MAKE THE
WORLD SEE

Milestone Systems

Milestone Husky IVO™ 1800R

Getting started and maintenance guide

June 2021

milestone

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All names of people and organizations used in the examples in this text are fictitious. Any resemblance to any actual organization or person, living or dead, is purely coincidental and unintended.

This product may make use of third-party software for which specific terms and conditions may apply. When that is the case, you can find more information in the file 3rd_party_software_terms_and_conditions.txt located in your Milestone system installation folder.

Safety

Warning!

Risk of explosion if battery is replaced by incorrect battery type.

Dispose of used batteries according to the instructions.

Caution

Replacement of a BATTERY with an incorrect type that can defeat a SAFEGUARD (for example, in the case of some lithium BATTERY types).

Disposal of a BATTERY into fire or a hot oven, or mechanically crushing or cutting of a BATTERY, that can result in an EXPLOSION.

Leaving a BATTERY in an extremely high temperature surrounding environment that can result in an EXPLOSION or the leakage of flammable liquid or gas.

A BATTERY subjected to extremely low air pressure that may result in an EXPLOSION or the leakage of flammable liquid or gas.

Make sure to connect the power cord to a socket-outlet with earthing connection.

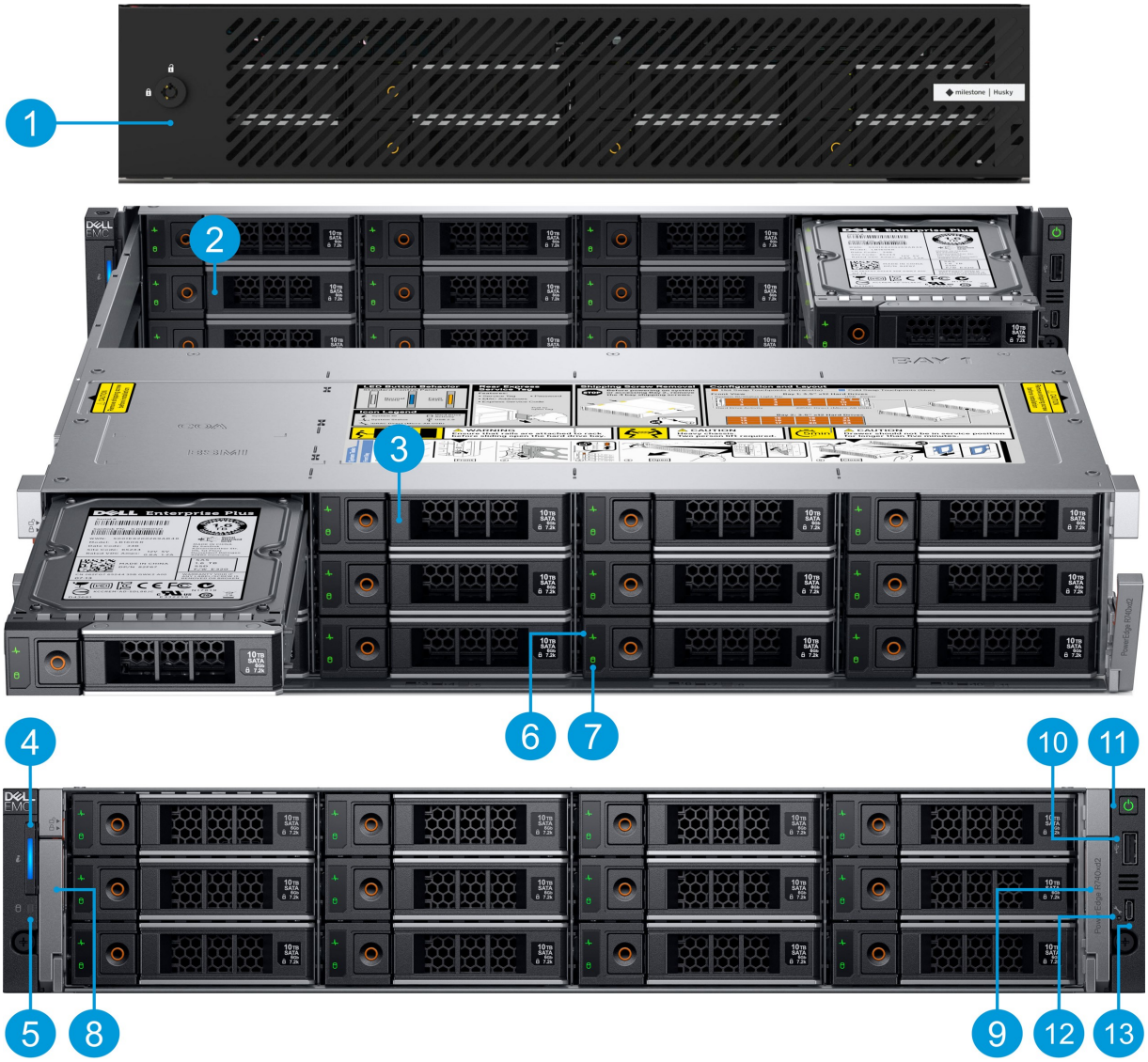
Suitable for installation in Information Technology Rooms in accordance with Article 645 of the National Electrical Code and NFPA 75.

About this guide

This getting started and maintenance guide for Milestone Husky IVO is a point of reference to the Milestone Husky software and Milestone Husky hardware.

This guide describes Husky Assistant, an application that helps you install, maintain, and reconfigure your system.

Front view



1. Bezel lock	6. Drive status	10. USB 2.0
2. Drive bay 2 (12 x 3.5" hard drive slots)	7. Drive activity	11. Power button
3. Drive bay 1 (12 x 3.5" hard drive slots)	8. Left release latch	12. iDRAC direct indicator
4. System health and system ID indicator	9. Right release latch	13. IDRAC direct micro-USB port
5. Drive indicator		

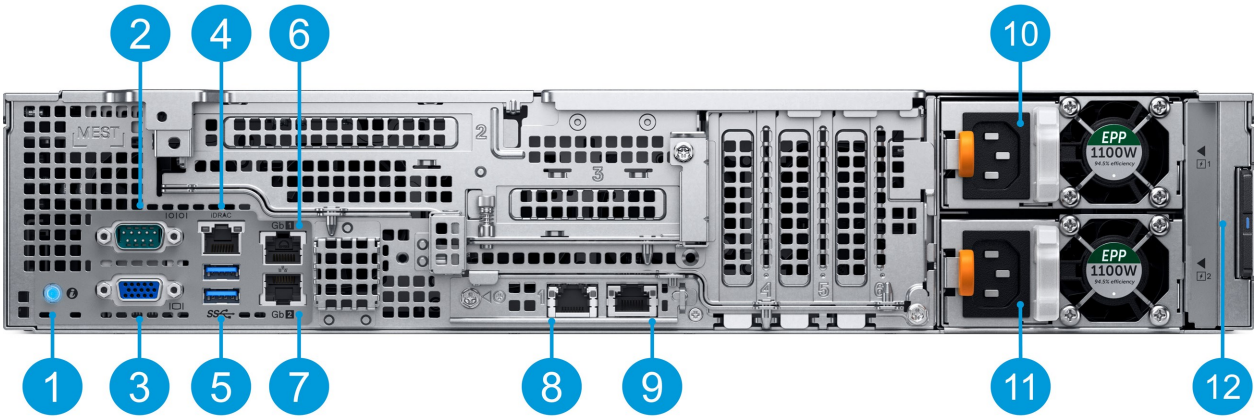
Bezel

To remove the bezel, unlock the bezel lock and the bezel comes off.

When mounting the bezel, mount the right side first, then on the left side, press the button behind the tab to secure the bezel. When mounting is complete, remember to lock the bezel.



Back view



1. System identification button	5. 2 x USB 3.0 Type-A	9. LOM riser NIC port 2
2. DB9 serial com port	6. NIC port 1	10. Power supply unit 1
3. VGA port	7. NIC port 2	11. Power supply unit 2
4. iDRAC9 dedicated network port	8. LOM riser NIC port 1	12. Information tag

Information tag

You can identify your system by the information tag. Pull out the information tag in front of the system to view the unique identifiers. The information tag holds information of:

Service tag	The unique express service code and service tag. Refers to the serial number of the unit. Always provide the details when contacting support.
iDRAC password	A password used for remote management via the iDRAC interface. You can find the IP address of the IDRAC interface in Husky Assistant > support.
iDRAC port MAC address	The physical address (MAC address) of the iDRAC port.
Main board ethernet card MAC address	The physical address (MAC address) of the on-board ethernet card.

The information tag can sometimes be referred to as the luggage tag.

Link to detailed hardware documentation

For more information on the specific features and functionality or your unit, see Installation and service manual.



The documentation provided can have slightly different specifications or configurations compared to your Milestone Husky IVO unit.

Getting started checklist

This guide applies to all models of the Milestone Husky IVO. Follow the checklist below to ensure that you carry out the steps of your installation in the right order.

☐	Prepare network and devices	• Assign static IP addresses to all system components and cameras • Make sure camera models and firmware are supported by the XProtect system • Cameras must be connected to the network, and you can access them from your unit
☐	Obtain a software license code	• Purchase XProtect software and obtain the license file • Go to the Milestone website (https://online.milestonesys.com/) and register your software license code (SLC) This step does not apply if you are using an XProtect Essential+ license
☐	Prepare your unit	• Mount the unit on a shelf for the desktop and tower models, or use rails for the rack models, to support the chassis • Connect peripherals, LAN, and power
☐	Turn on the unit and complete the Husky Assistant	• Configure computer name and domain or workgroup settings • Hard drive detection • Select the preferred storage configuration • Select the XProtect software version • Links to detailed description of system installation
☐	Download the latest XProtect Device Pack	• A device pack is automatically included when you install the XProtect software. For support of new devices and firmware versions, get the latest device pack
☐	Update Windows®	• Make sure that your Windows operating system is updated with all the latest Windows updates
☐	Install clients on other computers	• Install XProtect Smart Client and XProtect Management Client on other computers for better system performance

Before you install

Milestone recommends that you go through the steps described in this article before you start the actual installation.

Prepare network and devices

1. Assign static IP addresses to all system components, devices, and cameras.

   To prepare and configure your devices or cameras, follow the instructions provided by the camera manufacturer.

2. Make sure that your cameras and devices are supported and connected to the camera network.

   On the Milestone website, you can find a detailed list of supported devices and firmware versions (https://www.milestonesys.com/supported-devices/).

Obtain a software license code

Your Milestone Husky unit is shipped with XProtect video management software pre-loaded, and you can use it with any version of the five XProtect VMS products by applying a valid software license code (SLC). You receive the SLC when you purchase the XProtect product. Read more about Milestone XProtect products and Milestone Care™ coverage on the Milestone website to find out which product matches your needs.

The SLC is printed on your order confirmation, and the software license file is named after your SLC. Milestone recommends that you register your SLC on the Milestone website (https://online.milestonesys.com/) before installation. Your reseller may have done that for you.

You can also run the free version of XProtect Essential+ on your unit. This version provides you with basic functionality and a limited number of cameras compared to a purchased XProtect VMS system. In this case, the license is provided with the installer. To receive this free license, your unit needs to be connected to the internet during installation.

When you run Husky Assistant, you can see the version of the pre-loaded VMS. If you want a different version, you can choose that option if you have a valid SLC.

If your unit is used as a recording server to an existing VMS system, you do not need an SLC. This setup is covered by the SLC that you bought with the VMS system.

XProtect software is licensed through different types of licenses:

- Base licenses: Controls which XProtect product you can use.
- Device licenses: Controls how many hardware devices you may connect to the Milestone Husky unit. A hardware device can be a camera, encoder, or similar, identified by a separate IP address. You do not need licenses for speakers, microphones, or input and output devices attached to the hardware devices.
- Add-on product licenses: Your new Milestone Husky unit can run any XProtect add-on product. Most XProtect add-on products require additional licenses.

After installation, the surveillance system runs on licenses that need to be activated before a certain period ends. This is the grace period. Once the installation is complete, you can get an overview of your licenses for all installations with this SLC on the Basics > License Information node in the Management Client.

Milestone recommends that you activate your licenses before you make the final adjustments.

- For online activation, log in to the Software Registration page with your My Milestone account on the Milestone website (https://online.milestonesys.com/).
- For offline activation, you must export a license request (.lrq) file in the Management Client, and then log in to the Software Registration page and upload the .lrq file.

  Once you have uploaded the .lrq file, Milestone emails you an activated .lic file for import.

Prepare your unit



Always place the unit on a shelf or use rails to support the chassis.

1. Connect your peripherals: mouse, keyboard, display and audio.
2. Connect your local area network with internet connection, if available, to a NIC port. This network is for management and viewing.
3. Connect your camera network to a different NIC port. If your unit is equipped with a higher bandwidth network card, connect your camera network to the this network port.
4. Connect all power cables and plug them into a power socket.

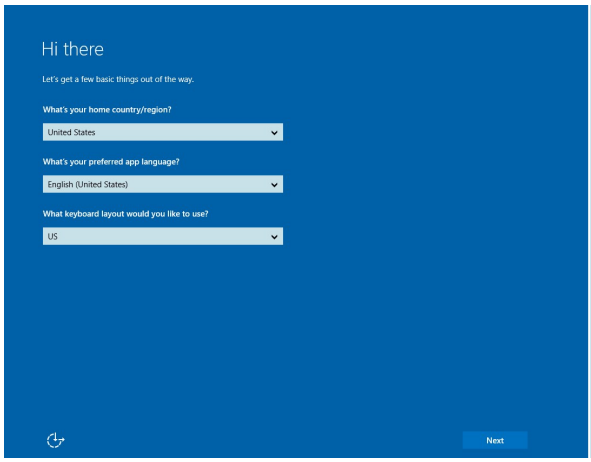
Turn on the unit

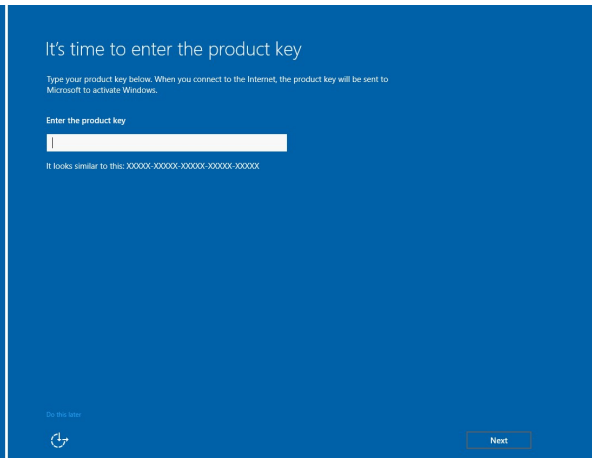
Turn on your Milestone Husky unit and wait for Windows to boot for the first time.

Windows first run

Configure the country, language, keyboard, and account information:

1. Select your region, language, and keyboard. Click **Next**.

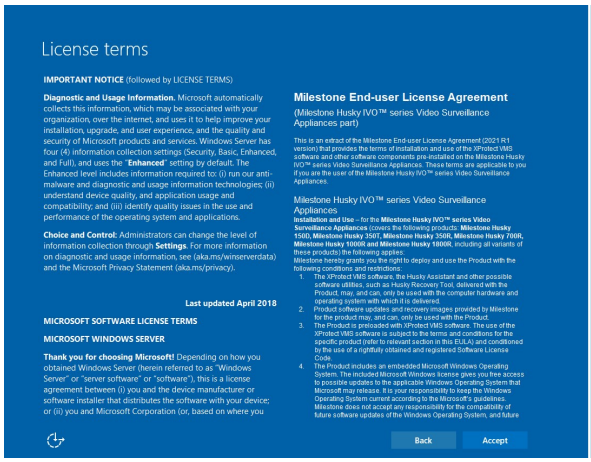


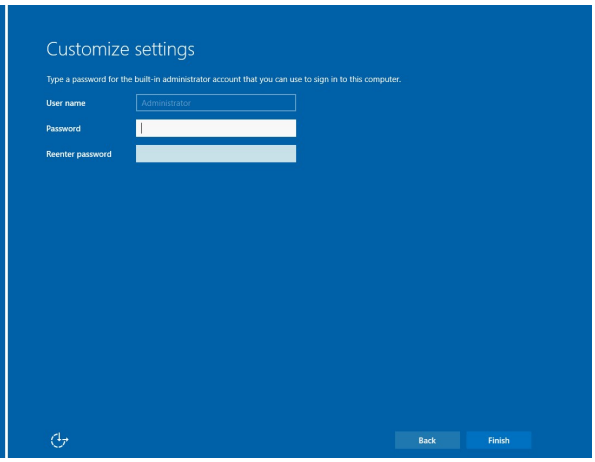


2. If prompted, enter Windows product key and click **Next**.

   You can locate the product key label on the top-left side of your unit.

3. **Accept** the license agreements.





4. Create a administrator password and click **Finish**.
5. Log-on to Windows using the password you have just created and wait for the Windows desktop to appear.

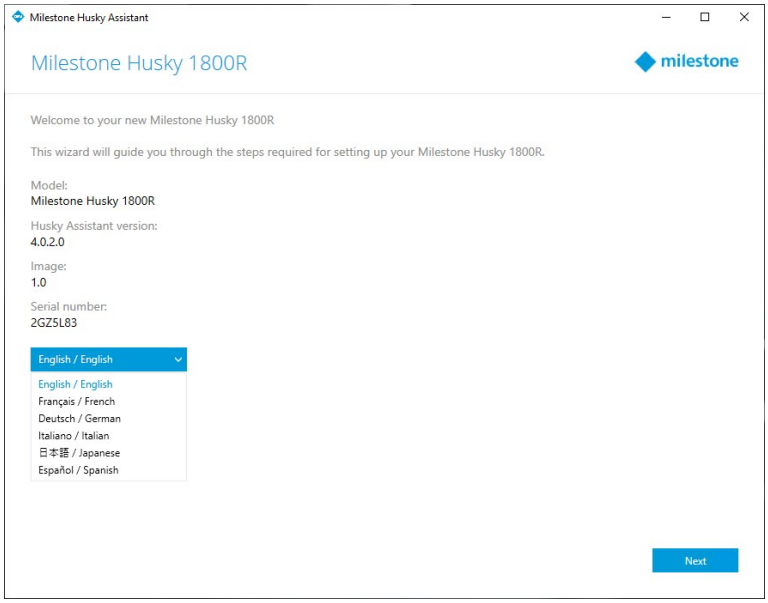
Complete the Husky Assistant Wizard

Husky Assistant now starts automatically. This wizard helps you check, select, and configure your Milestone Husky IVO with:

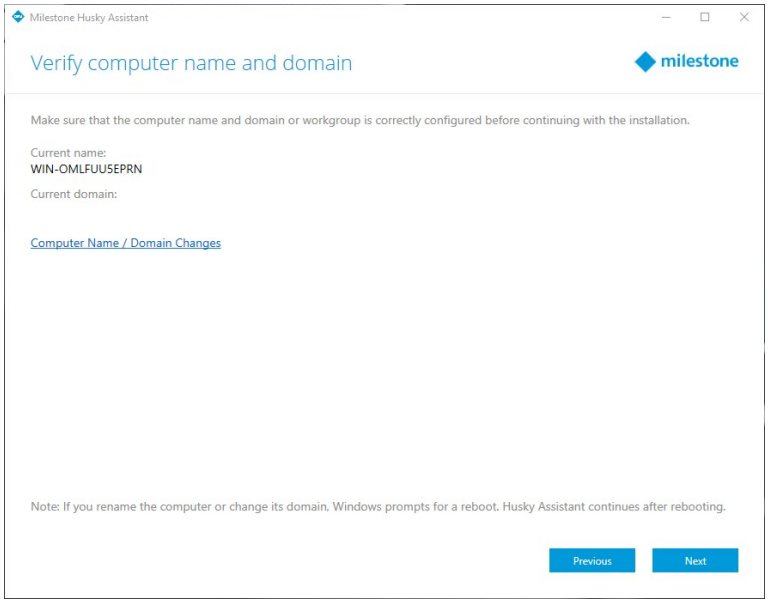
- Computer name and domain or workgroup
- Data storage drive detection
- Data storage configuration
- Milestone XProtect version
- Additional system optimizations

To complete the wizard:

1. Select your preferred Husky Assistant language and click **Next**.



2. Click **Computer name / Domain changes** to configure computer name and domain or workgroup settings.



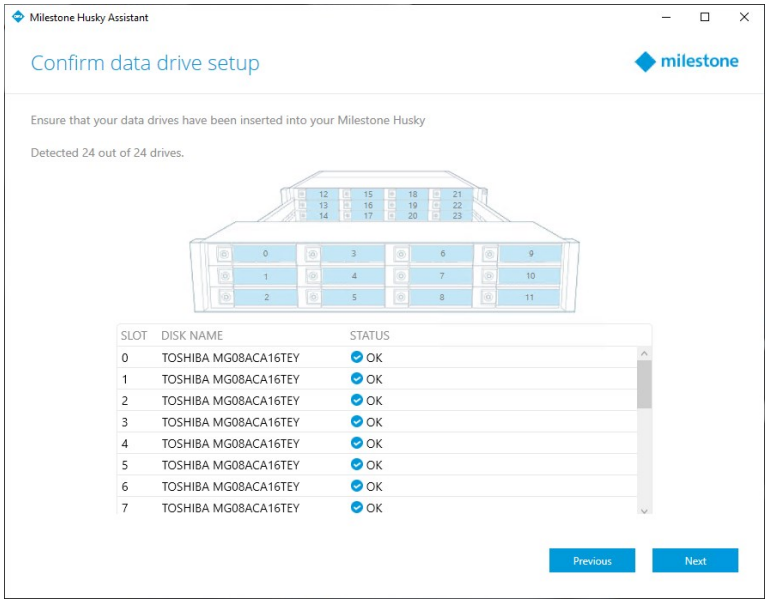
   When completed, Windows will require a restart to apply the changes.

3. Restart Windows and wait for Windows to boot.

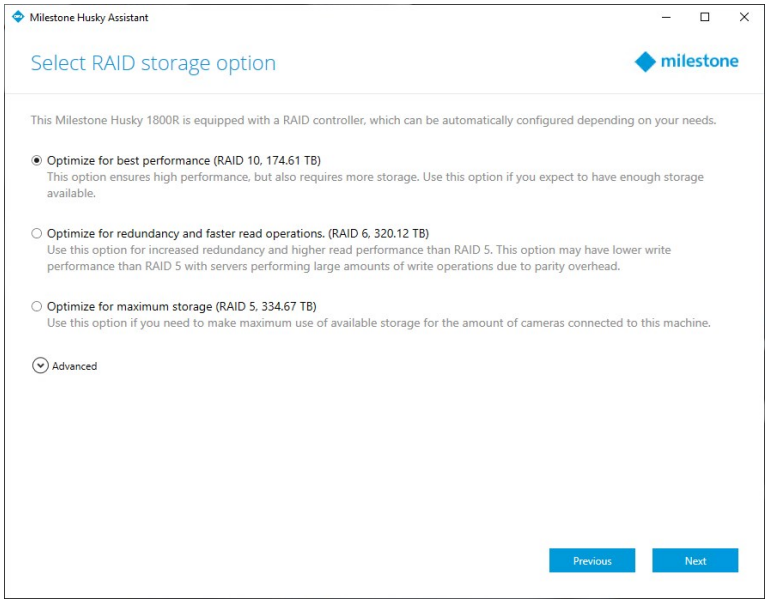
   Husky Assistant restarts. Click **Next**.

4. Because you have already configured the name and domain setting, click **Next**.

5. Make sure that all the hard drives are detected and click **Next**.

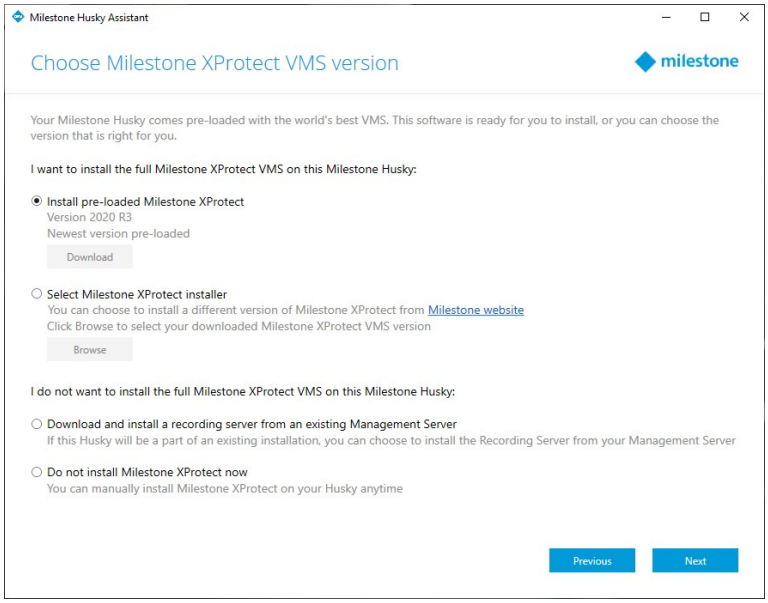


6. Select the preferred RAID configuration to match your storage requirement. Click **Next**.



The **Advanced** option is to manually configure the RAID using the RAID storage manager application.

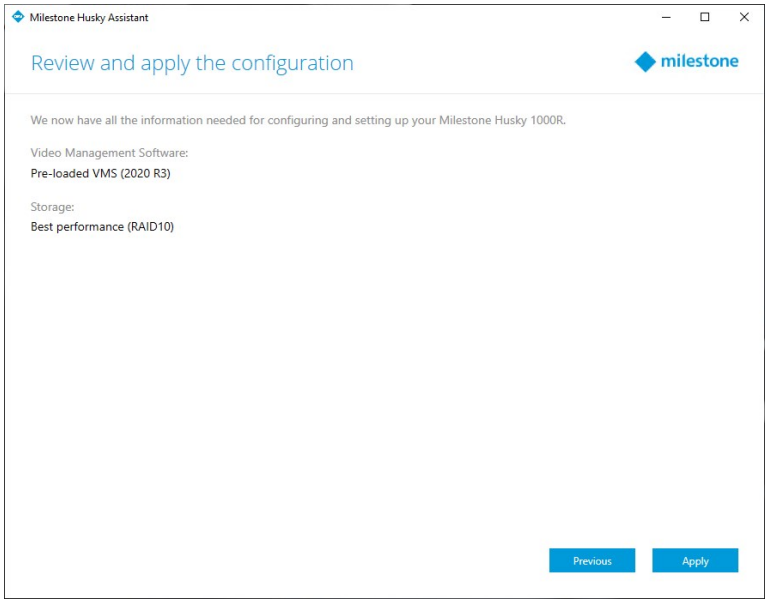
7. You have different options when selecting the Milestone XProtect version to install. Select one of these options:



- Check if the pre-loaded XProtect version is the version that you want to install. If yes, select **Install pre-loaded Milestone XProtect** and click **Next**.
- If you want to install an XProtect version different than the pre-loaded one:
    1. Choose **Select Milestone XProtect installer**.
    2. Download the XProtect version that you prefer from the **Milestone website**.
    3. Click **Browse** to select the downloaded installer file and click **Next**.
- To use your unit as a recording server in an already existing Milestone XProtect system:
    1. Select **Download and install a recording server from an existing Management Server** and click **Next**.
    2. Provide the IP address of the computer with the management server installed, and credentials.
    3. Click **Next**. The installation files for the recording server will be downloaded from the management server later.
- Select **Do not install Milestone XProtect now** if you want to install Milestone XProtect later without the aid from Husky Assistant.

> Remember to apply optimizations in Husky Assistant after installation.

8. The **Review and apply the configuration** window appears. Verify your selections and click **Apply** to start the process.



The system automatically starts the Milestone XProtect installation. Continue to XProtect VMS administrator manual for detailed description of Milestone XProtect installation.

After you have completed the Husky Assistant wizard, the application changes and Husky Assistant serve as an application that helps you configure, maintain, and see the status of your Milestone Husky system. Find the Husky Assistant shortcut on the Windows desktop.

Post-installation tasks

Download the XProtect® Device Pack

A device pack is a set of drivers that is installed with your XProtect system to interact with your devices. A device pack is installed on the recording server. Milestone adds support for new devices and firmware versions on an ongoing basis, and releases device packs every two months on average. A device pack is automatically included when you install the XProtect system. To get the latest device pack, manually check for newer versions to download and install.

To update your device pack after installation, go to the download section of the Milestone website (https://www.milestonesys.com/downloads/) and download the relevant installation file.

> If your system uses very old cameras, you may need to download the device pack for legacy devices. For more information, see https://www.milestonesys.com/community/business-partner-tools/device-packs/.

Update Windows

To update your Windows operating system with all the latest Windows updates, go to Windows Update settings and check for updates. Make sure to install all available updates and restart the Husky unit if required.

Install clients on other computers

You can access your XProtect system from other computers via the clients. Accessing the clients from remote computers will give you better system performance and free up system resources on your Milestone Husky unit. The clients are:

- XProtect Smart Client (used for viewing video)
- XProtect Management Client (used for configuring and managing the system)

For detailed description of client installation, see:

Install XProtect Smart Client

Install XProtect Management Client

Husky Assistant

Husky Assistant is an application that helps you configure, maintain, and see the status of your Milestone Husky system. Find the Husky Assistant shortcut on the Windows desktop.

Husky Assistant Properties

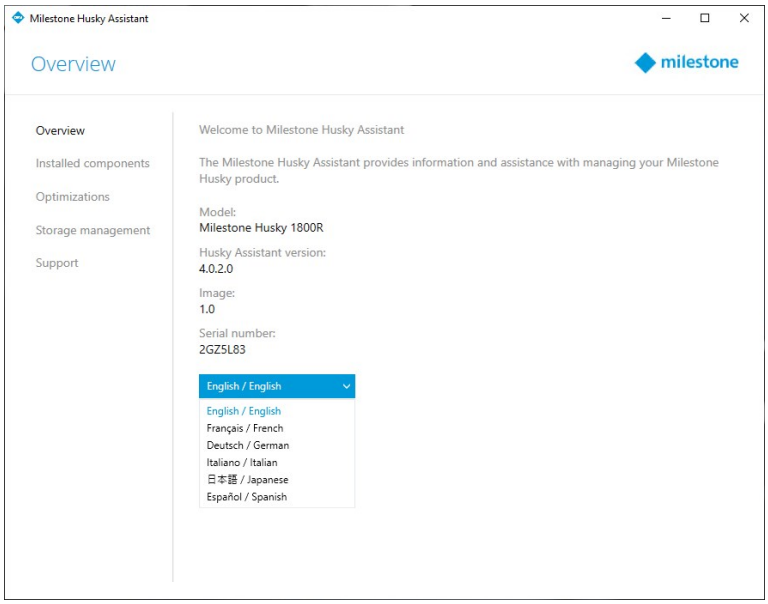
The Husky Assistant has the following features:

Navigation element	Description
Overview	A list of details about the unit: • Model: Milestone Husky model • Version: Milestone Husky Assistant version • Image: Husky firmware version • Serial number: Refers to the service tag of the unit You can change the language in which Husky Assistant appears.
Installed components	A list of installed Milestone software components and versions.
Optimizations	A list of applied or available optimizations you can apply.
Storage management	See the status of the current data RAID array. Change the data RAID configuration.
Support	Run the Milestone Diagnostics Tool to create files that are needed for the Milestone reseller when the reseller helps you troubleshoot. Lists the information that you need to contact Milestone Support. Always contact your Milestone reseller that you have bought the unit from before contacting Milestone Support. Shows the current version of Milestone Husky Services software. Find the iDRAC remote management IP address. Will only be present when the iDRAC port is connected to a network.

Choose your language

To select your preferred language:

1. Open Husky Assistant.
2. On the **Overview** tab, select your preferred language from the list of available languages.

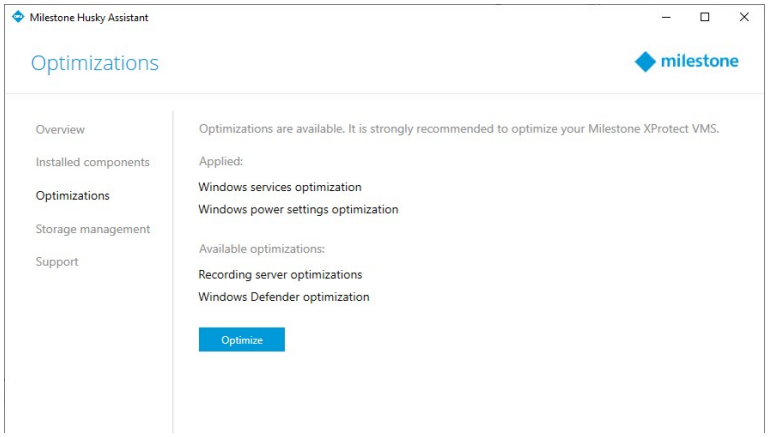


Husky Assistant chooses English by default. All language changes require a restart of Husky Assistant.

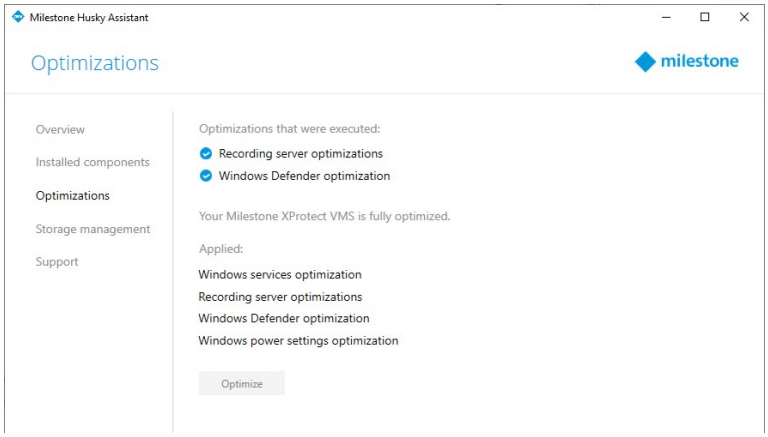
Apply optimizations

Husky Assistant can help you to optimize Windows for running XProtect software and to optimize XProtect software for running on your Husky unit. If you have installed Milestone XProtect VMS without using Husky Assistant, you need to apply the available optimizations. To check if any optimizations are available:

1. Select the **Optimizations** tab.
2. A list of the available optimizations appears.



3. If an optimization is available, click **Optimize**.
4. Accept any user account control warning and wait for the optimization to be applied.
5. Check that the optimization is applied.



Storage management

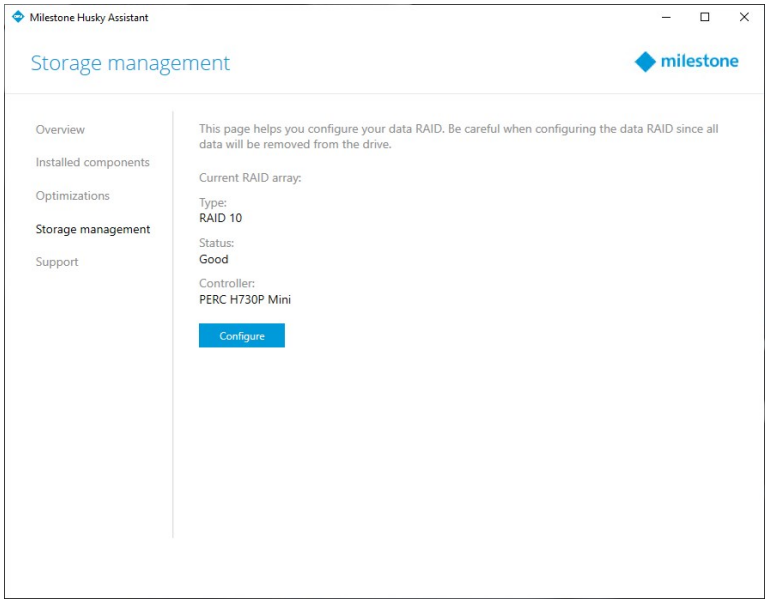
On the Storage management tab, you can see the RAID type and status of the current data storage RAID array.

You can also change the RAID type to fit your storage needs for capacity, redundancy, and performance.

Check RAID status

To check the type and status of the data RAID configuration:

1. Select the **Storage management** tab.



2. The type and status of the current RAID array appears. The different types and statuses are:

Type	Description
RAID 10	For best performance and most redundancy
RAID 6	For high capacity and more redundancy
RAID 5	For maximum capacity

Status	Description
Good	Normal working state
Degraded	The RAID is missing a hard drive, but it is still available Replace one or more hard drives. See Identify and replace a hard drive on page 31
Offline	Too many hard drives are missing from the RAID array, so the raid is now unavailable or offline. Replace one or more hard drives. See Identify and replace a hard drive on page 31
Not Configured	No RAID is configured
Unsupported	A RAID configuration other than RAID 5, RAID 6, or RAID 10 is in use
Unknown	The status of the RAID array could not be detected

Choose RAID type

Your Milestone Husky IVO unit holds several hard drives. You can configure these hard drives as a data storage for Milestone XProtect based on your capacity, performance, and redundancy needs. The options are:

- **RAID 10**

  Select RAID 10 for best performance and most redundancy. The storage capacity will be half the combined storage capacity of the hard drives because half the number of drives are redundant hard drives.

- **RAID 6**

  Select RAID 6 for higher capacity. The storage capacity will be two hard drives fewer than the combined storage capacity of the hard drives because you have two redundant hard drives.

- **RAID 5**

  Select RAID 5 for maximum capacity. The storage capacity will be one hard drive fewer than the combined storage capacity of the four hard drives because you have one redundant hard drive.

Husky IVO Product Guide can help you choose the right storage capacity or other dimensioning of the unit depending on some of these parameters:

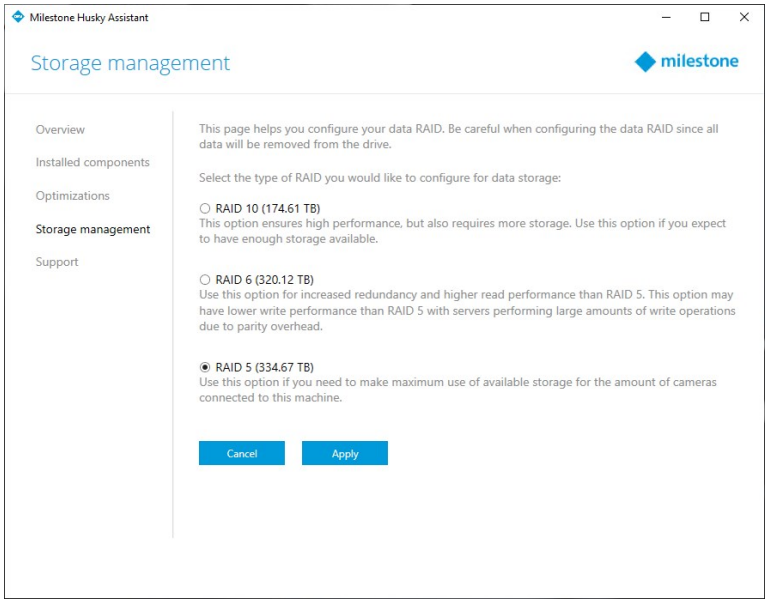
- Number of cameras
- Retention time
- Codec
- Resolution
- Frame rate
- Data rate

Go to Husky IVO Product Guide and log in with your My Milestone credentials.

Change RAID type

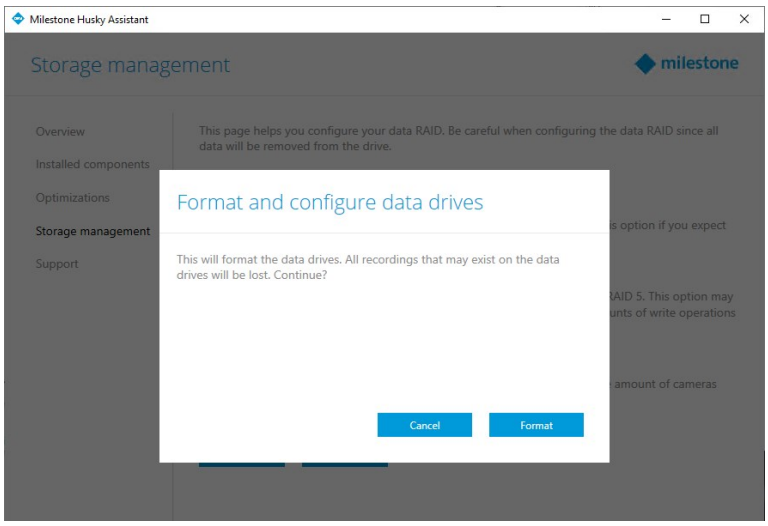
To change the RAID array type:

1. Check if the current RAID array status is **Good** and click **Configure**.
2. Accept any user account control warning and click **Next**.
3. Select the type of RAID that you would like to configure for data storage and click **Apply**.

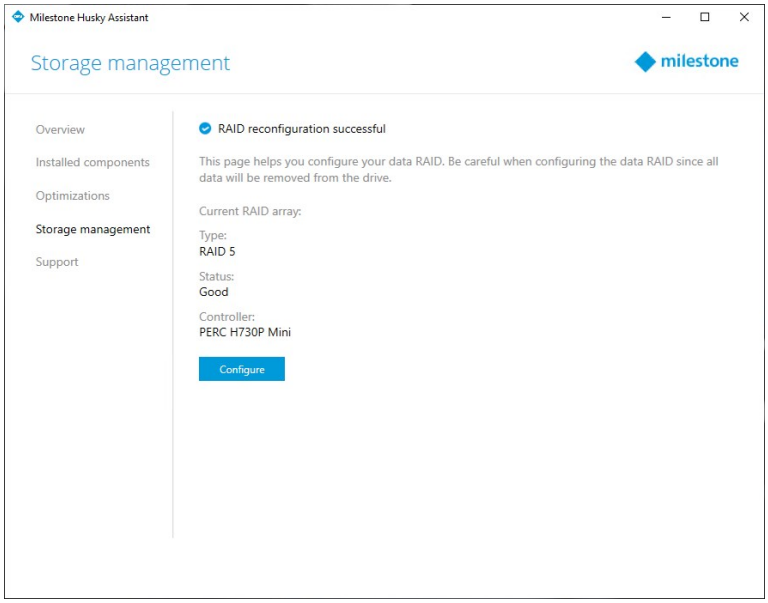


Read the warning stating that all data will be deleted if you continue. Your XProtect system records no video during the configuration.

4. Click **Format** to accept the data deletion and start the configuration of the data RAID storage.



5. A summary window of the RAID configuration appears. Check the type and status of your current RAID array.



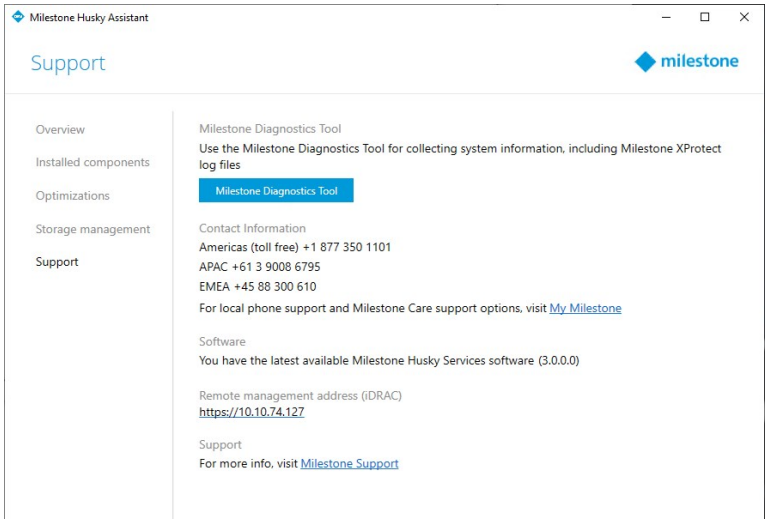
Support

If you have a problem and need support, contact your Milestone reseller that you bought the unit from.

Create a diagnostics file

To help your Milestone reseller get logs and details about your system, create a Milestone diagnostics .zip file that lists the system information:

1. Select the **Support** tab.

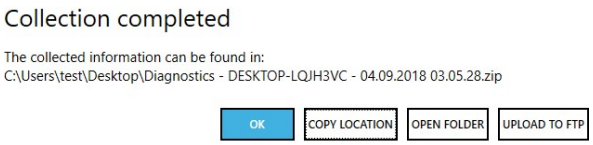


2. Click **Milestone Diagnostics Tool**.

3. Accept any user account control warning. The **Main Page** appears.
4. Click the **Collect Defaults** icon to start creating a diagnostics .zip file.



5. When finished, the diagnostics .zip file is saved on the Windows desktop. You can now move or transfer the file to any preferred location.



6. Close Milestone Diagnostics Tool.
7. Provide your Milestone reseller with the diagnostics .zip file when they assist you in troubleshooting a problem.

Identify and replace a hard drive

If the RAID array status is **Degraded** in Husky Assistant **Storage management tab**, this article will help you identify a faulty hard drive and rebuild the RAID configuration of your data storage.

> If one of the hard drives fails, an audible alarm starts. After replacement of a faulty hard drive, you have to manually start the rebuilding of the RAID.

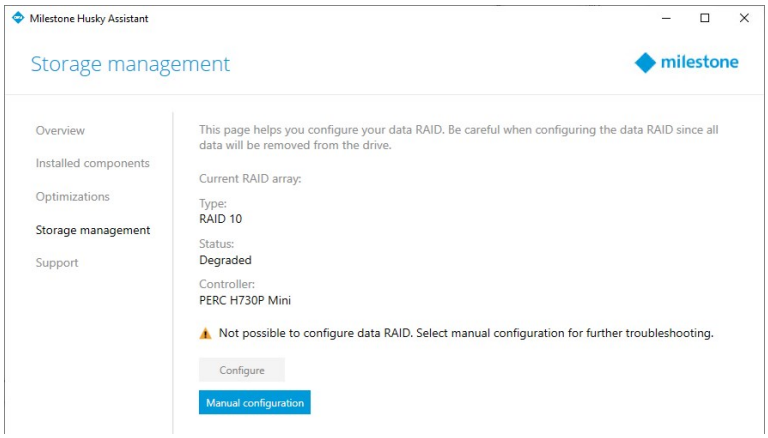
Locate the hard drive tray with a status LED indicator code that shows a hard drive failure and get the drive replaced.

Data hard drives status LED indicator codes	Condition
Flashes amber four times per second	Drive failure
Flashes green slowly	Drive rebuilding
Solid green	Drive online

RAID rebuild

To make the replaced hard drive available for the RAID array, rebuild the RAID:

1. Click **Manual configuration** to open MegaRAID Storage Manager.



   You can use the MegaRAID Storage Manager for status, configuration, and maintenance of your data storage RAID array.

2. On the **Remote servers** tab, click the IP address next to the host name.

3. A login screen appears. Enter your Windows user name and password. Click **Login**.
4. The **Dashboard** appears. Under **Actions**, select **Silence alarm** to stop the audible alarm.

   The audible alarm starts every time there is a change in the storage status.

5. Select the **Logical** tab.
6. Right-click the degraded hard drive with a red mark and select **Start Rebuild**. A warning appears. Select **Confirm** and click **Yes** to start the RAID rebuild.

   The rebuild is faster if you stop the recording server service. In that case, your XProtect system records no video during the rebuild process.

7. Select **Dashboard** to **Silence alarm**, and under **Background Operations**, click **More details** to check the progress of the rebuild.
8. When the rebuild is complete, close the application and check that the current RAID array status in Husky Assistant is **Good**.

   Remember to start the recording server service if you stopped it during rebuild.

Find the shortcut for MegaRAID Storage Manager on the Windows desktop.

Recovery

You can do a recovery on your Milestone Husky unit, which resets your unit to the factory default state and lets you start over and reconfigure your unit from scratch.

Recovery will:

- Make a new Windows installation
- Run Husky Assistant wizard to configure your unit
- Help you install Milestone XProtect



All data on the Windows (C:) drive will be lost, and your XProtect system will not record any video during the recovery of your unit. You can save the Milestone XProtect VMS configuration before you start the recovery.



Data on the Data (D:) drive will not be deleted.

For detailed feature descriptions and procedures for configuration and maintenance, see the administrator manual for XProtect VMS.

Before the recovery process:

1. Contact Milestone support to get the latest recovery software.
2. Get help from Milestone support to create a bootable USB flash drive.
3. Connect the USB flash drive to your Milestone Husky IVO unit.
4. Prepare the BIOS settings to boot from USB flash drive.

To start the recovery process:

1. Restart your unit.
2. Boot from the USB flash drive.
3. Your unit boots into recovery mode. Follow the instructions to complete the process.



Enter the Windows product key if prompted during the process, see Turn on the unit on page 15. For more information on first time use, see Complete the Husky Assistant Wizard on page 16.

XProtect Upgrade

Your Milestone Husky unit can run with any product variant and version of Milestone XProtect VMS determined by the Software License Code (SLC). Your Milestone Husky unit has a preloaded XProtect VMS version ready to be installed, but you can always download and install a newer or older version of Milestone XProtect VMS that matches your license.

You can upgrade your entire system configuration from one product version to another, for example from XProtect 2020 R3 to XProtect 2021 R1. You can install the new product on top of the old version without removing the previous version.



Remember to apply available VMS optimizations after the upgrade. For more information, see Husky Assistant on page 22 > Apply optimizations.

System scaling

To be able to scale to thousands of cameras across multiple sites, the system consists of components that handle specific tasks. If you have installed all components on a standalone Milestone Husky IVO unit, you can expand your system by installing the components on separate dedicated servers in a distributed system to scale and distribute the load.

Not all components are needed in all installations. You can always add additional recording servers, failover recording servers, or XProtect Mobile servers for hosting and providing access to XProtect Mobile client and XProtect Web Client.

helpfeedback@milestone.dk

About Milestone

Milestone Systems is a leading provider of open platform video management software; technology that helps the world see how to ensure safety, protect assets and increase business efficiency. Milestone Systems enables an open platform community that drives collaboration and innovation in the development and use of network video technology, with reliable and scalable solutions that are proven in more than 150,000 sites worldwide. Founded in 1998, Milestone Systems is a stand-alone company in the Canon Group. For more information, visit https://www.milestonesys.com/.