Bosch Video Management System

Upgrade

BOSCH

en Technical Service Note

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1 Short information

This document should help you to make the upgrade process as smooth as possible. The upgrade itself is not restricted to Bosch VMS software only.
See the Release Notes for Bosch VMS 6.0 for the supported software and firmware versions.
If required, update the Bosch VMS SDK (Software Development Kit). See chapter *Upgrading Bosch VMS, page 8* for details.

Notice!
Bosch VMS V.2.3.1 requires .NET framework 3.5 from Microsoft. When importing or or upgrading Bosch VMS V.2.3.1 to V.5.0 or later, first install .NET framework 3.5 if not available on the target computer. Otherwise upgrade or import fails.

Notice!
Close Configuration Client before starting the upgrade.

Notice!
This manual describes the update from V.2.3.0 or later to V.6.0.
When updating from a version earlier than 2.0, update to version 2.0.3 first, then proceed to version 2.3.0
When updating from a version between 2.0 and 2.3, first update to version 2.3.
Refer to the update manual for V.2.0.2 and V.2.2.0 for details.

Notice!
Version 6.0 requires a new Activation Code. Make sure you have a new Activation Code at hand when you update the system.
The new activation code can be retrieved in SLMS (Software Licensing Management System) under **My Activations**.
Contact your technical support when you have problems.

Notice!
From VRM 3.0 onwards load balancing modes are not supported anymore. If previous VRM versions, for example 2.22 or 2.30, must be updated to VRM 3.0, refer to VRM 3.0 release letters for migration information.

Notice!
From Bosch VMS V. 2.3.0 onwards, the management of Task Schedules has been changed.
You can now configure empty exception days and holidays. And now exception days and holidays replace the schedule of the corresponding week day.
The order of decreasing priority: exception day, holiday, week day.
Example:
Old configuration:
Weekday schedule configured to be active from 9:00 to 10:00
Exception day schedule configured to be active from 10:00 to 11:00
Result in Bosch VMS 2.2 or earlier: activity from 9:00 to 11:00
Result in Bosch VMS 2.3 or later: activity from 10:00 to 11:00
Required change to get same schedule behavior as in Bosch VMS 2.2 or earlier:
Change exception day schedule to include active times of the weekday schedule: exception day must be configured to be active from 9:00 to 11:00.

Notice!
From Bosch VMS 6.0 onwards, you cannot update or start your Bosch VMS installation on a DIVAR IP 2000 / 7000 with the Setup that you obtained from the Bosch VMS Online Product Catalog.
Contact your Bosch Support for a valid Setup.

Notice!
With the upgrade to Bosch VMS 6.0 you also update the version of the used SQL database to 2014 Express.

2 System overview

This chapter provides a check list to be considered before starting the upgrade.
Check the system requirements for your desired Bosch VMS feature with the Bosch VMS datasheet available in the Online Product catalog. This guide does not apply to Bosch Video Appliances (Bosch Divar IP 3000/7000).
Before starting the upgrade process, consider and check the following points:

☐	Read the Release Notes first.
☐	Make sure that the upgraded license activation codes for the new version are available. As a precaution have an Emergency Backup license at hand. As of Bosch VMS 5.5 each ONVIF and VSG camera requires a channel license, like any normal camera.
☐	Consider restrictions of the new version. See the Bosch VMS Datasheet for details.
☐	Make sure that the hardware environment (servers, workstations, network, storage, keyboards) is up-to-date, is working stable and that there are no other issues which could negatively affect the upgrade process. Ensure that your network is configured correctly for huge amounts of cameras, for example use separate VLAN for up to 2000 cameras so that not more than 2000 cameras are located in one subnet. Have a specialist available.
☐	Get all information about network infrastructure and system design.
☐	Make sure how to handle redundancy solutions. Have a specialist available if necessary.
☐	Collect all logon credentials for PCs and other devices belonging to the system.
☐	Be prepared for a possible failure of devices. Prepare a backup plan if possible.
☐	Discuss the required downtimes with the customer. The times for the different steps are mentioned below. The downtime for the individual recordings should not be longer than the time for the encoder's firmware upgrade.
☐	Check deviations from the standard software (e.g. dome driver protocols) and have them at hand. Check if these are compatible with the new version.
☐	Make sure that all Operator Clients and Configuration Client have been logged on to the Management Server at least once. This is required for an Auto Deployment of the SW for the clients. During Setup, Configuration Client must be closed.
☐	Be sure to have the latest firmware available for all IP devices.
☐	Backup all individual configurations and important logbooks. (e.g. elements.bvms). Do not delete logbook files (BVMSLogbbok.mdf, BVMSLogbook.ldf). **Note:** The encoder's IVA / Motion+ settings remain untouched.
☐	Check if there are other individual settings (e.g. Time Server) in the Bosch VMS CentralServer.exe.config and note them (do not reuse the file after upgrade!)
☐	Check the multicast settings of all devices. The multicast settings will be lost after the firmware upgrade (if you come from a firmware < 4.0) and have to be reconfigured.

☐	Check if an external SQL server is installed and connected. The database is also updated on an external SQL server.
☐	Make sure that the host name of the Management Server was not changed since the first installation. Otherwise the SQLDB migration for the logbook will fail. If the host name of the Management Server has changed, change the following registry key: [HKEY_LOCAL_MACHINE\SOFTWARE\BVMS\Installer\SelectedValues]"LOGBOOKDB_SERVER"= "<hostname>\BVMS" Replace <hostname> with your current hostname of the SQL server or (local) if you run the default local SQL Server.
☐	Check if panoramic cameras are configured in Client Dewarping mode and not in Edge Dewarping mode.

3 Upgrading Bosch VMS

Upgrading Bosch VMS consists of the following steps:

3.1 Password security

If in your previous Bosch VMS version the password length for a user was configured to be >0, the **Strong password policy** option is automatically enabled for this user after the upgrade.

3.2 Compatibility Mode

As of Bosch VMS 6.0 you can upgrade using 2 different ways when your system consists of multiple servers and workstations:

– Upgrade your Bosch VMS Management Server computer first to allow Offline Client Operation (available since Bosch VMS 3.0) and make use of No-Touch-Deployment for the workstations.
– Upgrade your workstations first to allow continued monitoring in compatibility mode with Bosch VMS 5.5 servers or later

When you plan to update all workstations and servers, but are not able to do this at once, following sequence is recommended:

1. Workstations without alarm management operation (Compatibility Mode).
2. Server together with workstations for alarm management via No-Touch-Deployment.

When you connect to different Bosch VMS Management Server computers with the same workstation, please update not only Operator Client, but also Management Server, where alarm management is needed.

3.3 Upgrading Bosch VMS features

You upgrade the following features according to the existing deployment of your system:

– Management Server
– Video Recording Manager
– Operator Client
– Configuration Client
– Video Streaming Gateway
– Cameo SDK
– Mobile Video Service

Note: Updating takes up to 30 minutes depending on the installed features.

Note: The SNMP feature support is optional and required if you like to monitor network devices via SNMP.

The feature can also be independently installed later in the **Windows Components Settings** if required.

As of Bosch VMS 5.5.0, a Compatibility Mode is introduced.

Follow this update sequence to support Compatibility Mode:

Follow this sequence of the upgrade process to support the Compatibility Mode:

– First upgrade Operator Client workstations without alarm handling.
– Then update Operator Client workstations with alarm handling.
– Then update Management Server and Configuration Client and other components.

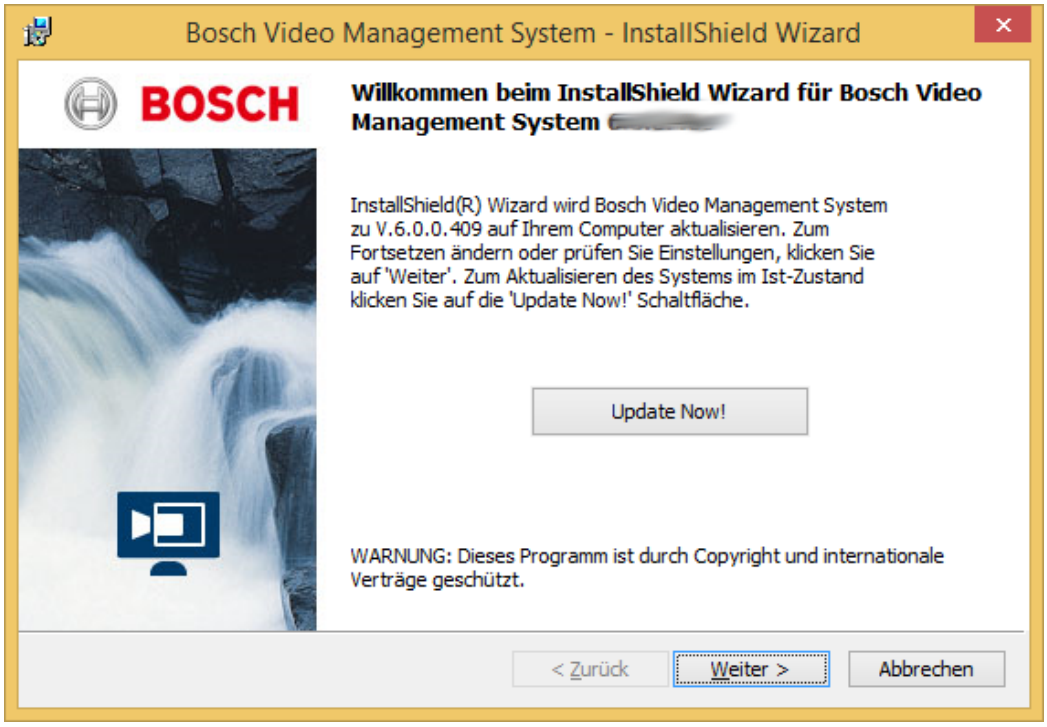
Note: Exit Configuration Client and Operator Client on all affected computers before you start the upgrade process. In some case, especially when the system load is high, we recommend stopping the Central Server service before starting setup.

Documentation and software for Bosch Security Systems products can be found in the online product catalogue as follows:

- Open any browser > enter www.boschsecurity.com > select your region and your country > start a search for your product > select the product in the search results to show the existing files.

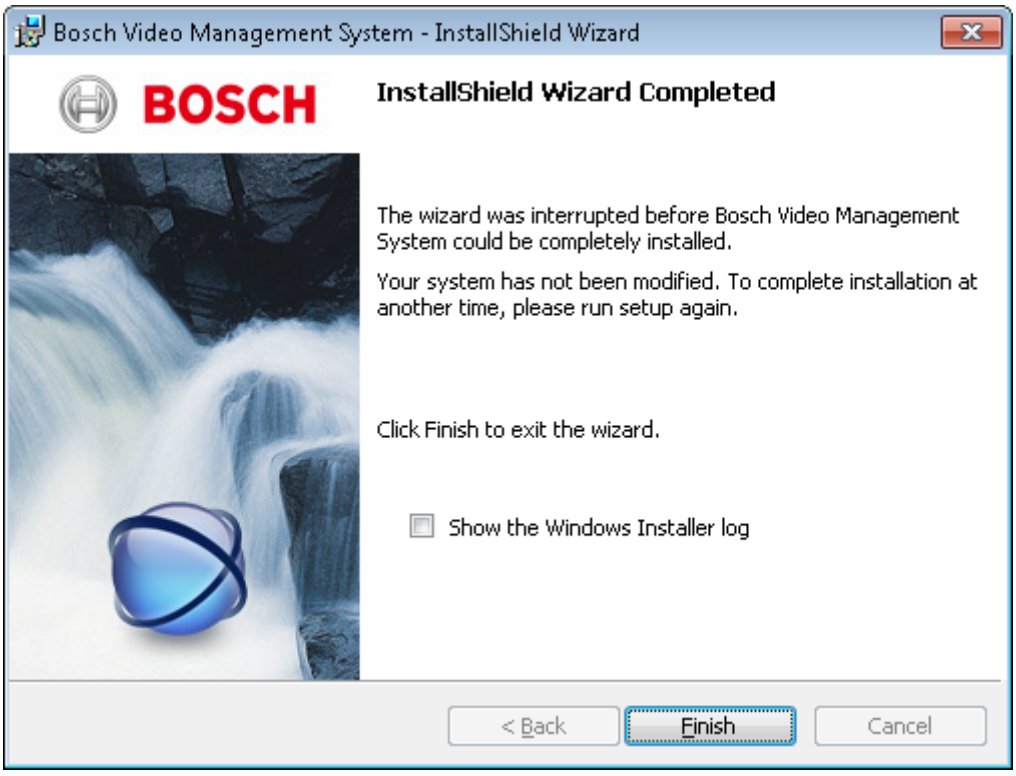
To perform Setup:

1. Download the current Setup from the Product Catalog.
   Note: The Setup for DIVAR IP devices is only available on the corresponding DIVAR IP product pages.
2. Close all programs before starting the setup program.
3. Double-click Setup.exe.
   Setup is started and is preparing the installation.
4. After a few minutes the **Welcome** dialog box of the Setup Wizard is displayed.



This dialog box only appears when you perform an upgrade installation. On a computer without Bosch VMS installation the dialog box for selecting the desired Bosch VMS components appears.

5. Click **Update Now!** to upgrade existing features of Bosch VMS or click **Next >** to change and upgrade Bosch VMS features.
   Wait until the final dialog box of the wizard is displayed.



6. Click **Finish**.
   After the upgrade installation is finished, click **Yes** to restart the computer.

3.4 Upgrading Operator Client and Configuration Client

Note: This task takes approximately 10 minutes per client.
The Clients are upgraded by No Touch Deployment. As soon as the program starts, the program compares the installed version with the version of its last server connection. The upgrade starts automatically.
No Touch Deployment only works on computers where Configuration Client and Operator Client are installed but no other Bosch VMS components.

Note:
To run the No Touch Deployment, log on as an administrator.
The No Touch Deployment updates both Operator Client and Configuration Client simultaneously if both are installed.
The following registry key of an Operator Client computer shows the IP address of the last connected Management Server computer:
\HKEY_CURRENT_USER\Software\Bosch Sicherheitssysteme GmbH\LastConnection

3.5 Upgrading encoder / decoder firmware

Notice!
Ensure that the firmware of your 3rd party cameras that are connected to your Bosch VMS, is on the latest compatible version.

Note: This task takes approximately 5 minutes per device.
When updating devices in parallel, the time might increase depending on the network speed.
The firmware upgrades are performed with the Bosch VMS Configuration Client in the **IP Device Configuration** dialog.
Note:
The devices must be authenticated.
The following steps describe the upgrade using Bosch VMS Configuration Client.

1. On the **Hardware** menu, click **IP Device Configuration...**.
2. Select one or more devices with left clicking on the grid. For a multi-select operation please hold the left mouse button and move the arrow down on the grid. You can also hold down the CTRL key while you click other devices that you want to select. The selected rows are highlighted in blue.
   Note: We do not recommend selecting more than 20 devices per batch upgrade.
3. Click **Update Firmware...**.

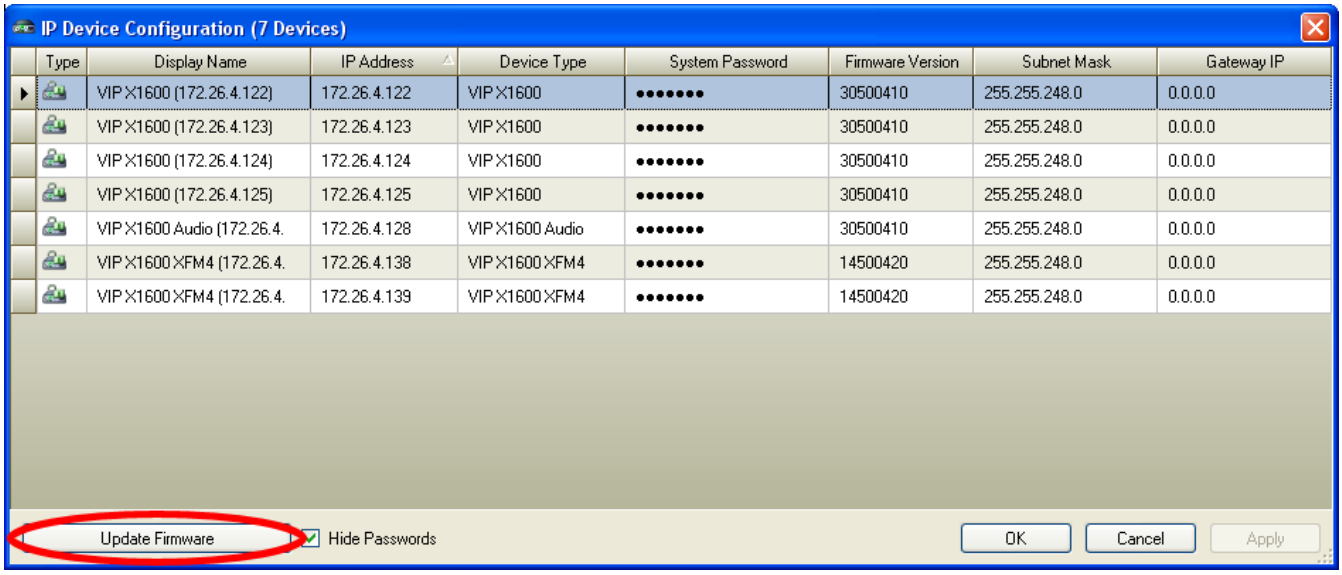


Figure 3.1: Firmware upgrade in Bosch VMS Configuration Client

Note:
The selected devices shall be of the same device type. Otherwise the devices may not be updated correctly!
Multiple devices of the same type can be selected for a parallel upgrade. The upgrade speed depends on the network infrastructure.
The **Open** dialog box is displayed.

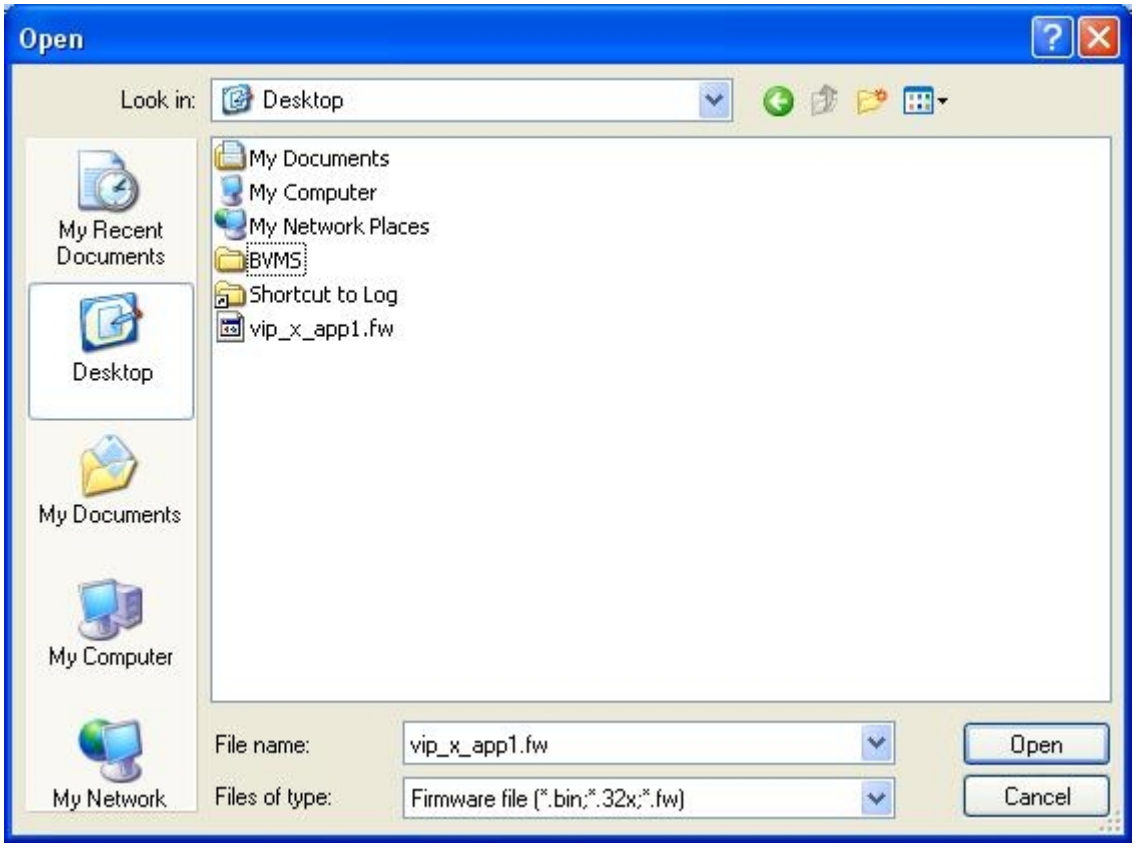


Figure 3.2: Browse for the Firmware File

1. Select the appropriate firmware, and then click **Open**.
   The **Firmware upload status** dialog box is displayed.

2. Click **Start**.
   Wait until the firmware upload of all devices is finished and the automatic reset of the updated devices is done. After that the status **Available** is displayed in the **Status** column. Then click **Close**.

Note:
In some cases the device status update in the Bosch VMS Logical Tree might not be working correctly for Operator Client.
In this case perform a configuration change from within Configuration Client.
If you come from a firmware earlier than 4.0, check the following settings on your encoders:
– Multicast settings
– Reference image
A manual reset of your encoder might be necessary.

3.6 Upgrading BIS-Bosch VMS connectivity

When using a BIS-Bosch VMS connection, the installation routine will reset the credentials for the authentication.
Make sure that user and password is restored in the file Bosch.Vms.BISProxy.dll.config in the Management Server's %appdata% directory.
Run

```
…\<Program directory>\Bosch\VMS\bin\BoschVMSProxyFileInstaller.exe
```

The following files are copied into the Global Assembly Cache (GAC):
– `Bosch.Vms.Core.FeatureSupportInterface.dll`

– Bosch.Vms.Core.IUserAuthenticationService.dll

You can check the GAC in C:\Windows\Microsoft.NET\assembly\GAC_32

3.7 Finalizing and confirming the upgrade

We recommend performing the following tasks after the upgrade:

☐	Ensure that all workstations (Operator Client) with alarm handling are updated.
☐	Adjust time server settings (protocol, IP address), if required. Bosch VMS 6.0 supports SNTP.
☐	Check that all workstations with alarm handling are upgraded because newer software versions connected in Compatibility Mode to the Management Server offer only video monitoring.
☐	Check correct time synchronization on all devices. Check time zone settings if required.
☐	Check reference images on encoders.
☐	Reinstall special protocols if required.
☐	Check recording status.
☐	Check playback.
☐	Check live images.
☐	Check IntuiKey keyboards and AMGs. Can you log on and control?
☐	Check IVA settings and alarms.
☐	Check multicast settings and confirm the correct function.
☐	Check Logbook.
☐	Check alarms.
☐	Check Favorites, Bookmarks and user preferences.
☐	Check operation of inputs (Compatibility Mode).
☐	Check recording preferences settings of encoders.
☐	Check SNMP traps.
☐	Check custom scripts.
☐	Check and adjust the load balancing settings of the iSCSI disk arrays.
☐	Optionally check the BIS-Bosch VMS connection.

4 Upgrading Bosch VMS SDK

This chapter provides information on upgrading Bosch VMS SDK. Note the differences between upgrading version 2.0.1 to v. 2.0.3, from 2.0.3 or later to v. 2.3.0 and from v. 2.3.0 or later to the latest version.

4.1 Upgrade from v.2.0.1 to v.2.0.3

Update the Bosch.Vms.SDK.dll on the computer where Bosch VMS SDK is used. This may require re-linking or re-building your application. If you used this assembly in the Global Assembly Cache (GAC), update the GAC as well.
A new assembly, Bosch.Vms.Core.IUserAuthenticationService.dll, is required.
A new event is available, informing you about a lost connection to the Bosch VMS Management Server or an Operator Client workstation.

Bosch VMS 2.0.1	**Bosch VMS 2.0.3**
Required DLLs on SDK client computer: – Bosch.Vms.SDK.dll version 1.2 – Bosch.Vms.Shared.Infrastructure.RemoteServiceAccess.dll – GenuineChannels.dll – ICSharpCode.SharpZipLib.dll – n/a	Required DLLs on SDK client computer: – Bosch.Vms.SDK.dll version 1.3 (requires re-binding, since new version) – Bosch.Vms.Shared.Infrastructure.RemoteServiceAccess.dll – GenuineChannels.dll – ICSharpCode.SharpZipLib.dll – Bosch.Vms.Core.IUserAuthenticationService.dll
Class RemoteServerApi n/a	Class RemoteServerApi New event ConnectionLostEvent

4.2 Upgrade from v.2.0.3 or later to v.2.3.0

Update the Bosch.Vms.SDK.dll on the computer where Bosch VMS SDK is used. This may require re-linking or re-building your application. If you used this assembly in the Global Assembly Cache (GAC), update the GAC as well.
For other changes please refer to the table below.

Bosch VMS 2.3.0
Required DLLs on SDK client computer: – Bosch.Vms.SDK.dll version 1.5 (requires re-compiling, since new version) – Bosch.VMS.Shared.Infrastructure.RemoteServiceAccess.dll – Bosch.VMS.Core.IUserAuthenticationService.dll – GenuineChannnels.dll – CSharpCode.SharpZipLib.dll

Bosch VMS 2.3.0
– Updated version of Bosch VMS SDK assemblies to 1.5.0.0 – CameraManager.ExportAsf() now considers the Export-Quality. – ContentManager.GetGranularity() was not clearly defined before. It now returns the position of the granularity slider in the Operator Client user interface. The granularity slider determines the vertical numbers of Image panes displayed in the Image window. Depending on the monitor resolution, a different number of Image panes are displayed. Hence, it is not safe to determine the number of Image panes displayed per monitor using the method. – Target platform of Bosch VMS SDK assembly is set to "x86". 64-bit application development using Bosch VMS SDK was not supported before, and is not supported with Bosch VMS 2.3. – The internal methods, which were not for general use: CameraManager.StartRecordingInManualMode(), CameraManager.StartRecordingInAlarmMode(), CameraManager.FindRecordingById(), are now additionally marked as obsolete.

4.3 Upgrade from v.2.3.0 or later to v.4.5

Update the Bosch.Vms.SDK.dll on the computer where Bosch VMS SDK is used. This may require re-linking or re-building your application. If you used this assembly in the Global Assembly Cache (GAC), update the GAC as well.
For changes in the Bosch VMS SDK refer to the Release Notes.

Bosch VMS 4.5
Required DLLs on SDK client computer: – Bosch.Vms.SDK.dll version 1.9.0.0 (requires re-compiling, since new version) – Bosch.VMS.Shared.Infrastructure.RemoteServiceAccess.dll – Bosch.VMS.Core.IUserAuthenticationService.dll – GenuineChannnels.dll – CSharpCode.SharpZipLib.dll – Bosch.VMS.SDK.Enterprise.dll (required for clients in an Enterprise System)
As of Bosch VMS 3.0: No ClientEventReceiver anymore
– Updated version of Bosch VMS SDK assemblies to 1.9.0.0 – New Class SystemTimeManager – Change of SDK user permissions: Non-Admin user now only has restricted access according to his configured permissions. – GetInitialStates method now filters by devices

4.4 Upgrade from v.2.3.0 or later (until v.4.0.1) to v.5.0

For changes in the Bosch VMS SDK refer to the Release Notes.

Bosch VMS 5.0
Required DLLs on SDK client computer: – Bosch.Vms.SDK.dll version 1.9.0.0 (requires re-compiling, since new version) – GenuineChannnels.dll – Bosch.VMS.SDK.Enterprise.dll (required for clients in an Enterprise System)

4.4.1 Upgrade from v.4.5 to v.5.0

You do not have to change anything in your SDK application. If you want to use new functionality, you must recompile.

4.5 Upgrade from v.2.3.0 or later (until v.4.0.1) to v.5.5

For changes in the Bosch VMS SDK refer to the Release Notes.

Bosch VMS 5.5
Required DLLs on SDK client computer: – Bosch.Vms.SDK.dll version 1.9.0.0 (requires re-compiling, since new version) – GenuineChannnels.dll – Bosch.VMS.SDK.Enterprise.dll (required for Clients in an Enterprise System)

4.5.1 Upgrade from v.4.5 to v.5.5

You do not have to change anything in your SDK application. If you want to use new functionality, you must recompile.

4.6 Upgrade from v.2.3.0 or later (until v.4.0.1) to v.5.5.5

For changes in the Bosch VMS SDK refer to the Release Notes.

Bosch VMS 5.5
Required DLLs on SDK client computer: – Bosch.Vms.SDK.dll version 1.9.0.0 (requires re-compiling, since new version) – GenuineChannnels.dll – Bosch.VMS.SDK.Enterprise.dll (required for Clients in an Enterprise System)

4.6.1 Upgrade from v.4.5 to v.5.5.5

You do not have to change anything in your SDK application. If you want to use new functionality, you must recompile.

4.6.2 Upgrade from v.4.5 to v.6.0

You do not have to change anything in your SDK application. If you want to use new functionality, you must recompile.

5 Troubleshooting

If you import a configuration file with an earlier version in Bosch VMS with the current version, you must activate the new configuration and restart the Bosch VMS Central Server service. Otherwise new Bosch VMS events that were added since that earlier version are not available.

5.1 Setup

During Setup an error message can be displayed with the message text cut:

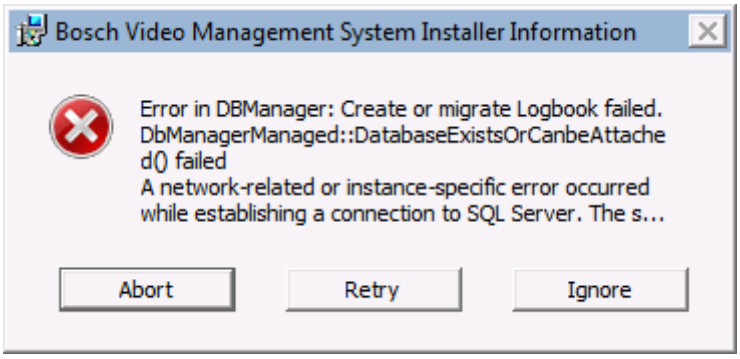


Figure 5.3: db_migrator_error

Perform one of the following steps to solve the issue:

- Click **Retry** to retry the migration of your Logbook database after addressing possible causes.

or

- Press **Ignore** to continue the Setup without migrating your logbook.

or

- If your logbook fails because it was not migrated, you can restart Setup later in **Repair** mode to repeat the migration.

or

- Press **Cancel** to abort the Bosch VMS installation.

You can restart Setup later. Your current Logbook and custom data is retained.

5.2 System services

If after installation and restart, in the logon dialog the Management Server is not displayed as online:

- Check whether the installed services are started: On the **Start** menu, click **Control Panel**, double-click **Administrative Tools**, and then double-click **Services**.

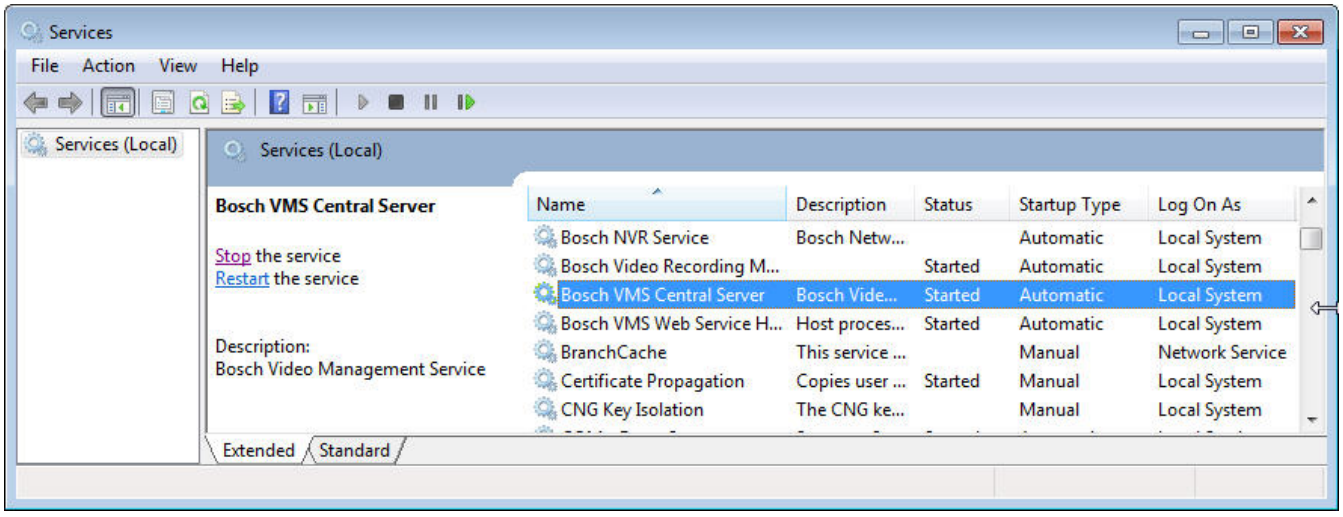


Figure 5.4: Management Server

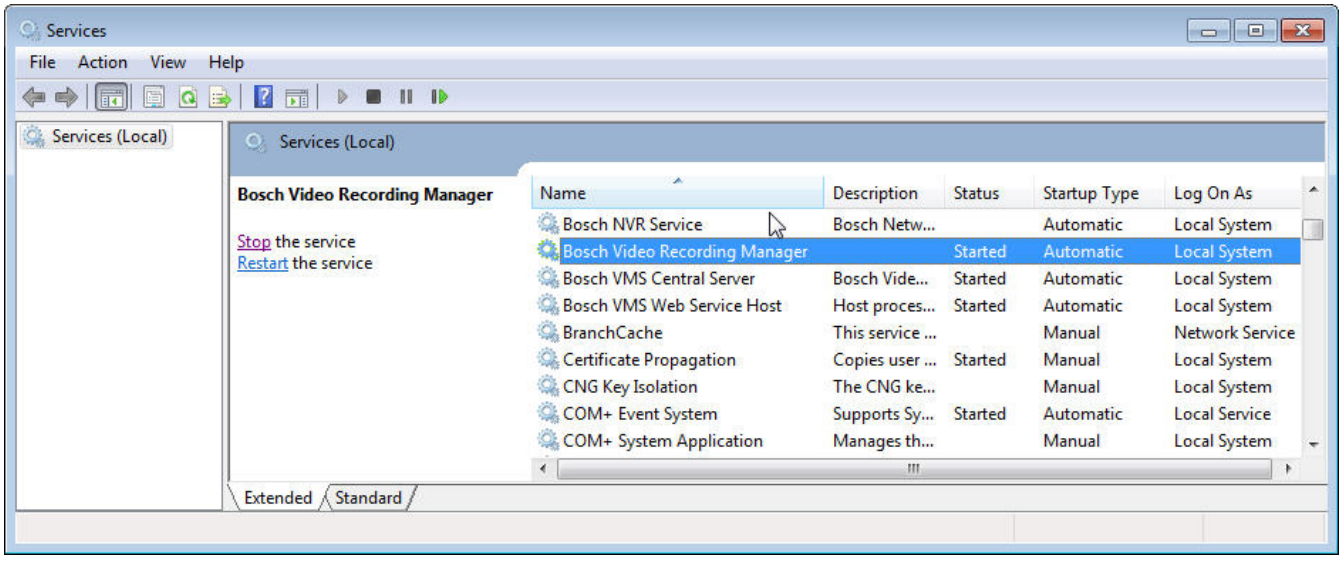


Figure 5.5: VRM Server

- Note that the Bosch VMS Web Service Host must also be started.
  Only for Management Server and NVR Server: If the service is not listed, start the command prompt, run <Install Directory>\bin\serviceinstaller.exe.
  If installation fails, see the logfile: bvms.log
  Client-Server certificates are installed that are also used by Mobile Video Service.

5.3 Compatibility mode

If you have compatibility issues with an updated Operator Client workstation connected to a previous version of Management Server, upgrade the entire system with the new version.

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