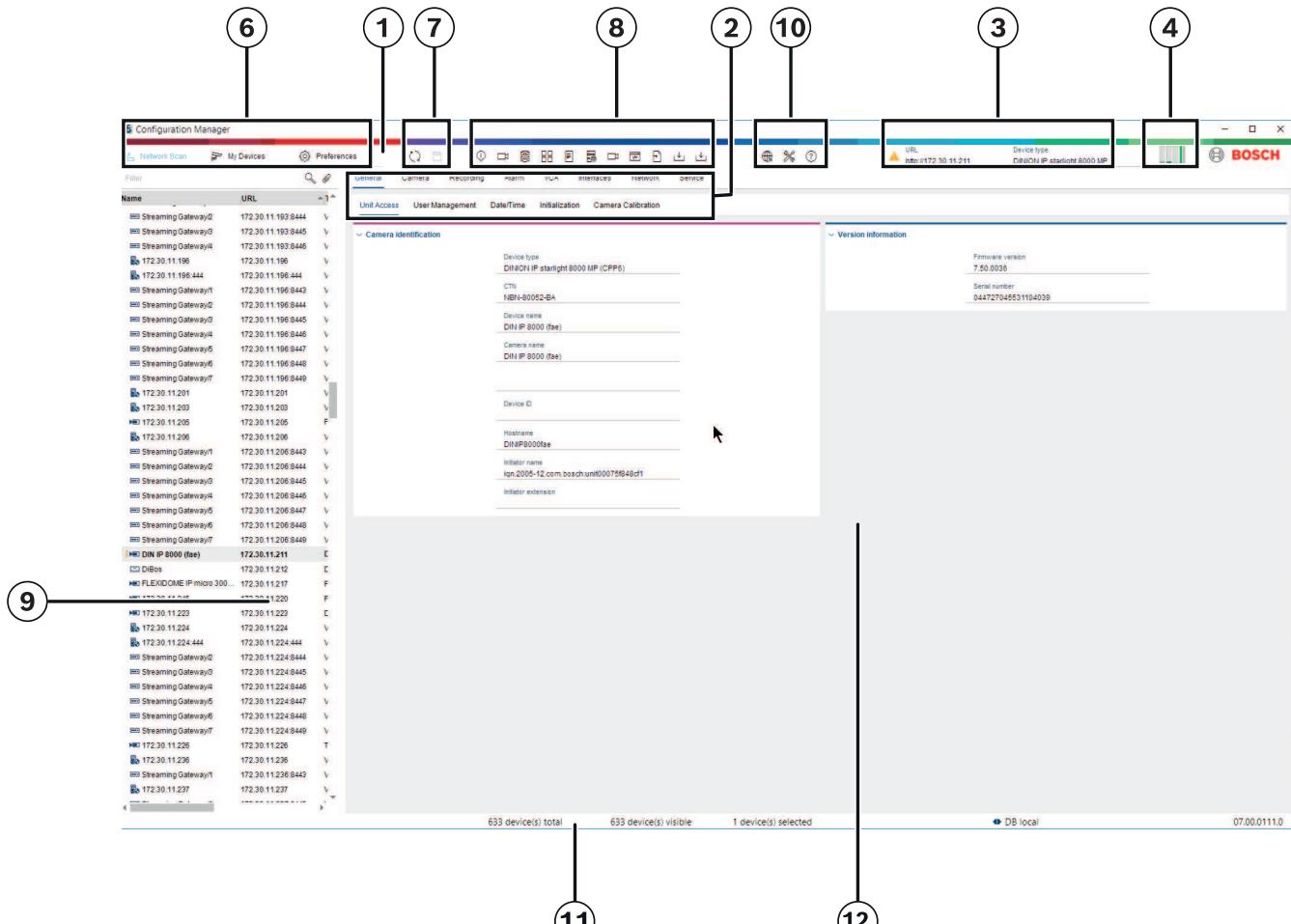
4 User interface

In this section, you will find detailed information about the user interface.

4.1 Overview

The Configuration Manager program allows you to adapt the general appearance of the user interface to your needs, for example, the display of the navigation bar on the left side or on the top.

Navigation bar to the left

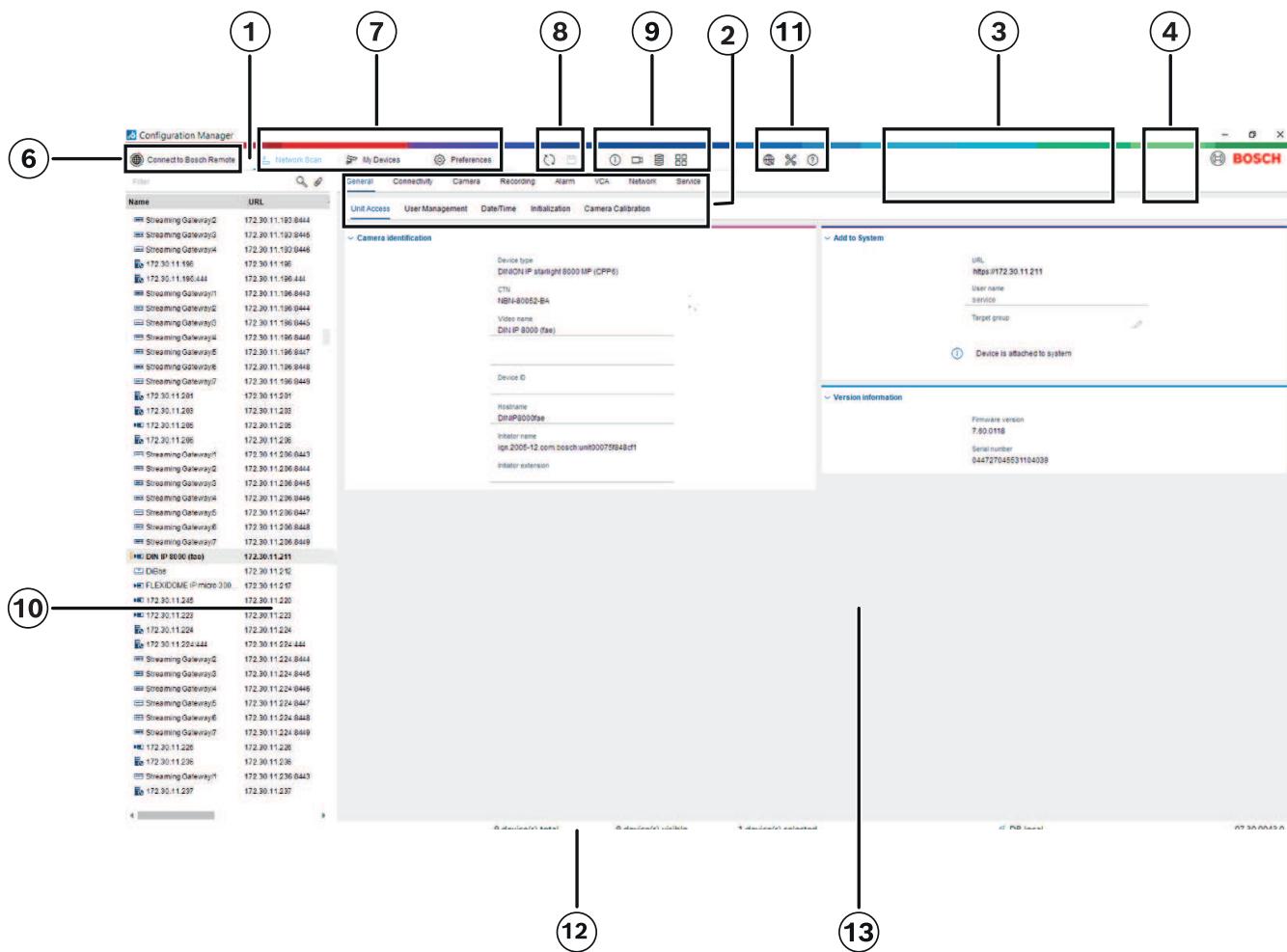


1	Navigation bar	2	Device depending tabs The displayed tabs depend on the selected device in the device tree structure.
3	Info bar	4	Quick indication bar
5	Expand navigation bar icon Expands the navigation bar and shows plain text beside the icons	6	Connect to Bosch Remote Portal Allows you to connect to the Bosch Remote Portal
7	Main navigation bar (Network Scan, My Devices, Preferences)	8	Reload page / Save

9	Toolbar section (configurable) For example: Info , Live video , Table View... , Logging...	10	Device tree structure with filter and search option
11	Menu bar (File , Tools , Help)	12	Status bar
13	View pane The display in the view pane depends on the selected device in the device tree structure and the selected device depending tabs.		

Navigation bar on the top

(numbering see table above)



4.2

Main navigation bar tabs

The navigation bar tabs allows quick access to the most important functions.

4.2.1

The Remote Portal tab

The Bosch Remote Portal application allows you to connect your devices securely to the Bosch Remote Portal from anywhere without changes in the local network. Using the Bosch Remote Portal application you can then configure and maintain your devices remotely, and you can give end-customers mobile access permission to devices.

Refer to

- *Connecting to the Bosch Remote Portal, page 48*

4.2.2

The Network Scan tab



The **Network Scan** tab shows all video IP devices supported by the Configuration Manager program that are detected in the network.

Additional Information:

- The information about a device is shown in bold if the device is newly detected since the last network scan.
- The information about a device is shown in red if the device has an IP address or a MAC address that is already used by another device in the system. This might be the case, for example, if several devices that have not yet been configured are connected directly after one another.
- Additional information about the devices can be seen if you scroll to the right.

4.2.3

The My Devices tab



The **My Devices** tab shows all devices that had been manually allocated to the system.

Additional Information:

- The information about a device is shown in bold if the device is newly detected since the last network scan.
- The information about a device is shown in red if the device has an IP address or a MAC address that is already used by another device in the system. This might be the case, for example, if several devices that have not yet been configured are connected directly after one another.
- Additional information about the devices can be seen if you scroll to the right.

4.2.4

The Preferences tab



The **Preferences** tab allows you to access general and application-specific settings. Here, you can carry out a basic configuration for Configuration Manager itself as well as for other video IP devices.

This tab contains the following device depending tabs:

- **Access** tab
- **Directories** tab
- **Network** tab
- **Video** tab
- **Security** tab
- **Logging** tab
- **Appearance** tab

If necessary, expand the folders to get subordinate items.

Access tab

This tab contains the following groups:

- **Access** group

Master password

Assign a password here that protects access to the Configuration Manager program. If you do not enter anything in this field, the program will start without asking for a password.

This password is only valid for the computer on which it was defined.

Password policy

We recommend that you use strong passwords to enhance the protection of your computer against unauthorized access.

Saved credentials

Displays your credentials (user, username, password).

- **Security group**

Encrypt communication (defines the TLS connection preferences)

To define the TLS connection preferences, select the required levels.

- **Optional**

Encrypted connections (HTTPS) and non-encrypted connections (HTTP, RCP+) are allowed.

No certificate validation is performed. The certificate requirement level is not relevant.

The default protocol HTTP is used when adding devices to the system.

The VSDK security properties are set as follows: **Allow unencrypted connections**, **Allow unencrypted media exports**, and **Allow no forward secrecy**.

- **Preferred**

Encrypted connections (HTTPS) and non-encrypted connections (HTTP, RCP+) are allowed.

The certificate validation is performed. The certificate requirement level is relevant. If validation failed a warning is displayed but a connection still possible.

The default protocol HTTPS is used when adding devices to the system.

The VSDK security properties are set as follows: **Allow unencrypted connections**, **Allow unencrypted media exports**, and **Allow no forward secrecy**.

- **Required**

A communication with devices is only possible using HTTPS.

The certificate validation is performed. The certificate requirement level is relevant. If validation failed an error message is displayed and no connection is established.

The default protocol HTTPS is used when adding devices to the system.

There are no changes in the VSDK program.

Certificate required level

To validate certificates, select the required levels.

- **None:** All certificates are accepted. No validation is performed.
- **Valid:** Only an end certificate validation is performed. The certificate must be valid (standard validation procedure, time signature).
- **Trusted:** The entire chain validation is performed, The root CA certificate is used to sign the certificate and must be trusted on machines where the validation is performed.
- **Issued by the CA:** The entire chain validation is performed, The root CA certificate is used to sign the certificate and the MicroCA program must be configured in Configuration Manager program.

- **Environment Factors group**

Network

Allows you to select the kind of network (**Dedicated network**, **Shared network**, **Internet**).

- **Repository** group

Seal configuration after backup

Allows software sealing on the device after configuration has been backed up.

Check seal integrity

Does an integrity check of the software seal on the device.

Check settings integrity

Does an integrity check of the configuration of the device.

Directories tab

This tab contains the following group:

- **Directories** group

Allows you to select the folders for:

- Screenshots
- Recordings
- Database
- Configuration repository

Network tab

This tab contains the following groups:

- **Network Scan** group

Run continuous network scan

Enable this option if the network is to be scanned at regular intervals.

Scan interval [s]

Enter the time interval in seconds for automatic scanning here, choosing a value between 10 and 3600 seconds (1 hour).

- **Network Scan RCP+** group

Protocols

In the **Protocol** list, click the protocol if you are using devices in various subnets.

This allows all devices that belong to a different subnet than the PC on which

Configuration Manager is installed to be included in the network scan. Otherwise you will have to manually add these devices to the system.

Multicast operation requires a multicast-enabled network that uses the UDP and the Internet Group Management IGMP protocols.

Note: To get a valid multicast configuration, configure only RTP ports. The multicast ports may only have even port numbers, while the ports with odd numbers may not be used. This is because the multicast protocols RTP and RTCP depend on each other. RTP uses the even ports, while RTCP uses the next odd ports.

- **Bosch Remote Portal** group

In the **URL** box, enter the address of the Bosch Remote Portal. This allows you to connect the Configuration Manager program to the Bosch Remote Portal page to perform remote administration and maintenance tasks.

- **IP address range** group

Mode

In the Mode list, click the mode (**On, Off, Allow, Deny**).

In the **From** and **To** columns, enter the IP addresses, then select the protocol in the **Protocol** column.

Video tab

This tab contains the following groups:

- **Monitor** group

Encoder

Select whether the images should be displayed in video format (**H.26x**) or as constantly updated screenshots (**JPEG**).

Refresh interval

Select how often the screenshots that are shown in the various tabs (for example, Intelligent Video Analytics) are refreshed:

Continuous: Image is refreshed as often as possible.

0 seconds: Image is displayed once but not refreshed.

1 ... 10 seconds: Image is refreshed accordingly.

- **VCA group**

Show default VCA live overlay

If selected, the VCA overlays will be displayed on all video windows where applicable.

Security tab

This tab contains the following groups:

- **MicroCA** group

Here you can create a CA certificate.

Create: Click **Create**. The **Create CA** dialog box is displayed.

To create a CA certificate, refer to:

- *Configuring MicroCA using Smart Token, page 38*
- *Configuring MicroCA using USB file, page 40*

Load: Click **Load**. The **Load CA** dialog box is displayed. You can load existing CA certificates.

Signature Validity [days]: Select the validity of the certificate.

- **User token** group

Certificate store type: Click the **Certificate store type** list to display a list of existing tokens known to your system.

To manage and create user tokens, refer to:

- *Managing user token, page 45*
- *Creating user token, page 46*

Logging tab

This tab contains the following groups:

- **Device I/O** group

Select the required logs, for example, **Log (read)**, **Log (received)**, **Log (message)**.

- **RCP+** logging group

Enable RCP+ logging

Enable or disable the logging of RCP+ commands. A log file is created for every device in the system.

Minimum numbers

Specify the maximum period for which you want the log data to be saved.

- **ONVIF** logging group

Enable logging

Enable or disable the logging of ONVIF commands. A log file is created for every device in the system containing the time stamp, the URL, the ONVIF service and the command. The output is displayed in the **Device Communication Log** dialog box.

- **Miscellaneous** group

Write time stamp

Select the check box to obtain the time stamps on the recordings.

Appearance tab

This tab contains the following groups:

- **Language** group

Language

Select the display language.

Edit Toolbar:

Click and adapt the toolbar to your needs.

Config service enabled

Not applicable

- **Startup** group

Restore last view

If selected, the last view is displayed when Configuration Manager is restarted.

After confirmation only

If selected, the next time you start Configuration Manager you will be asked whether you want to restore the last view.

- **Database camera name** group

Prefix device name to camera name

Displays the encoder device name before the camera name in the camera list if cameras are integrated into the system over video encoders.

- **Theme** group

Navigation bar orientation

Select whether the navigation bar is displayed to the left or on the top.

Refer to

- *Configuring MicroCA using Smart Token, page 38*
- *Configuring MicroCA using USB file, page 40*
- *Managing user token, page 45*
- *Creating user token, page 46*

4.3

The Menu bar

This section describes special operational functions, tools and help functions.

4.3.1

The File menu

To get the **File** commands:



- ▶ Click the **File** menu. The following commands are displayed.



Emulate Alien System... / Abandon Emulation

Imports the system image of an alien Configuration Manager system.



Export VDB

Allows you to export the database with the user defined password.



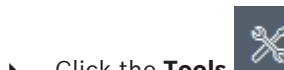
Close

Closes the Configuration Manager program. This also breaks the connection between Configuration Manager and the server.

4.3.2

The Tools menu

To get the **Tools** commands:



- Click the **Tools** menu. The following commands are displayed.



Logging...

Displays the **Device Communication Log** dialog box.

Here, you can view the RCP+ commands that are transmitted by Configuration Manager when connecting to devices, if you have enabled logging.



Device Allocator...

Displays the **Device Allocator** dialog box containing an overview of all available devices in the network and all devices that are allocated to the system.



Snapshot Scan

Displays a dialog box containing a snapshot for each of the selected cameras. If you right-click a snapshot, the commands are displayed relevant for the camera.



Device Health Monitor...

Displays the **Device Health Monitor** dialog box, that provides a quick overview of the status of selected devices.



Save System Image

Saves the image of the current Configuration Manager system for emulation on a different PC.



Import .csv File...

Displays a dialog box that allows you to import .csv files.



Import Project Assistant File

Displays the Project Assistant Import dialog box where you can select the files to be imported.



Security and Safety Things Store

4.3.3

The Help menu

To get the **Help** commands:



- Click the **Help** menu. The following commands are displayed.

Online Help...

Displays the Configuration Manager Help.

Online Help VRM...

Displays the Video Recording Manager Help.

Online Help IVA...

Displays the Intelligent Video Analytics Help.

About...

Displays the **About Configuration Manager** dialog box, containing information on, for example, the software components installed on this PC and the software version numbers of the installed components.

4.4

Reload / Save icons

**Reload page**

Reloads device and page information and starts a device scan on the **Devices** tab.

**Save**

Saves any settings that have been configured for the selected device.

4.5

Toolbar icons

These icons allow quick access to several Configuration Manager functions.

**Info**

Displays detailed information about the selected device.

**Live video**

Displays the live video data from the selected device.

**Configuration repository,,,**

Display the **Configuration repository** dialog box showing device configuration information, for example; device count notes, firmware and hardware versions.

**Table view**

Displays the **Table View** dialog box containing the devices in table view.

Click again to close the **Table View** window.

**Logging...**

Displays the **Device Communication Log** dialog box.

Here, you can view the RCP+ commands that are transmitted by Configuration Manager when connecting to devices, if you have enabled logging.

**Device Allocator...**

Displays the **Device Allocator** dialog box containing an overview of all available devices in the network and all devices that are allocated to the system.

**Import .csv File...**

Displays a dialog box that allows you to import .csv files.



Device Health Monitor...

Displays the **Device Health Monitor** dialog box, that provides a quick overview of the status of selected devices.



Save System Image

Saves the image of the current Configuration Manager system for emulation on a different PC.



Snapshot Scan

Displays a dialog box containing a snapshot for each of the selected cameras. If you right-click a snapshot, the commands are displayed relevant for the camera.



Import Project Assistant File

Displays the Project Assistant Import dialog box where you can select the files to be imported.

4.6

The Info bar

If a device is selected under the **Network Scan** or **My Devices** tabs, an info bar is displayed to the right of the top navigation pane. This info bar provides you with brief information about each selected device as follows:

- Device type
- Device IP address

Notice!

The info bar is only available if the navigation bar is on the top.



4.7

The Quick indication icons

To display the quick indication icons:

- Drag the pointer on the icons to view details on the processor load, network connection and recording status:

Quick indication icon description

- The left icon indicates the proportions of the individual functions on the encoder load, shown as percentages. For devices with two processors, a separate icon is shown for each processor.
- The icon in the middle indicates the network connection type and the speed of the outgoing (UL = Uplink) and incoming (DL = Downlink) data traffic.
- The right icon indicates information on the recording status.
 - Green: active recording
 - Red: error
 - Orange: recording scheduler active, no current recordings
 - Gray: recording scheduler not active, no current recordings

4.8

The Status bar

The status bar at the bottom edge of the window shows the following:

- In the central section: the number of detected, visible and selected devices.

- In the central section: whether you are currently working **Online**, and whether or not Configuration Manager is currently connected to a server. If it is connected to a server, the server IP address is displayed. Otherwise the entry **DB local** appears here.
If you are emulating an alien system, the entry **System emulation** appears here.
- On the far right: the version number of Configuration Manager is displayed.

4.9

The View pane

The View pane for the **Network Scan** and **My Devices** tabs shows a series of subdivided tabs, the number and content of which depend on the device selected in the list.

The tabs in the View pane can be used to make the configuration settings that the device also provides in the Web browser view, some of them with a slightly different composition.

Access from Configuration Manager to the devices can be configured when selecting the **General** and **Unit Access** tab (not necessary for web browser).

Detailed information about the configuration options for a device can be found in the relevant device documentation and the online Help in the relevant Web browser view.



Notice!

Changes only become active if you click the **Save** tab.

4.10

Used icons

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

Device icons

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

Device status icons

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

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

* Device was online

Icons on the View pane

The following icons are used on the View pane:

 Help. Click the icon to open context-related help.

 Warning. This element contains important information.

 Danger. This element contains very important information.

 Info. Click the icon to display a camera's properties.

 Connection established.

 Connection lost.

 Recording state: Device is recording.

 Recording state: Device is not recording.

 Relay state: Relay is in default state.

 Relay state: Relay switched to alert state.

 Locked: This element does not allow input or changes.

MicroCA icons

The following icons are related to the MicroCA functions:

 Certificate icon: Shows the certificate status.

 Signing icon: Click this icon to sign and upload a certificate.

 User token icon: Click this icon to add a user token.

4.11 Shortcut menu

Right-click a device to open the shortcut menu. If you have selected multiple devices, not all options in the shortcut menu are enabled.

The following provides an overview of the commands:

Select Group

(**My Devices** tab)

If several devices have been grouped, use this command to select all devices or cameras of that group for editing.

Node > Expand Child Nodes

(**My Devices**)

Click to expand a group or site to see the devices and cameras assigned to it.

Node > Collapse Child Nodes

(**My Devices** tab)

Click to collapse a group or site to hide the devices and cameras assigned to it.

New Device...**(My Devices tab)**

Allocates a non-listed device to the system. This command is only active if you click the area in the left pane in which no devices are listed.

Delete**(My Devices)**

Deletes the selected device from the system.

Site**(My Devices)**

Click to change a group to a site. Select the group first.

Add to System...**(Network Scan tab)**

Allocates the selected device to the system. Before making an allocation, you can select a group or create a new one.

This command corresponds to the **Device Allocator** dialog box.

Set Session Authentication...**(Network Scan tab)**

If a selected device is protected by a password, you must authenticate yourself for that device.

Configure...

Displays the respective configuration tool if installed.

Add iSCSI System... (VRM)

Displays the **Add iSCSI System** dialog box.

Here, you can add an iSCSI system to the VRM using the host IP address and the SNMP IP address.

LUN Assignment... (iSCSI system)

Displays the **LUN Assignment** dialog box. Here, you can add individual LUNs to the system.

File Upload**- Firmware...**

You can select the desired upload file and start the upload. Refer to the information about firmware uploads in the documentation for the relevant device.

You can use this command to carry out a firmware upload for several devices at the same time. You must ensure that all selected devices are of the same device type when you carry out a firmware upload for several devices at the same time.

- SSL Certificate...

Upload an SSL certificate to the device to enable encrypted communication with the device.

- Decoder Logo...

The decoder logo is the image displayed by the decoder if there is no connection to a device. You can upload your own logo for this purpose. This must be in H.263 format.

Settings**(My Devices tab)****- Back up...**

Allows you to save the camera configuration.

Click to open the **Backup to Repository** dialog box.

- Restore...

Allows you to restore the camera configuration.

Click to open the **Configuration repository** dialog box.

- **Transfer...**

Transfers the camera configuration from one camera to another camera.

Click to open the **Transfer Settings** dialog box.

- **Replace...**

Replaces the configuration of a camera with configuration of another camera of the same type.

Click to open the **Device Replacement Wizard**.

Device Network Settings...

(My Devices tab)

You will see the **Network settings** dialog box.

This dialog box is used to change the IP address, subnet mask and gateway of the selected device or activate automatic IP assignment via DHCP.

This is only possible for devices that are not password-protected.

Show Live Video...

(My Devices tab)

A window opens, displaying the live video data from the selected device. You are offered different display options depending on which device you selected.

Show in Web Browser...

(My Devices tab)

The live page of the Web browser view for the device is opened in the default browser.

Show Settings in Web Browser...

The configuration page of the Web browser view for the device is opened in the default browser.

Device Info...

The dialog box containing device information is displayed.

Blink LED

(My Devices tab)

A LED on the device flashes. This allows you to check whether there is any communication between Configuration Manager and the device. This command also helps you to identify a device if several devices of the same type are installed at the same location.

Restart

(My Devices tab)

Initiates a reboot of the device. This is only possible for devices that are not password-protected.

Ping

(My Devices tab)

Pings the selected device to confirm network communication with the device.

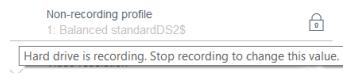
4.12 Blocked input fields

It is possible that some fields are blocked for editing. The causes for the block are indicated by different entries in the fields.

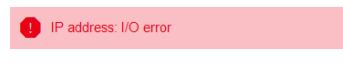
<multiple>



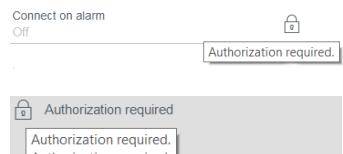
If several devices are selected, some settings cannot be made. The input fields are marked with a padlock.



If a device is currently recording, some settings cannot be modified. There is no difference between valid and invalid authentication. Only a tooltip is shown. The input fields are marked with a padlock. If necessary, stop the recording.



If there is an error, individual fields are marked accordingly. The group labeling is included in the error message.



Input fields you are not authorized to change are marked by a padlock and are blocked for editing.

Groups you are not authorized to change are marked by a padlock and are blocked for editing.

5 Working with Configuration Manager

The following section offers a list of user actions for configuring hardware and software components that can be performed using Configuration Manager.

5.1

Adding devices to the system

You can add devices and components to the system that are detected in the network.

5.1.1

Adding devices (for example, cameras, encoders)

To add devices to the system (for example, cameras, encoders):



1. On the navigation bar, click the **Network Scan** tab.
2. Select the device.
3. Click the **General** tab, then click the **Unit Access** tab.
4. In the **Add To System** group, click the **Target group** icon if necessary. The **Set target group** dialog box is displayed.
5. Enter the name of the group or select the name from the list if you want to assign the device to a group.
Note: You can also continue without selecting or creating a group.
6. In the **Add To System** group, click **Add to system**.
The device is added to the system.



7. Click the **My Devices** tab to display the device in the tree structure.

5.1.2

Adding iSCSI devices

To add iSCSI devices to the system:



1. On the navigation bar, click the **Network Scan** tab.
Note: The Configuration Manager program scans the network for compatible devices and displays the decoder in the tree structure.
2. In the tree structure, right-click a device, then click **Add to System....**
The **Add Device to System** dialog box appears.
3. Enter the name of the group or select the name from the list if you want to assign the device to a group.
Note: You can also continue without selecting or creating a group.
4. Click **OK**.
The device is added to the system.



5. Click the **My Devices** tab to display the device in the tree structure.

See also:

- *Allocating devices, page 25*

5.2

Allocating devices

Before working with Video Client, you must complete the allocation, as the program can only access devices that have been allocated to the system.

5.2.1 Allocating listed devices

You can allocate all devices using the **Network Scan** tab. It is also possible to allocate devices to the system by adding them to the **My Devices** tab. This simplifies configuration as you can limit yourself to a relevant selection of available devices and clearly arrange the allocated devices in groups.

To allocate listed devices using the **Device Allocator** icon:



1. On the navigation bar, click the **Tools** menu, then click **Device Allocator**.
The **Device Allocator** dialog box is displayed.
All devices detected in the network are displayed to the left, while those allocated to the system appear to the right.
2. Drag the unallocated devices from the left to the right-hand side of the window.
3. If necessary, sort the list of entries. To do this, click the appropriate table header.
4. Click **OK**.
The devices are integrated into the system.

Notice!

If it is not possible to integrate a device, a warning message appears.



See also:

- *Creating groups, page 27*
- *Defining a group as site, page 28*

5.2.2 Allocating unlisted devices

The **Device Allocator** dialog box also enables you to allocate devices to the system that were not detected during the network scan.

Allocating an unlisted device:



1. On the navigation bar, click the **Tools** menu, then click **Device Allocator**.
The **Device Allocator** dialog box is displayed.
All devices detected in the network are displayed to the left, while those allocated to the system appear to the right.
2. In the **Device Allocator** dialog box, right-click into the **Allocated devices** area (but not on a device), then click **New Device...**.
The **Device Editor** dialog box is displayed.
3. Enter the URL (for example, the IP address with the port number) of the device. The IP address must previously have been set on the device.
4. In the **Type** list, select **<Auto detect>** or select the device type from the list of supported devices.
If you select an ISDN-compatible device, the field for the telephone number is also activated.
5. Enter the telephone number for the ISDN connection if you want a device to be connected using an ISDN line.
6. Click **OK**.
The device is listed as allocated device.

**Notice!**

You can only allocate supported devices. In the tree structure of the **Devices** and **My Devices** tabs, not supported devices are displayed dimmed or red.

See also:

- *Creating groups, page 27*
- *Defining a group as site, page 28*
- *Used icons, page 19*

5.3

Clearing device allocations

You can remove devices from the system at any time by clearing the allocation. The devices are then no longer listed in the **My Devices** tab and can no longer be accessed in the Project Assistant program.

To clear device allocations:



1. On the navigation bar, click the **Tools** menu, then click **Device Allocator**.
The **Device Allocator** dialog box is displayed.
All devices detected in the network are displayed to the left, while those allocated to the system appear to the right.
2. Drag a device from the right to the left-side of the dialog box
or
right-click the device and click **Delete**.
3. Click **OK**.

**Notice!**

Delete groups in the same way. If you delete a group, you also clear the allocation of all devices that you have allocated to that group.

5.4

Creating groups

The **Device Allocator** dialog box enables you to clearly combine the devices into groups, for example sorted by locations.

To create groups:



1. On the navigation bar, click the **Tools** menu, then click **Device Allocator**.
The **Device Allocator** dialog box is displayed.
All devices detected in the network are displayed to the left, while those allocated to the system appear to the right.
2. In the **Device Allocator** dialog box, right-click into the **Allocated devices** area (but not on a device).
3. Click **New Group...**.
The **Add New Group** dialog box is displayed.
4. Enter a name for the new group.
5. Click **OK**.
The group is added to the list.
6. Drag a device from the list to the group name.
The device is added to the group and listed under the corresponding name.



Note: To remove a device from a group, drag the device from the group to the list.

7. Click **OK**.

The grouping is displayed in the device tree structure.

Note:

You can also create sub-groups by dragging a group to the name of another group in the **Device Allocator** dialog box.

Additional Options

- ▶ On the toolbar, click the **My Devices** tab, right-click the tree structure area (but not on device), then click **New Device....**

See also:

- *Defining a group as site, page 28*

5.5 Defining a group as site

You can define a group as site to use it in Video Client.



Notice!

Cameras that are assigned to a group are only available if the site is connected. That means, for chargeable connections costs only arise in this case.

To define a group as site:

1. On the navigation bar, click the **My Devices** tab.
2. Right-click the group in the tree structure or in the **Device Allocator** dialog box, then click **Site**.

The icon to the left changes from  to .

To define a site as group:

1. On the toolbar, click the **My Devices** tab.
2. Right-click the site in the tree structure or in the **Device Allocator** dialog box, then click **Site**.

The icon to the left changes from  to .

5.6 Accessing the device

If a device is not currently communicating with the system, for example, because it is only temporarily contactable or because a firewall is blocking communication, a message is displayed in the view window.

In this case, Configuration Manager offers various setting options to enable communication again.

IP address failure

Communication can fail because the device IP address has been changed (for example, using the device's Web browser view) and Configuration Manager is still using the old IP address to establish the connection.

To update the device tree:



1. On the navigation bar, click the **Network Scan**  tab.
2. Click the **Reload**  icon.

The Configuration Manager program scans the network for devices and displays them with their current settings.

Device Access

If a firewall is blocking communication between the device and the Configuration Manager program, you can change the transmission protocol:

To change the transmission protocol:



1. On the navigation bar, click the **My Devices** tab, then select the device.
2. Click the **General** tab, then click the **Unit Access** tab.
3. In the **Device access** group, select the transmission protocol from the **Protocol** list.
 - **RCP+**
TCP transmission using port 1756
 - **HTTP**
TCP transmission using preset port
 - **HTTPS**
TCP transmission using preset port
4. If you have selected HTTP or HTTPS as the protocol, you must set the port to correspond to the settings stored in the device.
5. Under **Authentication**, you can set up a password for a user name of the relevant device. This means, the Configuration Manager program automatically accesses the device when establishing a connection without disabling the password protection each time.

Notice!



Do not use any special characters, for example &, in the password.

Special characters are not supported for the password and can prevent you from being able to access the program.

5.7 Replacing devices

If devices must be replaced, most of the configuration for the new devices can be done automatically using the **Replacement** function.

The **Replacement** function can only be used on devices that are allocated to the system - such devices are displayed when clicking the **My Devices** tab.

To replace devices:



1. On the navigation bar, click the **Preferences** tab, then click the **Directories** tab.
2. In the **Database folder** box, enter the location in which configuration data is to be backed up.
3. On the navigation bar, click the **My Devices** tab, right-click the device, click **Settings**, then click **Backup up....**
The **Backup to repository** dialog box is displayed.
4. Select the **Use global password** and **Seal configuration** check boxes if needed, then click **Start**.
The device configuration settings are saved locally on your PC.
5. Replace the device.
6. In the navigation bar, click the **My Devices** tab.
The replaced device is shown as not being configured.
7. Right-click the device, click **Settings**, then click **Replacement....**
The **Device Replacement Wizard** dialog box lists all devices that are the same type as the replaced device and for which configuration data is saved.
8. Select the replacement device that was installed instead of the selected device.

9. Click **Next >**.
Automatic configuration is started.
10. You will be informed if the firmware version of the device and the configuration file differ.
You are able to download a new firmware version onto the device.
11. Click **Next >** again.
The **Device Replacement** dialog box is displayed, listing the selected device and additional information.
12. Click **Start**.
The configuration files are transferred. If it is not possible to transfer all the data, the number of data packets not transferred is listed in the **Failed** column.
Once the transfer is complete the device is rebooted so that the new settings take effect.
When the **Cancel** button is replaced by the **Close** button, the procedure is complete.
13. Click **Close**.
The **Device Replacement Wizard** dialog box is displayed again.
14. Click **Finished** to complete the procedure.

5.8 Defining storage locations

You can define the storage location for screenshots, recordings, configuration repository and video analytics.

To define the storage location for screenshots, recordings, database and configuration repository:

1. On the navigation bar, click the **Preferences** tab, then click the **Directories** tab.
2. In the relevant input field, enter the path for the storage location or click the icon to the right of the input fields to select a folder.

Note:

You can select any directory that is available in the network.



Warning!

Do a regularly check that the selected directories have available storage capacity. Delete recordings no longer required.

5.9 System emulation

The complete system configuration can be saved as a system image and emulated using a different Configuration Manager application. This function helps you to isolate problems without having to access the actual system.

To save a system image:



1. On the the navigation bar, click the **Tools** menu, then click **Save System Image....**
The **Save System Image** dialog box is displayed.
2. Select the storage location and enter a name for the zip file.
3. Click **Save**.

To emulate an alien system:

1. Save the zip file containing the image of the alien system to your PC.



2. On the the navigation bar, click the **File** menu, then click **Emulate Alien System....**
The **Choose Alien System** dialog box is displayed in which you can select the storage location and the image file.

3. Click **Open**.
The emulation is performed automatically. The message **System emulation** appears in the status bar.
4. Click the **File** menu, click **Abandon Emulation** to return to your own system.
The message **System emulation** disappears in the status bar.

5.10 Notes on multiple configuration

It is possible to select multiple devices and then simultaneously make settings for all selected devices. In this way, CCTV systems can be set up quickly and efficiently.

To configure multiple devices:



1. On the navigation bar, click the **Network Scan** or **My Devices** tab.

2. In the tree structure, select the devices.

3. In the View pane, select the tab in which you want to make changes.

The following special features are available for multiple selections:

- Input fields that can only be changed for individual devices (for example, **Device IP address**) are blocked.
 - Input fields where the settings for the selected devices differ because of their type (for example, recording planning for different video senders) are blocked.
 - Input fields that already have identical settings for all selected devices show these settings.
 - Input fields containing different entries for the selected devices show <multiple> or M.
 - Options that are only activated (checked) for some of the selected devices are indicated by a green square.
4. Change the settings as desired.
 5. Click **Save**.
Changed input fields that previously contained <multiple> or M now display the uniform value.
 6. Continue for all other tabs in which you want to make changes.

5.11 Configuring the toolbar section

You can adapt the toolbar section in the navigation bar individually to your needs.



Notice!

Do not use any special characters, for example &, in the password.

Special characters are not supported for the password and can prevent you from being able to access the program.

To adapt the toolbar section to your requirements:



1. On the navigation bar, click the **Preferences** tab.
2. Click the **Appearance** tab
3. In the **General** group, click **Edit Toolbar....** The **Toolbar Settings** dialog box is displayed.
4. Select an entry, then click the arrow buttons to move the entry from the **Available actions** list to the **Showed actions** list or vice versa.

Note:

If necessary, click **Default** to get the original settings.

5. Click **OK**.

5.12

Getting device information

The Configuration Manager program gives you easy access to all devices in the network. You can quickly get all information you need for each device.

To get device information:



1. On the navigation bar, click the **Network Scan** or **My Devices** tab.
2. Right-click a device, then click **Device Info...**. The device information are displayed.

Additional options:

- The info bar above the view pane shows the name, device type and IP address. For hardware devices, it also gives information on the processor load, network connection and recording status.
- The tabs in the view pane show all available configuration.

5.13

Disabling network scan

If you do not want to use the automatic network scan, you can disable it. Note that in this case the status of the devices will not be updated regularly.

Regardless of the default setting, you can trigger a network scan manually at any time.

To disable the automatic network scan:



1. On the navigation bar, click the **Preferences** tab.
2. Click the **Network** tab.
3. In the **Network Scan** group, clear the **Run continuous network scan** check box.

To trigger a network scan manually:

1. On the navigation bar, click the **Network Scan** tab.



2. Click the **Reload page** icon.

5.14

Using the Table view

The table view provides the option of presenting a summary of specific settings for individually selected devices in the form of a clearly arranged table.

The content of all main tabs and sub-tabs can be exported in *.csv format.

To open the table view:



1. On the navigation bar, click the **Network Scan** or **My Devices** tab.
2. On the navigation bar, click the **Table view** icon.



The **Table View** window is displayed. The table contains a column to the left with all devices and cameras.

In the view pane to the right, all well-known main tabs (for example, **General**, **Camera**:

etc.) and sub-tabs (for example, **Unit Access**, **Date/Time**, etc.) are displayed.

Name	URL	Device type	CTN	Device name	Camera name	Device ID	Hostname
Streaming Gateway/6	172.30.11.206.8447	Video Streaming Gateway/6					
Streaming Gateway/7	172.30.11.206.8448	Video Streaming Gateway/7					
DIN IP 8000 (fe)	172.30.11.211	DINON IP starlight 8000 M...	NBN-80052-BA	DIN IP 8000 (fe)	DINIP8000fe		
DBos	172.30.11.212	DBos					
FLEXIDOME IP micro 300...	172.30.11.217	FLEXIDOME IP micro 3003					
HD 172.30.11.245	172.30.11.220	HD FLEXIDOME IP 4000 IR					
HD 172.30.11.223	172.30.11.223	DINON IP starlight 6000 IR					
	172.30.11.224	VRM					

- If necessary, minimize the amount of displayed devices and cameras as follows:

- In the **Filter** dialog box, enter an appropriate filter. To delete the filter, click the icon.

In table view you can also define your own custom views.

To define a custom view:



- On the navigation bar, click the **Network Scan** or **My Devices** tab.
- In the tree structure, select one or more devices or cameras.



- On the navigation bar, click the **Table view** .

The **Table View** window with all devices is displayed. And also the **Customs view** tab and the **default** tab where you can add your first view with specific parameters.

To rename the **default** tab, double-click the tab, then enter an appropriate name.

To add further views, click the **+** sign. A **New page** tab for the next view is displayed.

To rename the **New page** tab, double-click tab, then enter the new name.

Name	URL
Streaming Gateway/6	172.30.11.206.8447
Streaming Gateway/7	172.30.11.206.8448
DIN IP 8000	172.30.11.211
DBos	172.30.11.212
FLEXIDOME IP micro 300...	172.30.11.217
HD 172.30.11.245	172.30.11.220
HD 172.30.11.223	172.30.11.223
	172.30.11.224

- Add groups to your custom view as follows:

Select a device, then click one of the main tabs and a sub-tab (for example, **Camera** > **Imaging**).

Right-click a group (for example, **Scene mode**), then click **Add group to view** and select the view the group should appear.

Name	URL	Current mode	Mode ID	Contrast	Saturation	Brightness	White balance
Streaming Gateway/6	172.30.11.206.8447						
Streaming Gateway/7	172.30.11.206.8448						
DIN IP 8000 (fe)	172.30.11.211	Indoor	Indoor	—	128	128	128
DBos	172.30.11.212						
FLEXIDOME IP micro 300...	172.30.11.217						
HD 172.30.11.245	172.30.11.220						
HD 172.30.11.223	172.30.11.223						

Note: A new column **Camera identification** group is added to your custom view.

Name	URL	CTN	Device type	Current mode	Mode ID	Copy mode to
Streaming Gateway5	172.30.11.206:8447					
Streaming Gateway6	172.30.11.206:8448					
Streaming Gateway7	172.30.11.206:8449					
DIN IP 8000 (fe)	172.30.11.211	NBN-80052-BA	DIONIP starlight 8000 M.	Indoor	Indoor	--
Dibos	172.30.11.212					
MFLXIDOME IP micro 300	172.30.11.217					
HD 172.30.11.245	172.30.11.220					
HD 172.30.11.223	172.30.11.223					
HD 172.30.11.224	172.30.11.224					

- Add elements to your custom view as follows:

Select a device, then click one of the main tabs and a sub-tab (for example, **Camera**: > **Video Input**).

Right-click an element (for example, **Camera name stamping**), then click **Add column to view** and select the view the element should appear.

Name	URL	CTN	Device type	Display stamping	Time stamping	Live video indicator
Streaming Gateway5	172.30.11.206:8447					
Streaming Gateway6	172.30.11.206:8448					
Streaming Gateway7	172.30.11.206:8449					
DIN IP 8000 (fe)	172.30.11.211					
Dibos	172.30.11.212					
MFLXIDOME IP micro 300	172.30.11.217					
HD 172.30.11.245	172.30.11.220					
HD 172.30.11.223	172.30.11.223					

Note: A new column **Camera name stamping** element is added to your custom view.

Name	URL	CTN	Device type	Display of camera name stamping	Scene mode
Streaming Gateway5	172.30.11.206:8447				
Streaming Gateway6	172.30.11.206:8448				
Streaming Gateway7	172.30.11.206:8449				
DIN IP 8000 (fe)	172.30.11.211	NBN-80052-BA	DIONIP starlight 8000 M.	Bottom	Indoor
Dibos	172.30.11.212				
MFLXIDOME IP micro 300	172.30.11.217				
HD 172.30.11.245	172.30.11.220				
HD 172.30.11.223	172.30.11.223				

- Add more columns to the custom view in this way

Note: Not all groups or elements can be added to the custom view.

- If necessary, add more devices or cameras to the table.

- In custom view, click a field in the table. You can set actions or parameters for individual devices or cameras directly from here.

Name	URL	CTN	Device type	Display of camera name stamping	Scene mode
Streaming Gateway5	172.30.11.206:8447				
Streaming Gateway6	172.30.11.206:8448				
Streaming Gateway7	172.30.11.206:8449				
DIN IP 8000 (fe)	172.30.11.211	NBN-80052-BA	DIONIP starlight 8000 M.	Bottom	Indoor
Dibos	172.30.11.212				
MFLXIDOME IP micro 300	172.30.11.217				
HD 172.30.11.245	172.30.11.220				
HD 172.30.11.223	172.30.11.223				

Importing and exporting .csv files



Export

In the **Table View** window:

On the navigation bar, click to export the content of the different **Table View** tabs as .csv file.



Import

In the **Table View** window:

On the navigation bar, click to import the stored content of **Table View** tabs.

Additional options in the Table View

- Sorting the table:
Click a column header to sort the table.
- Device commands:
Right-click one of the devices.
- Removing a column:
Right-click a column header, then click **Remove...**

Refer to

- *Reload / Save icons, page 17*

5.15 Importing .csv files

The Configuration Manager program allows you to import .csv files with additional attributes.

The .csv file must at least contain:

- A headline with column definitions
- 1 line with a device

The headline of the .csv file defines the mapping of the columns to the artefacts in the Configuration Manager program. Information above the headline will be ignored during import.

Possible values are:

- Level: Creates a folder. If folder is already present, no folder will be created. Level may appear several times to create folder-structures.
- Site: Creates a folder, that is flagged as site. This is only allowed to appear once per line.
- Attribute (name): Defines an attribute column with the attribute name in brackets.
- ConnectionString: Creates a device by connecting to the URI specified.
- DeviceName: Name of the device.
- User: Username for authentication.
- Password: User password for authentication.

To import a .csv file:



1. On the navigation bar, click the **Network Scan** or **My Devices** tab.



2. On the navigation bar, click the **Tools** menu, then click **Import CSV-File...**
The **Import Data** dialog box is displayed.
3. Click **Browse**, then select the .csv file you want to import.

Example: .csv import file

```

1 This is a sample-file for CSV-Import;;;;;;
2 Version;1.0;;;;;
3 Date;23.05.2014;;;;;
4 Level;Level;Level;Attribute(ZIP);Site;Attribute(Manager);DeviceName;ConnectionString;User;Password
5 USA;California;Los Angeles;12345;54321;John Doe;Store LA;http://160.10.127.34:srvadmin:123456
6 USA;Arizona;Phoenix;54321;9876;Mike Paso;Store Phoenix;http://160.10.120.200:ADMINISTRATOR:000000
7 USA;Arizona;Phoenix;54322;9877;Mike Paso;Store Outer-Phoenix;http://any2.url:admin:admin
8 UK;;London;1111;5466;Charlotte Jose;Store London;http://124.124.124.123:admin:Admin

```

4. If needed, select the **Add online devices only** and the **Empty current database before import** check boxes.

5. Click **OK**. The content of the .csv file is displayed in a device list.

Example: Imported .csv file

Name	URL	Type
USA		
Arizona		
Phoenix		
9877	any2.url	any2.url Unknown
9876	BVC Dvr5k	160.10.120.200 DVR-5000
California		
Los Angeles		
54321	160.10.127.34	160.10.127.34 DIVAR IP 2000
UK		
London		
5466	124.124.124.123	124.124.124.123 Unknown

Notice!

The attributes can be used to search for such data in the device tree. Use the **Filter** functionality.



To display attributes imported with the .csv file:



1. On the navigation bar, click the **Network Scan** or **My Devices** tab.
2. Right-click a device, then click **Device Info....**

5.16 Using Device Health Monitor

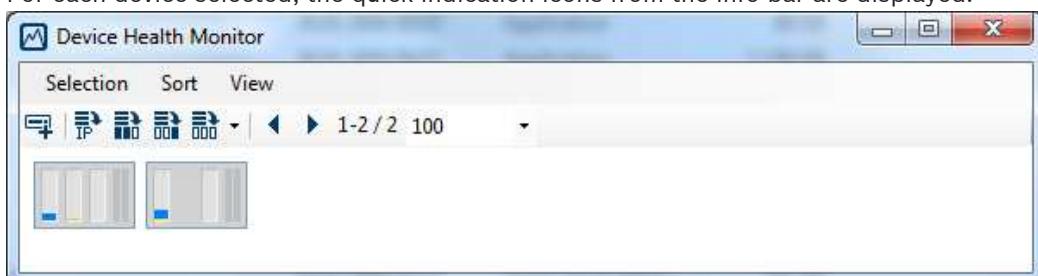
The device health monitor displays a dialog box containing status information for selected devices, which would otherwise be viewed via the icons on the right edge of the info bar.

To display status information:



1. On the navigation bar, click the **Network Scan** or **My Devices** tab.
2. In the tree structure, select one or more devices or cameras.
3. On the Navigation bar, click the **Tools** menu, then click **Device Health Monitor....** The **Device Health Monitor** dialog box is displayed.
4. On the menu bar, click **Selection** or
On the toolbar, click

For each device selected, the quick indication icons from the info bar are displayed.



5. Place the pointer on the icons to view details on the processor load, network connection and recording status:

6. To display information for other devices, change the selection in the main tab and click **Selection** in the dialog box.
7. To reorganize the display, click **Sort** and select the category by which to sort. A second click reverses the sort order.
8. On the **View** menu, click **Show Icon Bar** to display a toolbar providing quick access to the various menu options.

Quick indication icon description

- The left icon indicates the proportions of the individual functions on the encoder load, shown as percentages. For devices with two processors, a separate icon is shown for each processor.
- The icon in the middle indicates the network connection type and the speed of the outgoing (UL = Uplink) and incoming (DL = Downlink) data traffic.
- The right icon indicates information on the recording status.
 - Green: active recording
 - Red: error
 - Orange: recording scheduler active, no current recordings
 - Gray: recording scheduler not active, no current recordings

5.17

Device configuration using the View pane

The View pane for the **Network Scan** and **My Devices** tabs shows a series of tabs, the number and content of which depend on the device selected in the tree structure.

The tabs can be used to make the configuration settings that the device also provides in the Web browser view, some of them with a slightly different composition.

Due to the large number of possible settings, not all of the details are dealt with here. Below are just a few examples of the configuration options:

- Display stamping (camera name, time stamp) on or off
- Creation of encoder profiles
- Configuration of output to an analog monitor (decoder)
- Alarm configuration
- Planning local recordings
- etc.

Detailed information about the configuration options for a device can be found in the relevant device documentation and the online Help in the relevant Web browser view.

To make changes in the View pane:



1. On the navigation bar, click the **Network Scan** or **My Devices** tab.
2. In the tree structure, select the device.
3. In the View pane on the right, click the tab for the area you want to edit.
4. Make the desired changes.
5. On the navigation bar, click the **Save** icon to save the new settings.
6. Continue with the settings in the other tabs.

Some settings (for example, **Device time**) can only be changed if the device is not currently recording. If necessary, stop any recordings before making changes.

5.18

Managing certificates using MicroCA

5.18.1

Background information

The Configuration Manager MicroCA functionality facilitates the management of small to medium systems deploying certificate device authentication and certificate-based user authentication.

Each certificate consists of the following parts:

- A publicly available certificate with the public key
- A corresponding private key

For highest level of security, the private key must be concealed in hardware, a physical key store, typically performed by a Trusted Platform Module (TPM) chip. For this purpose, Bosch cameras include a TPM chip. Use a USB or smart card crypto token for MicroCA use to guarantee exclusive ownership.

For test purposes, or in case of low expectations on measures against stolen keys, you may also store the private key and certificate on a standard USB flash stick as PKCS12 file.

Notice!



Weak protection by PKCS12 implementations

Malware on the PC may create an unnoticed copy and crack the PIN due to weak encryption of most PKCS12 implementations. Never use PKCS12 implementations in security-critical applications.

Very high protection through certificate-based authentication

Certificate based authentication allows you to create closed systems with very high protection against malicious access. This certification mechanism allows you to set up distributed camera systems that reach security level 3 of FIPS-140-2 standard.

However, note that before the initial creation of certificates on the devices no technical means can hinder so-called man in the middle attacks. Preferably use a secure environment to roll-out the initial certificates to your devices.

5.18.2

Initializing the MicroCA

The MicroCA functionality in the Configuration Manager program is an easy-to-use tiny certificate authority (CA).

After the CA certificate is created, it can be immediately used for signing other certificates.

When using a file-based CA certificate make sure to store it on a USB flash stick kept in a safe place. We also recommend that you create a security copy to reduce the risk of losing your CA certificate.

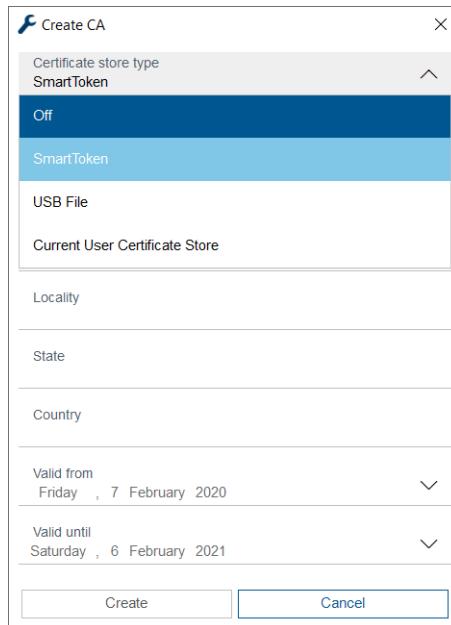
Preferably, use a USB token or smart card. Check the release notes for a list of supported crypto hardware.

5.18.3

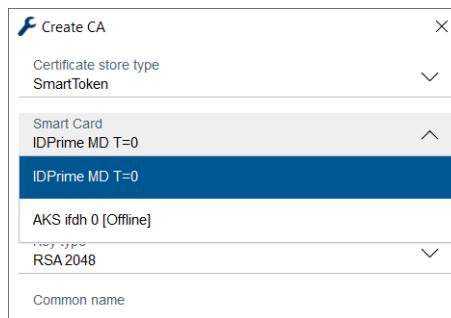
Configuring MicroCA using Smart Token

To create a Smart Token:

1. On the navigation bar of the Configuration Manager program, click the **Preferences** tab.
2. Click the **Security** tab.
3. In the **MicroCA** group, click **Create**. The **Create CA** dialog box is displayed.
4. In the **Certificate store type** list, click **Smart Token**.



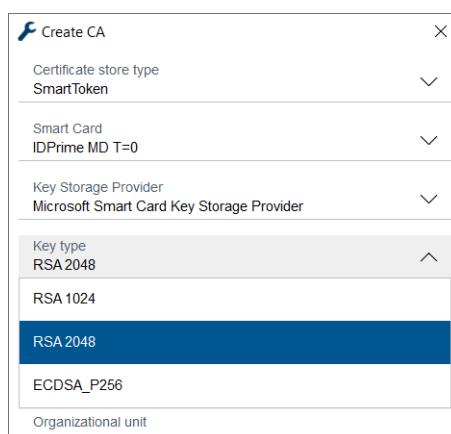
- In the **Smart Card** list, select the smart card type.



- In the **Key type** list, select an entry.

The list contains different key sizes and two different key types: the classical RSA type and the ECDSA type, a so-called Diffie-Hellman exchange type. While RSA is much more common, Diffie-Hellman has lower computational overhead. Although mixing both types on different tokens is possible, we recommend that you use the same type for all tokens.

Note: Higher numbers reflect higher levels of security. For example, RSA 2048 is more secure than RSA 1024, but requires more computation time.

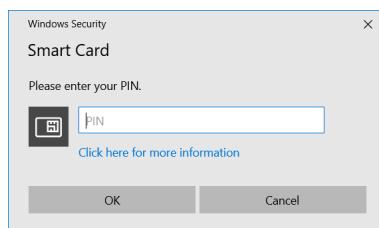


- In the **Common name** box, enter a meaningful name for the new Certificate Authority.
- Fill out the **Organization**, **Organization unit**, **Locality**, **State** and **Country** boxes. In larger installations, this information will help you to identify the authority.

9. In the **Valid from** and **Valid until** lists, click the desired start and end date.

Note: Since the MicroCA functionality has no provisions to prolong validity, make sure that you select an appropriate period of time.

10. Click **Create**. The **Windows Security** dialog box is displayed.
11. Type the smart card PIN to be authorized using the private key including self-signing. A new Certificate Authority is displayed in the **MicroCA** list.



12. In the **MicroCA** list entry, click the **Trusted** check box. A **Security Warning** message is displayed that you are about to install a certificate from a certificate authority claiming to represent MicroCA.

Note: The **Trusted** check box facilitates to add MicroCA to the Windows **Trusted Certificates** list.

Applications, for example the Chrome browser, identifies the certificate as valid.

Issued to	Issued by	Valid until	Store location	Algorithm	Trusted
MicroCA	MicroCA	2/6/2040 2:58:10 PM	Smart Token	RSA 2048	<input checked="" type="checkbox"/>

13. To confirm, click **Yes**.

5.18.4

Configuring MicroCA using USB file

To create a USB file:

1. On the navigation bar of the Configuration Manager program, click the **Preferences** tab.
2. Click the **Security** tab.
3. In the **MicroCA** group, click **Create**. The **Create CA** dialog box is displayed.
4. In the **Certificate store type** list, click **USB File**.

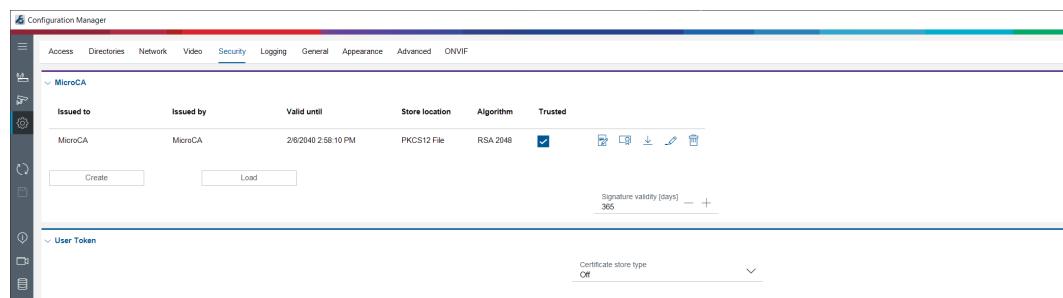
The dialog box is titled 'Create CA'. It contains the following fields:
Certificate store type: USB File
Certificate store location: (with a folder icon)
Key type: (dropdown)
Common name:
Organization:
Organizational unit:
Locality:
State:
Country:
Valid from: Friday, 7 February 2020
Valid until: Monday, 6 February 2040
Pfx File password:
Confirm:
Create **Cancel**

5. Insert a USB stick into your system, click the icon to the right of the **Certificate store location** box, then select a storage location.
6. In the **Key type** list, select an entry.
The list contains different key sizes and two different key types: the classical RSA type and the ECDSA type, a so-called Diffie-Hellman exchange type. While RSA is much more common, Diffie-Hellman has lower computational overhead. Although mixing both types on different tokens is possible, we recommend that you use the same type for all tokens.
Note: Higher numbers reflect higher levels of security. For example, RSA 2048 is more secure than RSA 1024, but requires more computation time.

The dialog box is titled 'Create CA'. It contains the following fields:
Certificate store type: USB File
Certificate store location: (with a folder icon)
Key Storage Provider: Microsoft Software Key Storage Provider
Key type: RSA2048
Common name:

7. In the **Common name** box, enter a meaningful name for the new Certificate Authority.
8. Fill out the **Organization**, **Organization unit**, **Locality**, **State** and **Country** boxes. In larger installations, this information will help you to identify the authority.
9. In the **Valid from** and **Valid until** lists, click the desired start and end date.
Note: Since the MicroCA functionality has no provisions to prolong validity, make sure that you select an appropriate period of time.
10. Click **Create** to open the **Generate Certificate** dialog box.
11. To confirm creating a new certificate, click **OK**. A **Password** dialog box is displayed.

12. In the **Pfx File password** box, type a new password. While you type, the **Password** dialog box will change its color from red (very weak password) to yellow (weak password) and to green (very strong password). Use a combination of characters, digits, and special characters to achieve a very strong password.
13. In the **Confirm** box, type the same password.
14. To create the certificate, click **Create**. A new Certificate Authority is displayed in the **MicroCA** list.



5.18.5

Signing device certificates

One of the main purposes of the MicroCA functionality is to deploy certificates to devices. To achieve this, you will replace a self-signed certificate by a MicroCA signed certificate. For signing, you will need your MicroCACrypto token or USB drive, and you need to enter the MicroCA PIN to authorize its use.

In order to secure device access by using certificates you need to change the devices authentication mode.

To sign device certificates:

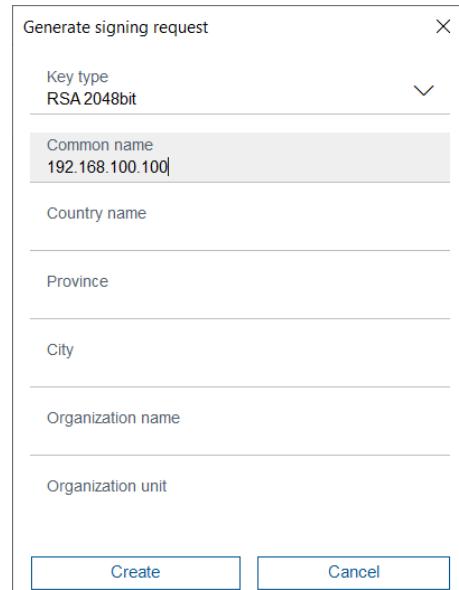
1. In the Configuration Manager program, click the **Preferences** or **My Devices** tab, then click the desired device.
2. Click the **General** tab, then click the **Unit Access** tab.
3. In the **Allowed authentication modes** group, click the upload icon . A message box will inform you that MicroCA certificate is active on your system and that you can upload the MicroCA certificate.
4. Click **Yes** to start certificate-based authentication on the device. After successfully uploading the MicroCA certificate, the device needs a restart in order to engage certificate handling.
5. Confirm the restart by clicking **Yes** when the message box appears.
6. Wait for the device to be online again. In order to verify the successful switching to certificate based authentication, click the **Service** tab, then click the **Certificates** tab of the device. You will find a MicroCA certificate similar to the one shown here:

The screenshot shows the Configuration Manager interface with the 'Service' tab selected in the top navigation bar. Under the 'Certificates' tab, there is a table listing four certificates:

Issued to	Issued by	Valid until	Key	Usage
local.myboschcam.net	local.myboschcam.net	01.08.2032	✓	HTTPS server
Stratocast Keys	Stratocast Keys	07.10.2022	✓	Stratocast
InternalUseOnly	InternalUseOnly	22.05.2034	✓	
Bosch ST Root CA	Bosch ST Root CA	20.03.2015	CBS	

Below the table are four buttons: 'Upload certificate', 'Generate signing request', 'Generate self-signed certificate', and 'Certificate Wizard'.

7. To create a signing request, click **Generate signing request**. The **Generate signing request** dialog box is displayed.



8. In the **Common name** box, the IP address of the device is displayed. Do not change this!
 9. The remaining boxes are filled from the MicroCA certificate and can be adapted according to your needs.
 10. Click **Create**.
- Note:** Creating the certificate request may take some time due to the key creation process.

Issued to	Issued by	Valid until	Key	Usage
local.myboschcam.net	local.myboschcam.net	01.08.2032	✓	HTTPS server
Stratocast Keys	Stratocast Keys	07.10.2022	✓	Stratocast
InternalUseOnly	InternalUseOnly	22.05.2034	✓	
Bosch ST Root CA	Bosch ST Root CA	20.03.2115	CBS	
In progress...	[CSR]			

[Upload certificate](#) [Generate signing request](#) [Generate self-signed certificate](#) [Certificate Wizard](#)

11. To sign and upload the certificate, click the reload icon or press **F5** to update until the line shows a valid signing request.

Note: The sign icon is available after MicroCA has been configured. The sign icon allows you to sign and upload the signed certificate in a single step.

Issued to	Issued by	Valid until	Key	Usage
local.myboschcam.net	local.myboschcam.net	01.08.2032	✓	HTTPS server
160.10.126.88	[CSR]		✓	
Stratocast Keys	Stratocast Keys	07.10.2022	✓	Stratocast
InternalUseOnly	InternalUseOnly	22.05.2034	✓	
Bosch ST Root CA	Bosch ST Root CA	20.03.2115	CBS	

[Upload certificate](#) [Generate signing request](#) [Generate self-signed certificate](#) [Certificate Wizard](#)

12. Click the sign icon to the left. You may be asked to insert your smart card or to type your PIN to authorize the action.
 13. Follow the instruction on the screen.
 14. After the certificate is signed, in the **Usage** column select **HTTPS server**:

Issued to	Issued by	Valid until	Key	Usage
local.myboschcam.net	local.myboschcam.net	01.08.2032	✓	
160.10.126.88	MicroCA	06.02.2021	✓	HTTPS server
Stratocast Keys	Stratocast Keys	07.10.2022	✓	Stratocast
InternalUseOnly	InternalUseOnly	22.05.2034	✓	
Bosch ST Root CA	Bosch ST Root CA	20.03.2015		CBS

[Upload certificate](#) |
 [Generate signing request](#) |
 [Generate self-signed certificate](#) |
 [Certificate Wizard](#)

15. Restart the device. After the restart, the newly created signed certificate will apply as a TLS communication encryption certificate.

5.18.6 Managing user token

A user token - also known as security token - is a physical device which can be used to gain access to an electronically secured computer. A user token can be used as a replacement for, or in addition to a password. MicroCA certificate uses smart cards or (crypto-) USB sticks as the token hardware.

The user token contains a private key which will be tested against the public key of the MicroCA certificate. Only if this test is successful, access to the device or to the video software will be granted.

Smart cards are well-known devices for user authentication, although in principle you may deploy any other certificate technology for this purpose.

To manage tokens:

To manage tokens:

1. In Configuration Manager program,
click the **Preferences** tab, then click the **Security** tab.
The **User Token** group allows you to inspect existing tokens. Smart tokens and PKCS12 files on USB sticks are supported.
Note: To display a list of existing tokens known to your system, click the **Certificate store type** list.

2. In the **Certificate store type** list, click the corresponding entry.

3. Select a certificate. For the following reasons, more than one certificate can be displayed in the list:

- You have inserted multiple different tokens into your system.
- A single token contains multiple certificates.

For each certificate two functions are available:

- Showing detailed certificate information
- Deleting the certificate from the token

**Notice!**

Use caution when deleting token information. You cannot recover the token information.

5.18.7

Creating user token

User token creation is similar to certificate creation.

To create user token:

To create user token:

1. In Configuration Manager program, click the **Preferences** tab, then click the **Security** tab.
2. Insert a smart card, and in the **Certificate store type** list, click **Smart Token** and select the smart card.
or
Click **USB File** and enter a path and a new file name.
3. Click **Create**. The **Generate and sign key pair** dialog box is displayed.

The screenshot shows the 'Generate and sign key pair' dialog box. It includes fields for Key type (RSA 2048), Common name (CameralUser), Organization, Organizational unit, Locality, State, Country, Valid from (Friday, 7 February 2020), Valid until (Saturday, 6 February 2021), Pfx File password (*****), Confirm (*****), Enhanced Key Usage (Client authentication), and buttons for Create and Cancel.

4. In the **Common name** box, enter a meaningful name for the new Certificate Authority.
5. Fill out the **Organization**, **Organization unit**, **Locality**, **State** and **Country** boxes. In larger installations, this information will help you to identify the authority.
6. In the **Valid from** and **Valid until** lists, click the desired start and end date.
Note: Since the MicroCA functionality has no provisions to prolong validity, make sure that you select an appropriate period of time.

7. To submit, click **Create**.

Note: To allow the creation of a valid user token, the system needs access to the CA certificate. Insert a smart card with a valid CA certificate and authorize its use by entering the CA PIN and the user token pin.

5.18.8

Configuring token-based device authentication

To configure token-based device authentication you must add the user to the device's list of users.

To add the user to the device's list of users:

1. In the Configuration Manager program, click the **Devices** or **My Devices** tab, then click the desired device.
2. Click the **General** tab, then click the **Unit Access** tab.
3. In the **Users** group, click **Add user**. The **Add User** dialog box is displayed.
4. In the **Type** list, click **Certificate**.
5. In the **Group** list, click the appropriate entry to specify the user's role.
6. In the **User name** box, enter the name of the user.

Note: The name must be the identical to the name you entered in the **Common name** box when creating the user token.

7. Click **Create**.
8. Activate the new authentication mode. To do this, in the **Allowed authentication modes** group, click the **Certificate** check box.

Note: A green check mark indicates that the new authentication mode is active.

5.19

Finding/editing DSA E-Series devices

Configuration Manager allows you to find DSA E-Series devices and to edit certain settings of these devices.

5.19.1

Finding DSA E-Series devices

To find DSA E-Series devices:

- ▶ On the **Tools** menu, click **DSA E-Series Discovery....**
The **DSA E-Series Discovery...** dialog box with all DSA E-Series devices is displayed.

5.19.2

Editing the port settings

To edit the port settings of DSA E-Series devices:

- ▶ On the **Tools** menu, click **DSA E-Series Discovery....**
The **DSA E-Series Discovery...** dialog box with all DSA E-Series devices is displayed.
1. Select the device, then click **Management Ports...** or **iSCSI Host Ports....** A dialog box with the port settings is displayed.
 2. Change the port settings if necessary.

5.19.3

Changing the password

To change the password of a DSA E-Series device:

- ▶ On the **Tools** menu, click **DSA E-Series Discovery....**
The **DSA E-Series Discovery...** dialog box with all DSA E-Series devices is displayed.
1. Select the device, then click **Configuration Password....**
 2. Enter the new password.

5.19.4

Renaming the device

To rename a DSA E-Series device:

- ▶ On the **Tools** menu, click **DSA E-Series Discovery....**
The **DSA E-Series Discovery...** dialog box with all DSA E-Series devices is displayed.

1. Select the device, then click **Rename....**
2. Enter the new name.

5.20

Connecting to the Bosch Remote Portal

The Bosch Remote Portal application allows you to configure and maintain your devices remotely. If you want to have access to the Bosch Remote Portal application, request an account first.

5.20.1

Requesting access the Bosch Remote Portal application

To use the Bosch Remote Portal application, request an account first.

To request an account and try out for free:

1. Click [here](#). The **Welcome to the Remote Portal** window appears.
2. Click **Sign Up** to register.

5.20.2

Signing in to the Bosch Remote Portal application

To use the Bosch Remote Portal application with an existing account:

1. Open the Configuration Manager program.



2. On the navigation bar, click the **Remote Portal** tab.
The **Remote Portal** dialog box appears.
3. Enter user name and password.
4. Click **OK**.

You are connected to the Bosch Remote Portal application and your devices.

5.20.3

Adding cameras to the Bosch Remote Portal application

You can add cameras to your Bosch Remote Portal account.

To add cameras to the Bosch Remote Portal:

1. Open the Configuration Manager program.



2. Click the **Network Scan** or **My Devices** tab.
3. In the tree structure, select the cameras you want to add to the Bosch Remote Portal application.
4. Click the **Connectivity** tab, then click the **Cloud services** tab.
5. In the **Operation** list, select **On**.
6. Click **Register**.
The **Remote Portal** dialog box appears.
7. Enter your user name and password.
8. Click **Connect**.

The cameras appear in your Bosch Remote Portal account as **Registered**.

5.21

App management for INTEOX cameras

The app management for INTEOX cameras allows you to purchase and use ready-to-use apps offered by the Security and Safety Things (S&ST) application store. If you want to have access to the S&ST application store, request an account first.

5.21.1

Requesting access to the Security and Safety Things application store

To use the Security and Safety Things (S&ST) application store, request an account first.

To request an account:

1. Open the Configuration Manager program,

2. On the navigation bar, click the **Tools**  menu, then click **Security and Safety Things**



The **Log in to the Security and Safety Things Ecosystem** dialog box appears.

3. Click **REGISTER NOW**.

4. Follow the instructions on the screen.

5.21.2

Signing in to the Security and Safety Things application store

To sign in to the Security and Safety Things (S&ST) application store with an existing account:

1. Open the Configuration Manager program.



2. On the navigation bar, click the **Tools**  menu, then click **Security and Safety Things**



The **Log in to the Security and Safety Things Ecosystem** dialog box appears.

3. Enter your email address and password.

4. Select the **Remember me** checkbox (optional).

5. Click **LOG IN**.

A notification box with an authorization code appears.

6. Copy the authorization code in the notification box.

7. In the Configuration Manager program, paste the authorization code into the **Code** box of the **Authorization Code** group.

Note: The **Authorization Code** group is created automatically in the Configuration Manager program when you have signed in to the **Security and Safety Things Ecosystem**.

8. Click **OK**.

A **Security and Safety Things Store** dialog box appears showing a list of all apps you have bought and their license availability.

5.21.3

Checking the app status of the cameras

To check the app status:

1. Open the Configuration Manager program.



2. On the navigation bar, click the **My Devices**  tab.

3. In the tree structure, select one or more INTEOX cameras you want to install an app, for example.

4. Click the **Service** tab, then click the **App Management** tab.

An overview of all previously installed apps appears.

5.21.4

Downloading apps for installation in a local network

This procedure describes the download of apps outside the local network with access to the internet,

Notice!

For a later installation on devices within the local, offline network, refer to section *Installing downloaded apps locally and offline, page 50*.



To download apps locally and offline:

1. Sign in to the Security and Safety Things application store, copy the authorization code that appears, and then in the Configuration Manager program, paste the authorization code into the **Code** box of the **Authorization Code** group (see *Signing in to the Security and Safety Things application store, page 49*).
2. Click the **Licenses installed** tab.
Note: Select an app if you want to know on which camera the selected app is already installed.
3. Click the app you want to install, then click the download icon  to the right of the apps list.
The application files are downloaded.
4. Click the **Available devices** tab.
5. Select the cameras you want to install the app.
6. Click the download icon  to the right of the camera list to generate and download a license that activates the app.
7. Close the Security and Safety Things dialog box.
The app and the corresponding license are stored locally on your computer.

Refer to

- *Signing in to the Security and Safety Things application store, page 49*
- *Installing downloaded apps locally and offline, page 50*

5.21.5

Installing downloaded apps locally and offline

Purchased and licensed apps from the Security and Safety Things application store are stored locally on your computer after their download.

To install downloaded apps locally and offline:

1. Open the Configuration Manager program.
 2. On the navigation pane, click the **My Devices**  tab.
 3. In the tree structure, select the camera you want to install the app.
 4. Click the **Service** tab, then click the **App Management** tab.
An overview of all previously installed apps appears.
 5. Click the **Upload app...**  icon below the installed apps overview.
A dialog box appears showing your local directory with the apps you bought before.
 6. Select the respective app, then click **OK**.
The app appears in the **App Management** overview.
 7. Click the **Install license**  icon below the installed apps overview.
A notification appears that informs you the license was installed successfully.
 8. Click **OK**.
- Note:** Each app has its own configuration interface. Use the Local App Management Console of the camera's website for configuration. During configuration, there must be no connection to the Remote Portal application.

5.22

Working with other components

5.22.1

Video Content Analysis

Intelligent Video Analytics and Essential Video Analytics are available on all suitable cameras ex work. No license is needed.

Note however, that some previous CPP4 cameras are only prepared for using the Intelligent Video Analytics software. These cameras need licenses.

To get the VGA configuration pane:

1. Start the Configuration Manager program.
2. On the navigation bar, click the **My Devices** tab.
3. Select a camera.
4. Click the **VCA** tab. The VGA configuration pane is displayed.

Notice!



Upgrading Intelligent Video Analytics versions

If you have already licensed an earlier version of Intelligent Video Analytics for the device, you simply need to upgrade the firmware of the device. Then the license is automatically upgraded. A new license key is not required. No fee will be charged.

Notice!



You obtain the current firmware from your customer service or from the download area on our Internet site.

Upgrade the firmware directly by using the Web browser view of the device or by using Configuration Manager.

5.22.2

Monitor Wall

Monitor Wall is treated as a hardware decoder by Configuration Manager. As soon as Monitor Wall is running on a PC with an IP network connection, it is added to the list after the network scan.

You can use Configuration Manager to make various settings, which are explained in more detail in the separate Monitor Wall documentation.

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