Mirasys VMS Installation Guide V9

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1. Mirasys VMS Installation Guide V9

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This guide gives basic information about the Mirasys VMS installation

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1.1. About the System

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What is Mirasys Software

Mirasys software is a distributed, digital video management system (VMS or DVMS) for video and audio surveillance applications.

The software can be used for monitoring real-time and recorded video, audio and text data, and to control PTZ cameras, I/O devices and IP cameras.

The software supports systems consisting of both analogue and/or digital surveillance cameras, supporting the creation of analogue, digital or hybrid (consisting of both analogue and digital) surveillance systems.

A centralized surveillance system domain can consist of a network of up to 150 local or remote VMS Servers.

Mirasys software is sold both separately and as part of Mirasys video management systems consisting of both the software and the VMS Server hardware.

Please contact your Mirasys supplier for information on Mirasys software or hardware.

What Does a System Contain?

The Mirasys system consists of these components:

1-150 VMS Servers

-
  - o **Master Server** (dedicated server – recommended -, one of the video recording VMS Servers, or the only server in a single-server, non-networked environment)
  - o **VMS Server** ("nodes," if the system consists of multiple servers)

Client programs:

-
  - o Mirasys VMS System Manager
  - o Mirasys VMS Spotter for Windows
  - o Mirasys VMS Spotter Mobile
  - o Mirasys VMS WebClient

VMS Servers

The VMS servers record video and audio from multiple cameras and audio channels and write the data on hard disks.

You can access a VMS Server locally or over a network by using the System Manager and Spotter programs, and monitor server functionality through the Spotter Diagnostics plugin.

A server contains the computer with storage, the Windows operating system, and the VMS software with required drivers.

In addition, you can connect these devices to a VMS Server:

- PTZ (dome) cameras and keyboards
- External devices, such as sensors, to the digital inputs
- External devices, such as doors, lights, and gates, connected to digital outputs
- Monitors
- Printers
- Backup unit (NAS, SAN, or RAID, for example)

Master Server

In a networked system, one of the servers must be set as the Master Server. A Master Server is the central server of a surveillance system.

All other VMS Servers connect to it, and all client applications communicate through the Master Server.

If the system contains only one server, then that server is the Master Server.

If there is more than one server, the Master Server can be set freely. In a larger system, it is recommended that the Master Server is a dedicated server for this purpose alone.

NOTE: *Master Servers must have SQL Server Express 2014 or another Microsoft SQL Server 2014 installed.*

The Master Server does these things:

- It verifies the identity of all programs and users who try to log on to the system (authentication).
- It stores all system configuration data.
- It stores all user data.
- It monitors the system.
- It synchronizes the clocks on all servers.
- It generates reports.
- It stores watchdog events.

- It stores alarms.
- It stores audit trails.

Client Programs

System administrators use the **System Manager** program for these tasks:

- Configuring the servers.
- Adding user accounts and user profiles.
- Monitoring the system.

End-users use the **Spotter** program, for example, for these tasks:

- Monitor real-time and recorded video and audio
- Control digital I/O switches and PTZ cameras
- Export video and audio clips to local media
- Receive and handle alarm notifications
- Create video matrixes via the optional, separately sold Agile Video Matrix (AVM) software
- Control automatic license plate recognition systems via the optional, separately sold ANPR+ software

Starting from Version 8 onwards, the Mirasys VMS software is available only as a 64-bit ("x64") version.
Note that mixed 32-bit and 64-bit systems need more care and expertise for the installation, upgrading and management of the system.
Analog video compression (capture) cards are not supported on the 64-bit Mirasys VMS.

Mirasys 32-bit vs. 64-bit Versions

Managing an Environment With 64-bit Versions of Mirasys VMS

In a networked, multi-server Mirasys VMS system, the server with the Master Server role can simultaneously connect to and manage both 32-bit and 64-bit VMS Servers (also known as "slaves") on the network:

- The 64-bit Master Server supports simultaneously both 32-bit as well as 64-bit VMS Servers.
- A Version 8. x based Master Server supports simultaneously Version 8. x, Version 7. x and Version 6. x VMS Servers, but does not support servers based on Version 5. x, or earlier.

Version 8 supports clients to connect to 32bit and 64-bit server versions. It is recommended to reinstall the clients with the version 8 installer to get the latest application updater (VAU).

Server upgrading considerations

When using the System Manager application's "Update servers" -feature to update the VMS Servers in the system, all or the selected VMS Servers you choose to update will update to the version you choose (which installation file you provide).
In a mixed environment with both 32-bit and 64-bit servers, be careful that you know which servers are to be upgraded to which version, 32-bit or 64-bit!
The 64-bit versions will not work at all on, so-called, hybrid servers with internal analogue video capture cards (also known as compression cards or grabber cards). The system manager shows the 32 bit or 64-bit version information in the "Version" table.
All new IP cameras, encoders (video servers) or other drivers are also available as separate 32-bit and 64-bit versions.
When installing a new driver or updating an existing driver, you must use a 32-bit driver package on a 32-bit server and a 64-bit driver package on a 64-bit server.

Note also that all servers with the Master Server role, as well as all VMS Servers with Mirasys VCA require Microsoft SQL Server Express 2014 to be installed on the server before installing Mirasys VMS.

1.2. System Requirements

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The Mirasys VMS (Video Management System) software is a flexible and scalable network video recording software that consists of Mirasys server software and client application software.

The server and client software can be installed on any standard PC platform that fulfils the hardware and operating system (OS) requirements.

Servers may also be virtualized using, e.g., Microsoft Hyper-V or VMWare.

Mirasys VMS is delivered either in **pre-assembled servers** or as **software-only**, in which case the distributor/reseller, an integrator/installer or the end-customer installs the software on a PC.

The performance of a Mirasys VMS solution depends on several factors such as processor type and speed, available memory, and network bandwidth.

The requirements below define the minimum requirements for running Mirasys VMS software with IP surveillance cameras.

The examples presented in this document should only be used as a base guideline when planning to set up a system.

For a detailed calculation of system performance and storage capacity requirements, please refer to your Mirasys sales contact or an authorized distributor/reseller.

Please note also that the performance and functionality of a VMS system's server or client software are guaranteed only when it runs as the sole application on the PC platform.

No other software applications – with the exception of dedicated server software such as Mirasys ANPR+ (Automatic Number Plate Recognition), Mirasys Reporting+, Mirasys VCA (Video Content Analytics), or Microsoft SQL Server when required – should be installed on the computer on which the Mirasys VMS server or client applications are executed.

It is also recommended that server and client software should be used on separate computers.

Minimum Server Requirements

The servers require this minimum (small) system configuration:

Hardware:

- Intel Core i3, or better

- 8 GB of RAM recommended
- Min. 1 TB HDD
- Min 100 GB C: drive space

In a basic configuration, one hard disk may be enough, but for secure multi-disk recording (modified RAID 0), at least two disk units are required.
A separate disk for the operating system and application software is also recommended.
The use of 24/7 optimized HDDs is highly recommended.

NOTE: *The VMS software reserves by default 90% of available disk space on other drives than the C-drive for storage use.*

It does not use the C-drive for storage, except when it is the only drive.
Display adapter with at least 128 MB memory (a dual-head display adapter is optional).
Please note that display adapter performance can vary greatly depending on the adapter and the bus architecture used to connect the adapter to the motherboard.
Two 1 Gbps (separate network connections for the camera network and the system network, see the Mirasys VMS Networking White Paper for further information).

Minimum Client Workstation Requirements

These are the minimum requirements for Mirasys VMS client applications (such as Spotter for Windows or the System Manager).
The following hardware specification should be viewed only as of the minimum requirements for a small-scale surveillance system.

- Intel Core i3, or better (when using H.264 cameras in the system, quad-core processors are recommended).
  The recommended processor allows simultaneous viewing of more than 10 cameras at a higher resolution than VGA (640×480).
- Min. 8 GB RAM recommended
- Min. 20 GB of free disk space
- Display adapter with at least 512 MB of memory. Video adapter memory amount and performance will impact capacity to display simultaneous recorded or live camera streams.
- Please note that display adapter performance can vary greatly depending on the adapter and the bus architecture used to connect the adapter to the motherboard.

Windows OS Compatibility

Mirasys VMS V9.4 supports the following operating systems:

Operating System	Server with analogue camera support via capture cards	Server with only IP cameras or connected video servers (encoders)	Gateway server	System Manager client application	Spotter for Windows client application
Windows 2012 Server Standard Edition	-	X	X	X	-
Windows 2012 Server R2	-	X	X	X	X
Windows 10	-	X	X	X	X
Windows 11		X	X	X	X
Windows Server 2016	-	X	X	X	X
Windows Server 2019		X	X	X	X

NOTES:

- Mirasys VMS has not supported Windows XP since Mirasys VMS version 6.4. If Windows XP support is required, do not install Mirasys VMS 6.4, or any later releases.
- Make sure that the "Desktop Experience" feature is activated for Windows server operating systems.
- *No releases before Mirasys VMS V7.4 has support for Windows 10. Any older versions (V7.3 or older), if used with Windows 10, must be upgraded to the latest V7.4 release or later versions.*

Network Requirements

These network requirements apply to systems where users access the servers over a network.

General

A 1 Gbps Ethernet is required on both the client and the server-side.
Data can be transmitted over the Internet, Intranet, LAN, WAN, WLAN, ISDN, ADSL, or any other network using TCP/IP.
For best performance, the camera network should be closed to other network traffic and kept separate from the system network used for server-server or server-client communication.
It is heavily recommended to have at least two 1 Gbps network adapters for each server: at least one adapter for the camera feeds and one adapter for server-client and server-server communications.
In the case of large systems with multiple high resolution and high frame rate cameras, separating specific camera sets into their own networks (and adding network adapters to servers) can be recommended.
However, this is done case-by-case and requires specific calculations on network load.
PTZ (Pan-Tilt-Zoom) control requires a low latency in the network to make dome control as responsive as possible.

Network Card Settings

Network card setting requirements:

- Interrupt Moderation Rate --> Extreme
- Receive Buffers/Receive Descriptors --> 2048
- Transmit Buffers/Transmit Descriptors --> 2048

If the network card cannot be adjusted to these settings, replace the card.

IP Addresses

The servers must have static IP addresses so that the client programs can connect to them.
The Agile Virtual Matrix (AVM) Display Servers should also have either static addresses or names.
The AVM operator console connection to the display servers is made either with an IP address or computer name.

You can use some NAT solutions with the system but not all:

- Static network address translation (NAT) can be used between the servers and the client programs.
- Dynamic NAT cannot be used because the IP addresses can change.
- Single-address NAT works if there is only one server in the NAT system. It does not work if there is more than one server in the same system.

Ports

Port	Protocol	Service	Direction
5008	TCP	SMServer	OUT
5009	TCP	DVRServer	OUT
5010	TCP	WDServer	OUT
5011	TCP	DVRServer	OUT
8081	TCP	SMServer	OUT
8082	TCP	SMServer	OUT
8083	TCP	DVRServer	OUT
3556-4556	UDP	DVRServer	IN
554	RTSP	DVRServer	IN

8086 & 8087	TCP	Storage Locker service	IN

Note: *If you are using Windows Firewall, the VMS installer can automatically create exceptions for the required ports.*

Note: *Automatic port forwarding can configure the ports to be different than these default ones.*

Bandwidth Requirements

The bandwidth requirements for the network between the servers and client programs depend on a number of factors.

Here are a few aspects to think about:

- Data transmission from the servers to the client computers (uplink) requires more bandwidth than data transmission from the client computers to the server (downlink).
  - The connection does not have to be symmetric.
- Real-time monitoring requires more bandwidth than transmitting recorded video or audio.
- In addition, signalling and protocols increase the required bandwidth.

Data Security

The system uses a data protection mechanism and user authentication.
However, using public networks always includes a security risk because there are no completely secure systems available on the Internet.
For this reason, dedicated networks should be used whenever possible to prevent unauthorized access to the system.
Consider using a Virtual Private Network (VPN) to create a secure connection between computers on a public network.
Antivirus programs should also be used if the system units are on a public network (intranet).

1.3. Server Installation

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This chapter shows how to install the Mirasys VMS software on a computer that has not already a previous version installed.

To set up the server:

- Connect the display, mouse, and keyboard to the computer.
- Connect the network cable to the computer (for network use).
- Connect all power cords and turn on the power.
- If your system has analogue cameras, connect the cameras to the encoder, and treat the encoder as an IP camera.
- Install the server software. Please see the [Installing The Software](#) for information on installing the required software.
- Install IP cameras and other devices. Please see [Installing Devices](#) for further information.
- Install the client applications. Please see [Installing Client Programs](#) for further information.
- If your system will use WebClient or Spotter Mobile applications, you will need to install the Mirasys Gateway server. For further information, please see [Mirasys Gateway Server Installation](#).
- For advanced users only: if your system contains VCA components, install and configure the required software.

To update recording software and client applications:

Please see the [Updating](#) for information on updating server or client software.

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1.4. Failover Servers - Optional

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Mirasys VMS supports failover video recording servers.

Failover servers are VMS Servers that are on a passive standby until the system recognizes that one of the active video recording VMS Servers has broken down; at this point, a failover server takes the place of the broken server.

The broken server can be repaired and replaced as a new failover server, while the failover server that took its place can continue operating as an active server.
For details, see the *Mirasys VMS Administrator Guide*.

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1.5. Installing The Software

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During the server software installation, the installer designates the material disks used to store the recorded data.
Effectually, the server installer scans the locally available HDDs and grabs any sufficiently large drive automatically for material storage purposes.
The operating system disk is omitted.
If the automatic storage configuration does not detect a disk, the storage drives can be added later using the system manager.
If the automatic storage configuration is grabbing disks that are not intended for material storage, the automated logic can be disabled from the installer.
The HDD's don't need to be the same size in the earlier Mirasys VMS releases.
After designating the material disks, the installer appropriates all except 10 GB of it for data storage.
It is highly recommended not to use USB HDDs in the server, as they will be used as data storage disks for other HDDs.

NOTE: These instructions apply when installing software to a new server or reinstalling software to a server not provided by Mirasys.

IMPORTANT NOTE:

*Mirasys VMS will require SQL Express 2014 to be installed on the Master server.
The"full" Microsoft SQL Server 2014 works, but then the configuration has to be customized.
Mirasys l provides an installer that will install the SQL Express with correct settings as part of the VMS install.
If you are planning to use Microsoft SQL Server Standard or Enterprise, contact Mirasys support on how to configure the SQL connection string to get the database connection working correctly.*

IMPORTANT NOTE:

*Mirasys VMS is available as a **Complete** installer and an **Update** installer.*

*The **Update** installer can be used with*

- Client application installs
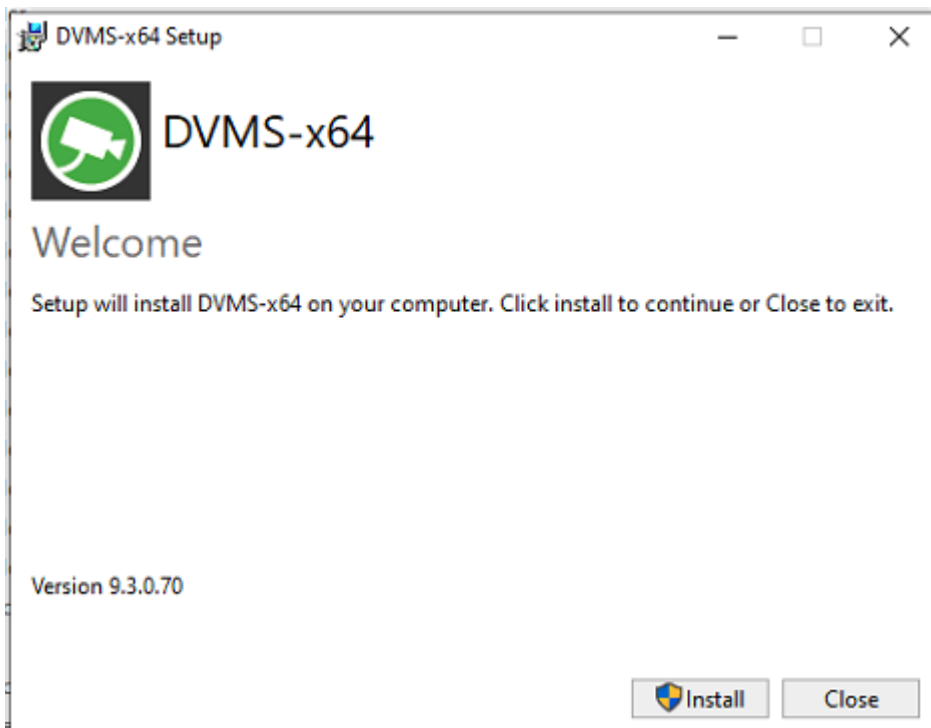- Networked VMS Server installs or upgrades when no Mirasys VCA is required

- Upgrade installs when SQL is already installed

*The **Complete** installer should be used with*

- Master Server installs
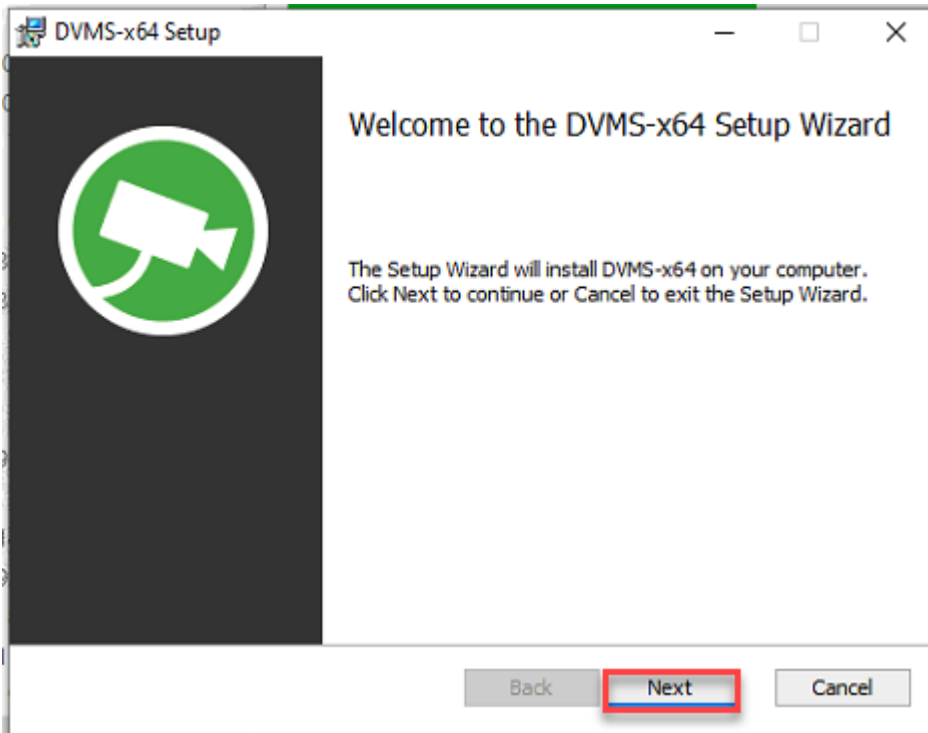- VMS Server installs when Mirasys VCA is required

Installation

1. Start the installation by clicking Complete installation package
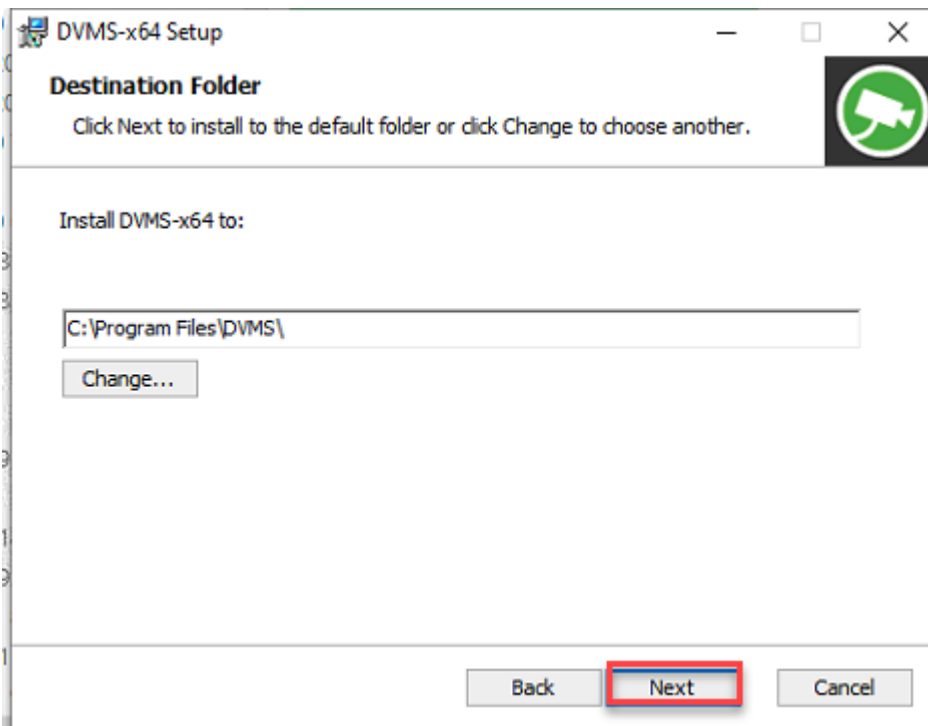2. Click **Install**
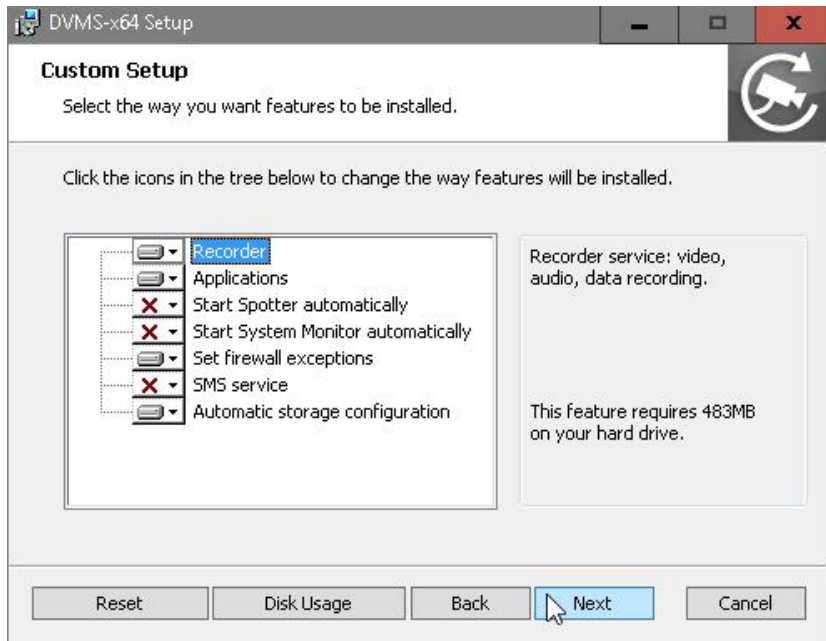

3. Click **Next**

Mirasys VMS Installation Guide V9
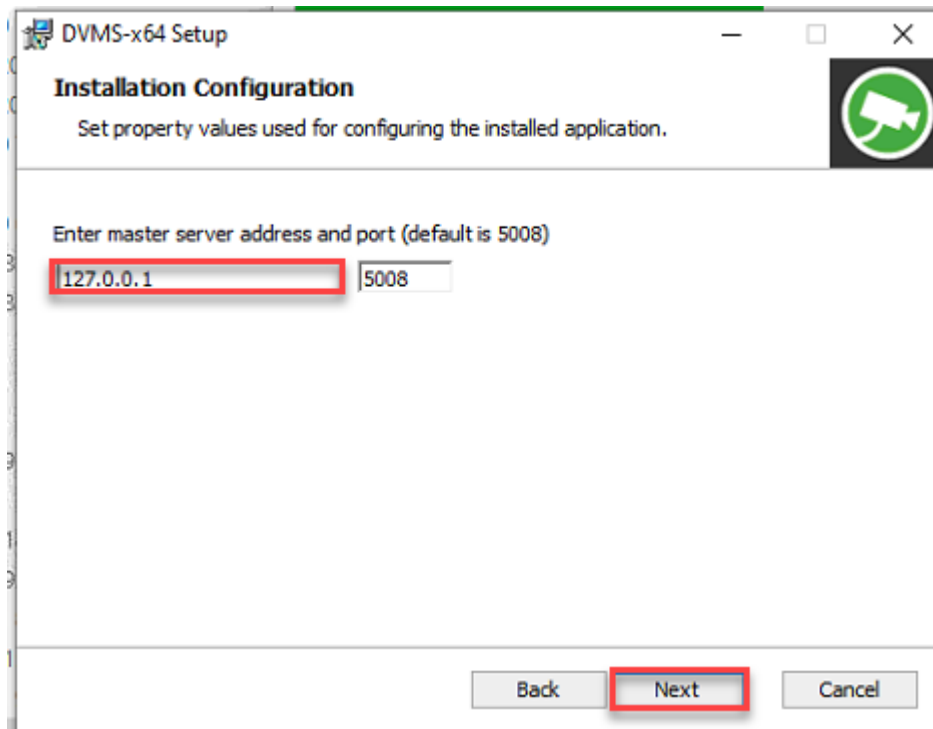

4. Use the default destination folder and click **Next**
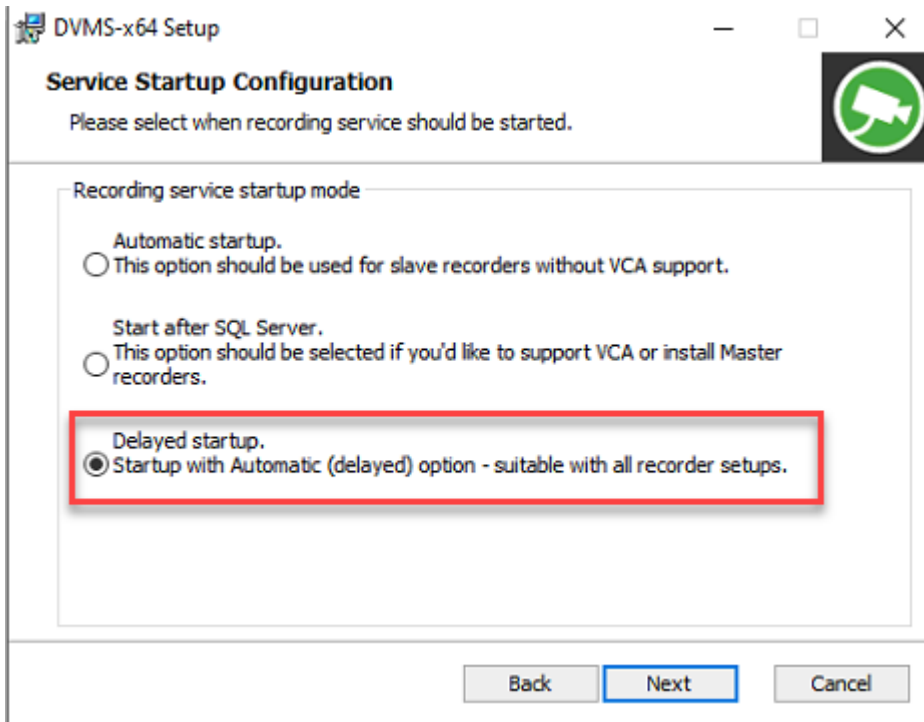

5. Use all default settings and click **Next**

7. Enter the master server address and click **Next**

8. Select Service Startup Configuration to **Delayed startup** and click **Next**

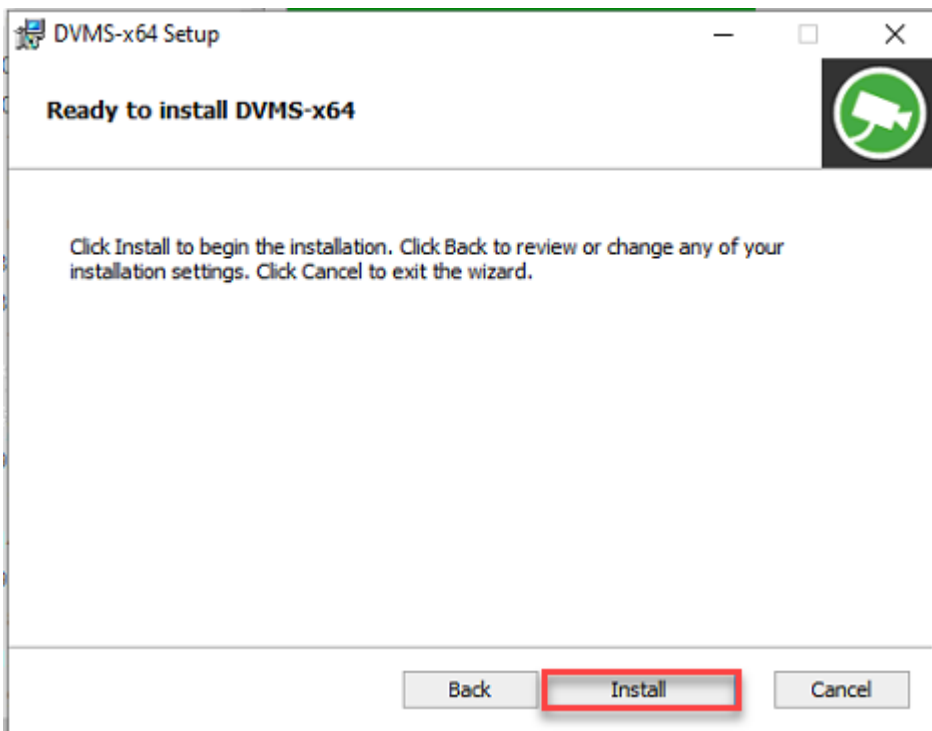9. Use default settings in Port forwarding and click **Next**
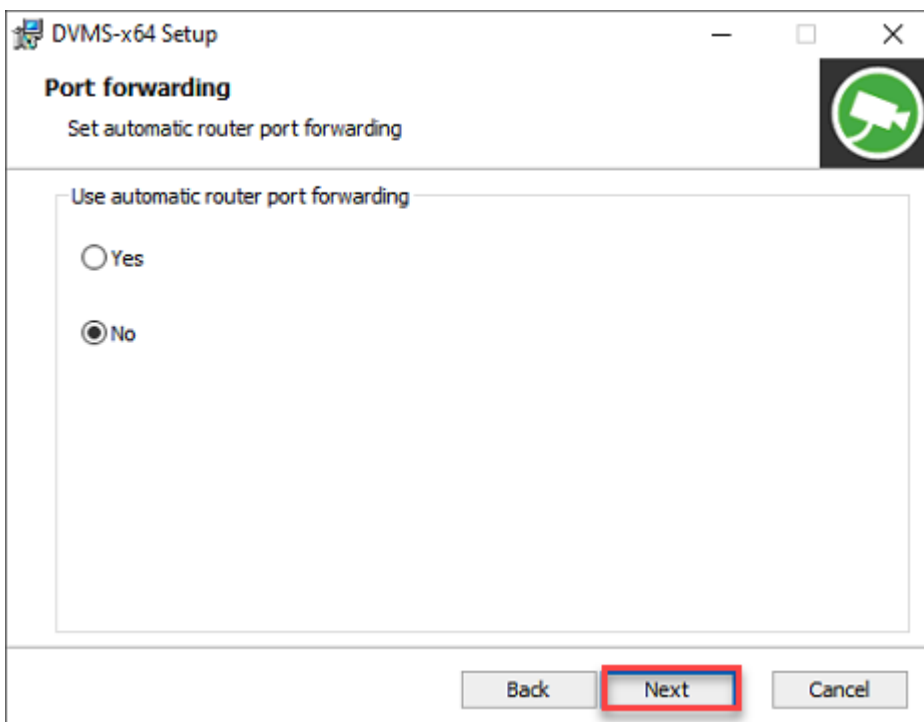
10. Select Recording mode configuration **Recording by default motion mask** and click **Next**
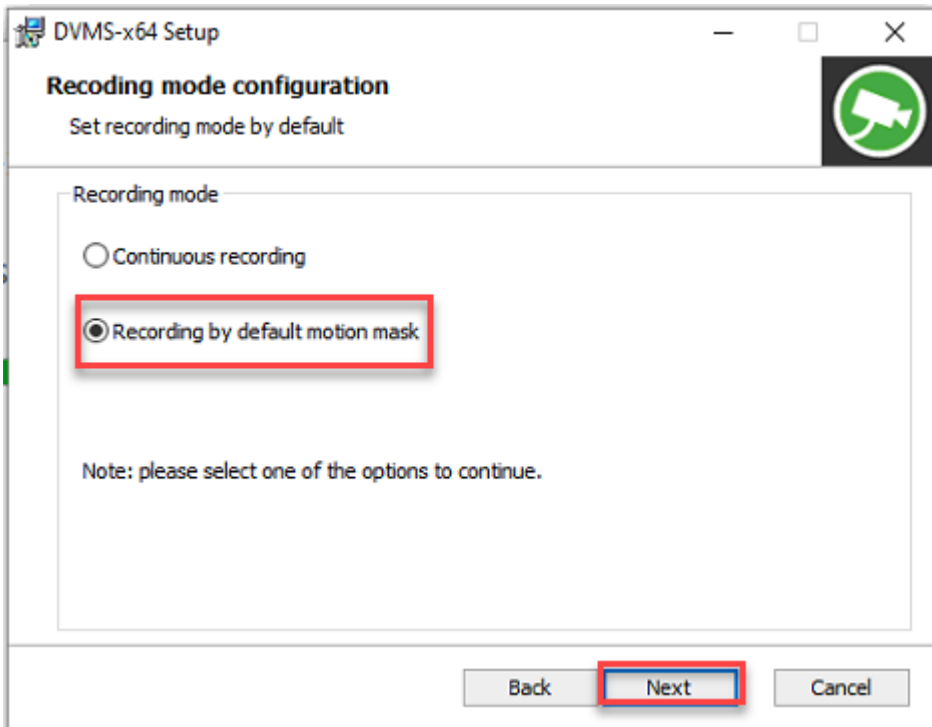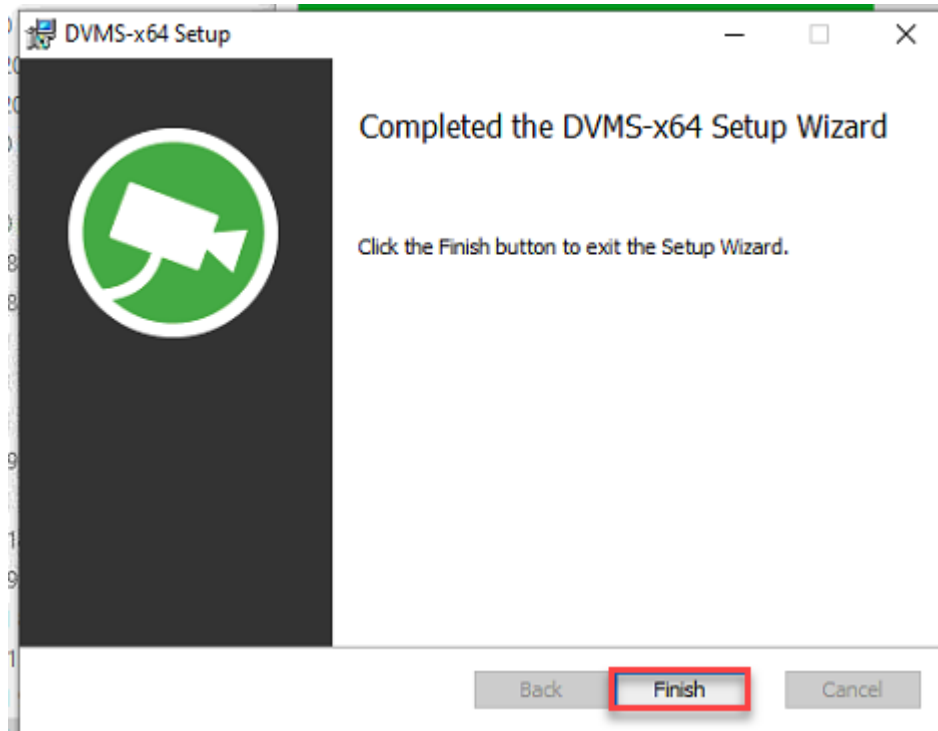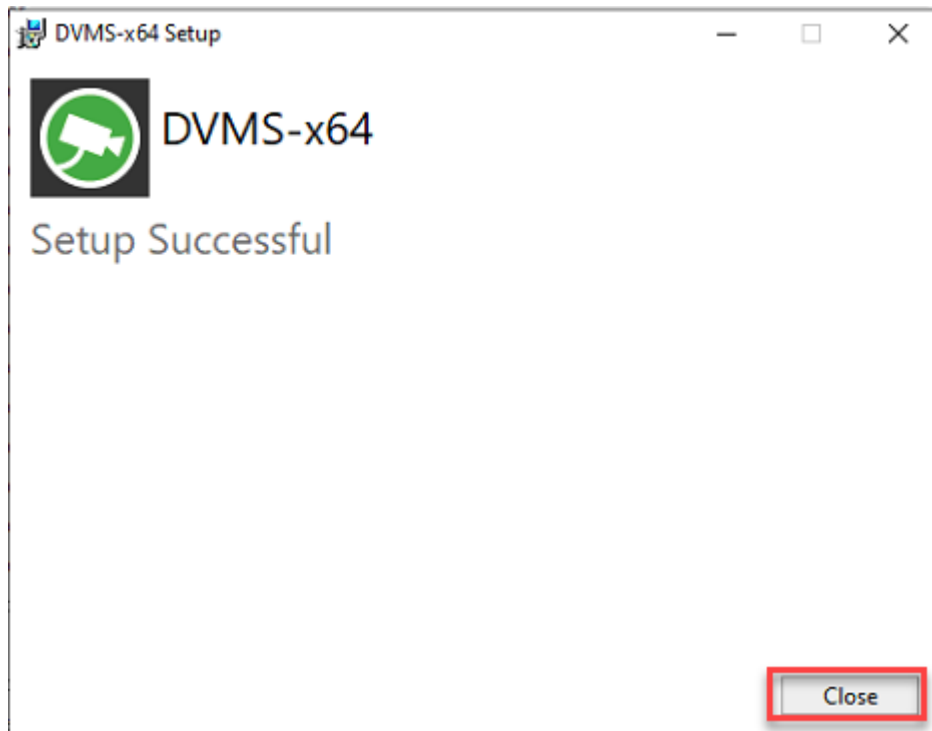
11. Click **Install**

12. Click **Finish**

13. Click **Close** to finalize the installation


Set The Windows TCP/IP Addresses

To set the TCP/IP addresses in Windows 10:

- Click **Start**, point to **Settings** and then click **Control Panel**.
- Double-click **Network and Internet**.
- Double-click **Network and Sharing Center**.
- Click **"Change adapter settings."**
- Right-click on the network adapter of your choice and choose **Properties**.
- Click **Internet Protocol v4 (TCP/IP)** and then click **Properties**.
- Select **Use the following IP address** and type a static IP address. Also specify the **Subnet Mask**, **Default Gateway** and **DNS Server address**.
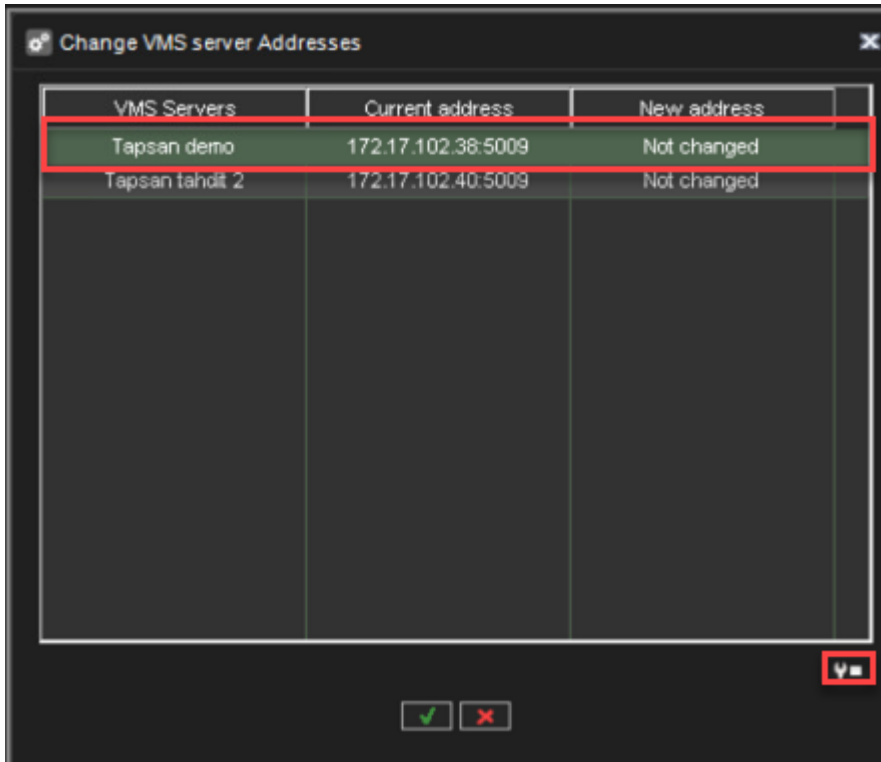
Change VMS server Addresses

If the server will function as the Master Server of a system, and if it will be accessed over a network, you have to set the server's IP address through the System Manager application.

1. Log in to the System Manager
2. Open **System** tab
3. Select **System settings**
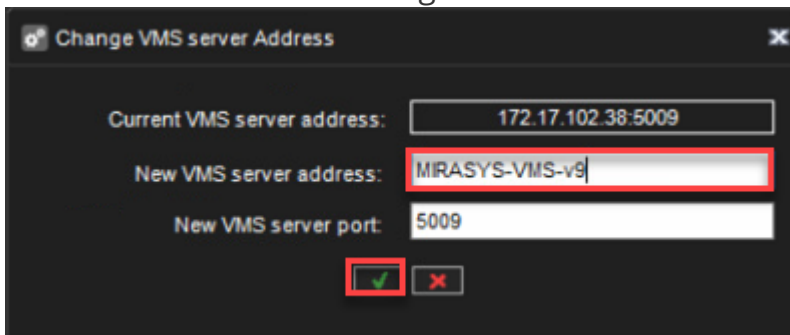4. Click **Change VMS server addresses**
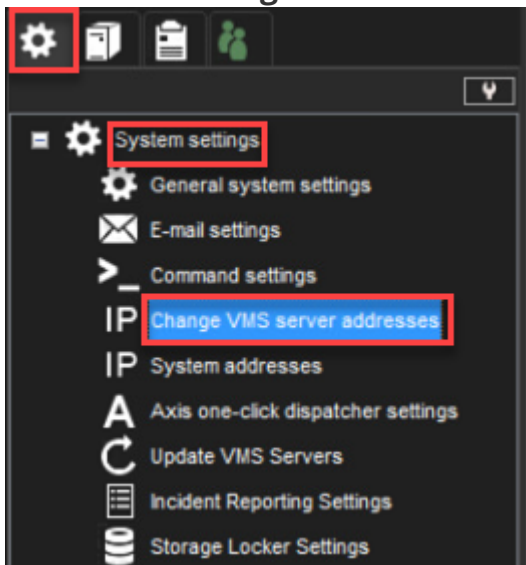
5. Select a server from the list and click **Change VMS server address**
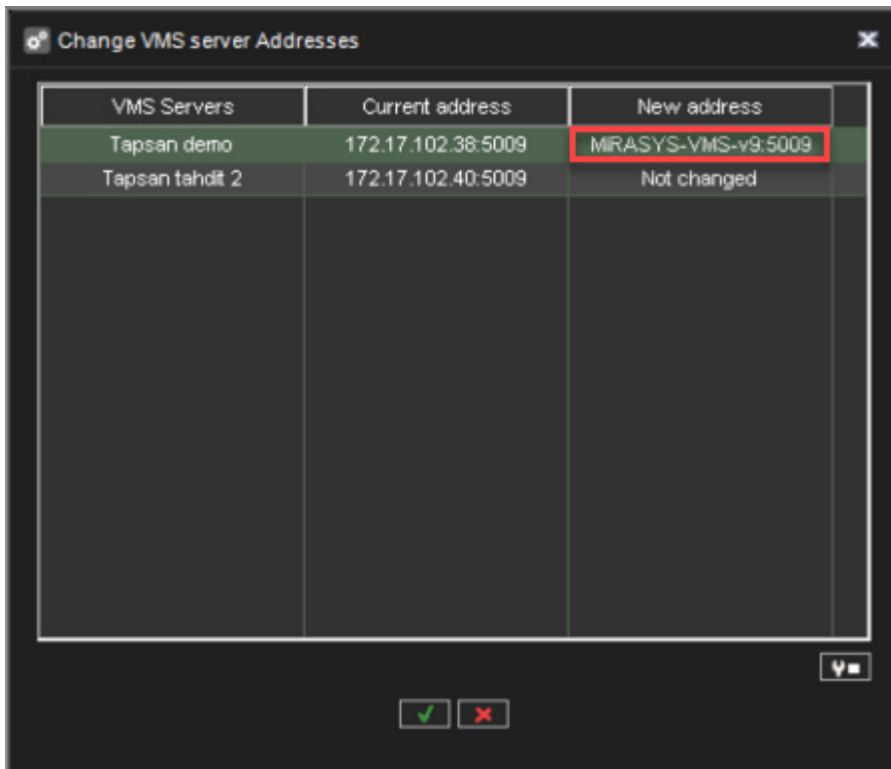
6. Enter the client network IP address or computer name to the **New VMS server address** field
7. Click **Ok** to save changes

8. The changed address can be seen in the new address field

Note: *You only need to set the local IP address for the Master Server of a system if the server can be accessed over a network. If the server is accessed locally, there is no need to set the address.*

Enable Time Synchronization

When more than one server is used in the same system, the Master Server keeps the clocks of all networked VMS Servers synchronized.
Master will synchronize the clocks using the computer clock as the source.
For this reason, one server should not belong to more than one system.
The Master Server synchronizes the clocks once a day.
However, if the time difference between the clock on the Master Server and the clock on the other server is more than 29 minutes, the clocks are not synchronized.
For the time synchronization to work correctly, the Windows time synchronization must be disabled on the other servers. However, it can be enabled on the Master Server.

To disable Windows time synchronization:

- Click **Start**, point to **Settings**, click **Control Panel**, and then double-click **Date and Time**.

- On the **Internet Time** tab, make sure that the checkbox **Automatically synchronizes with an Internet time server** is not selected.

Obtain a License Key

By default, without a VMS license, the server supports only one IP camera.
To get the full functionality, get a license key from Mirasys.
For the license key, you need the MAC to address the server.

To get a license key:

- Start System Manager. The License Information dialogue box is automatically shown when no license key has been specified.

On the **System** tab, under **Licenses**, double-click the server that you want to update.

- In the License Information dialogue box, copy the MAC address and send it to *orders@mirasys.com* In return, you will receive the license key as a text file.
- Click **Import license from the file**.
- Click **OK**. The system is updated immediately.

Note: *The default unregistered state that allows the use of one IP camera has been time-limited.*

The unregistered state can be active for up to 60 days after which a valid license key is required. Unless a valid license key is not added to the system within 60 days after the installation, the system will cease to operate.

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1.6. Installing Devices

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Installing IP Cameras

You can connect supported IP cameras and video servers to a server over a TCP/IP network.
An IP camera has a built-in component for capturing video images.
The camera is connected directly to a local area network, and it has its own IP address.
You can also use video servers (encoders) to change analogue cameras into IP cameras.
Video servers are also connected directly to the local area network, and they have their IP addresses.

For a list of supported cameras, see the document *Supported IP Cameras* that can be accessed from Mirasys Extranet.
Please see the [Mirasys VMS Administrator Guide v9 - EN](#) for instructions on installing IP cameras to the system.

Setting Up DirectX PTZ Joysticks

Any DirectX joystick can be used, but you can contact your supplier for a list of devices to work best.

1. Connect the DirectX device to your computer and wait for the driver to be installed.
2. Calibrate the joystick in windows. Press "Start" and write "USB game" and then select the "Set up USB game controllers" option
3. Select the device from the list and click "properties"
4. Select "settings" and then "Calibrate" and follow instructions.
5. After this, start the *Spotter* application and then configure the input device settings in Spotter to get the joystick working. Please see the *Spotter User Guide* for further details.
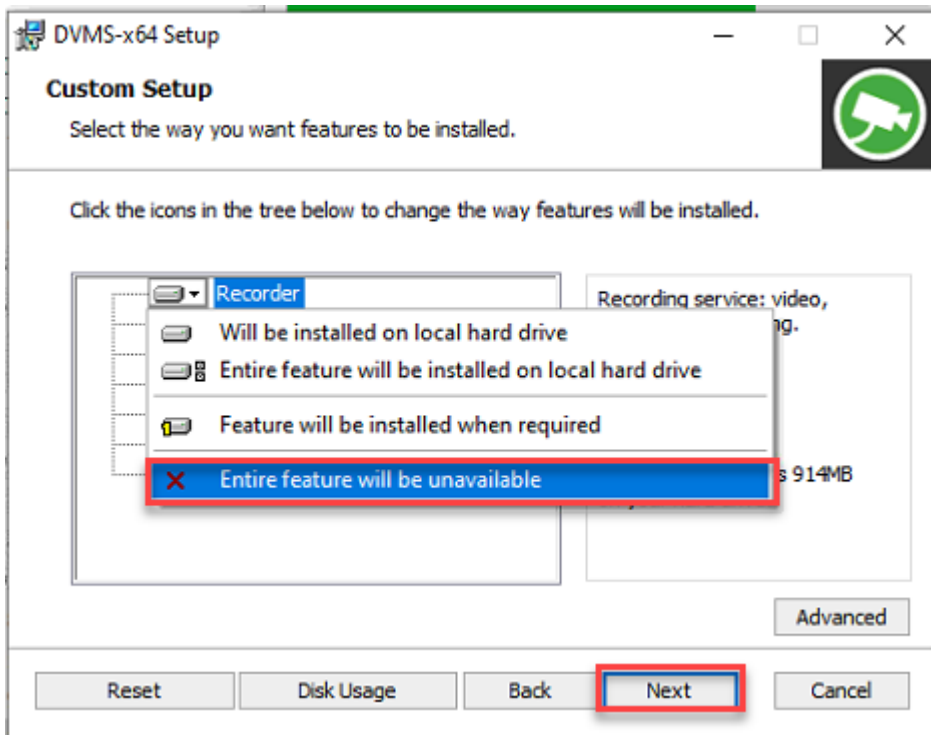
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1.7. Installing Client Programs

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Installing Mirasys Spotter

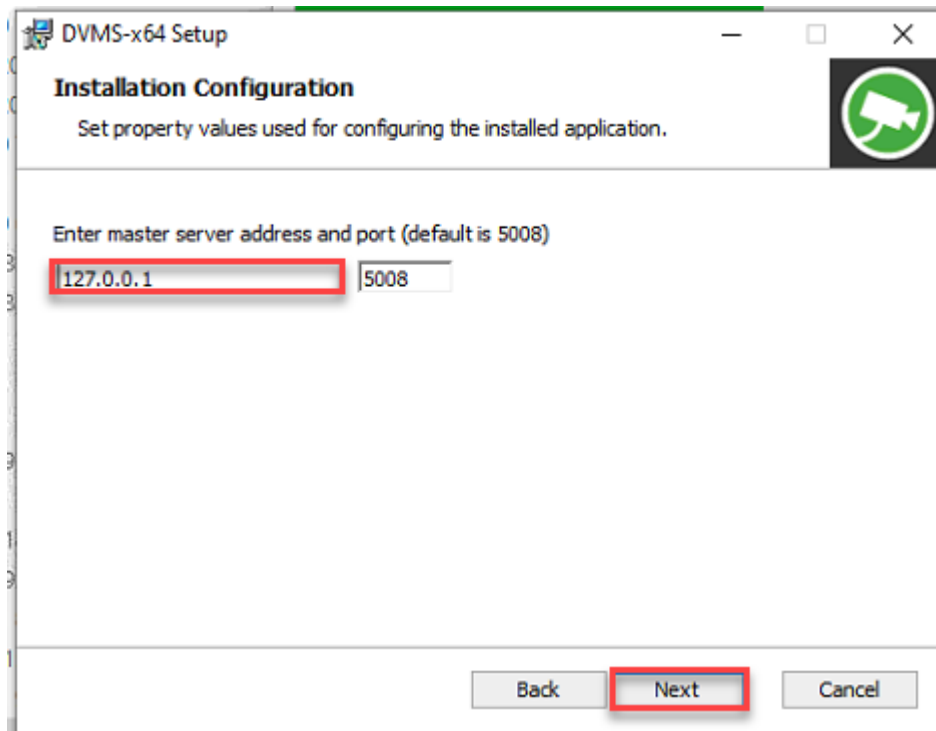The spotter can also be installed as part of the standard VMS installation package.

1. Start the installation by clicking Complete installation package
2. Click **Install**
3. Click **Next**
4. Use the default destination folder and click **Next**
5. Set **Recorder** component to **Entire feature will be unavailable**
6. Click **Next**

7. Enter the master server address and click **Next**

8. Click **Install**
9. Click **Finish**
10. Click **Close** to finalize the installation

Installing Mirasys Spotter Web
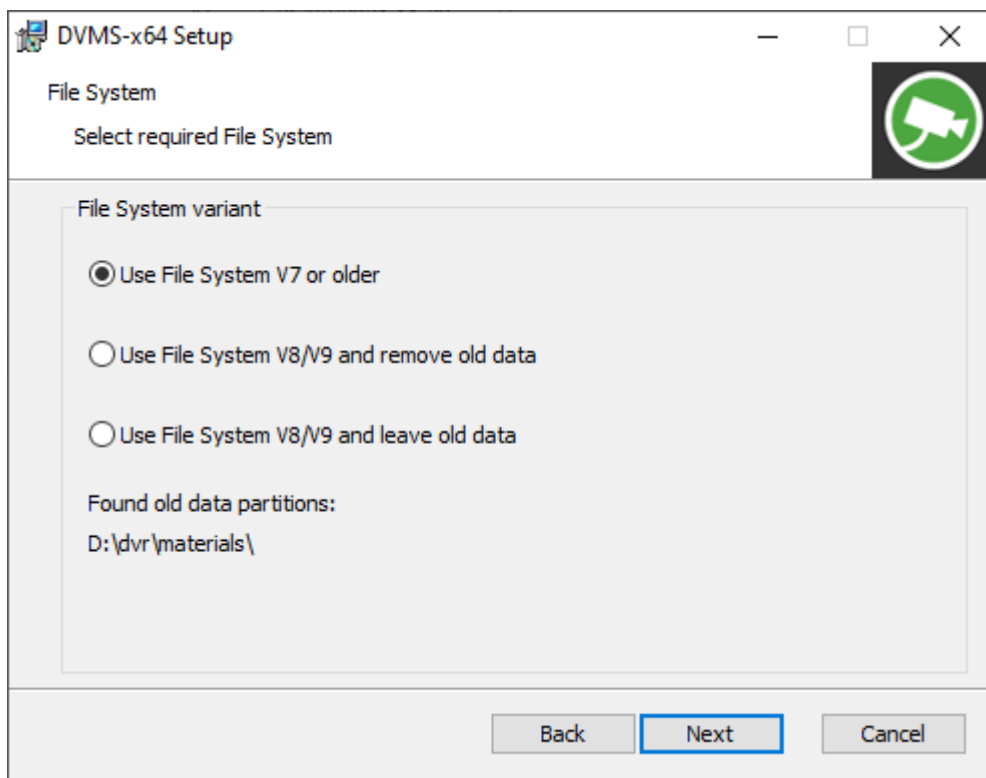
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1.8. Updating

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DVMS installer

Filesystem support selection is made during DVMS install in this dialogue:

1. Use File System V7 or older - old storage will be used in V7 format without any changes to its structure. All calls to the V7 file system will be passed over the new API -> old API wrapper.
   a. All previously recorded data (video, audio, text, alarms etc.) will be accessible after the DVMS update.
2. Use File System V8/V9 and remove old data - old storage will be erased and formatted to a new File System format. All previously recorded data is lost.
3. Use File System V8/V9 and leave old data - old storage will be left as is, but DVMS will be configured to use a new File System format.
4. This is useful if there is some additional disk that can be used for new data, and there is some need to keep old storage for some time to access previously recorded data.

5. Previous data can be opened as an archive in Spotter. The installer will create archive information if this option is selected in the installer.

Notes for installer's option 3 (Use File System V8/V9 and leave old data)

If there were several disks used in DVMS V7, then each disk will be opened as a separate archive in V8 or later after the DVMS update.
DVMS V7 has a recording mechanism similar to RAID 0 (stripe recording).
Still, in this case, it writes 1st second to one disk, 2nd - to another, so as a result, if each disk is opened separately, it will have gaps in places where those data is written to another disk.
If text channels are used in V7, then to generate archive information correctly, DVMS V8 or later should be installed on top of V7 (without V7 uninstall).
If V7 is uninstalled first - text channel event names and search tags information will not be written to the archive information file.
Also, if V7 will be removed with the "Remove settings" checkbox set, then also channel names, manufacturer, and other information will be lost so that archive information will be generic (like Camera 1, Audio 1 etc.)
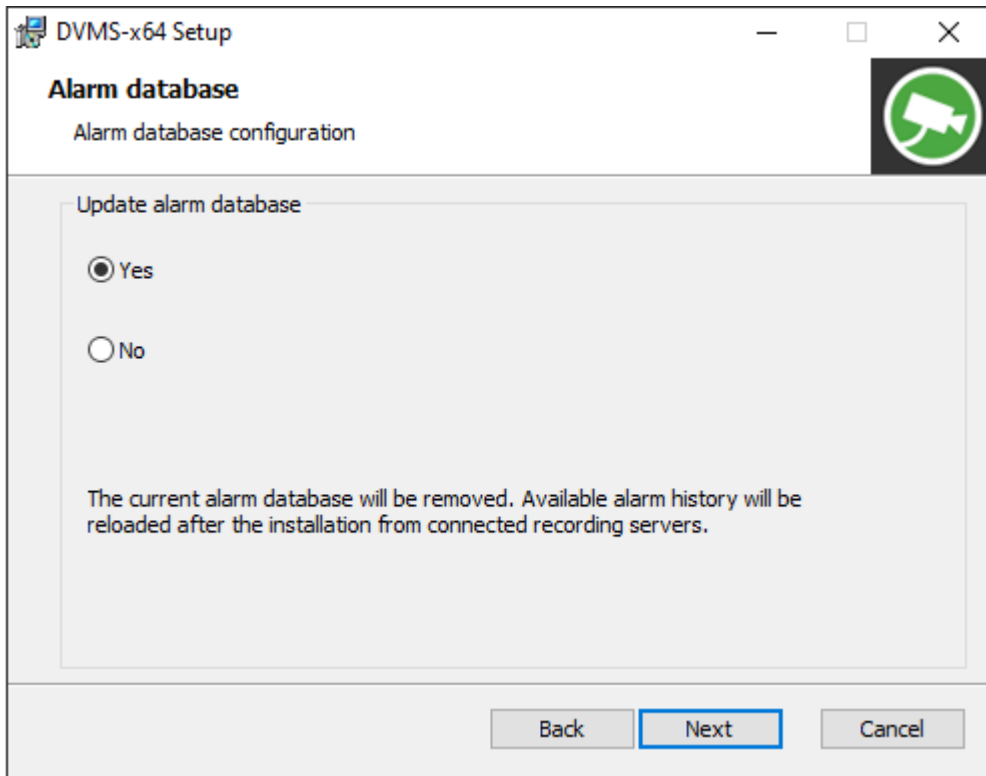
Notes for alarms database

If V7 is updated to V8, then the alarm database should be removed, so the option "Yes" should be set to this installer dialogue:

In another case, the alarm database will not be updated, and previously recorded alarms will not be fetched from file storage.

Limitations

DVMS with V7 file system support has those limitations:

1. Can't launch several archiving processes at the same time, so if the timed archive was launched - the manual archive would fail until the first process is finished.
2. If disk connection will be lost or disk will be unplugged and plugged again - it will not be recovered back until DVRServer restart.
3. Future file system features will not be supported

Updating a Server

To update a server, first, remove the current software version and then install the new software version.

Important: Back up system settings and server settings in System Manager before removing the current version and then restore the settings after the update is completed.

To remove the current server version:

1. Click **Start**, point to **Settings**, click **Control Panel**, and then double-click **Uninstall programs**.
2. Click DVMS and then click **Uninstall** and then review the installation instructions earlier in this Guide.

Updating Client Programs

The client programs are updated automatically to the same program version as the Master Server when they are started.
To manually update the client programs, remove the current version and install the new version by running the VMS installer.

To remove the current version:

1. Click **Start**, point to **Settings**, click **Control Panel**, and then double-click **Uninstall programs**.
2. Click DVMS and then click **uninstall** and then review the installation instructions earlier in this Guide.

Updating VMS Servers From Master server

Updating VMS Servers remotely through the Master Server has been possible since Mirasys VMS 6.2.5.

1. Update the Master Server to the latest version. In the System Manager, edit the licenses for the individual VMS Servers through the 'Licenses' list in the 'System' tree.
2. After updating the licenses, you can update the VMS Servers remotely using the 'Update servers' tool in System Manager.

In case the VMS Servers have an earlier version, you need to install Mirasys VMS 6.2.5 or newer on them manually to enable remote server updates.

NOTE: In some cases, the VMS Servers might need a restart of the PC after a remote software update.
Monitor the servers after a remote update, and if they do not return online in 10 – 15 minutes, restart the PC they are running on.

NOTE: Please remember the different 32-bit and 64-bit versions when doing remote updates. If a system is partially 64-bit, do not push a 64-bit update to all servers.

Updating Components

In addition to camera drivers and Spotter Plugins, it is possible to also update metadata drivers from the System Manager.
Spotter Plugins are updated by removing the old version and adding a new version *.spi file to the system.
Metadata drivers offer the possibility to update the drivers to the whole system or only selected servers.
Contact Mirasys for more information on available metadata drivers and updating them.

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1.9. Flash Memory Backup / Restore

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Mirasys VMS includes an automatic flash memory-based backup and restores functionality ("ABUR"). This feature is only available on servers delivered by Mirasys Ltd.
The flash memory backup and restore functionality is intended for situations in which the operating system and hard disk have failed the server hard disk needs to be reformatted or replaced.

The automatic flash memory functionality can backup and restore the following:

- Windows OS
- Mirasys VMS software
- Mirasys VMS license
- Server configuration files

The automatic flash memory functionality does not include the following:

- Windows OS updates made after server delivery
- Any VMS software updates made after server delivery
- Any driver updates made after server delivery

NOTE: *It is important to note that the automatic restore function restores the VMS software version that is delivered with the server.*
The same applies to IP camera drivers. If the server has been updated or new drivers installed, the software needs to be edited after restore, and the IP camera drivers will need to be reinstalled.
NOTE: *It should be noted that the first backup is done at midnight of each day (unless changes are made to the configuration during the hour before midnight, in which case backup is delayed until the next day).*

Flash Memory Backup

The flash memory functionality automatically backs up the server configuration and license files at installation, and after that each time there are changes in them.
The server automatically handles all steps of the process, and there is no need for the users to do anything to enable the functionality.

Flash Memory Restore

In case of a hard disk failure, the system administrator may need to restore the system from the automatic backup files.
The process is mostly automatized, but the user needs to perform some steps.

To use the flash memory, restore functionality:

- Set the computer BIOS to boot from USB devices. Ensure that there are no other USB memory devices or other boot media connected.

Once the Windows loader starts, select either:

**Format the hard disk –** Use this option to format a hard disk that has already been in use.
This option should be used when the operating system has been corrupted, and the hard disk needs to be reformatted.

Blank installation – Use this option to restore the system to a blank hard disk.
This option should be used when the hard disk has been changed, and a blank one has been installed on the computer.

Once the Windows installer starts, select the appropriate country, time zone, and language options.
Once the VMS software loader starts, choose either:
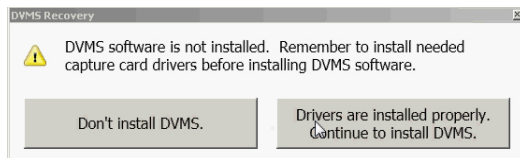
Don't install VMS – Choose this option if you do not want to install Mirasys VMS software.
Drivers are installed properly. Continue to install VMS – Choose this option if want to install Mirasys VMS software.
After the server software has been installed, the configuration files and license information is automatically restored.
When rebooting the computer, remember to go to the BIOS to disable booting from USB devices.

1.10. Mirasys Gateway Server Installation

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Mirasys WebClient is a browser-based application that is used for viewing video from Mirasys servers over a network.

Mirasys WebClient uses the user profiles, user names, and passwords as Mirasys System Manager and Spotter client programs.

To use Mirasys WebClient, the Mirasys Gateway server must be first installed on a computer running an HTTP (web) server.

Mirasys VMS recording software is not required on the server. The Gateway server needs to be able to connect to the Mirasys VMS Master Server.

Minimum System Requirements

Client

- Internet Explorer 6 or Mozilla Firefox 2.0 or newer
- Java Runtime Environment (latest version recommended for security reasons)

Server:

- Windows 7 Enterprise, or Windows 2008/2012 Server
- HTTP server software (IIS)
- Intel i3 processor, or better
- 4 GB of RAM

Note: *Please note that the minimum system requirements are recommended for mostly live viewing.*
If multiple users access the same WebClient server simultaneously, mainly for search and playback functions, a more powerful processor is required.

System Restrictions

The Mirasys VMS Gateway server can be installed on any Microsoft Windows server that meets the system requirements.

Mirasys VMS software is not required on the server.

The Gateway server has a default license controlled limitation of 32 simultaneous streams for all WebClient connections.

Installing The Mirasys Gateway Server

To install the Mirasys Gateway server:

1. Double-click the **Release_9XX_Gateway_x64.exe** installation package to start the installation.
2. After the **VMS Gateway Setup** screen has loaded, select the destination folder and click **Next**.
3. Type the **SMServer IP address** (the IP address of the Master Server) into the **SMServer IP** field.
4. Click **Next**
5. When the software has been installed, click **Finish**.

Verifying The Installation

To verify that the server has been correctly installed:

Open a compatible web browser and type the following address:

HTTP://[WEBCLIENT SERVER URL]:[PORT]/

For example, if the WebClient server is on the same computer: ***http://localhost:9999/***
If the server is correctly installed, the login screen is displayed.
Type a user name and password in the corresponding boxes and click **Log On**.
The user name and password are set in the Mirasys System Manager program.

Streaming Options

The users can view the WebClient streams in JPEG format (default) or in the native format in which they are received by the servers.
This does not require any action on the server-side: the users can decide to view the streams in native format by adding *?video=native* to the end of the WebClient URL.
For example, if the WebClient server is on the same computer: ***http://localhost:9999?video=native***
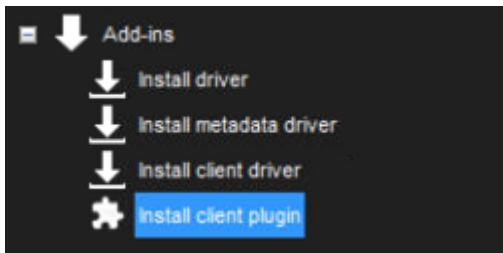
1.11. Installing Spotter Plugins

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Spotter plugins can be added to the system from System Manager.

Spotter plugins are added to System Manager as *.spi files from the system manager first tab – Add-ins – install client plugin.

Each plugin needs to be enabled in the master license.

If the plugin is not in the license, it can be installed but will not be deployed to the Spotter.

After the plugin is installed to System Manager, each Spotter client that login to this Master Server (SMServer) gets the updated plugin the next time the client is started.

The development of custom plugins is possible.

Contact Mirasys for further information.

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