



Milestone XProtect®
Video Management Software

**PREVENT.
PROTECT.
PROVE.**

What is XProtect?

XProtect is a video management software that brings all the puzzle pieces of a video surveillance installation together in a perfect combination, so you can create a video solution that keeps people and property safe today – and tomorrow.



XProtect – built on Open Platform architecture



**+11,000 devices
supported**



**+500,000 installations
worldwide**



**Leading innovation
with three yearly
product updates**

With +20 years of market experience, Milestone has proven to be the right answer for more than 500,000 installations worldwide – from florists to universities, to stadiums and cities.



**+850 employees
globally**



**+11,000 resellers and
integrators**



**Offices
in 23 countries**

Open Platform

XProtect's architecture has fostered an ever-expanding community of camera manufacturers, application providers, and software developers, all working to create integrations and extensions to XProtect.

Leverage the community and its thousands of integrated solutions and add additional value and capabilities to your XProtect system.

XProtect[®] Essential+

Supporting up to 8 cameras. Ideal for small businesses

XProtect[®] Express+

Supporting up to 48 cameras. Designed for smaller, single-site installations with basic security needs

XProtect[®] Professional+

Supporting an unrestricted number of cameras and servers. Optimized for multi-site companies needing to quickly identify and respond to incidents

XProtect[®] Expert

Supporting an unrestricted number of cameras. For large-scale installations that require end-to-end protection of video integrity

XProtect[®] Corporate

Supporting an unrestricted number of cameras. For high-security and mission-critical installations that demand supreme situational awareness of any event and uninterrupted access to live and recorded video



	FREE	XProtect Essential+	XProtect Express+	XProtect Professional+	XProtect Expert	XProtect Corporate
Type of deployment		Single server	Single server	Centrally managed, multi-server	Centrally managed, multi-server	Centrally managed, multi-server
Number of hardware devices per software license		Free up to 8	48	Unrestricted	Unrestricted	Unrestricted
Number of cameras per recording server		8	48	Unrestricted	Unrestricted	Unrestricted
Number of recording servers per system		1	1	Unrestricted	Unrestricted	Unrestricted
Map function		√	√	√	√	√
Third-party integration		√	√	√	√	√
Centralized management		√	√	√	√	√
Microsoft Active Directory		√	√	√	√	√
Hardware accelerated video decoding		√	√	√	√	√
Customer Dashboard		-	√	√	√	√
XProtect Add-ons		-	√	√	√	√
Alarm Manager		-	√	√	√	√
Bookmarking		-	-	√	√	√
Edge Storage		-	-	√	√	√
Smart Map		-	-	-	√	√
Media database encryption + digital signing		-	-	-	√	√
Failover recording server		-	-	-	√	√
Evidence Lock		-	-	-	-	√
Milestone Interconnect™		-	Remote site	Remote site	Remote site	Central/ Remote site

Simple licensing



Base server license

Can be installed on a single server or an unrestricted number of servers, based on the product



Device license

One hardware device license needed per camera or other IP-based device connected to the system

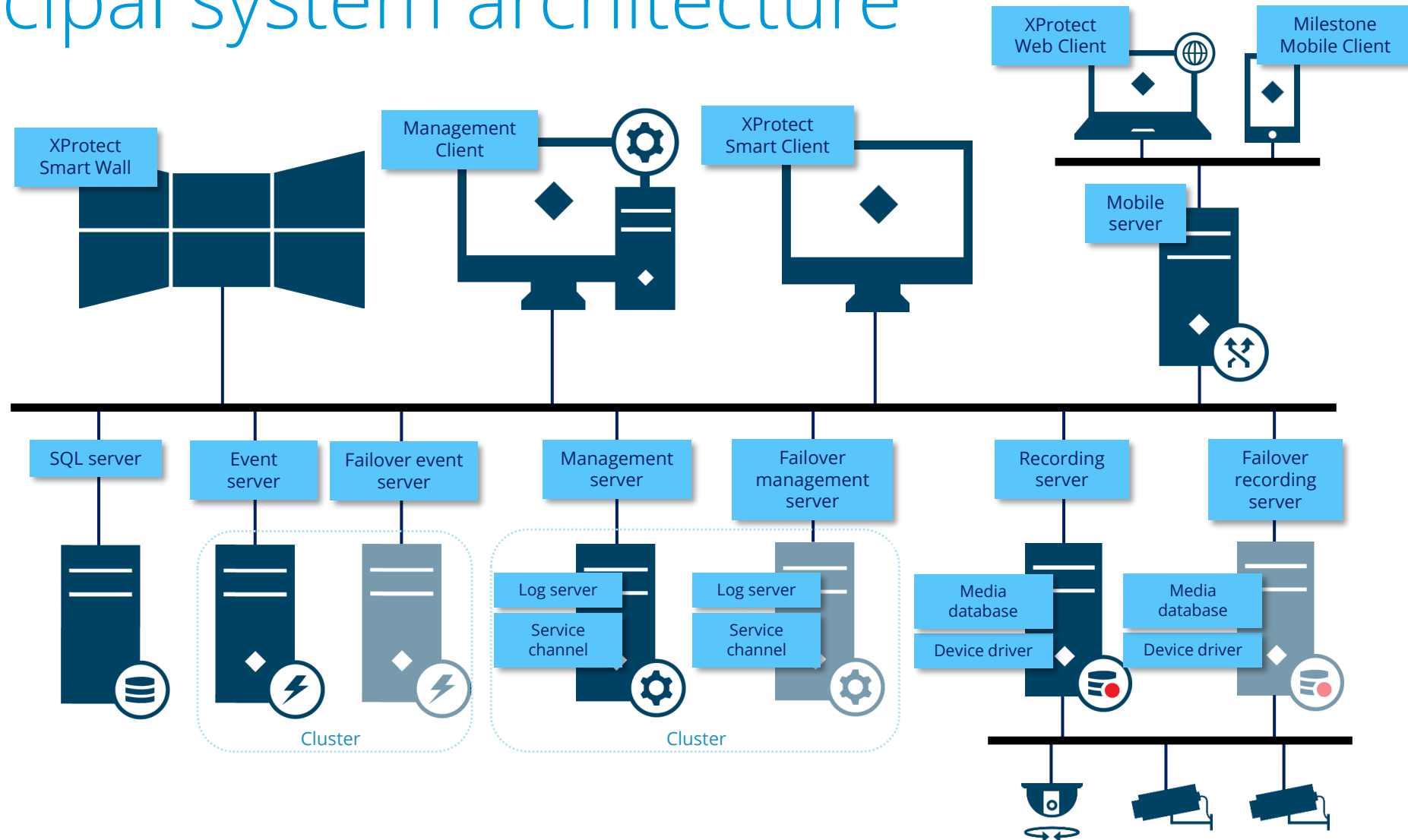


Free XProtect clients

All XProtect clients are unlicensed and work with all XProtect products



Principal system architecture



XProtect Clients

STAY IN CONTROL WHEREVER YOU ARE

You are always in control of your XProtect video management software solution with these three easy access options.



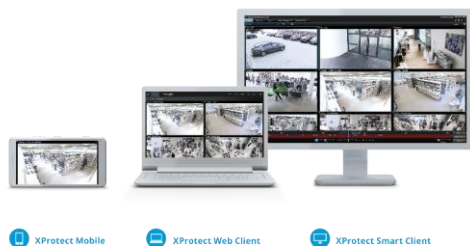
XProtect Mobile



XProtect Web Client

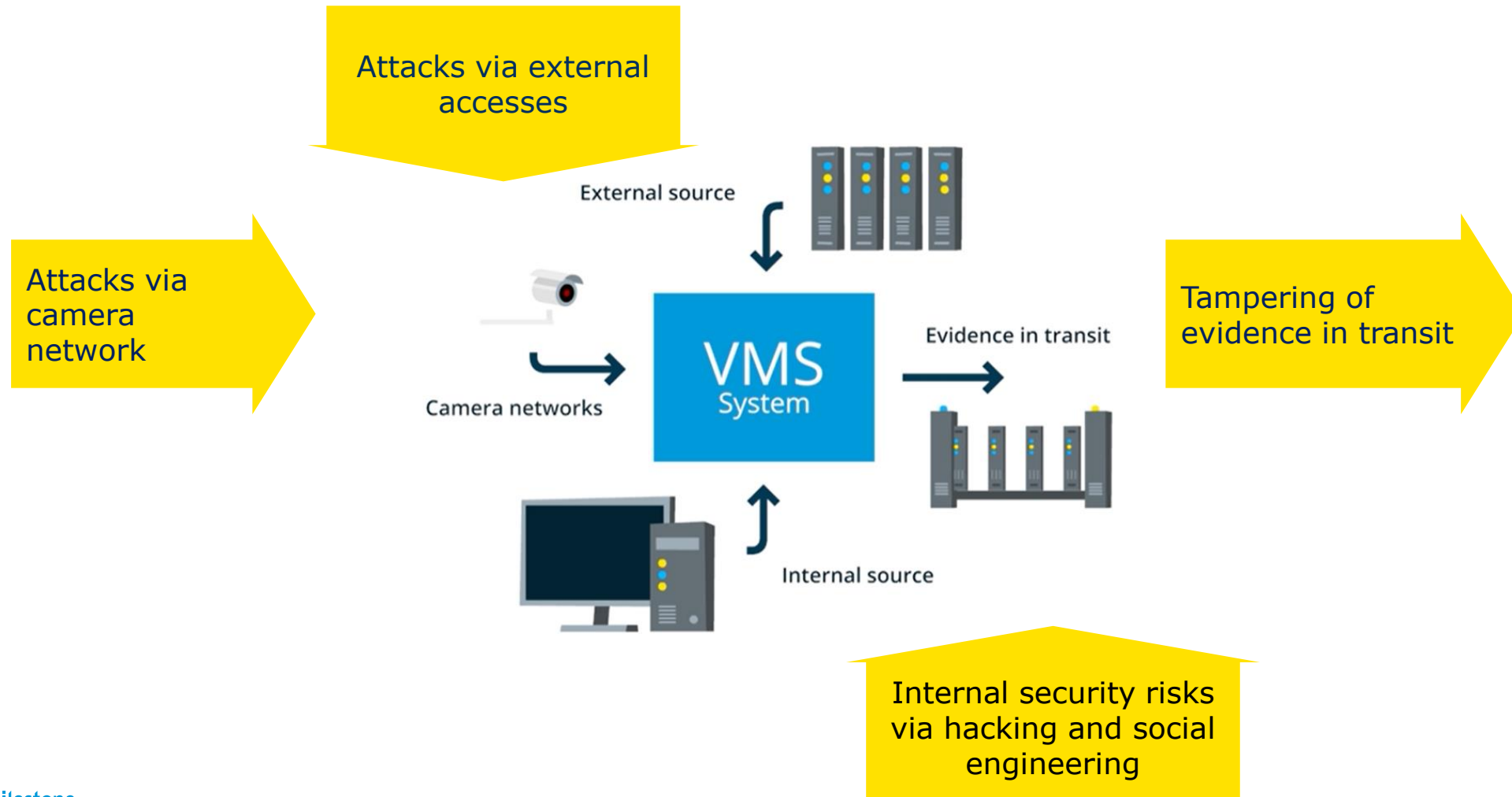


XProtect Smart Client



Choose the mobile device or computer you prefer to use, whether you want to access XProtect on-site, off-site, or on-the-go.

Principal risk exposures in a VMS system



Learn more

- Let our VMS expert, Eric Featureman, show you why XProtect's system architecture and security mechanisms keep your system and its data protected against internal and external threats
- Watch it here:



GDPR-ready certification

Issued by independent and recognized institute **European Privacy Seal**, this certification proves compliance with criteria catalogue v201701*

- XProtect Corporate 2019 R2 was the first major VMS product to obtain GDPR-ready certification by EuroPriSe, covering all core VMS functions
- XProtect Corporate 2021 R1 included an expanded GDPR-ready certification from EuroPriSe, adding key functions such as XProtect's Basic User, Mobile Server, Mobile Client, and Web Client to the 2019 certification to deliver an inclusive GDPR-ready VMS.
- The General Data Protection Regulation (GDPR) is a strict set of EU regulations that are devised to protect data and privacy for all individuals within the EU and EEA areas



EuroPriSe's criteria catalogue v201701 catalogue is pending approval pursuant to Article 42(5) GDPR and EuroPriSe GmbH has not been accredited as a certification body pursuant to Article 43 GDPR yet. EuroPriSe is dedicated to receiving the approval of its certification criteria and the accreditation as a certification body in accordance with Art. 42 f. GDPR asap.



<https://www.european-privacy-seal.eu/eps-en/milestone-xprotect-corporate>

Ensuring GDPR-compliant video operation



GDPR-READY VMS

VMS software certified to contain cybersecurity and privacy protection features that enable GDPR-compliant use.



CORRECT DESIGN

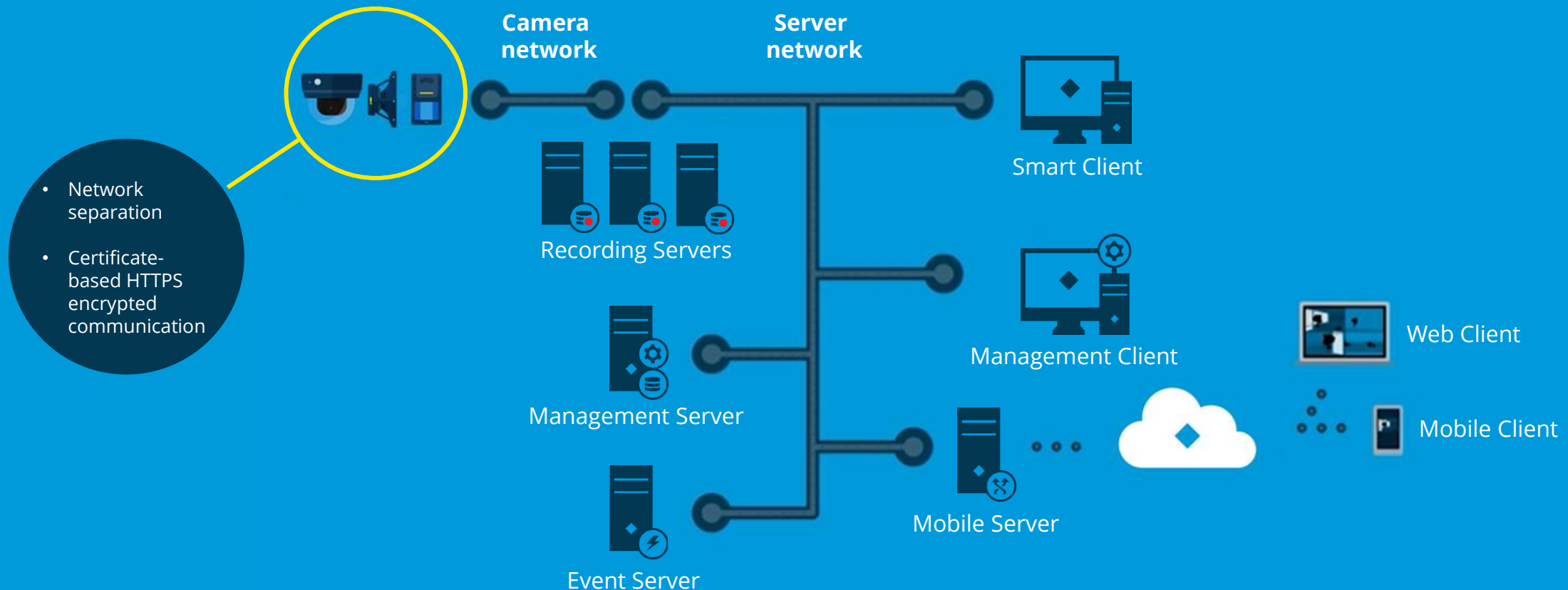
Systems Integrators ensure *privacy by design* by applying the correct overall system design, system configuration, and physical installation of cameras and other devices.



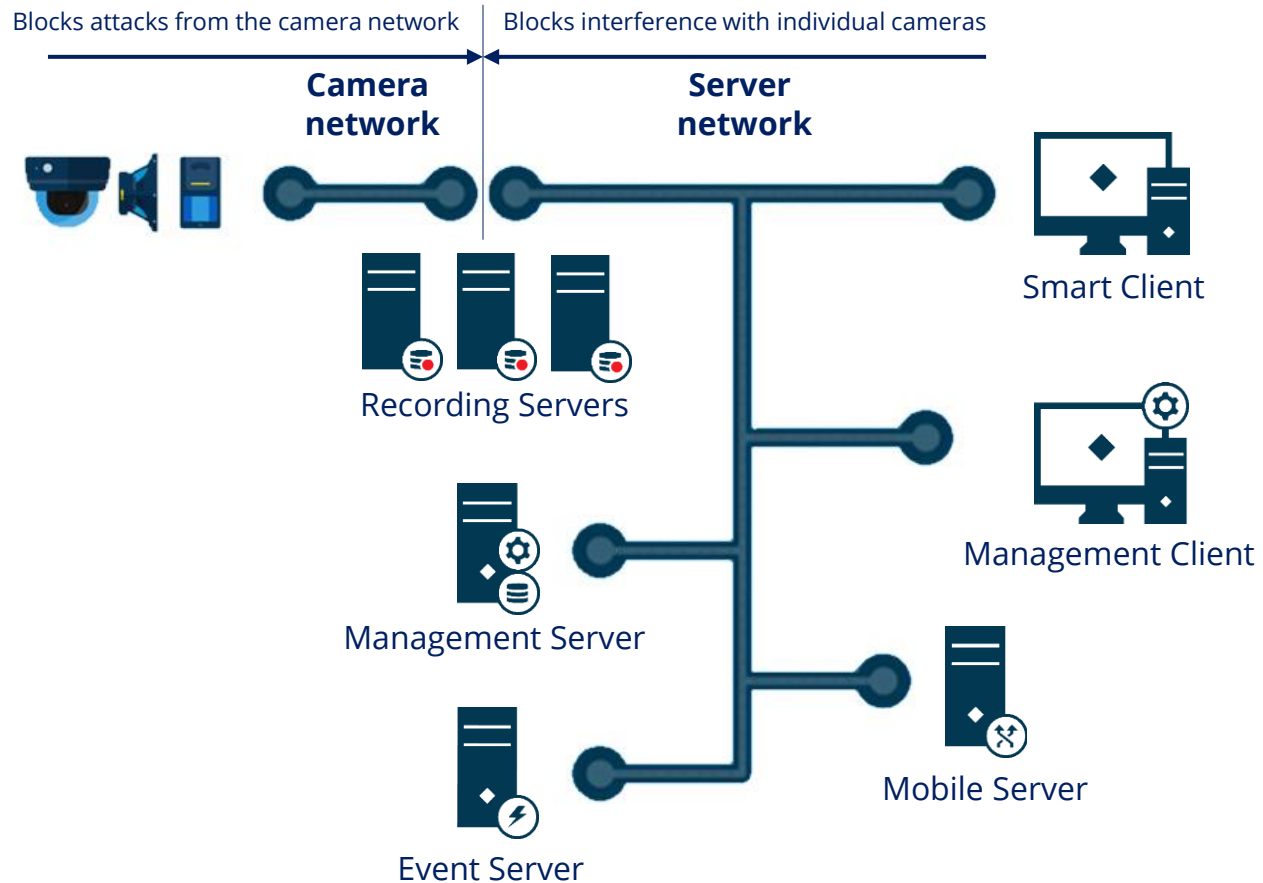
RIGHT USE

End-users define and follow procedures and processes for how video data is stored, handled and shared.

XProtect is secure by design



Security through network separation



1

XProtect is built on a tiered system architecture, making it possible to separate the camera network and the core server network

2

The physical separation of camera network and server network protects system integrity from cybersecurity attacks

3

The Recording Server acts as a gateway between the camera and the server network, ensuring there is no direct routing between the two network segments

4

If a cyberattack may reach the recording server on a network segment it will have difficulties penetrating beyond this point

Certificate-based HTTPS encrypted communication on the camera network



1

To prevent **unauthorized access to the streamed video**, XProtect supports certificate-based HTTPS encrypted communication between the camera and the Recording Server

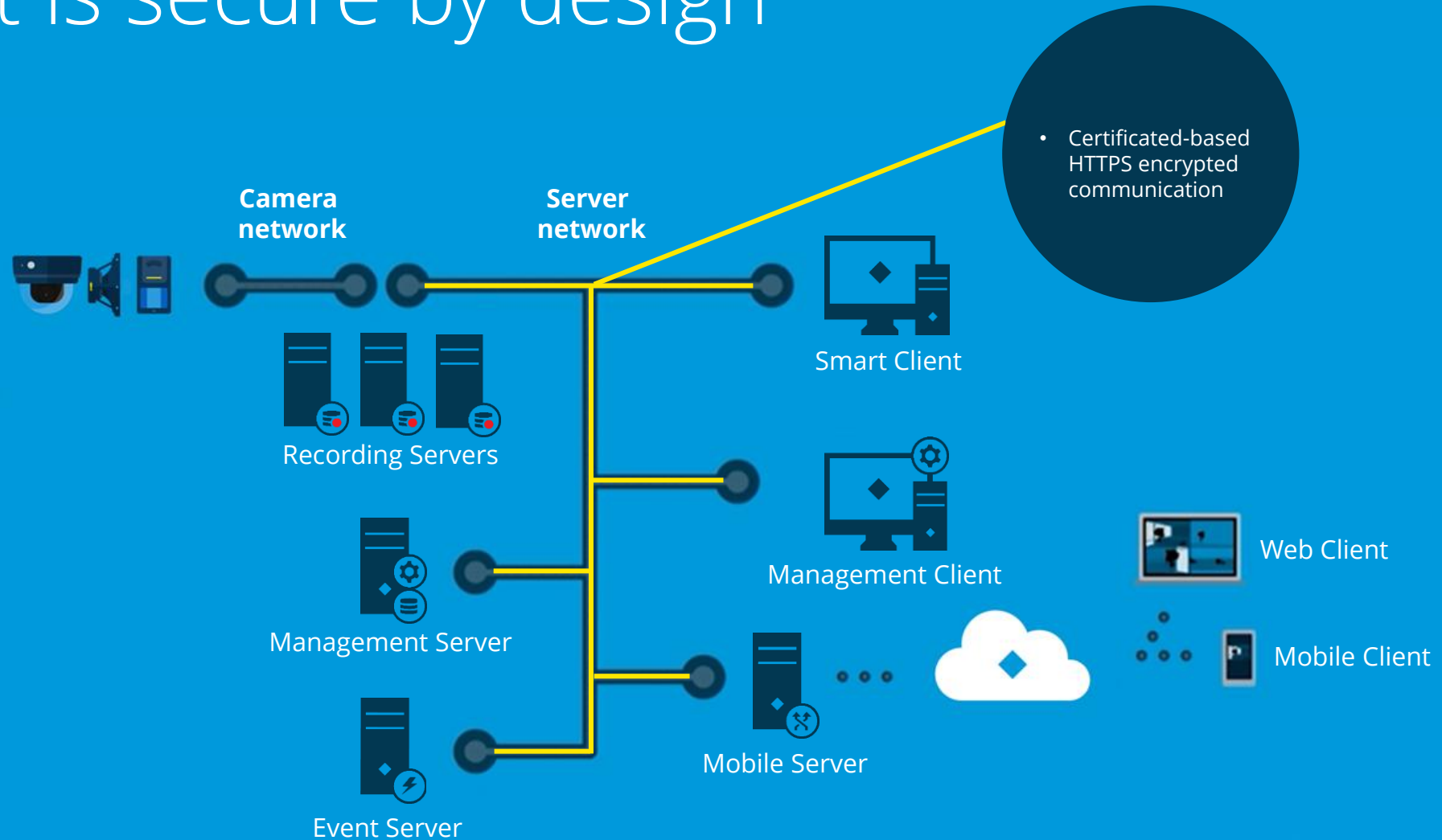
2

HTTPS provides bi-directional encryption of the communication and prevents eavesdropping and tampering

3

HTTPS uses Transport Layer Security (TLS) and certificates to guarantee the highest level of security of the servers' network

XProtect is secure by design



Certificate-based HTTPS encrypted communication on the server network



1

To prevent **unauthorized access to the streamed video and other communication data between servers and clients**, XProtect supports certificate-based HTTPS encrypted communication

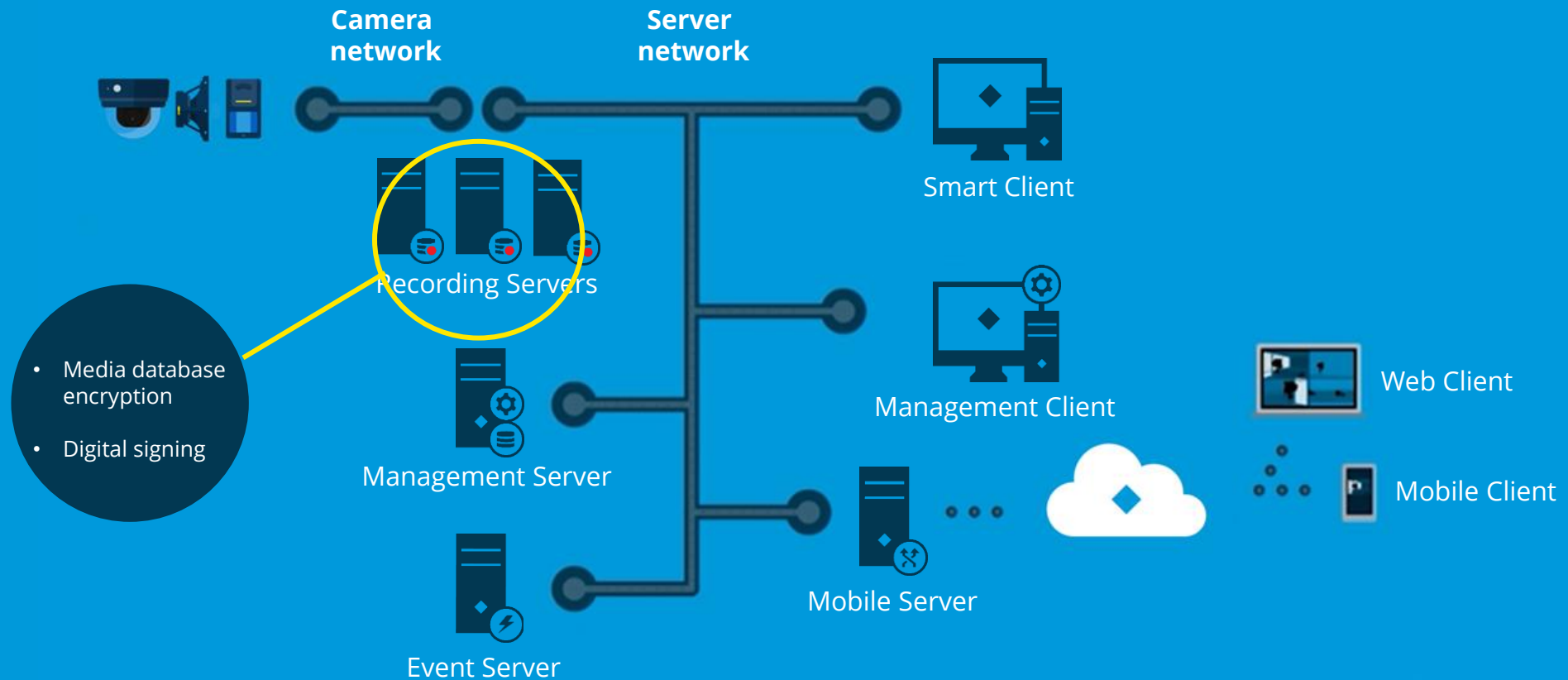
2

HTTPS provides bi-directional encryption of the communication and prevents eavesdropping and tampering

3

HTTPS uses Transport Layer Security (TLS) and certificates to guarantee the highest level of security of the servers' network

How XProtect is secure by design



Media database encryption and signing



1

To **prevent unauthorized access** directly to the recordings in the media database files, the recording server supports media database encryption and digital signing

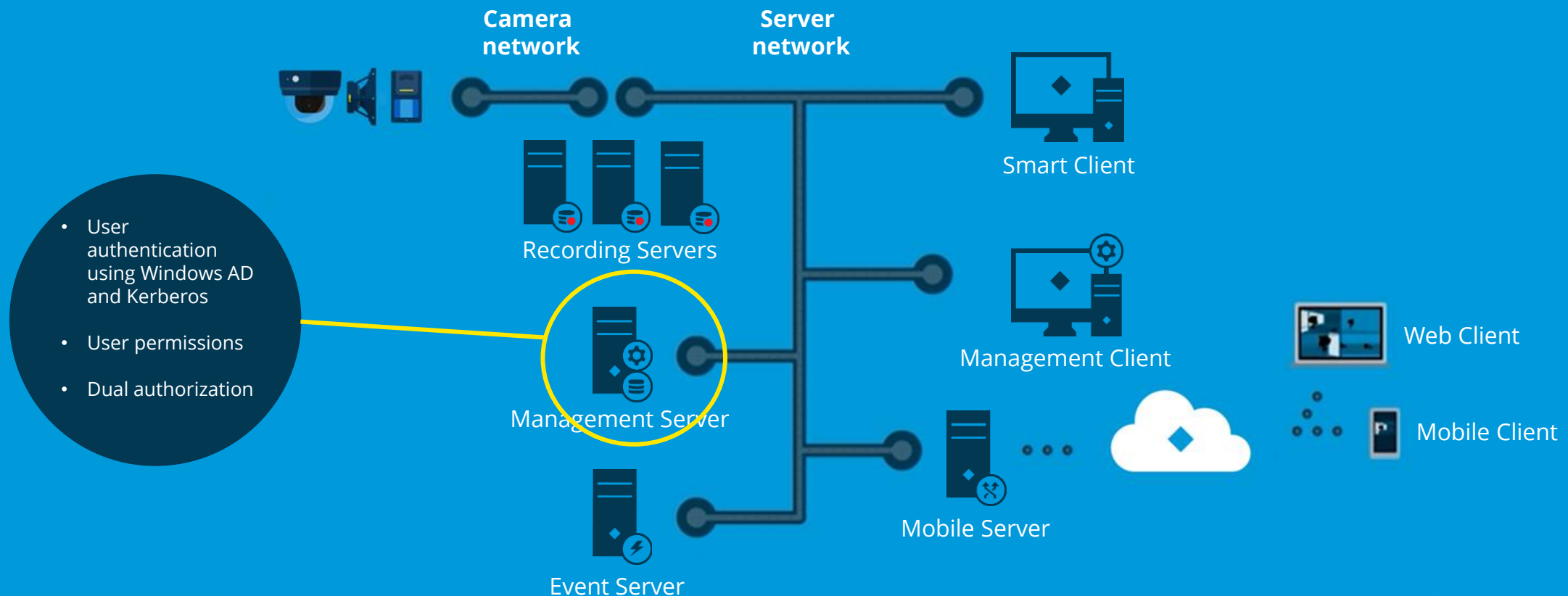
2

The media database encryption uses AES-256 encryption technology and protects the recorded data even if someone gains access to the media data

3

Digital signing on the recorded media data can be used to prove that the video has not been altered or manipulated while stored in the system

How XProtect is secure by design



User authentication



1

To prevent unauthorized access, the XProtect VMS supports server-side authentication using Windows Active directory with NTLM and Kerberos support

2

XProtect supports Kerberos authentication as a complement to Microsoft NTLM authentication

3

Kerberos is a security authentication protocol that offers a more secure way to authenticate users and requires a trusted third party.

User permission



1

Building on user role definitions in XProtect, users can apply general or granular user rights to specific roles, individual or groups of users

2

The degree of permission options in the roles is comprehensive and can determine which XProtect clients the user may use, which devices the user can access, etc.

3

The user rights can be defined to be both static and time conditioned, making it possible to grant certain permissions only at specific times

Dual authorization



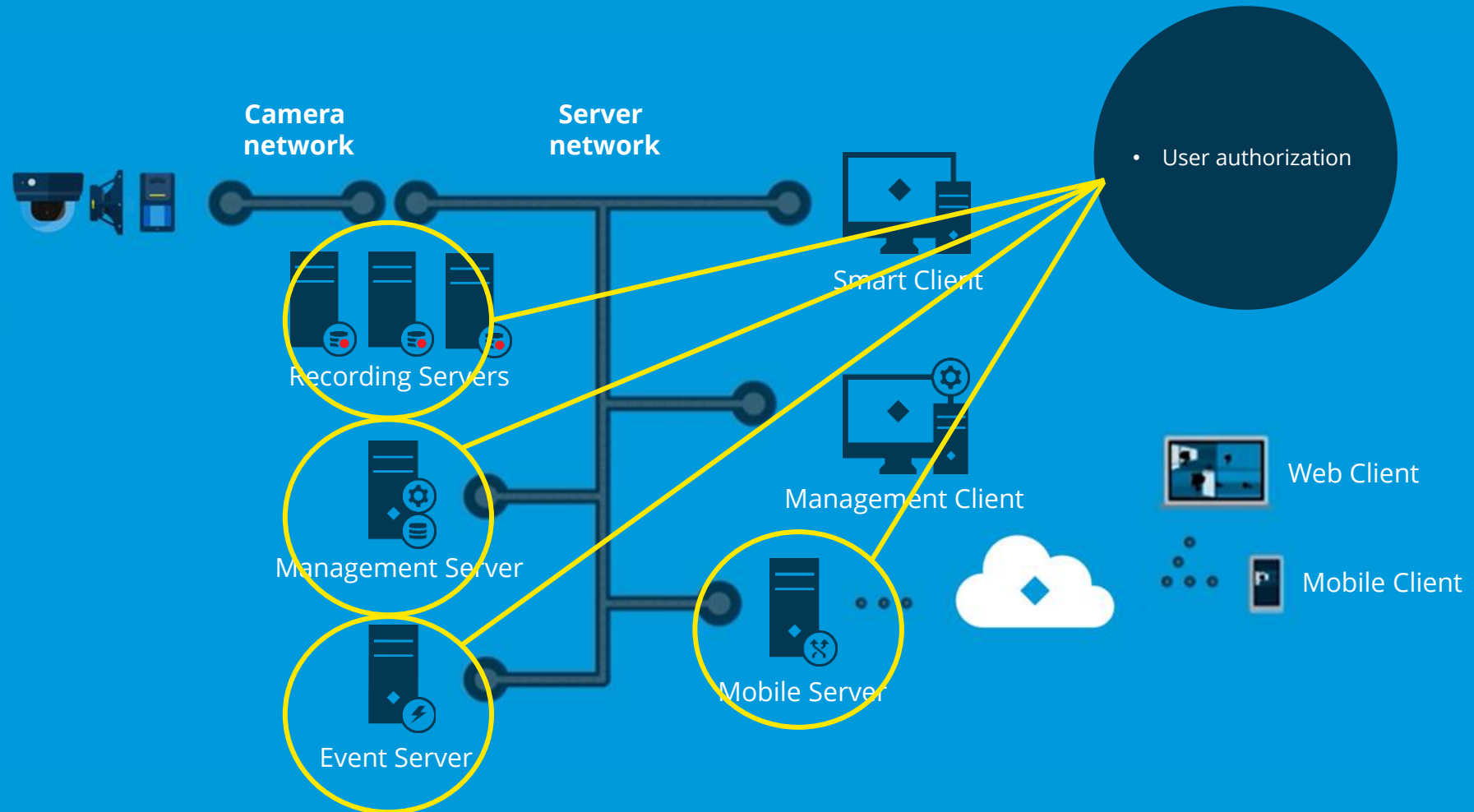
1

Dual authorization offers an additional layer of system security and only grants a user access when a second user has confirmed the log-in

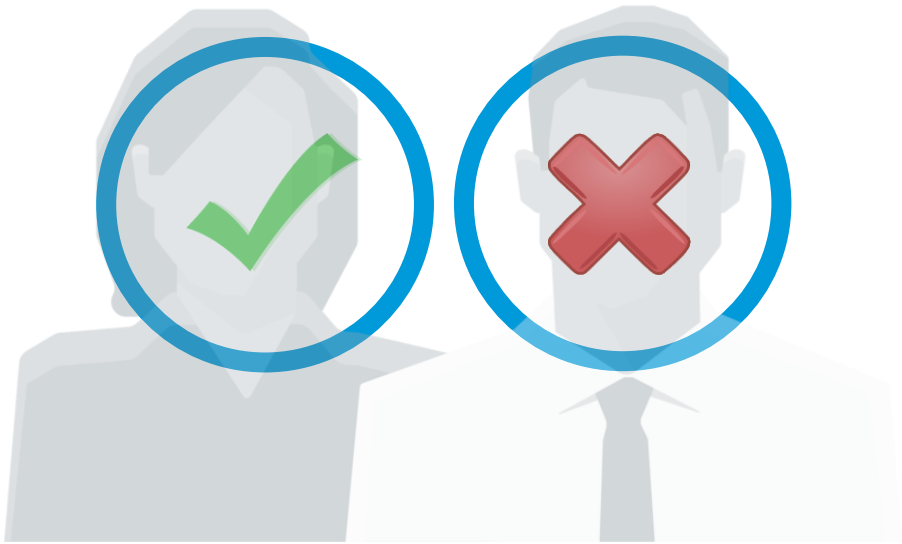
2

The dual authorization may optionally be applied to users accessing the VMS system via the XProtect Smart Client or the XProtect Management Client

How XProtect is secure by design



User authorization



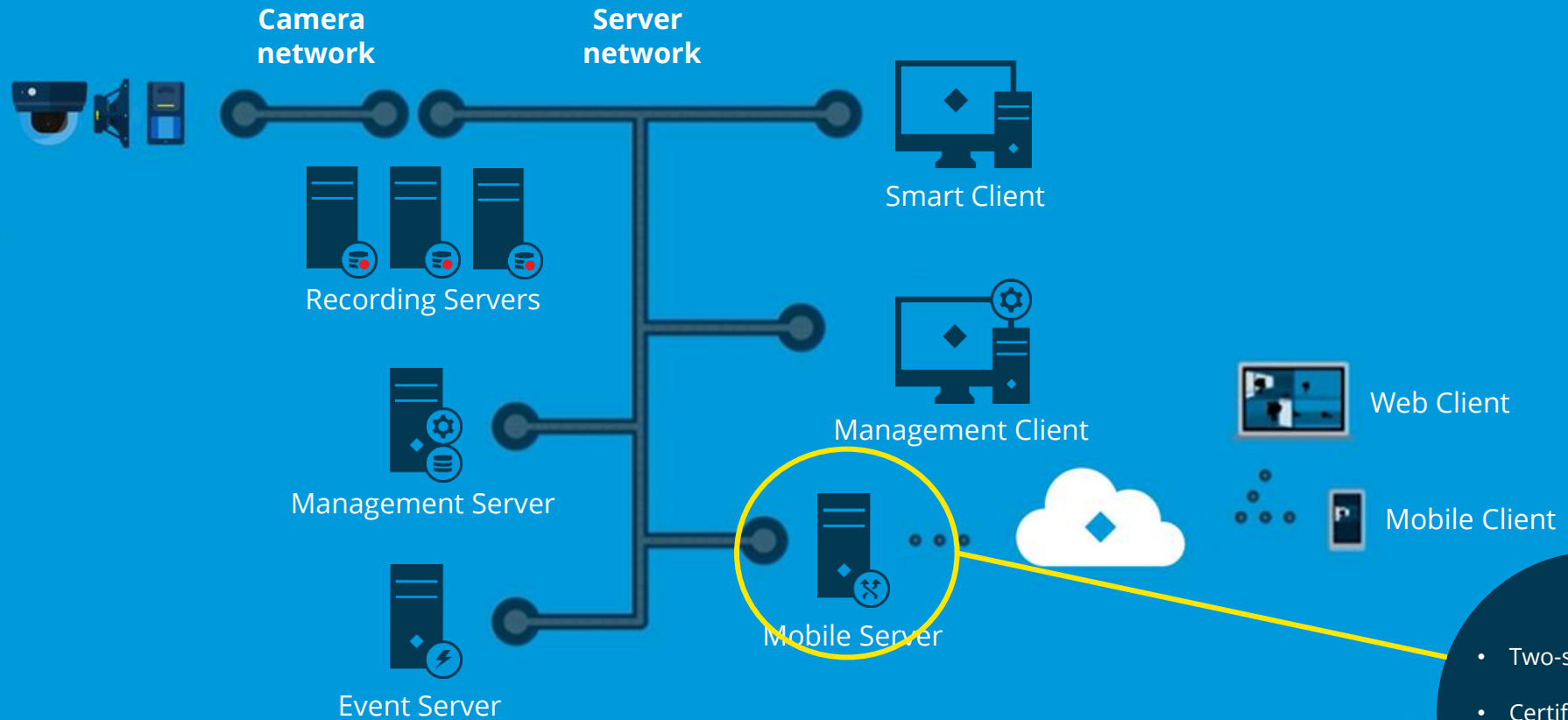
1

To ensure users only access the resources they have permission to, all XProtect servers authorize the request and grant or deny access based on user permissions

2

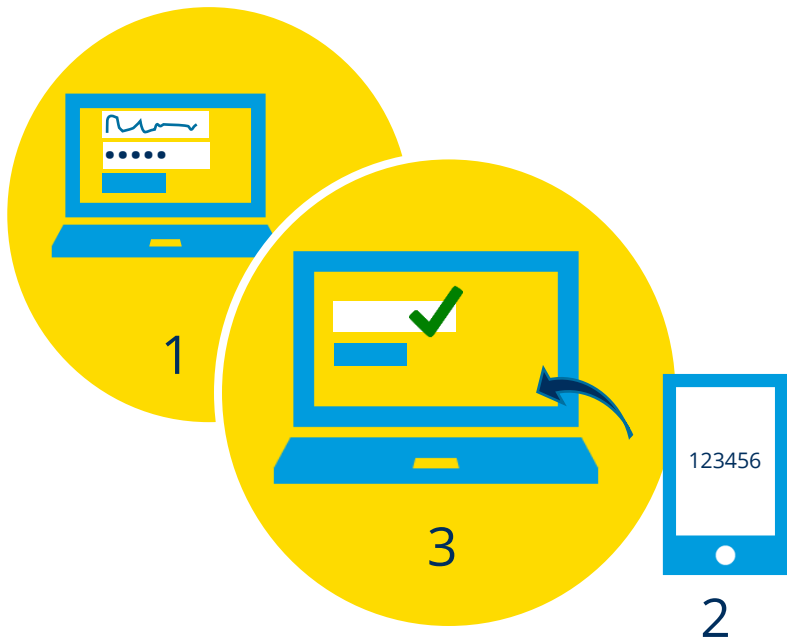
The user authorization is based on time-limited security tokens

How XProtect is secure by design



- Two-step verification
- Certificate-based HTTPS encrypted communication

Two-step verification



1

Prevents non-authorized people from accessing the system via XProtect Mobile and Web Client and protects against “man in the middle” attacks

2

Two-step verification can be configured per user and/or group of users and is a way to help protect the system with both a password and a verification code

3

User signs into XProtect Mobile or XProtect Web Client using their password as usual. A one-time verification code is sent to the user as an email or SMS

Certificate-based HTTPS encrypted communication on the Mobile Server



1

To prevent **unauthorized access to the streamed video and other communication data between the Mobile Server and Mobile and Web Clients**, XProtect supports certificate-based HTTPS encrypted communication

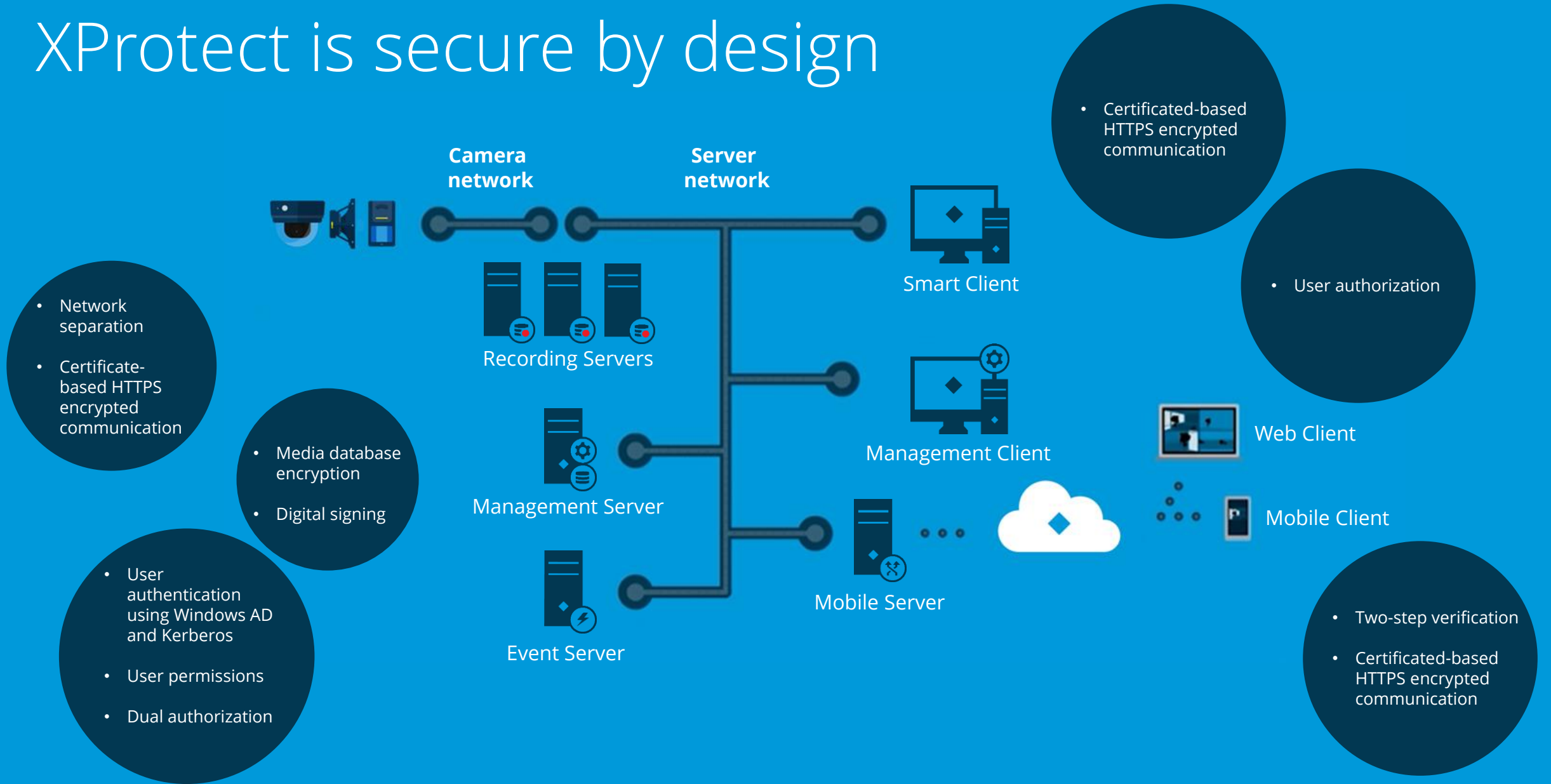
2

HTTPS provides bi-directional encryption of communication and prevents eavesdropping and tampering

3

HTTPS uses Transport Layer Security (TLS) and certificates to guarantee the highest level of security of the servers' network

XProtect is secure by design



XProtect adheres to FIPS 140-2 with the latest security measures



1

Cryptography New Generation (CNG) by Microsoft to ensure media database is encrypted at the highest standard

2

Dedicated device drivers that can guarantee a FIPS 140-2 compliant mode of operation when communicating with devices

3

Password protected configuration to ensure only authorized users can access the system configuration

Situational awareness

Early incident detection and location awareness

Map & Smart Map

- Instant alarm displays, including location

Alarm Manager

- Priority and descriptions
- Alarm instructions

Desktop alarm notifications

- Alarm notifications to focus on what's important

Fast and accurate incident assessment

XProtect Smart Wall

- Instant access to any camera
- Rich Smart Wall content

Independent Playback

- Evaluate events while maintaining real-time overview

PTZ Control

- Versatile use of PTZ cameras

Multi-layered maps

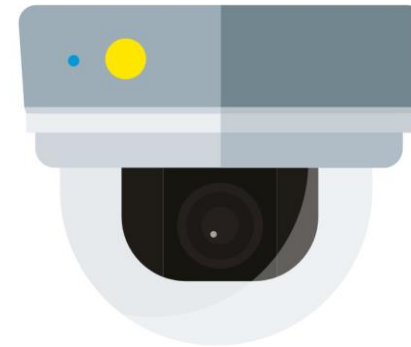
Interactive map function that gives operator a real-time situational overview, so they can instantly access any camera or control any security peripheral connected to the VMS system



Operational hub enabling status reporting and control of all connected devices

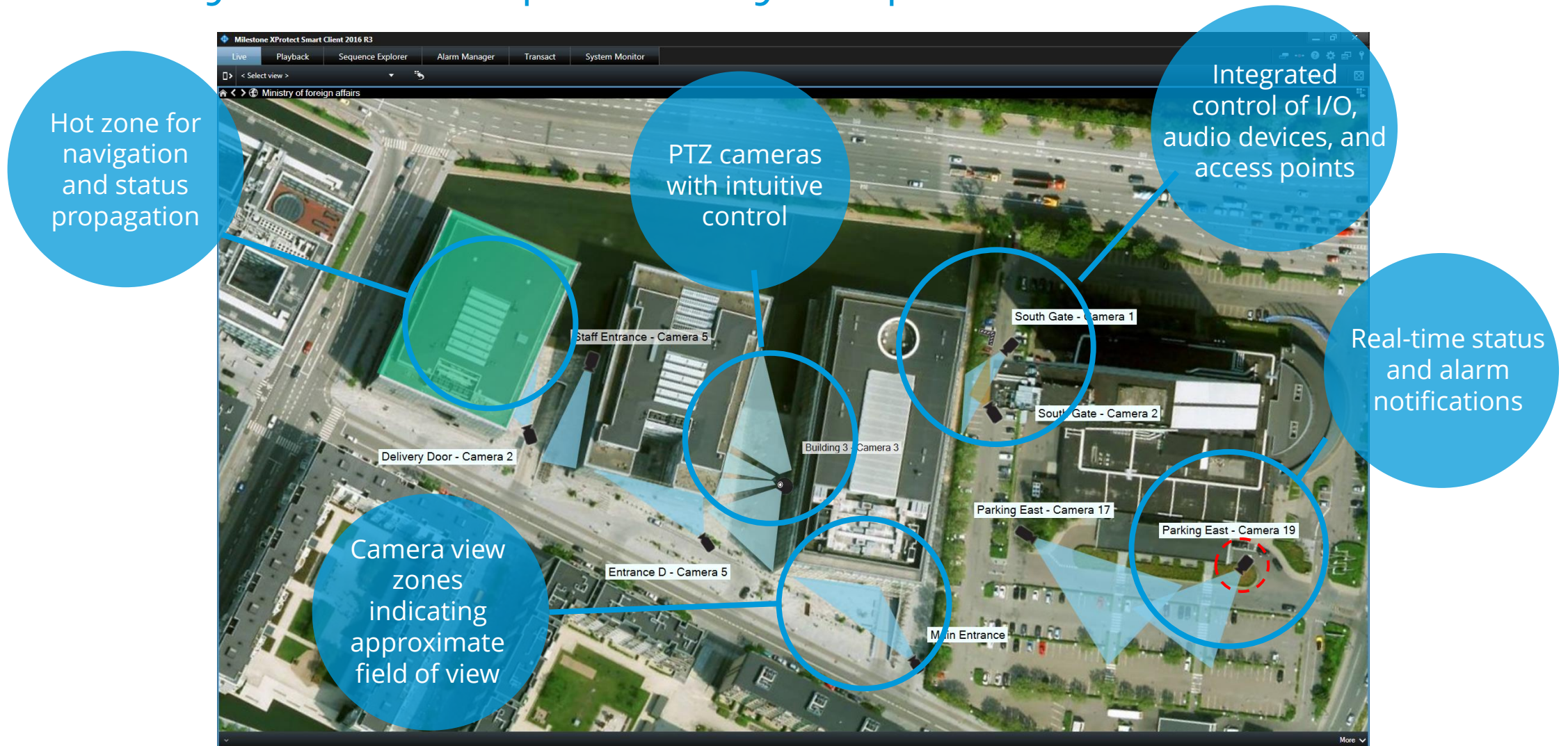


Provides visual and operational overview of large and complex systems

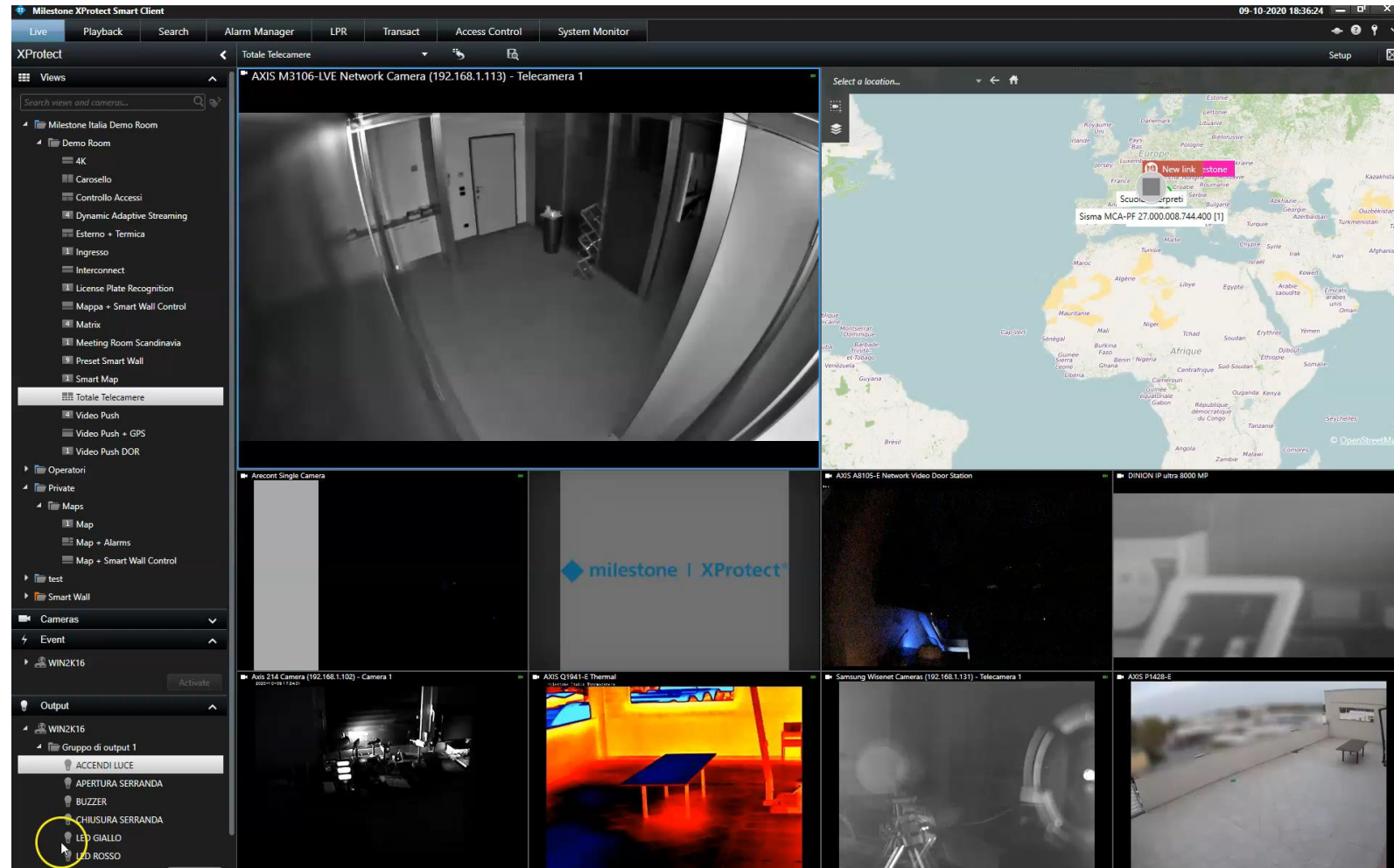


Increased efficiency and faster incident response

Multi-layered maps – Key capabilities



Demo - Maps



Smart Map

Smart Map supports seamless geo-navigation across different locations. It offers native support for GIS maps and CAD drawings, as well as support for online map services like Google maps, Bing maps and Milestone Map Service



Increases system overview and situational awareness



Enables seamless geo-navigation



Easy drag-and-drop definition of cameras, camera field of view, location links and quick links

Smart Map – Key capabilities

Device clustering of map items

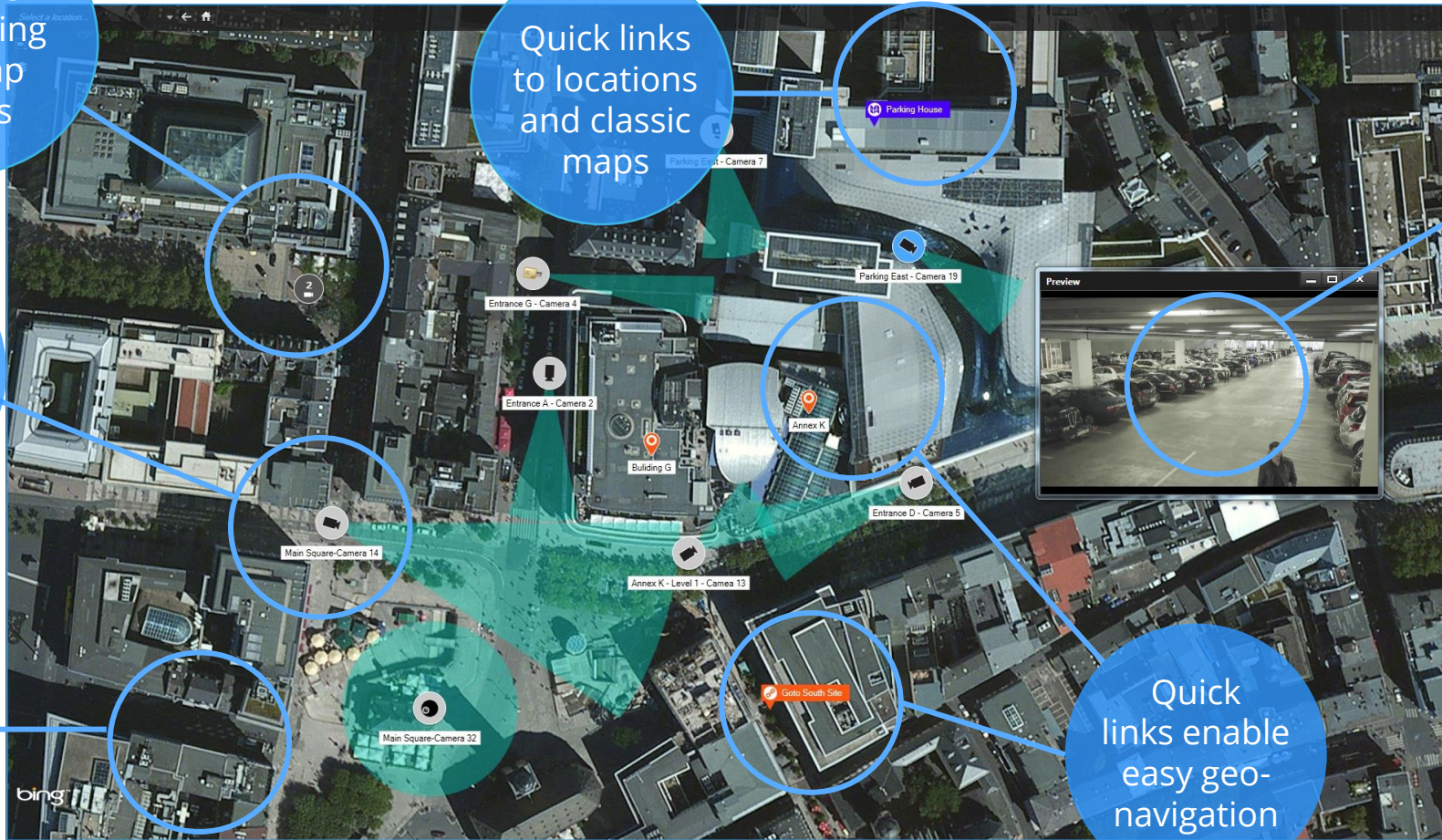
Quick links to locations and classic maps

Instant camera preview

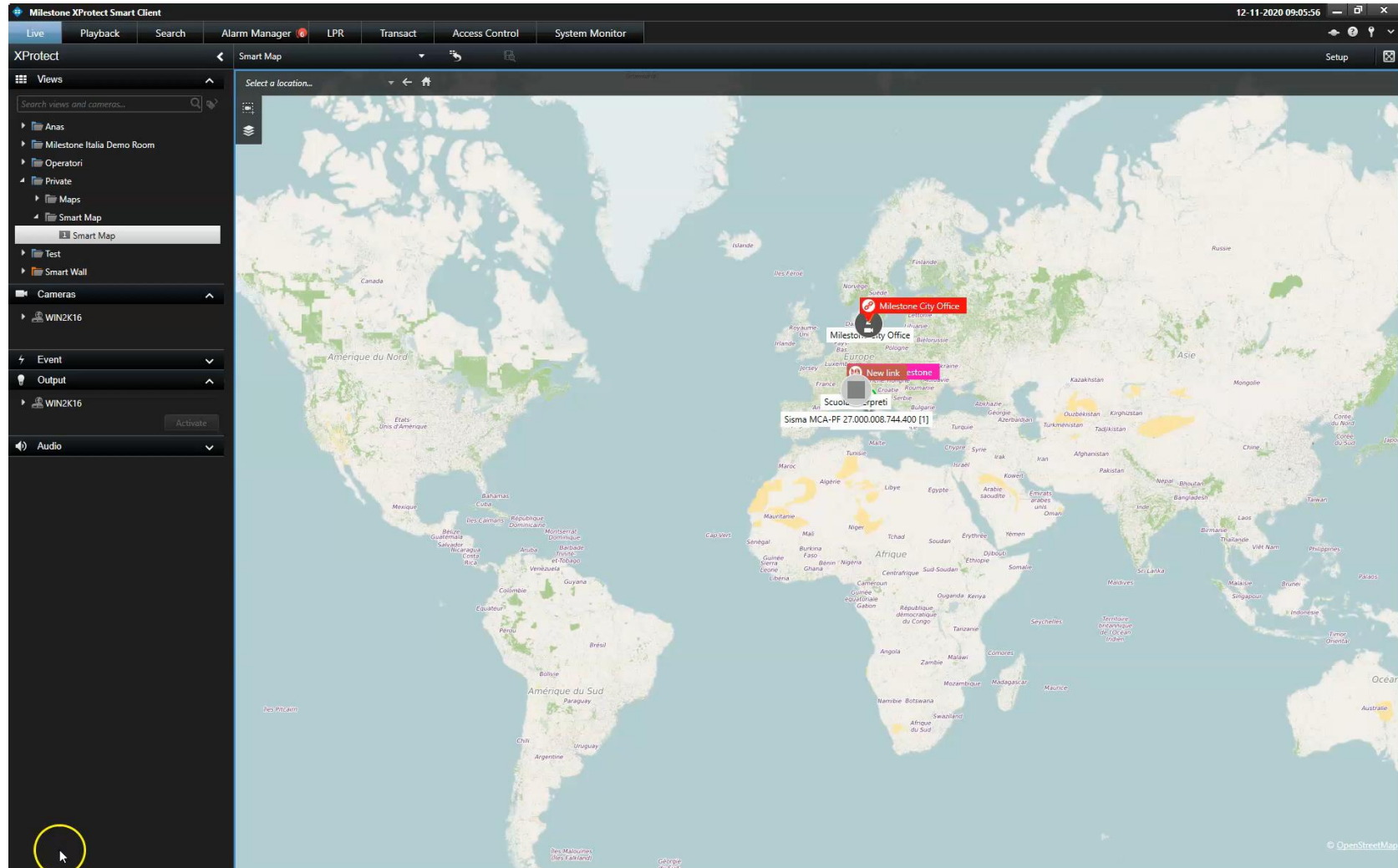
Camera icons

Add alarms, input devices and microphones

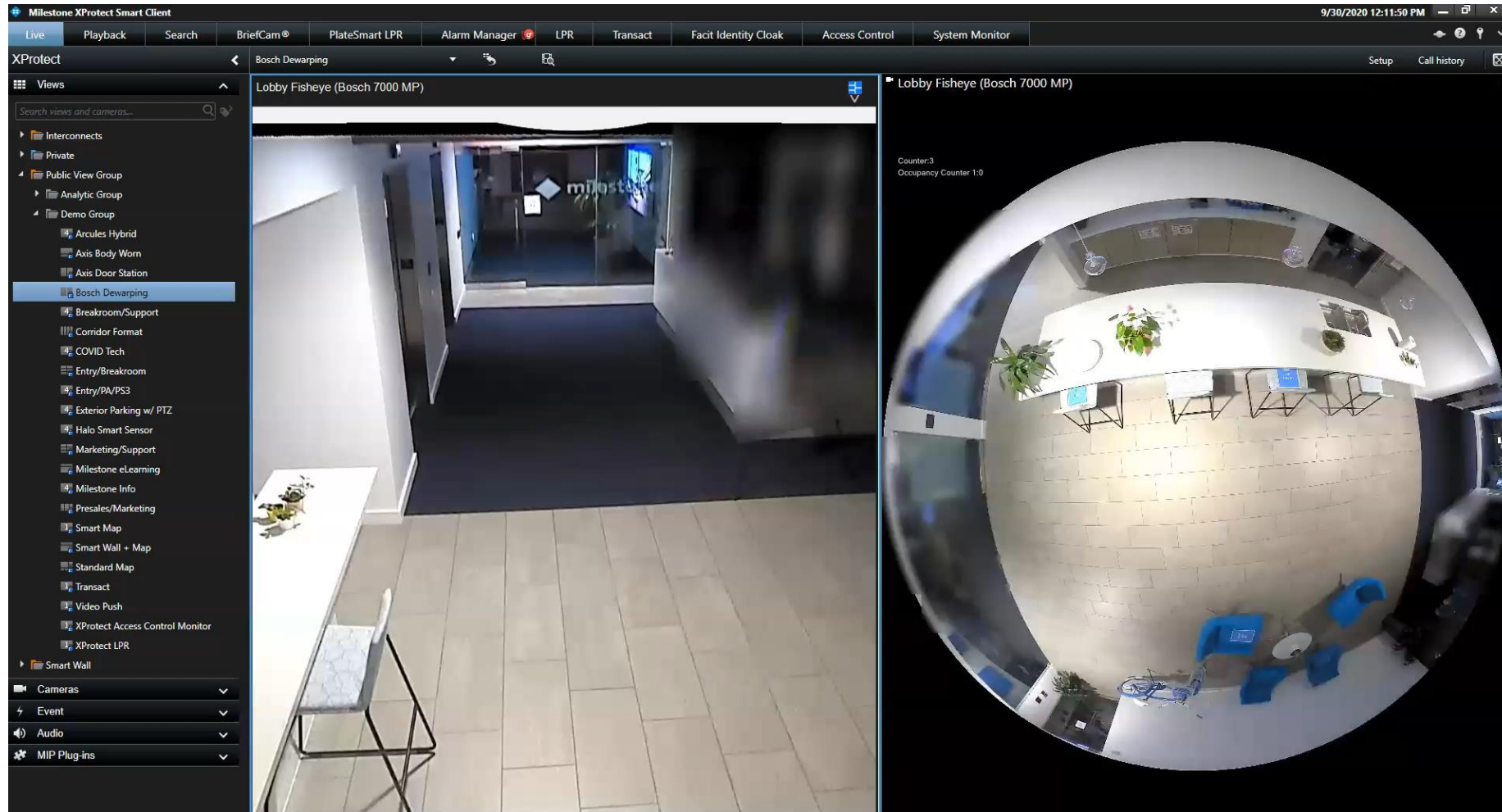
Quick links enable easy geo-navigation



Demo – Smart Map



Demo – Smart Map and Interconnect



Learn more

- Let our VMS expert, Eric Featureman, tell you how Smart Map in XProtect helps you seamlessly navigate between cameras
- Watch it here:



Alarm Manager

The Alarm Manager in XProtect Smart Client is an effective single-point management of all internal system alarms and external security alarms



Direct access to alarm instructions and images



Instant overview of potential security threats



Systematic handling with instructions and logging

Alarm Manager – Key capabilities

1

Virtually any kind of incident or technical problem (events) can be set up to trigger an alarm.

2

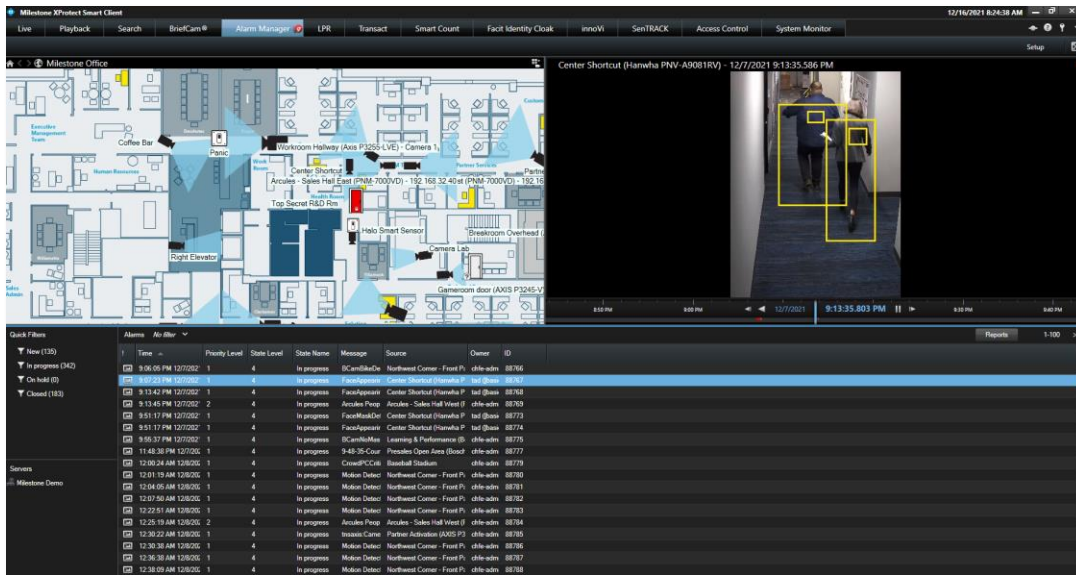
Alarms can all be viewed from the Alarm Manager tab, which provides a central overview of your VMS incidents, status, and potential technical problems

3

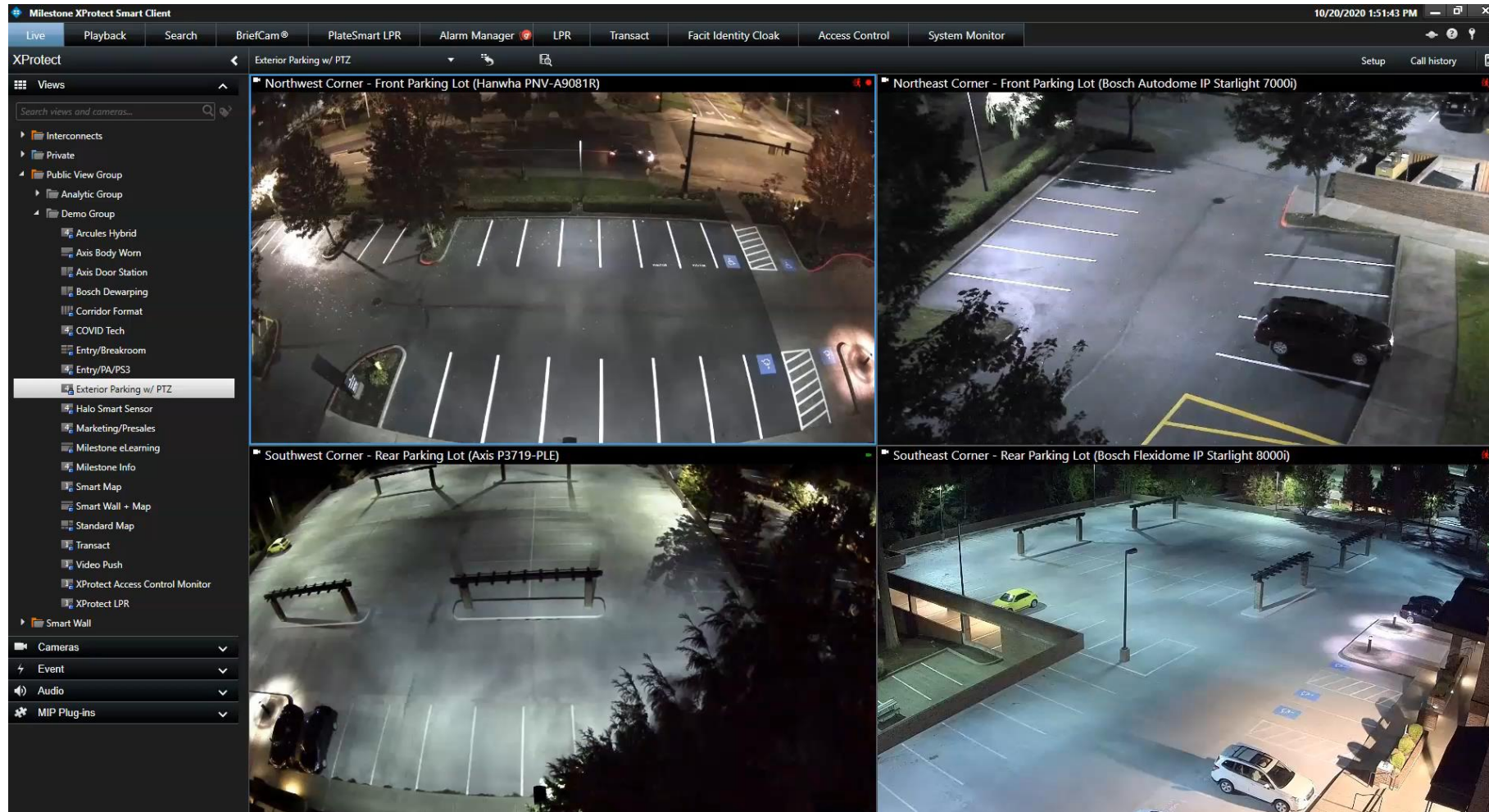
The Alarm Manager tab includes an alarm list, an alarm preview and, if available, a map position

4

The Alarm Manager enables the user to manage and respond to alarms by viewing, acknowledging, disabling, ignoring or closing alarms and events



Demo – Alarm Manager

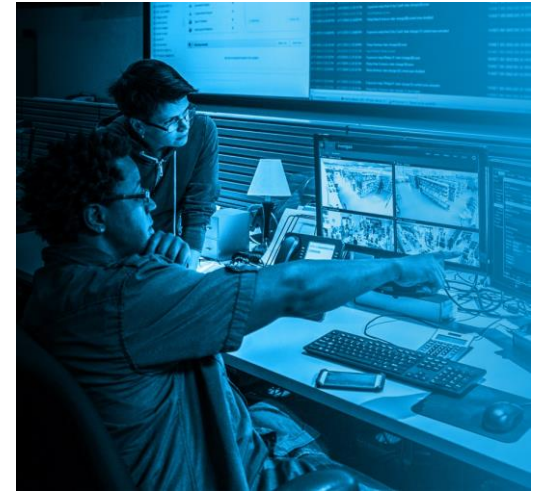


Desktop notifications

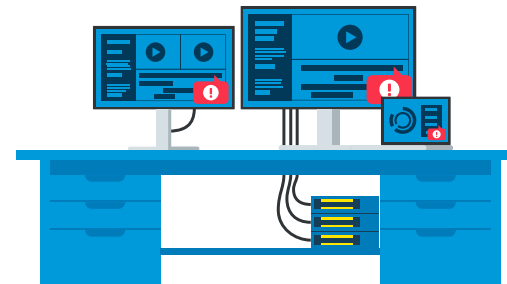
With desktop notifications in XProtect Smart Client, operators receive a pop-up notifications on the corner of their screens whenever an alarm is triggered in the XProtect system



Increased alarm awareness for multi-tasking operators

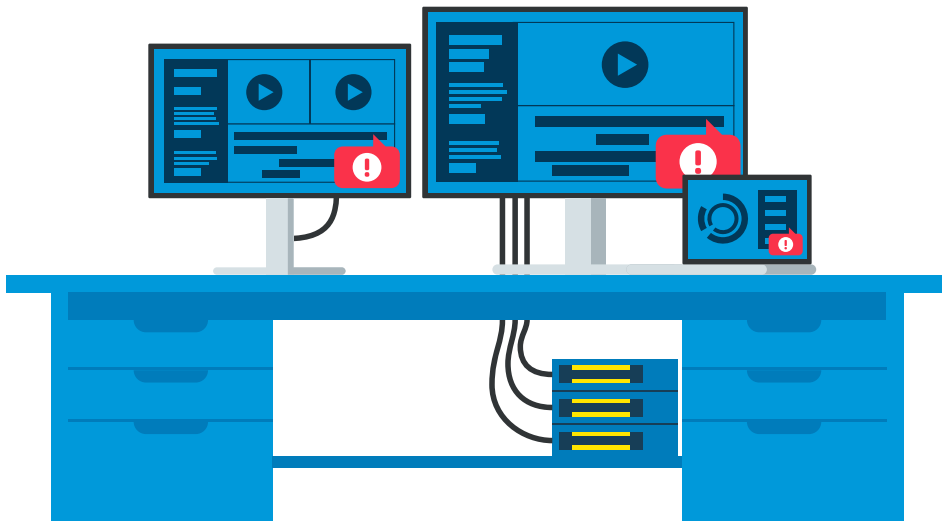


On-screen alarm notifications.
Wherever.
Whenever.



Easily access detailed alarm information by clicking the notification

Desktop notifications – Key capabilities



1

Even when the XProtect Smart Client is minimized alarm notifications will appear – to help keep focus on what's important

2

Click on the notification to gain instant access to the Alarm Manager – for related video, bookmarking and further investigation

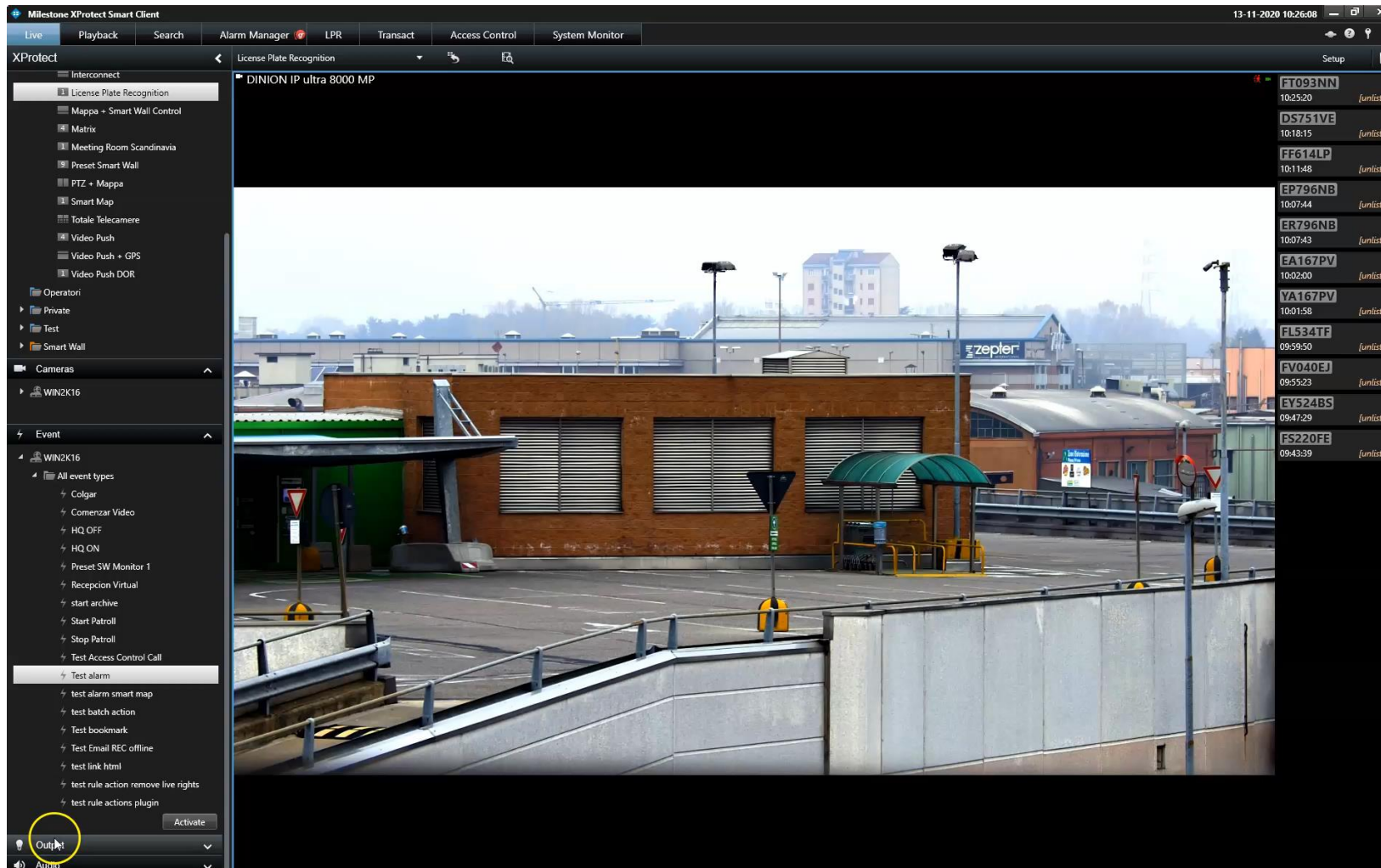
3

Administrators can choose what alarm levels trigger this notification, and can define what these level mean

4

Close/Ignore options, so operators can quickly remove alerts from non-relevant alarms

Demo – Desktop notifications



XProtect Smart Wall

A video wall solution that provides visual coordination and decision support to operators working in response centers and control rooms



Improve decision making and coordinate action

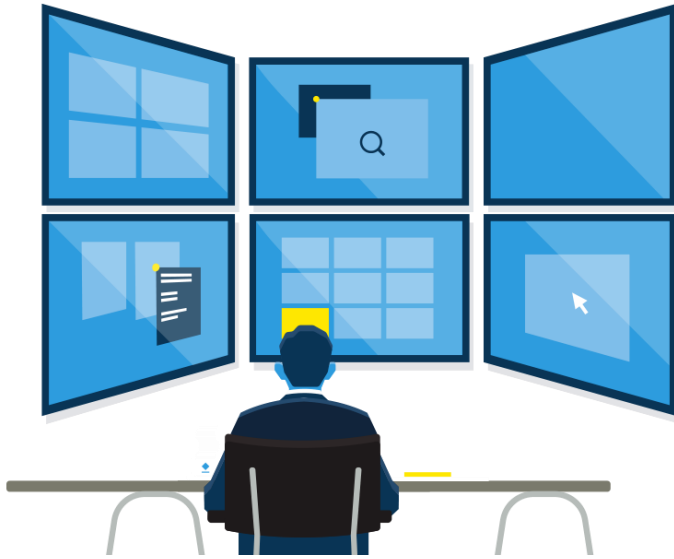


Flexible and versatile video wall application



Reduce response time in critical situations

XProtect Smart Wall – Key capabilities



1

Supports a wide set of content, including cameras, maps, still images and alarms

2

Supports unlimited number of video walls and monitors and runs on standard computers and displays

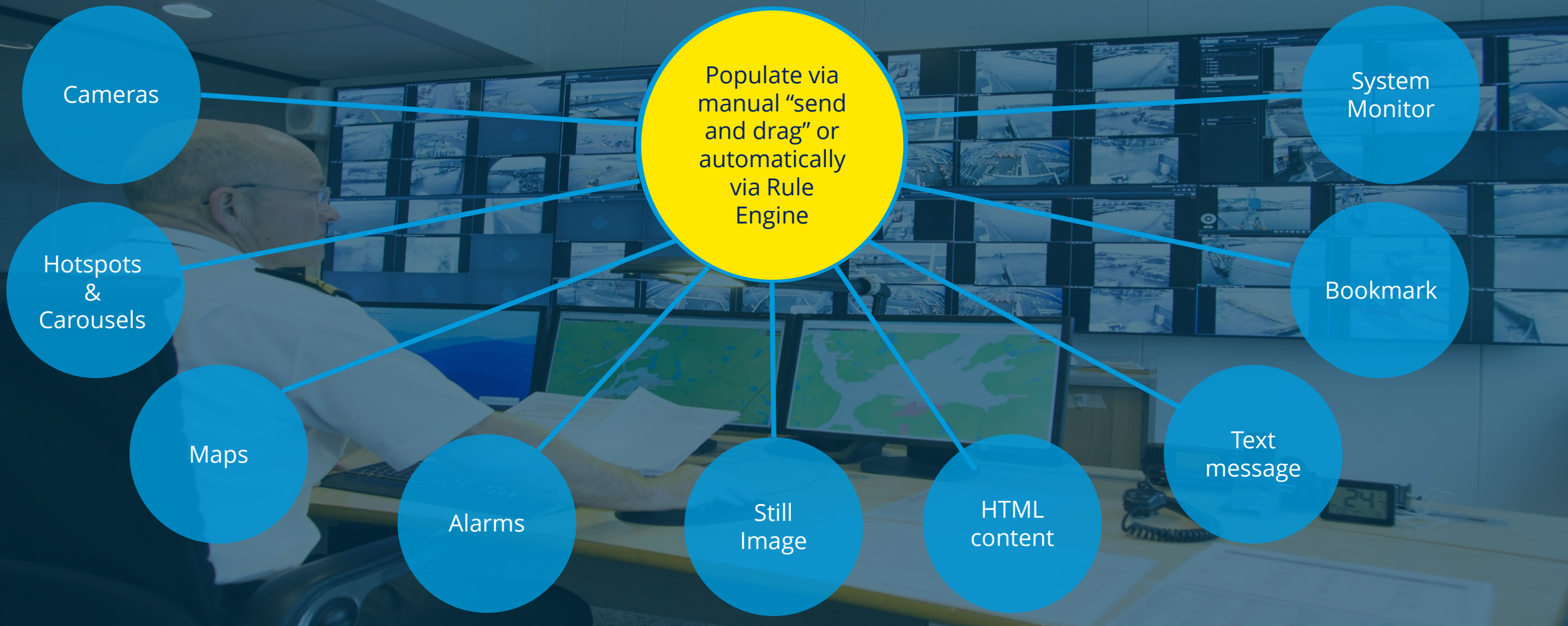
3

Intuitive manual sharing of content via simple drag-and-drop operations

4

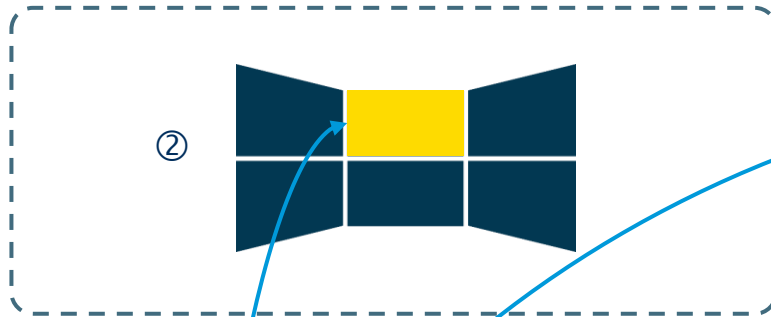
Virtual monitor definitions enable easy sharing and mirroring of content across different video walls

XProtect Smart Wall content

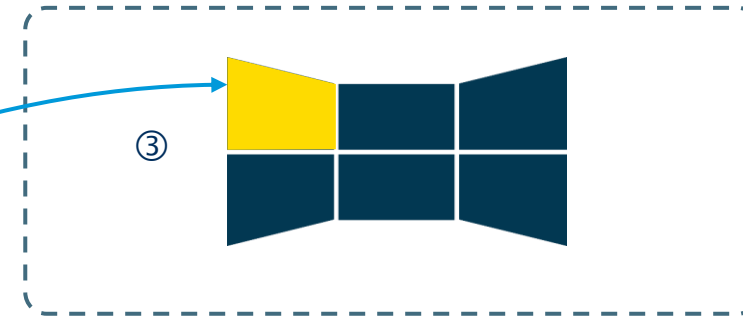


Collaborative canvas

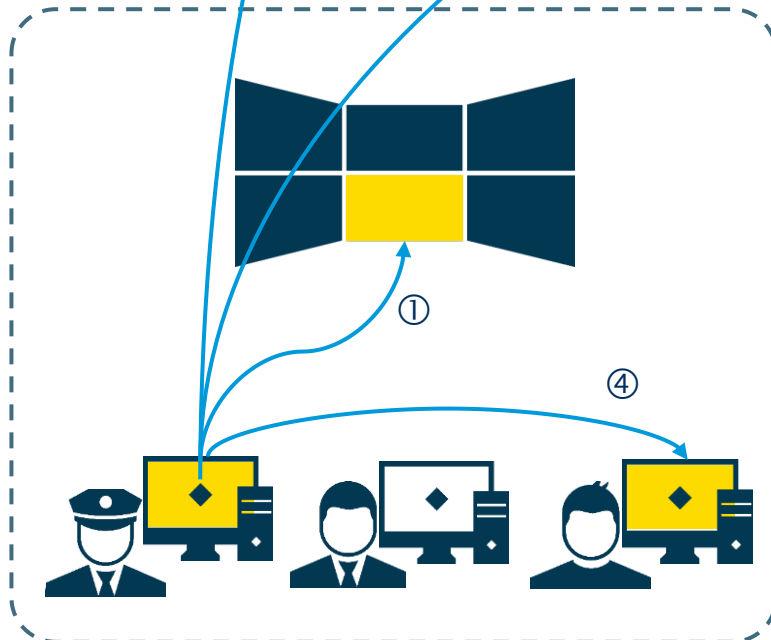
Headquarter



Law enforcement



Regional Center

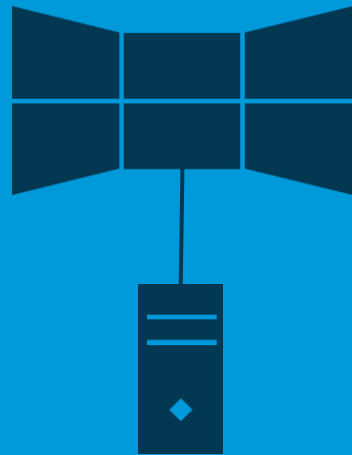


- ① Collaboration with peers
- ② Mirroring to other locations
- ③ Sharing with external authorities
- ④ Sharing with individual users

Flexible hardware configuration

XProtect
Smart Wall
Monitors

XProtect
Smart Wall
PCs



One PC drives all
monitors in one
physical Smart Wall

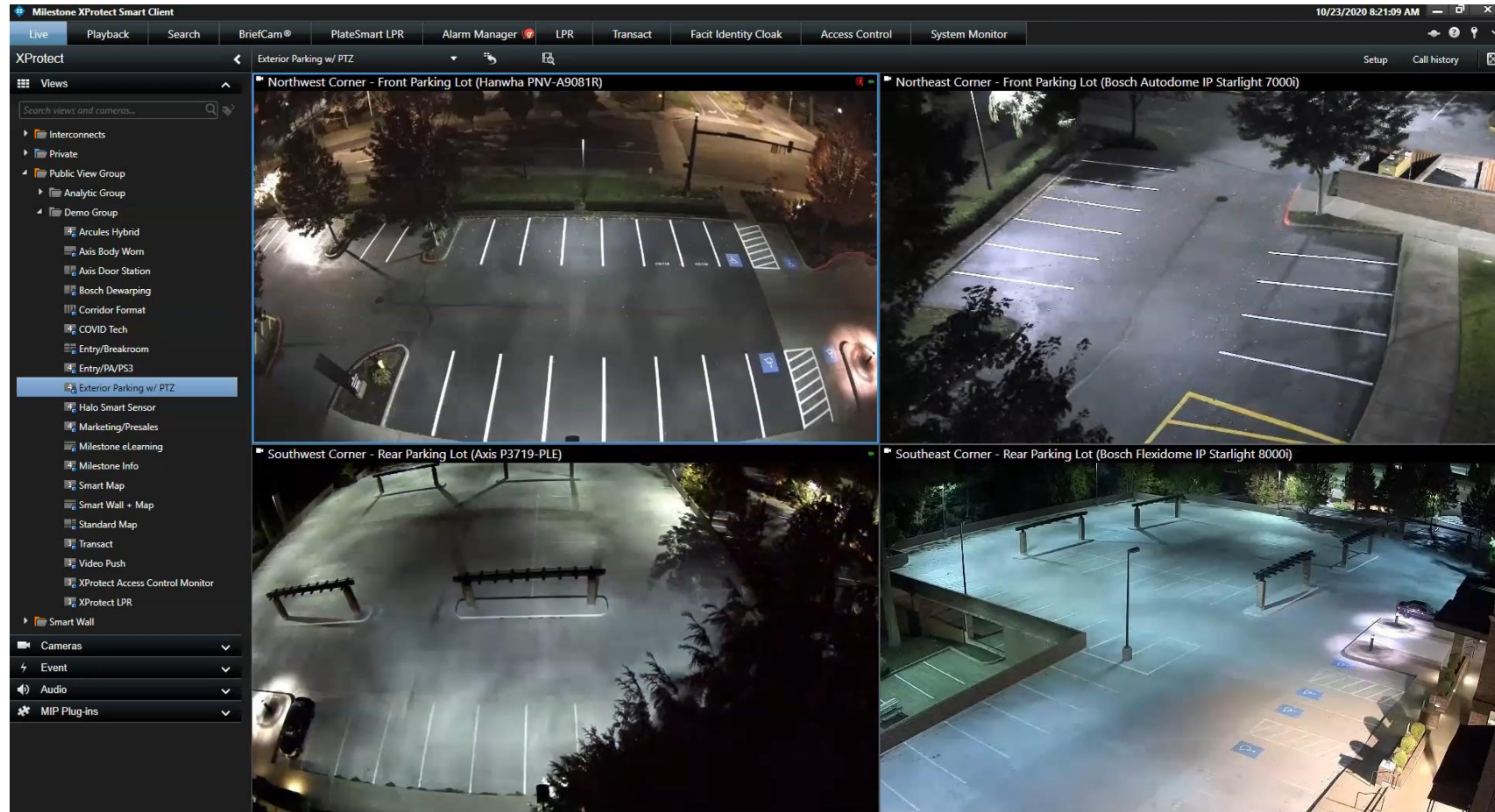


One PC drives all
monitors in multiple
physical Smart Walls



Multiple PCs drive selective
monitors in one physical
Smart Wall

Demo – Smart Wall



Learn more

- Let our VMS expert, Eric Featureman, show you how XProtect Smart Wall helps organizations gain situational overview, assess incidents and coordinate response
- Watch it here:



Independent playback

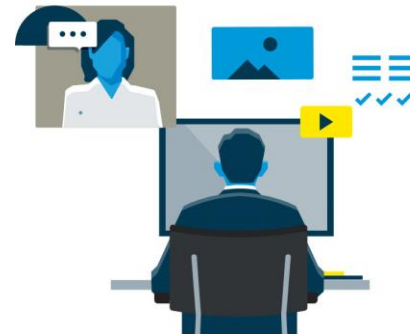
Independent playback capability in XProtect Smart Client allows for instant playback of recorded video for one or more cameras while watching live video simultaneously



Independent playback for simultaneous playback and live viewing

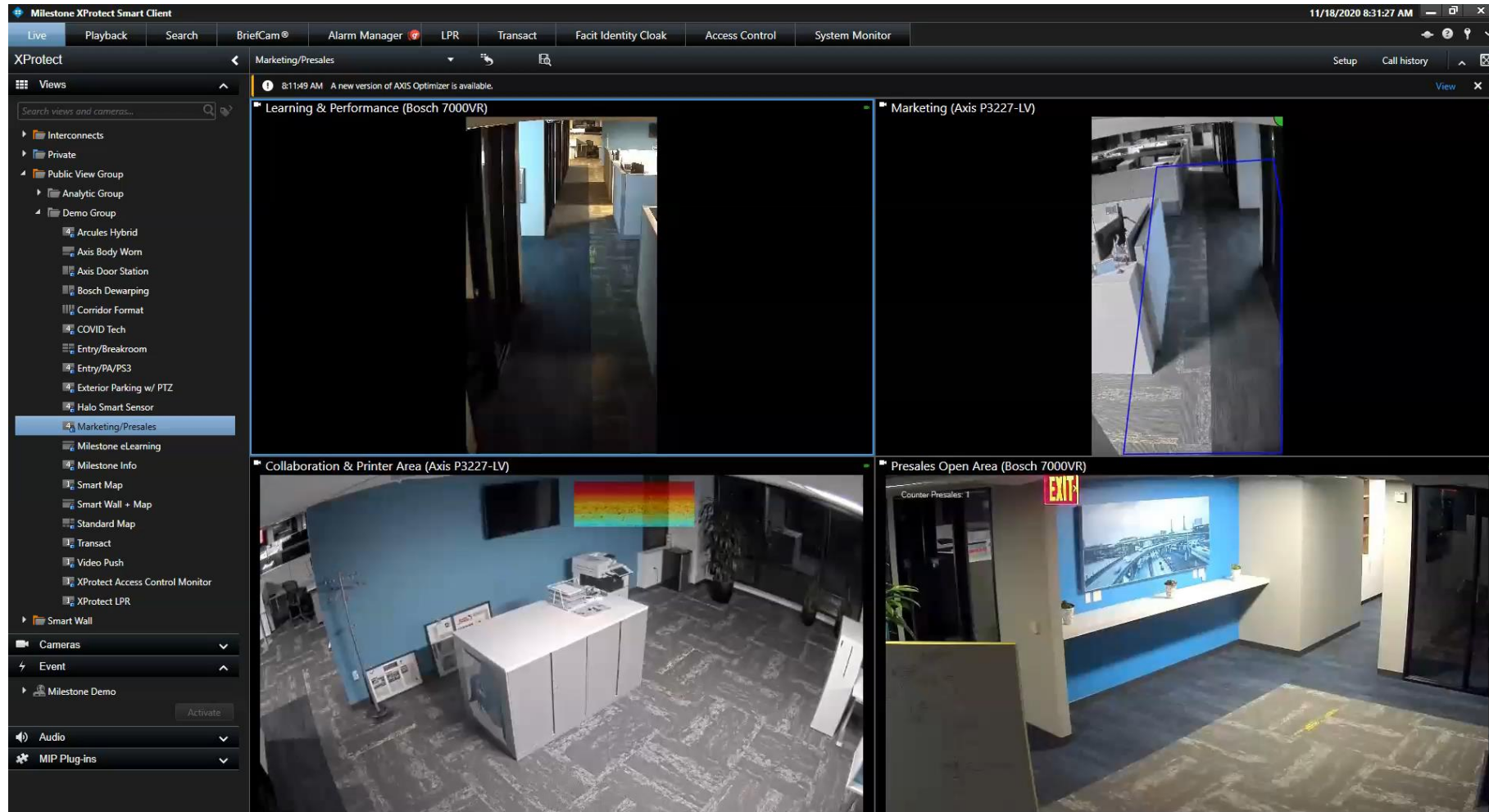


Investigate incidents instantly without losing track of what happens in real-time



Complete control while investigating

Demo – Independent playback



Advanced PTZ control

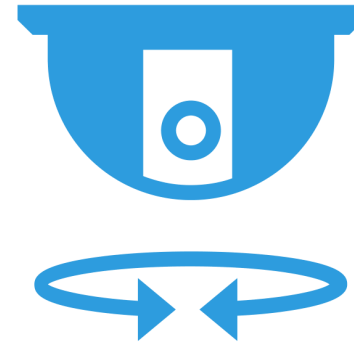
The ability to make the most out of connected PTZ cameras



Zoom in and out to see smaller details

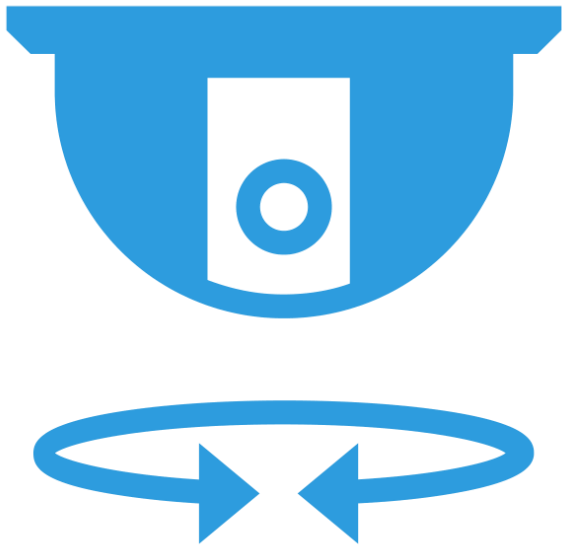


Cover larger and wider areas with one camera



Automate tasks by zooming in and out on pre-defined rules

PTZ control – Key capabilities



1

32,000 PTZ priority levels for control of rights between different operators and automatic patrolling schemes

2

Execute rule-based go-to preset position on events and patrolling

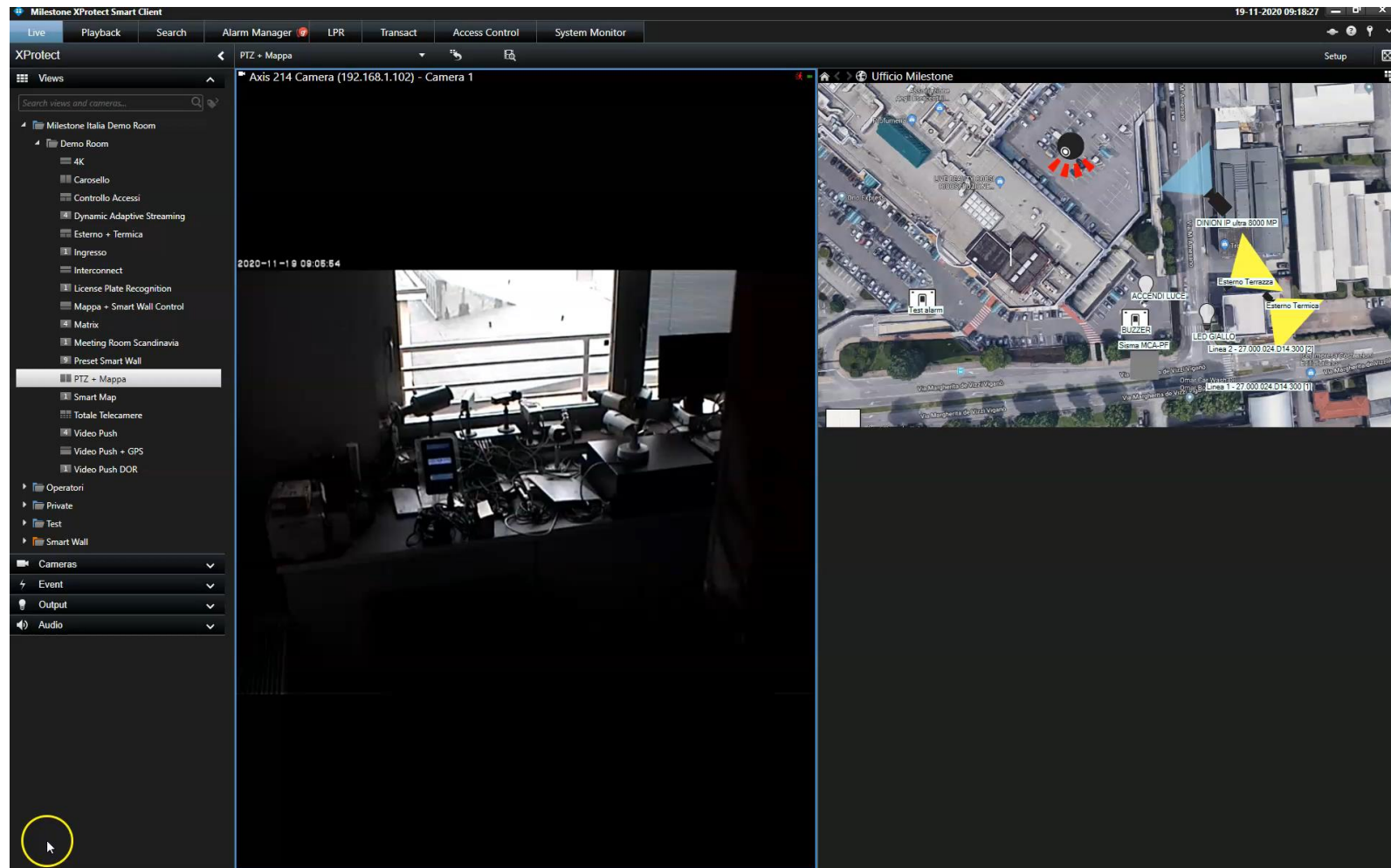
3

Pause PTZ patrolling on event and resume patrolling after manual session timeout

4

Import PTZ presets defined in the PTZ camera and rename imported PTZ presets

Demo - PTZ



Generic 360-degree dewarping

With the ability to cover a larger area than standard cameras, 360-degree cameras mean significant installation and camera cost reductions and increased situational awareness for installations of any size



Complete situational awareness with no blind spots



Cover it all with one camera



Easily follow a moving object with a single camera

Generic 360-degree dewarping – Key capabilities



1

Device support includes any 360-degree cameras that deliver a complete round fish-eye view, providing customers with greater freedom of choice when building or expanding their installation

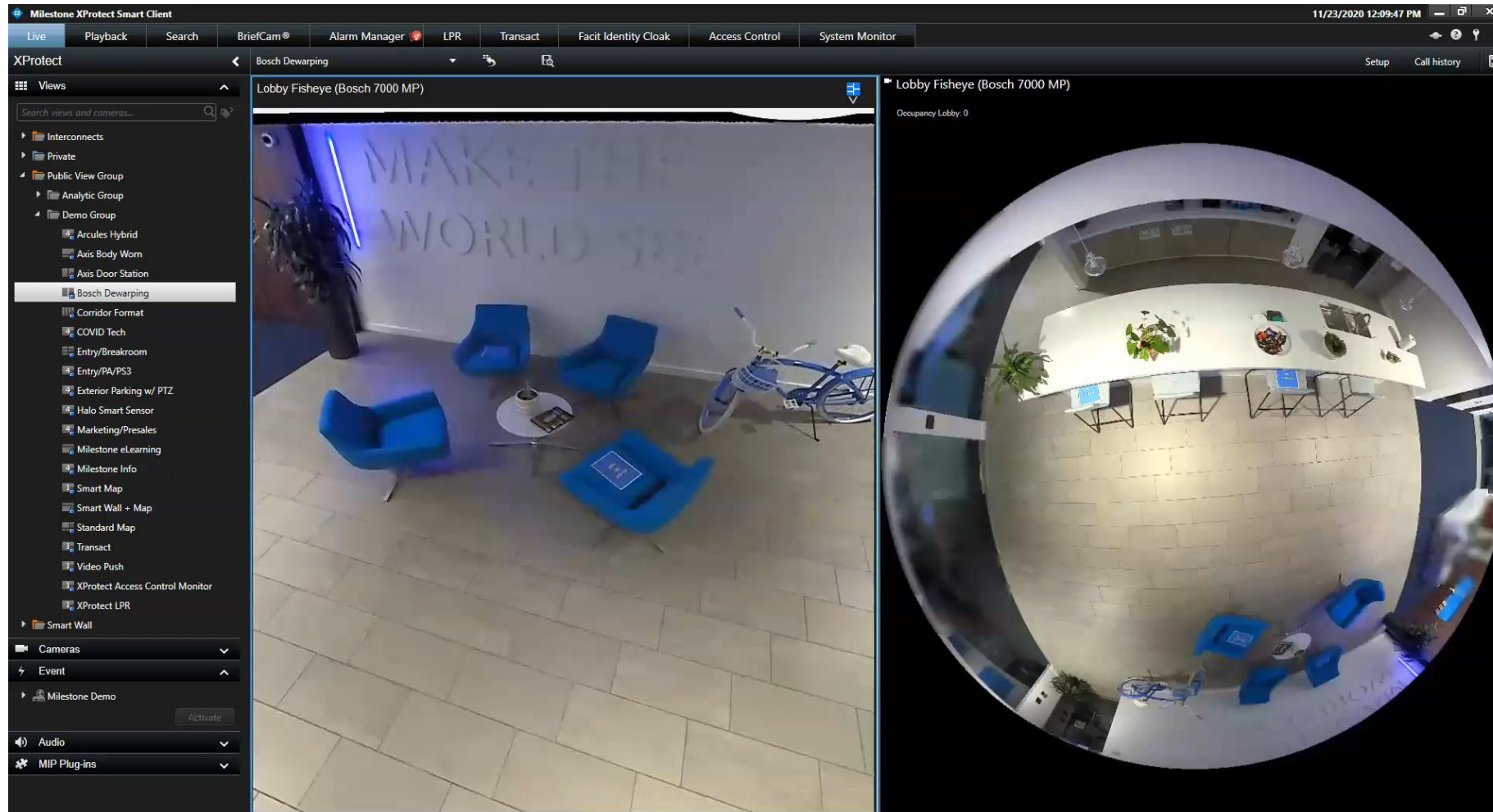
2

The expanded support is hardware-agnostic and ensures that the 360-degree images received into the XProtect VMS are delivered into a standard, operator-friendly format

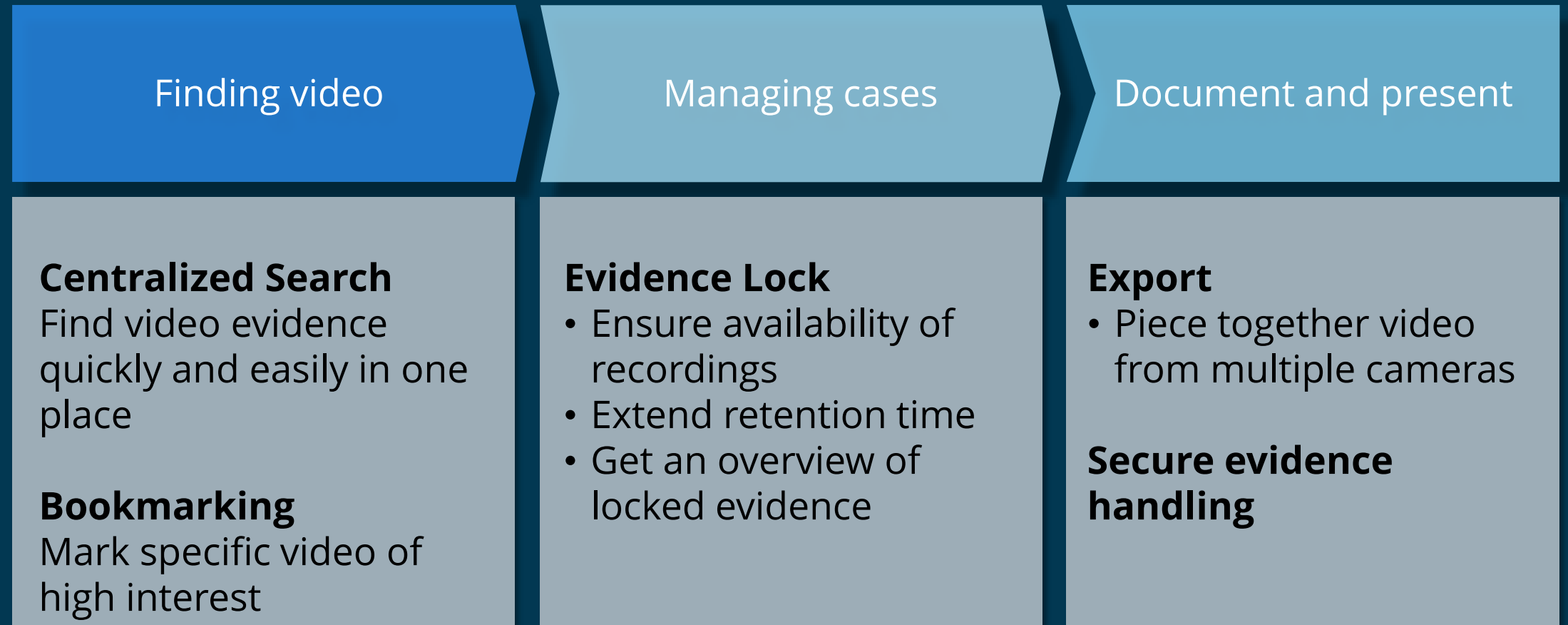
3

Allows tracking a moving object much easier with just one camera, rather than switching cameras for different viewpoints – this is especially useful for retail stores, which often need to track the suspicious individuals' movement.

Demo – 360 degree dewarping



Investigations and evidence management



Centralized Search

Centralized Search makes finding a specific incident or video sequence easier by aggregating all data types registered in the XProtect VMS.



Work faster and more efficiently

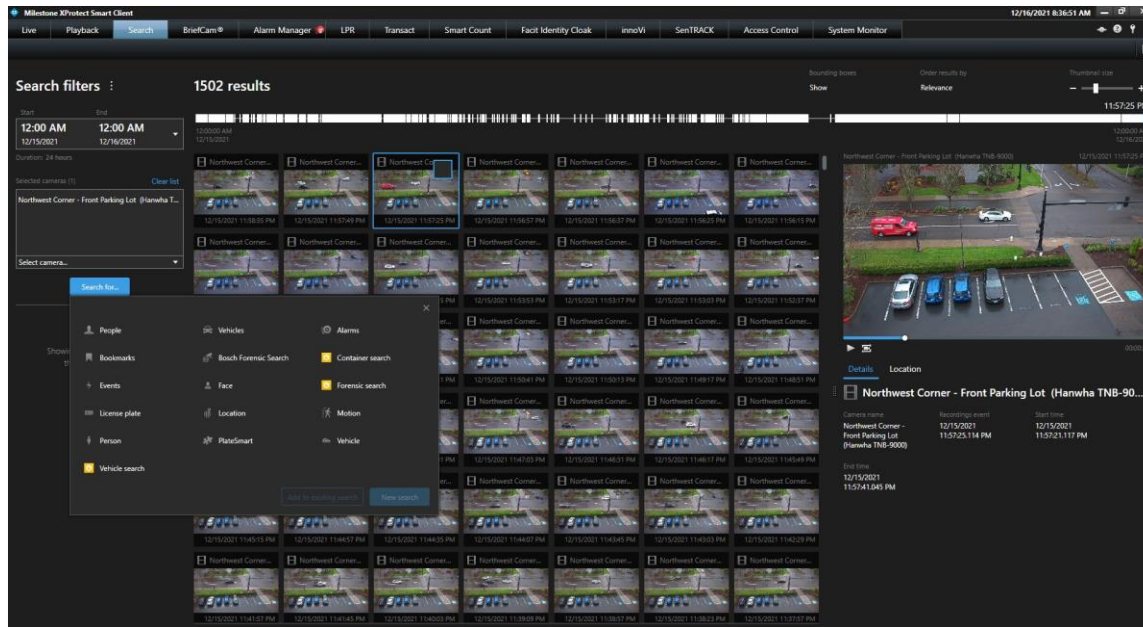


Everything you search for in one place



Search for data from integrated solutions with ease

Centralized Search – Key capabilities



1

Search for video sequences, motion, alarms, events, bookmarks, LPR, vehicles, people, and location all in one place

2

Search for data types from third-party technology-partner solutions that are integrated with Search

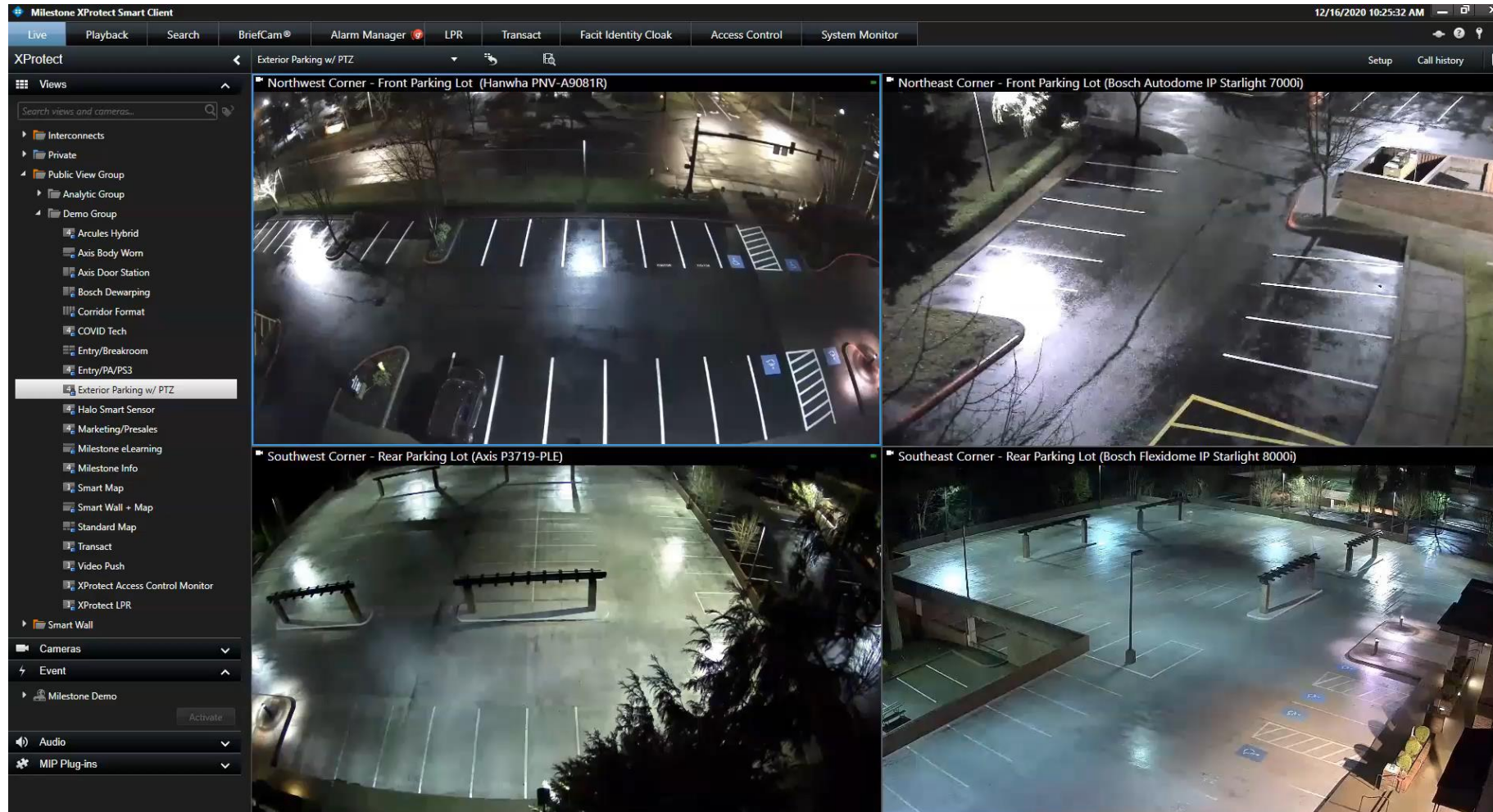
3

Integrate XProtect LPR results into the Centralized Search framework or make use of camera application metadata for license plate recognition

4

Multi-category Search allows users to combine and search across multiple Search categories to only provide results containing **all** selected search criteria and exclude those that only meet one of them

Demo – Centralized Search



Bookmarking

Provides an easy way for users to mark video sections of interest and add descriptive notes for later analysis or sharing with other users



Highlight and share suspect incidents with other users and between shifts

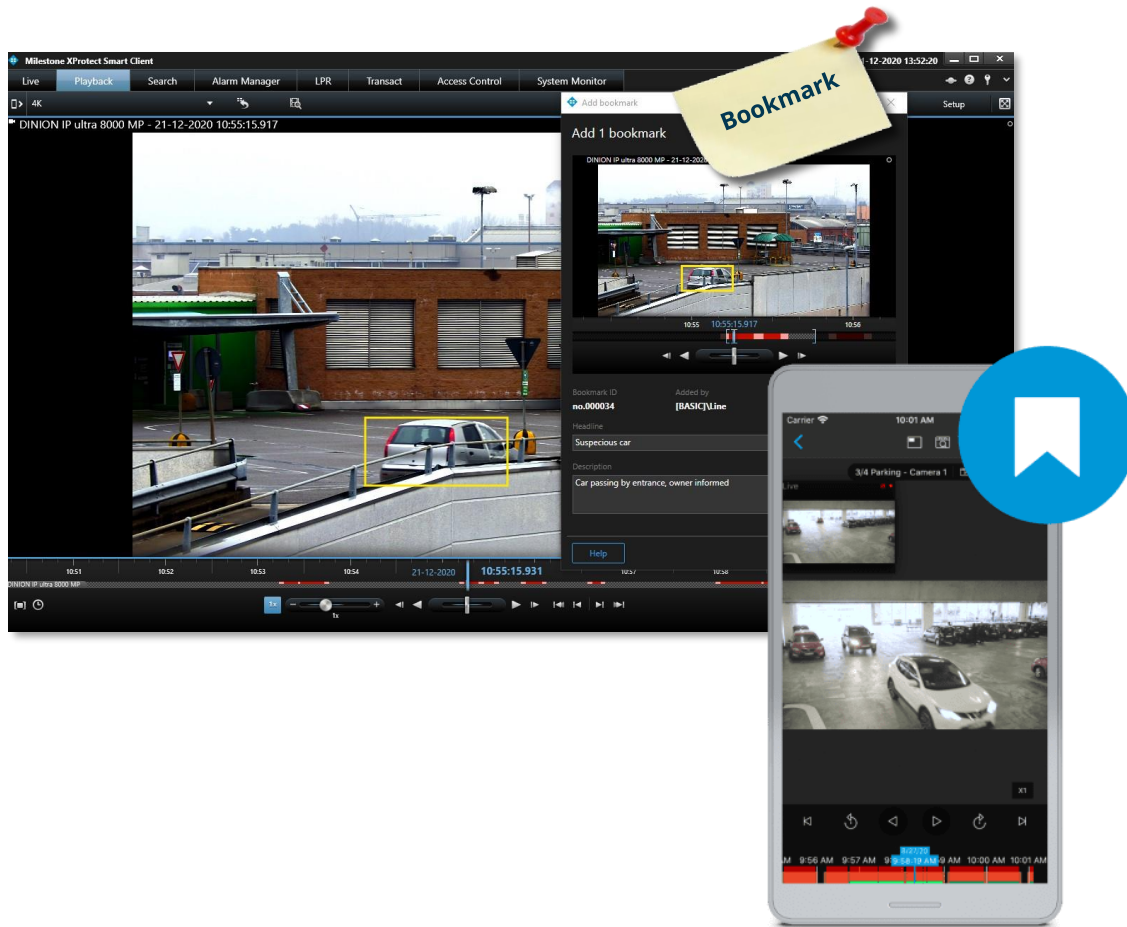


Efficient handling of incidents



Easier creation of evidence material

Bookmarking – Key capabilities



1

You can bookmark incidents in live or recorded video in XProtect Smart Client, XProtect Web Client and Xprotect Mobile

2

A bookmark is essentially a small video clip that are searchable, so you and other users can easily find them

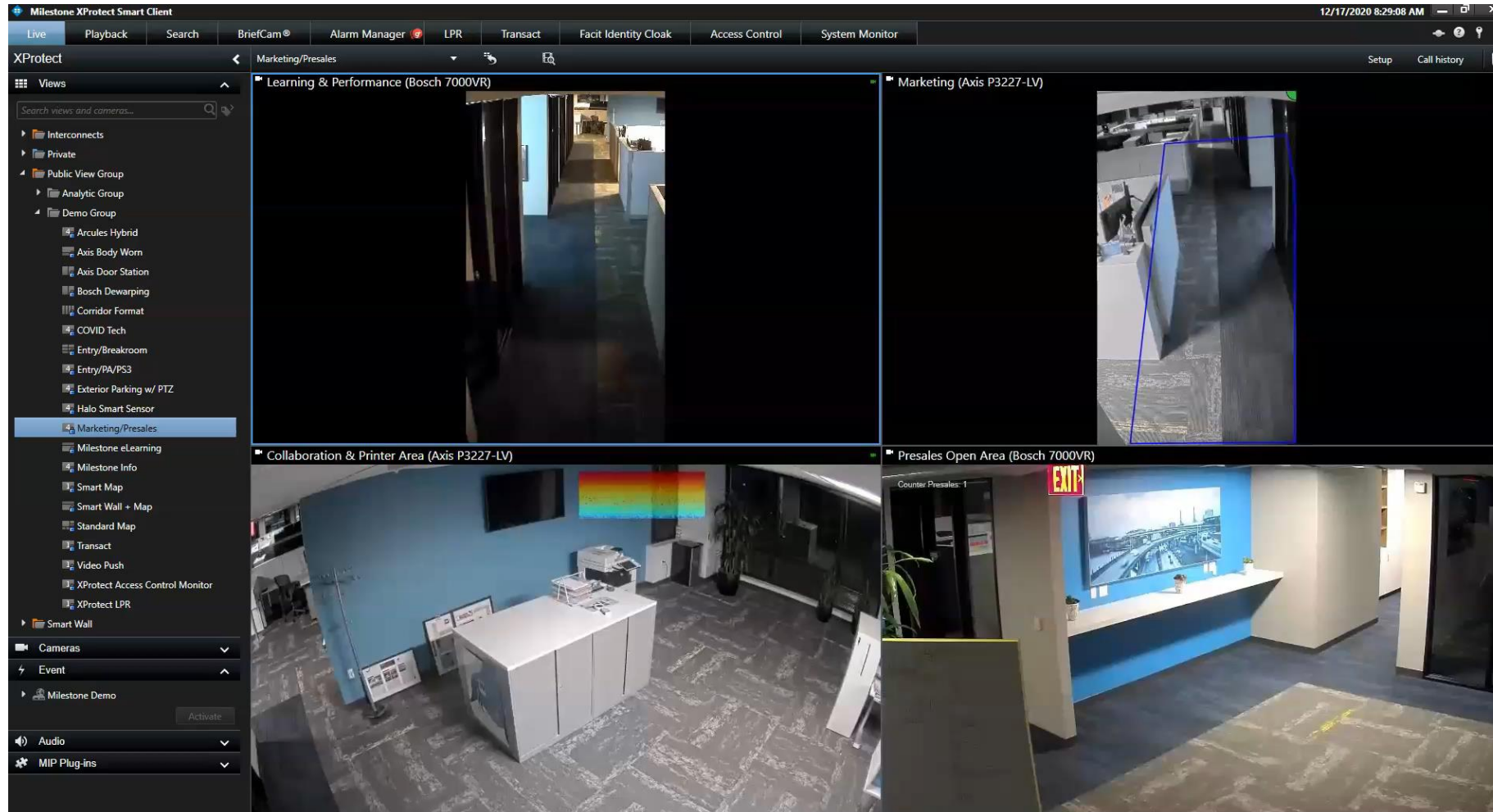
3

A bookmarked video clip typically contains video from a few seconds before and a few seconds after the bookmarked incident, ensuring the incident is recorded regardless of any delays

4

Easier evidence creation with direct video evidence export of bookmarks

Demo – Bookmarking



Evidence Lock

Ensures video is not deleted prematurely while an investigation or case handling is underway



Extends retention time for selected video

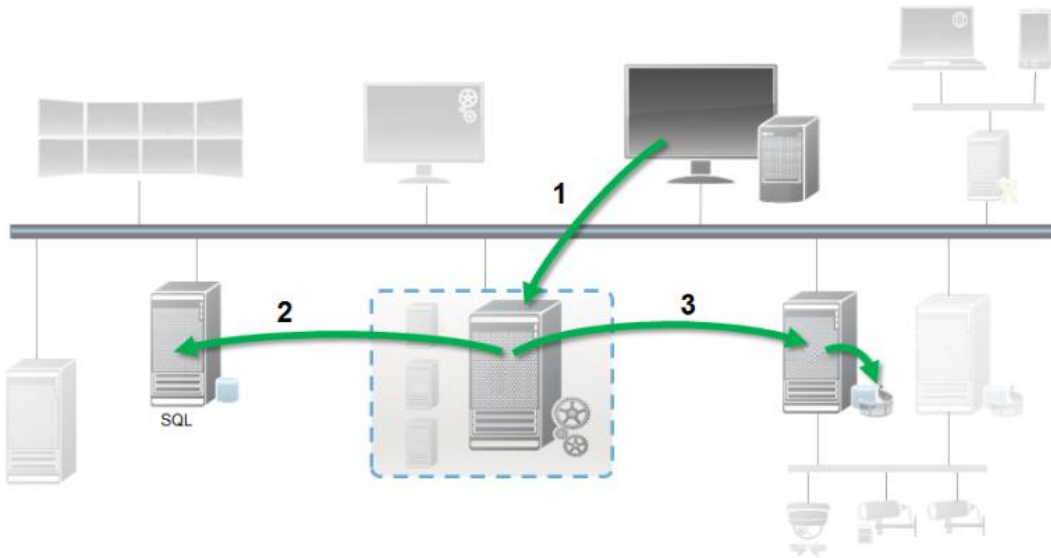


Ensures availability of recordings



Particularly relevant to regions with strict regulations on video retention

Evidence Lock – Key capabilities



1. User creates an Evidence Lock in XProtect Smart Client. Information sent to Management Server.
2. Management Server stores information about the evidence lock in the SQL server.
3. Management Server informs Recording Server to store and protect the recordings in the database.

1

With the evidence lock functionality, client operators can protect video sequences, including audio and other data, from deletion, if required

2

Evidence Lock overrides normal video archiving and grooming policies

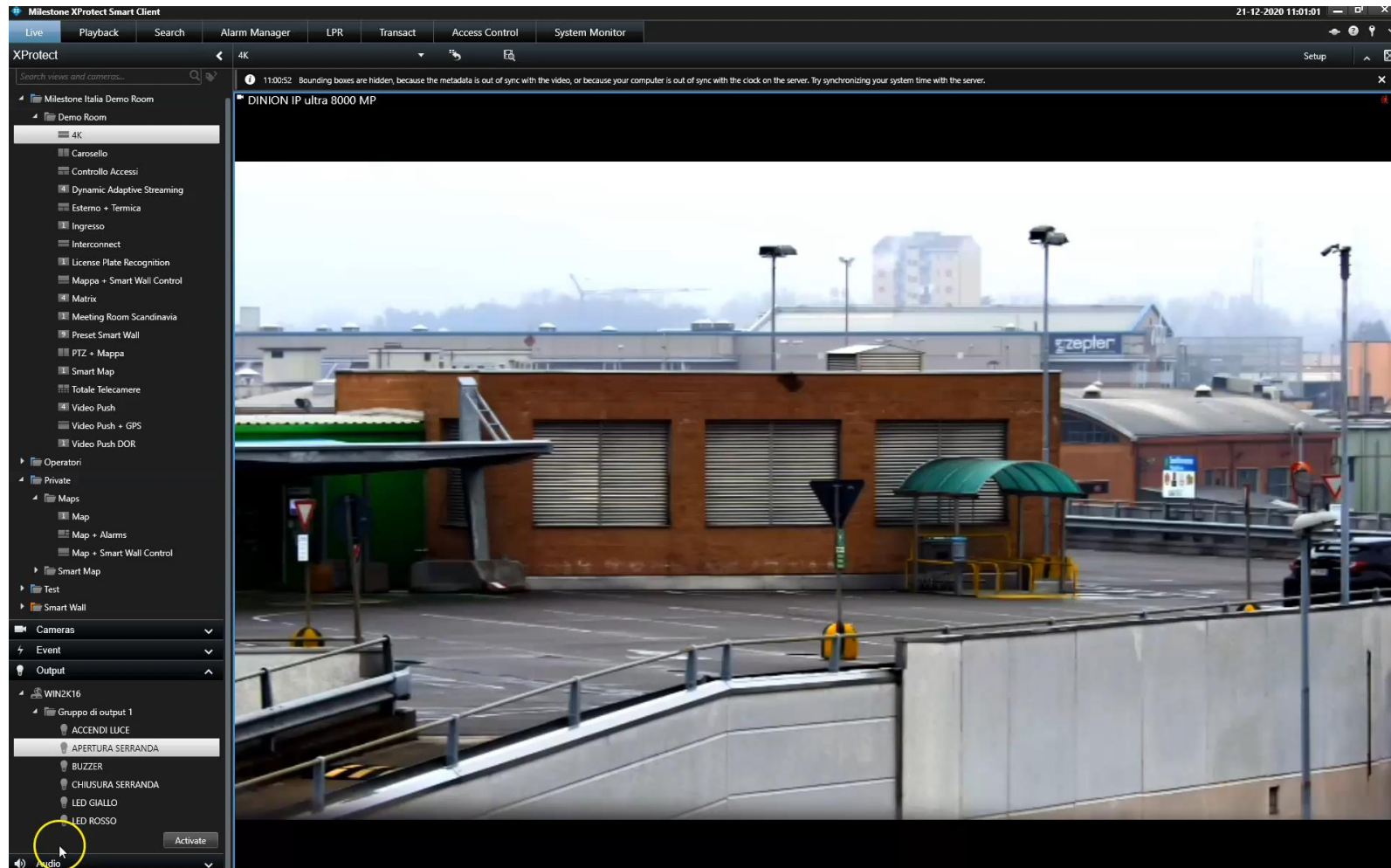
3

When protected, the data cannot be deleted automatically by the system after the system's default retention time, in other situations, or manually by the client users

4

The system or a user cannot delete the data until a user with sufficient user rights unlocks the evidence

Demo – Evidence Lock



Export

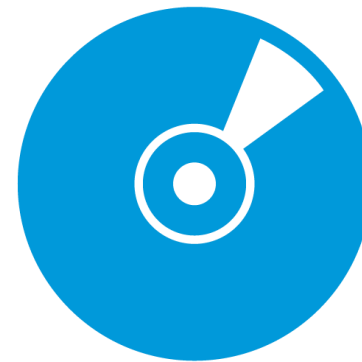
Need to share your video with third-party authorities? XProtect provides multiple export options.



Extended retention time for selected video



Hand over video evidence in preferred or requested format



Particularly relevant to regions with strict regulations on video retention

Export – Key capabilities



1

Export video from multiple cameras at the same time with the digital zoom capability in native XProtect format using XProtect Smart Client Player

2

Export video from multiple cameras as separate video clips that are viewable on a standard media player like Windows Media Player

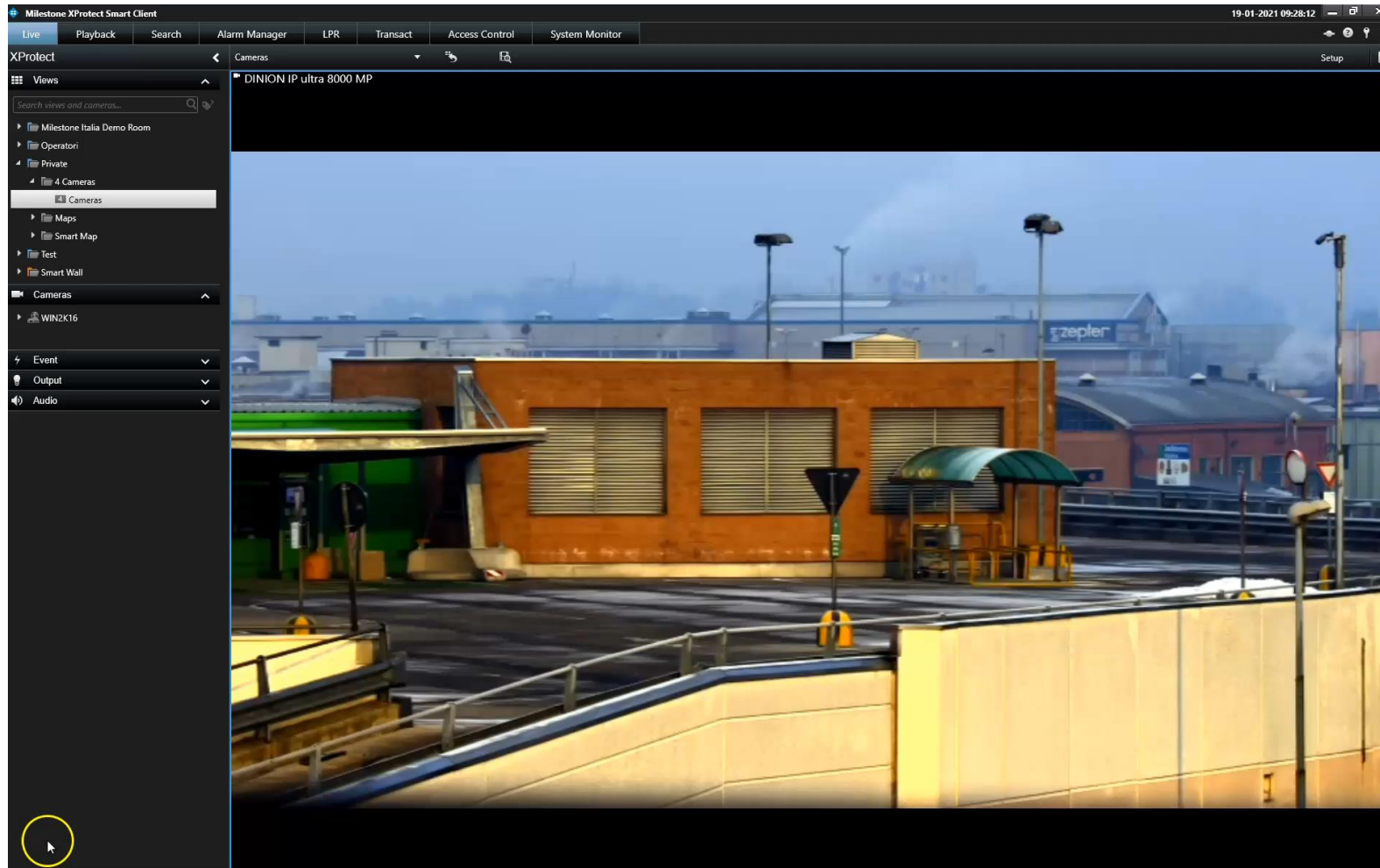
3

Export still images

4

Hide areas of video content by adding privacy masks on parts of the image. Privacy masks are useful when you do not want viewers to see sensitive content

Demo – Export



Secure evidence handling

If you need to share your video with third-party authorities XProtect provides multiple export options



Enables validation of authenticity of exported video



Prevents unauthorized access to exported video



Detects tempering and alteration of exported video

Secure evidence handling – Key capabilities



1

Select to include the XProtect Smart Client Player application with the exported data. The XProtect format can only be viewed with the XProtect Smart Client – Player

2

Select that you do not want to allow the video or audio to be re-exported — your recipients will not be able to export in any format

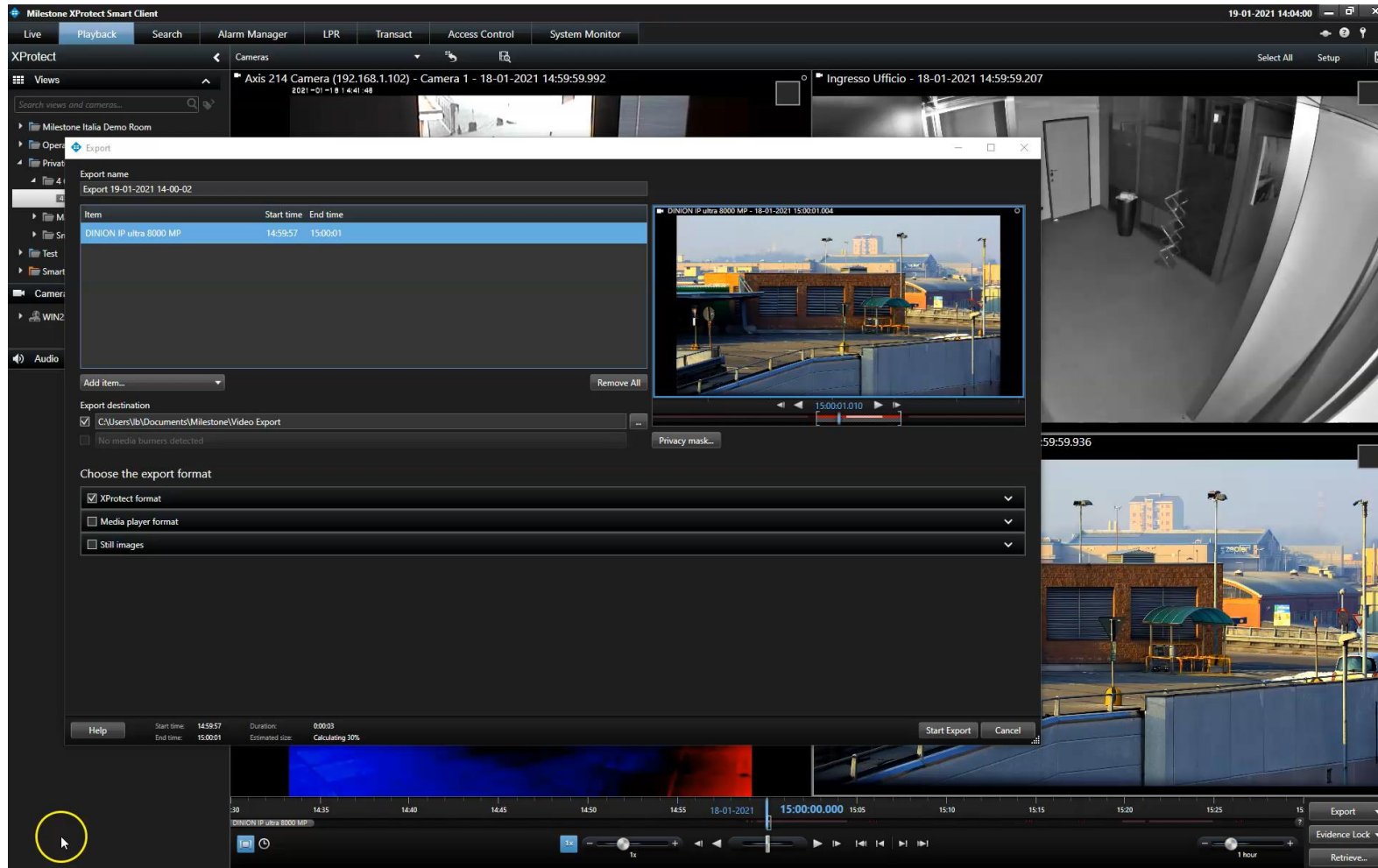
3

Password-protect the exported data to ensure only authorized personnel can access it

4

Select to include a digital signature to your exported database

Demo – Secure evidence handling



Distributed operations

When you have a multi-site installation

Milestone XProtect VMS offers several ways of scaling an installation and operating multiple sites from a central location

**Centralized
Management**

**Milestone Federated
Architecture**

**Milestone
Interconnect**

Centralized Management

Centralized management describes the architecture where users can manage installations spread across multiple sites or servers from a central location



Manage multiple servers easily and consistently

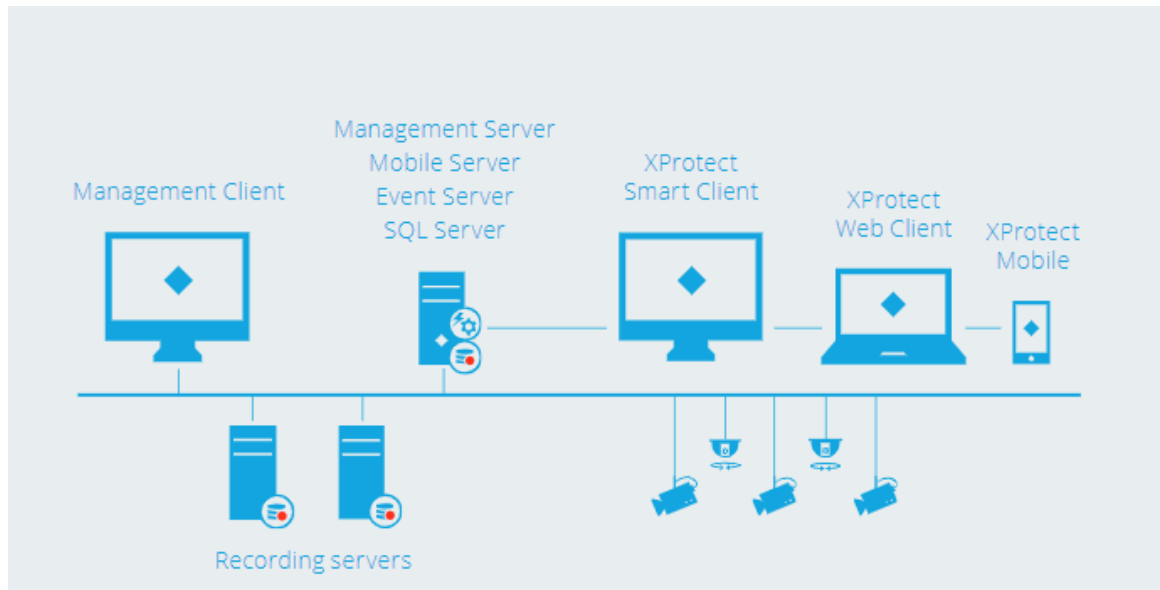


Scale the system to any size



Reduce operational cost

Centralized Management – Key capabilities



1

Central and single-point administration and management of all system components and settings

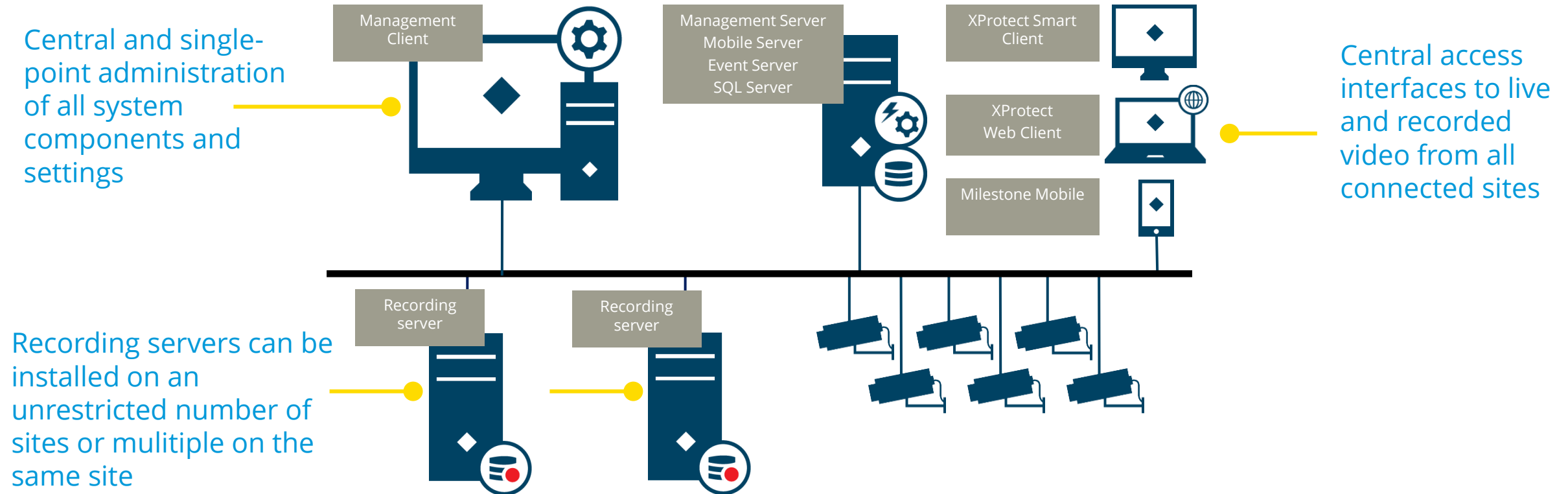
2

Recording servers can be installed on an unrestricted number of sites or multiple servers on the same site

3

Central access interfaces to live and recorded video from all connected sites

Centralized management – how it works



Milestone Interconnect™

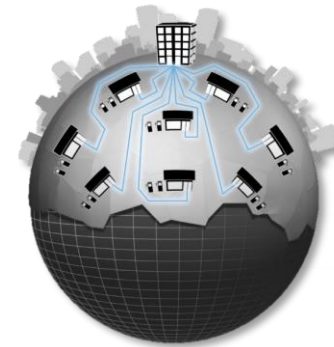
Milestone Interconnect is a unique solution that makes it possible for organizations with distributed Milestone surveillance installations to unite their individual systems into a single, centrally-operated and managed system.



Optimize security operations across multiple sites

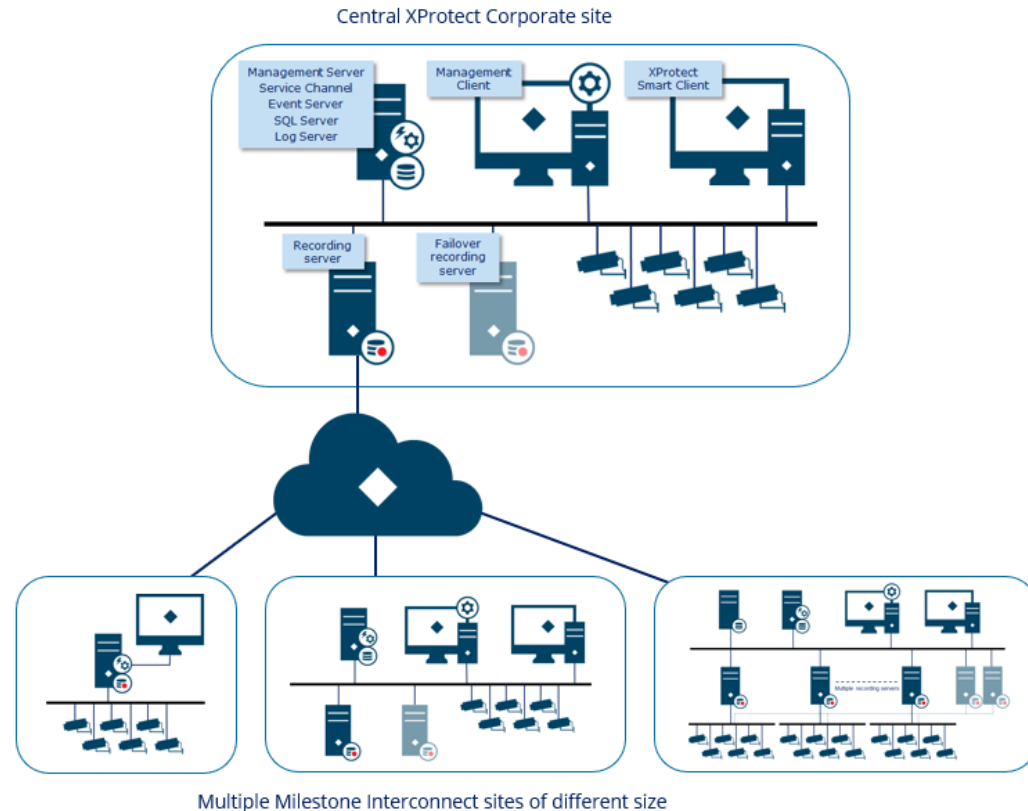


Secure locally.
Connect seamlessly.
Manage centrally



Manage large systems with ease

Milestone Interconnect™ – Key capabilities



1

With XProtect Corporate as the central hub, Milestone Interconnect connects any paid Milestone XProtect VMS product and Milestone Husky™ NVR unit

2

Connect an unlimited number of interconnected sites and get full VMS functionality in the central system on those interconnected cameras

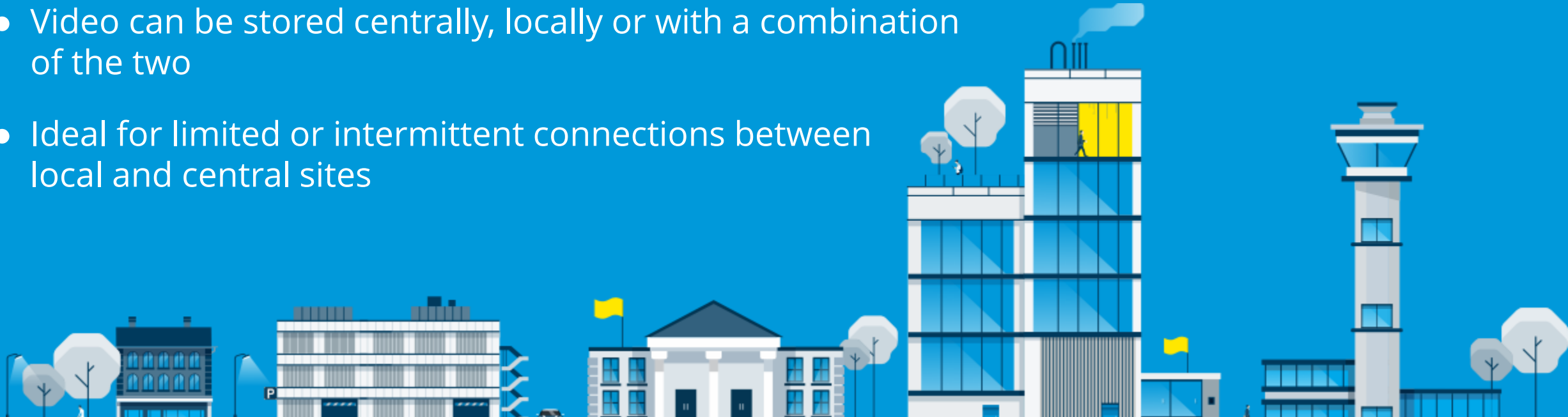
3

To protect the local interconnected sites it is possible to manage which functions and individual devices the central system has access to

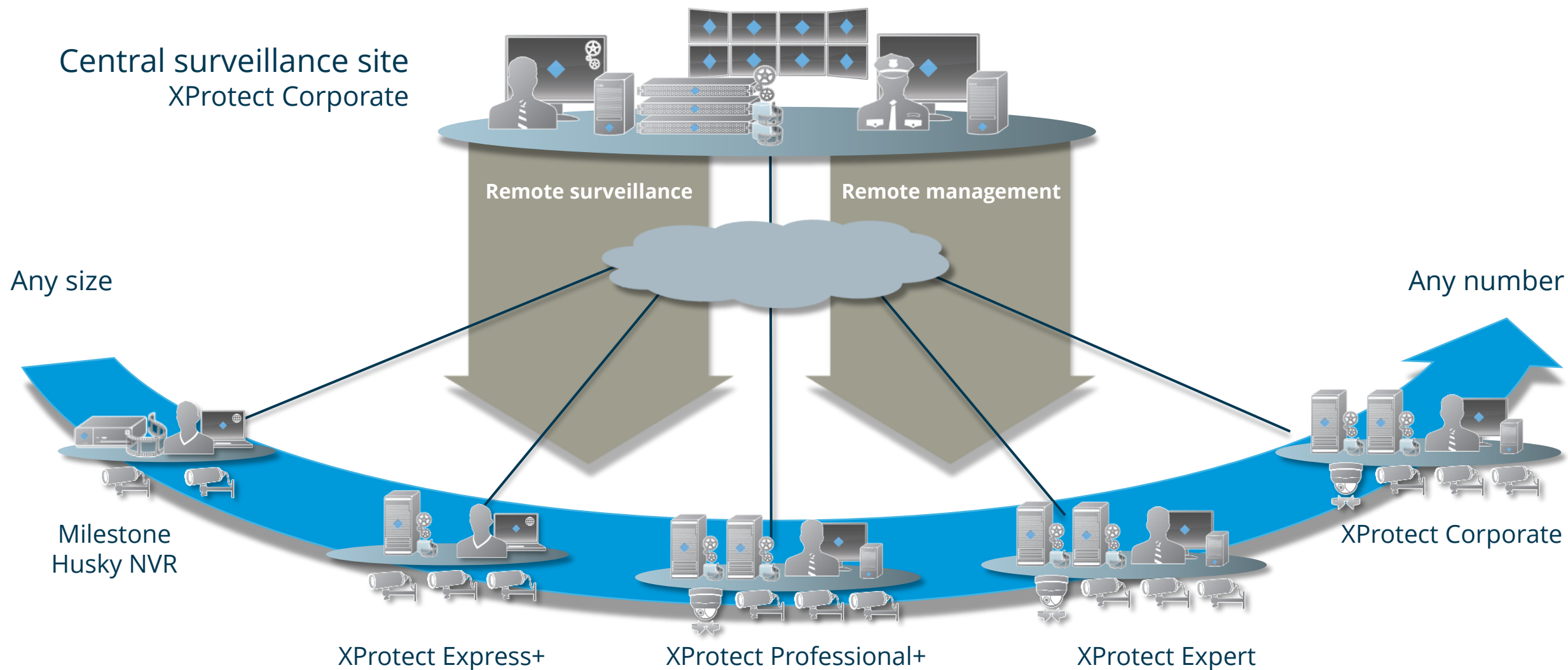
Milestone Interconnect™ - How it works

For when surveillance operations need to be coordinated across **many smaller sites** and handled from a central operation center

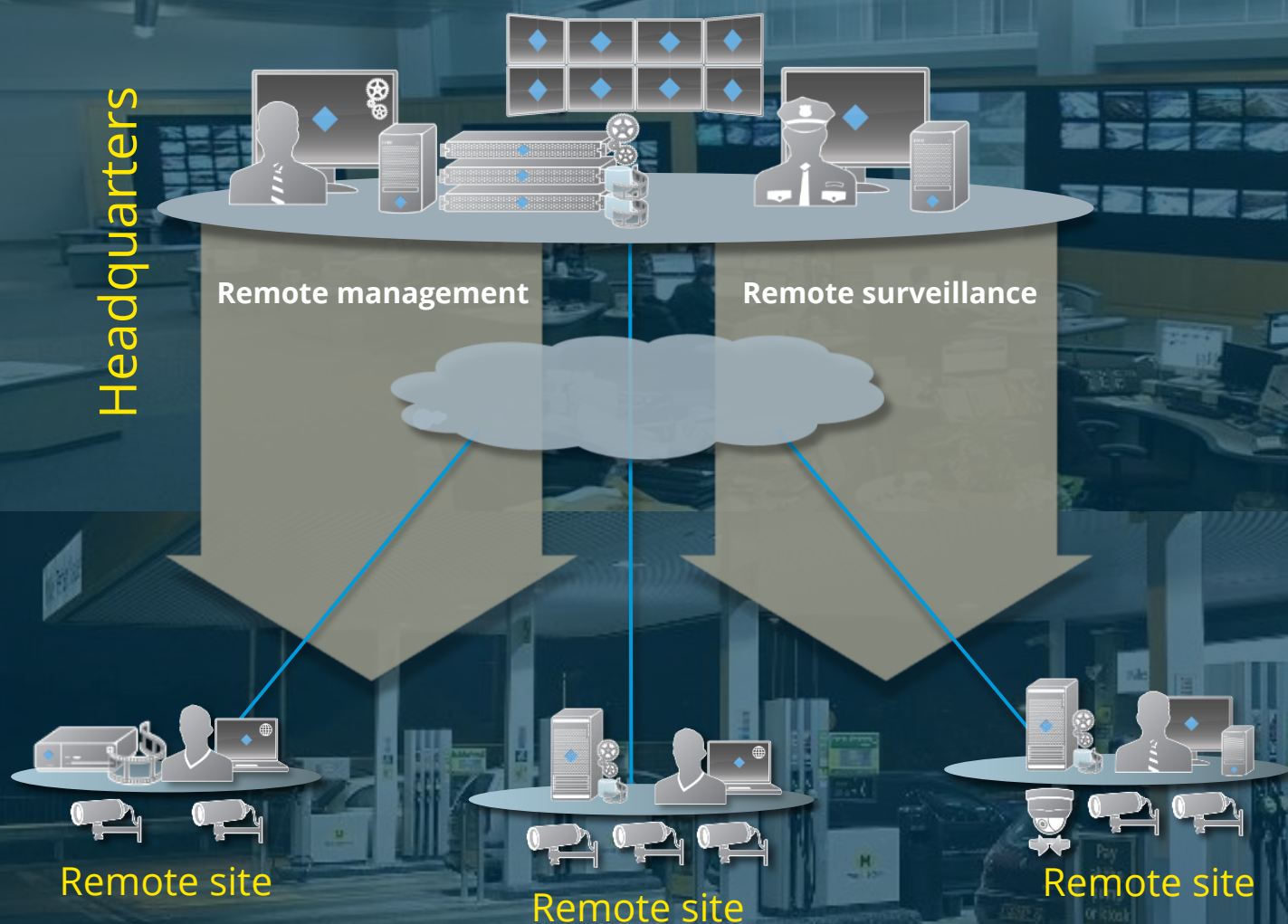
- XProtect Corporate is deployed at the main site
- Remote sites can use any paid XProtect VMS product or Milestone Husky NVR
- Video can be stored centrally, locally or with a combination of the two
- Ideal for limited or intermittent connections between local and central sites



Milestone Interconnect™ - How it works



Milestone Interconnect™ - The benefits



Increased security:

- 24/7 security – alarm monitoring

Reduced operational costs:

- Centralized system monitoring and administration
- Centralized evidence handling
- Reduced need for on-site visits

Reduced investment:

- Cost-efficient local system

Reduced operational costs:

- No local system maintenance
- Reduced need for local personnel training

Learn more

- Let our VMS expert, Eric Featureman, show you why Milestone Interconnect is ideal for organizations with distributed surveillance installations — like retail chains, financial institutions and government — to unite individual systems into a centrally-managed system.
- Watch it here:



Milestone Federated Architecture™

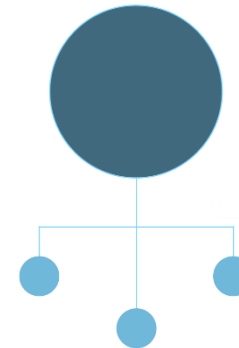
Milestone Federated Architecture allows multiple individual XProtect Corporate and XProtect Expert systems to be connected in a parent/child hierarchy of federated sites



Design, implement and grow a large-scale surveillance system in manageable parts

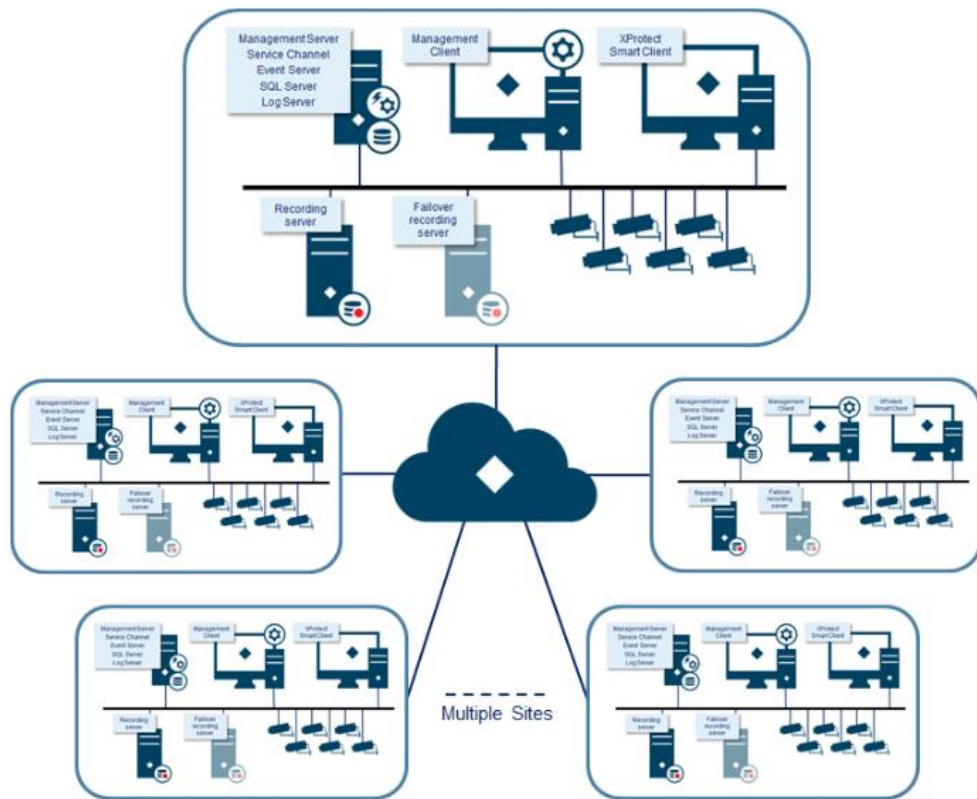


Unlimited scalability, operational flexibility, and easy accessibility



Requires no extra servers or special network equipment

Federated Architecture™ – Key capabilities



1

Provides a unified and seamless user interface throughout the hierarchy, making it easy to manage and operate each federated system locally and centrally

2

Each site can be designed independently by only taking the number of cameras and user requirements on the individual site into consideration

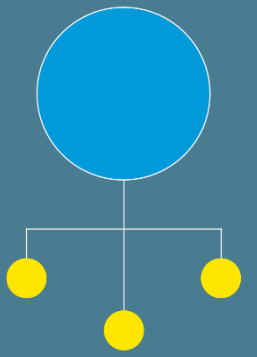
3

Users on a central site can access the entire federated system seamlessly via a single log-in

4

Local users on the remote site can access the system on their site even if the connection to the central site is broken

Federated Architecture™ - How it works



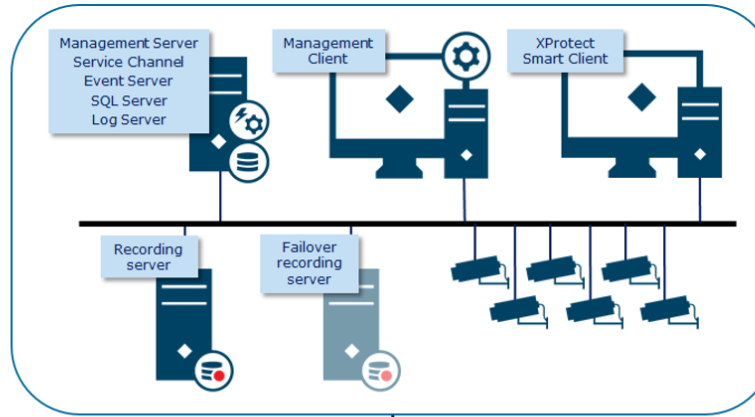
Choose Milestone Federated Architecture if all your sites require an advanced video management solution or you need to scale a large installation with several thousand cameras spread over several sites

Specifically designed for advanced surveillance solutions, where a XProtect Corporate system is the central hub for the following Milestone products:

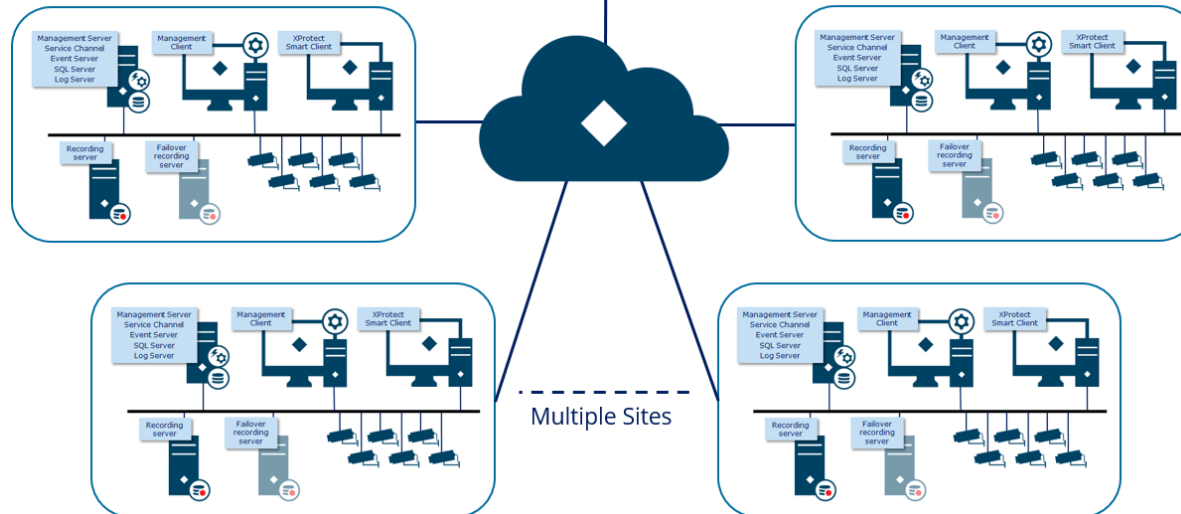
- XProtect Corporate
- XProtect Expert
- Each individual site in a federated hierarchy is a complete system with servers, cameras and other security peripherals and possible local users
- All federated child systems appear as one large system to administrators and operators in a parent system, making the total system as easy to manage as any standalone Milestone XProtect VMS

Federated Architecture™ – How it works

XProtect Corporate
deployed as the
central hub

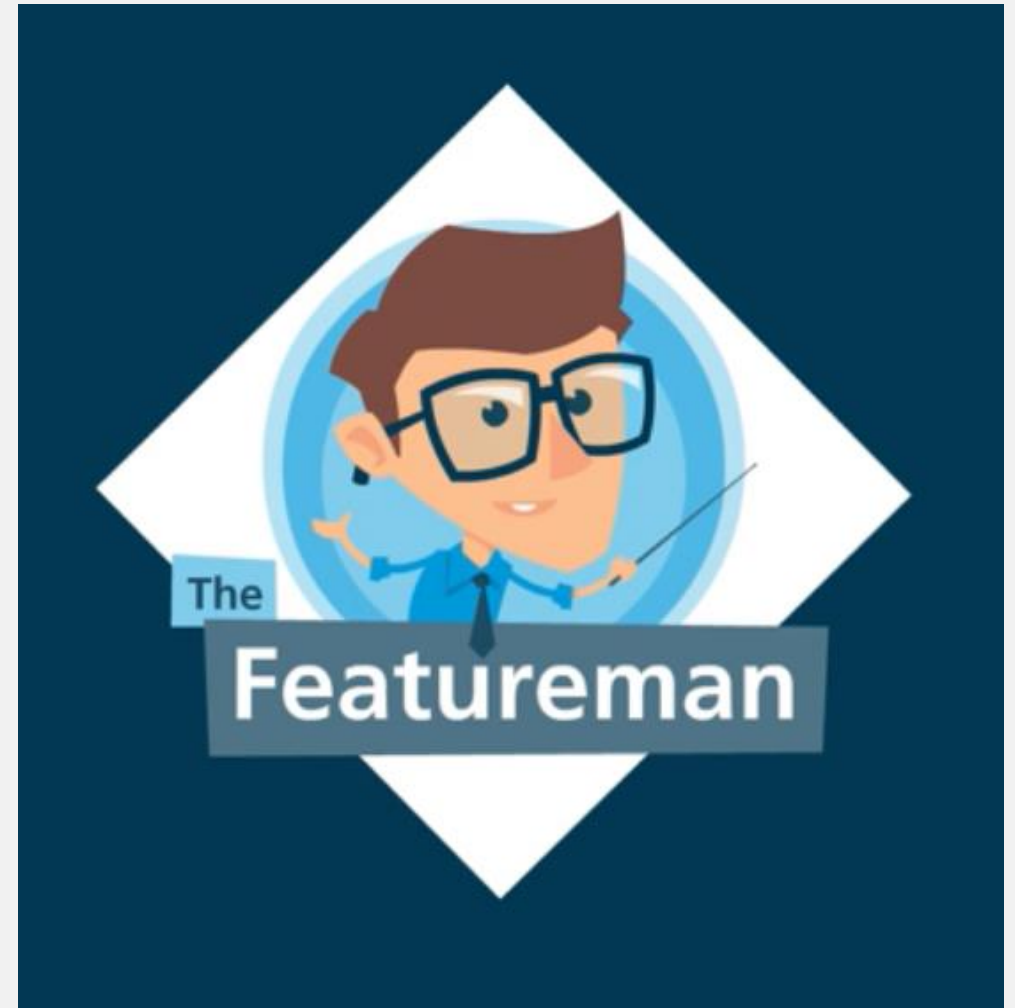


Each individual site
can be either
XProtect Expert or
Corporate



Learn more

- Let our VMS expert, Eric Featureman, show you why Milestone Federated Architecture is ideal for large corporations, city surveillance, governments, law enforcement installations or any other single-owner organization with many distributed stationary sites
- Watch it here:



Milestone Open Network Bridge

Choose Milestone Open Network Bridge to integrate video from Milestone Husky NVRs and XProtect VMS products into central monitoring solutions



When you need to share video externally



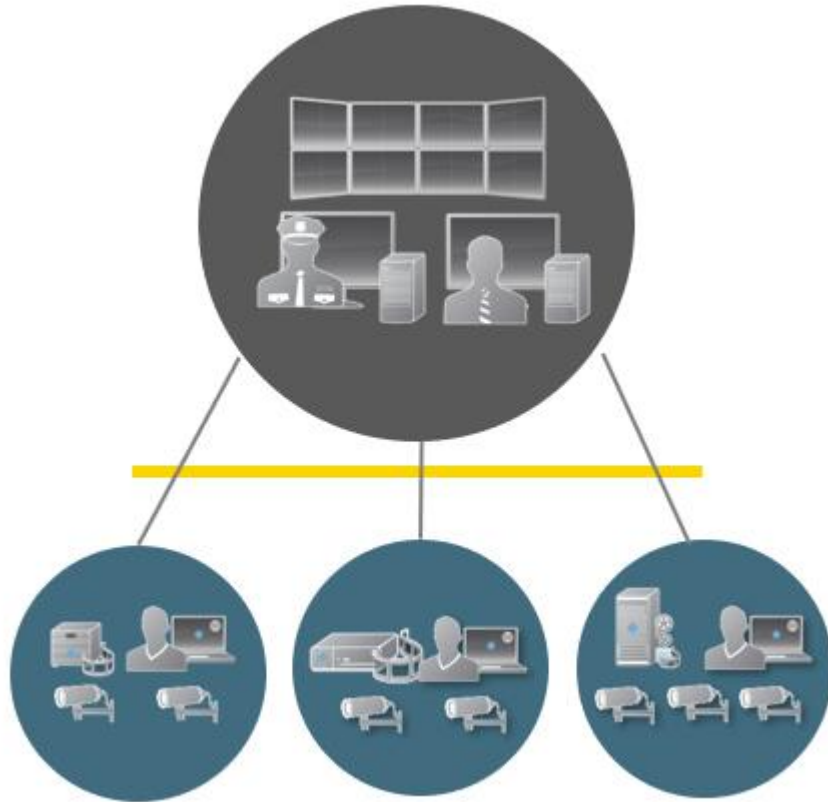
Ensures full video interoperability in multivendor installations



Gives external access to any video source in most XProtect VMS or Husky products

Milestone Open Network Bridge

– Key capabilities



1

Standardized ONVIF video out interface (profile G & S) for:

- Live and playback (H.264 and H.265)
- PTZ control

2

Available for all Milestone products supporting MIP SDK, at no additional cost

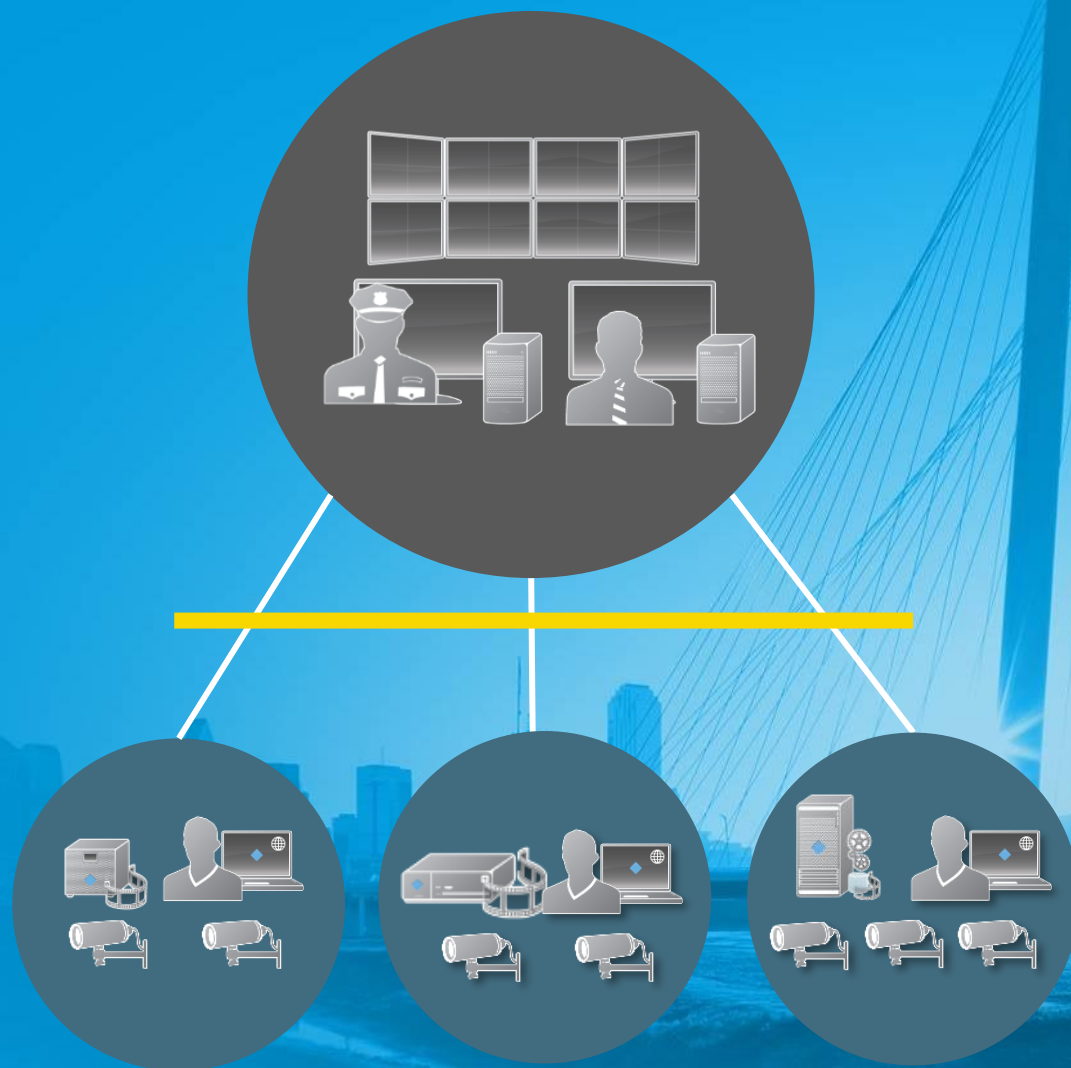
3

ONVIF is an open industry forum for the development of a global standard for the interface of IP-based physical security products

4

Seamless private-to-public video integration with a standardized interface for Alarm Centers and Monitoring Stations

Milestone Open Network Bridge – How it works



Any vendor:

- Central law enforcement
- City surveillance
- Governmental agencies
- Homeland security
- Monitoring stations

- Standard ONVIF interface
- Authorized access to private systems

- Milestone XProtect VMS or Husky NVR
- Independent private systems

Daily operations

STAY IN CONTROL WHEREVER YOU ARE

You are always in control of your XProtect video management software solution with these three easy access options.



XProtect Mobile



XProtect Web Client



XProtect Smart Client



SEE FOR YOURSELF

Depending on where you are and what features you need, you can choose the mobile device or computer you prefer to use to access XProtect on-site, off-site or on-the-go

XProtect Smart Client

XProtect Smart Client is a powerful, easy-to-use viewing client for a surveillance installation's daily operations. It gives seamless access to live and recorded video, instant control of cameras and connected security devices, and a comprehensive overview of recordings



A suite of tools for finding and exporting evidence material

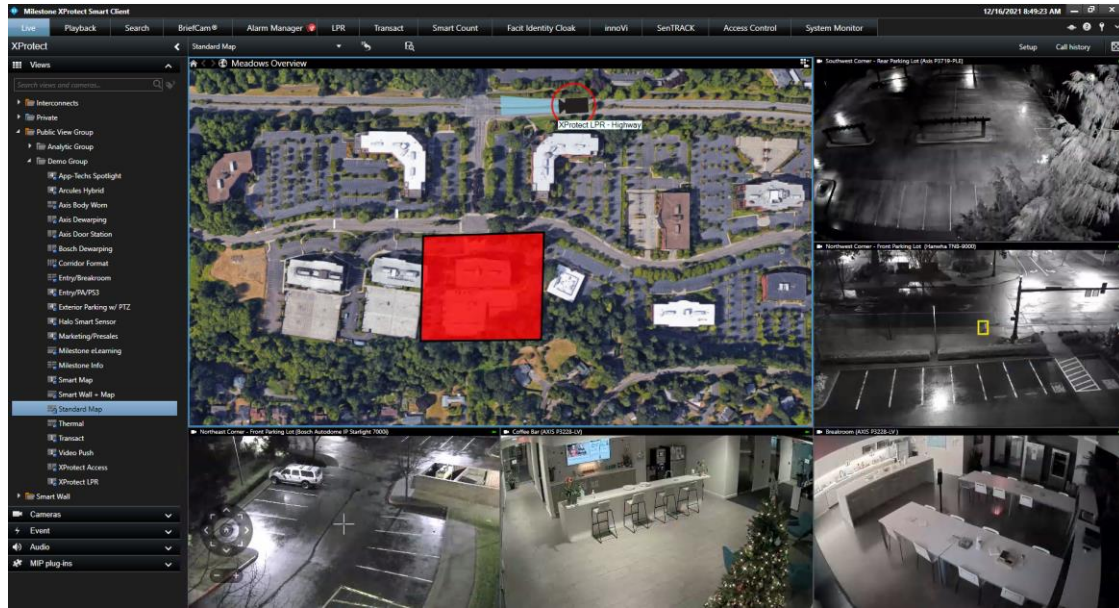


Advanced functions to detect and respond to incidents



The ultimate video surveillance tool, regardless of system size

XProtect Smart Client – Key capabilities



1

2

3

4

Hardware acceleration – Smart Client

Hardware acceleration improves the decoding capability and performance of the computer running XProtect Smart Client. This is particularly useful when you view multiple video streams with high frame rates and high resolution



Fluent display of several concurrent video streams

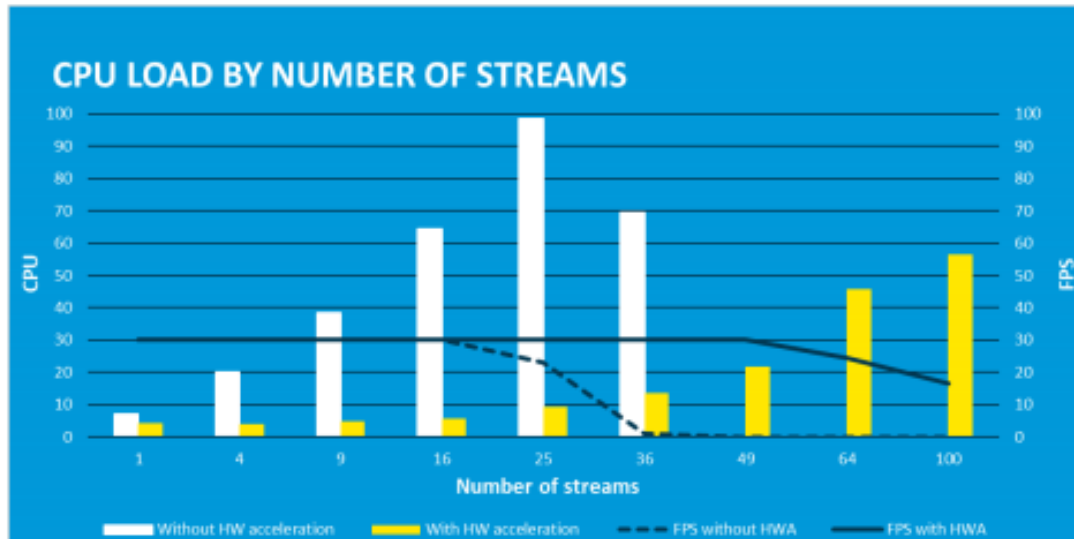
Fluent display of multiple 4K/UHD video streams



Reduce total cost of ownership



Hardware acceleration – Key capabilities



XProtect Smart Client performance measured for h.264 stream format in full HD. Tested hardware: Windows PC with Intel Core i7-8700K processor at 3.70GHz, 32 GB RAM, 2X NVIDIA GeForce GTX 1080 8GB

1

XProtect Smart Client supports hardware accelerated decoding using Intel® and NVIDIA® GPUs

2

Transforms the video decoding and image scaling process from linear (using only the built-in CPU) to parallel (using GPUs)

3

Removes the hardware-based bottleneck and allows installations to enhance the processing power of their machines by using either the built-in GPU or additional graphics cards

4

Decoding is offloaded automatically to Intel Quick Sync once NVIDIA GPUs are maxed out

Learn more

- Let our VMS expert, Eric Featureman, teach you what hardware acceleration means and how support for additional GPUs in XProtect can help increase system performance while saving on hardware costs
- Watch it here:



XProtect Mobile

XProtect Mobile is a free application for all Milestone products offering a seamless way to access the surveillance system from anywhere using smartphones and tablets



Never lose a moment and stay informed on any arising situation

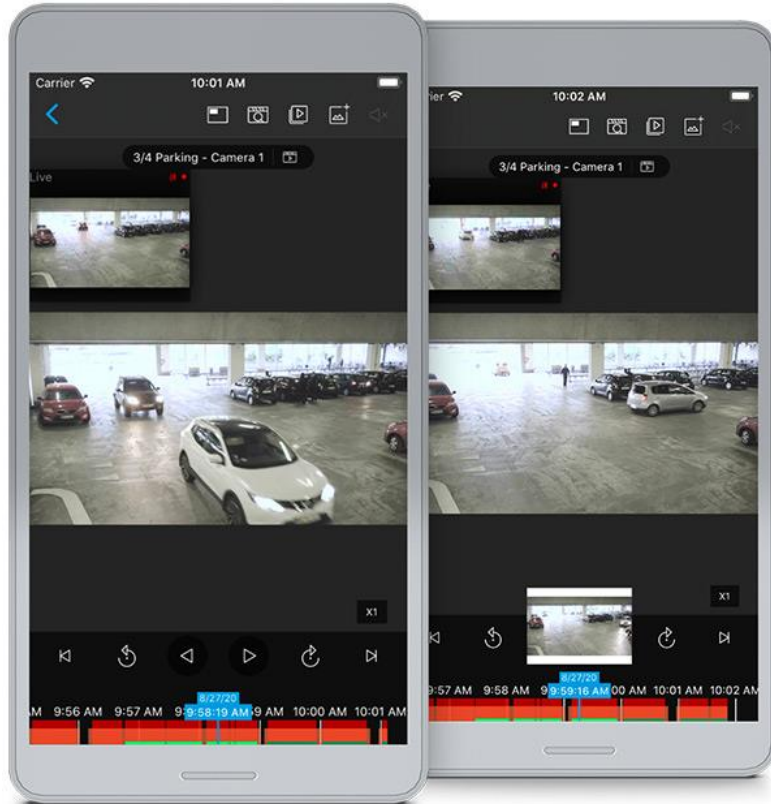


Access the video surveillance system from anywhere



Act immediately and prevent an escalating incident from happening

XProtect Mobile – Key capabilities



1

Available as a free download from the App Store and Google Play, XProtect Mobile enables users to view, playback and export video directly on the mobile device

2

Get notified automatically if an alarm is triggered in the system with Push Notifications

3

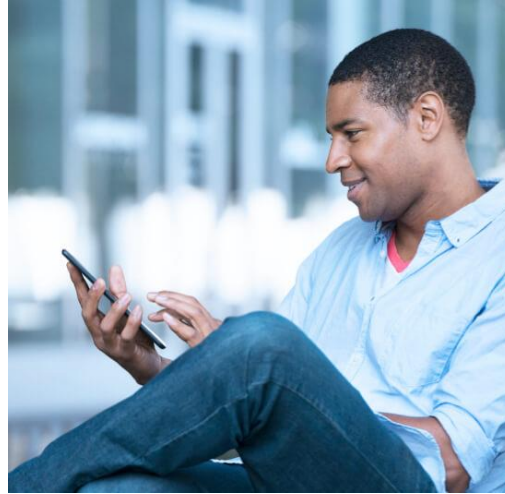
The communication between the mobile server and mobile client supports HTTPS, ensuring secure authentication and encryption of all exchanged information

4

To protect the system from cyberattacks via the mobile client it is possible to apply a two-step verification process for users accessing the VMS system

Push Notifications

Based on alarms pre-defined in the XProtect video management system, XProtect Mobile automatically notifies the user if anything in the system needs attention



Sleep safely at night knowing the system will automatically notify you if something requires your action

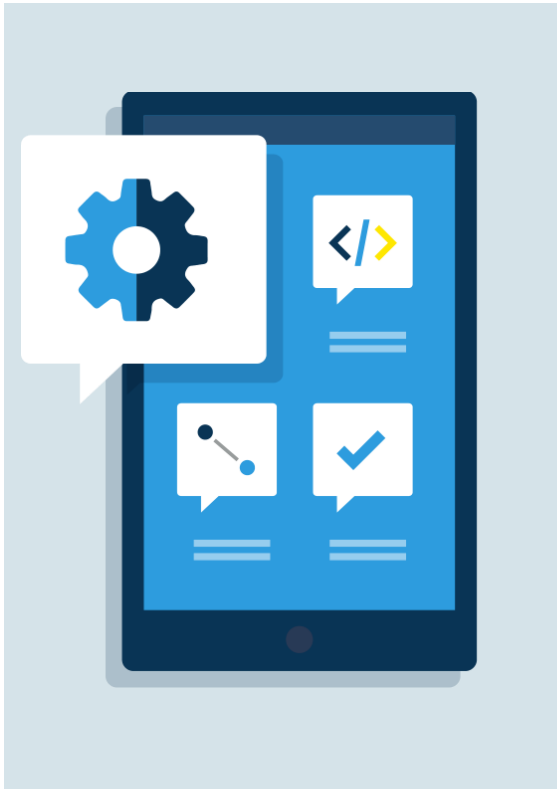


Full access to video, alarm information and instructions



Empowers patrolling guards and first responders to act quickly and efficiently

Push Notifications – Key capabilities



1

Get instant access to the alarm when clicking on the desktop notification, including video, alarm information and instructions

2

Ability to dispatch an alarm to a single or group of responders for improved collaboration

3

Manage access requests on the mobile device when integrated with XProtect Access

4

In-App notifications when connected to the system, and Push Notifications when device is not connected to the system

Video Push

Enables users to use the built-in camera in their mobile device to stream live video into the XProtect VMS system in real time



Capture valuable first-hand evidence

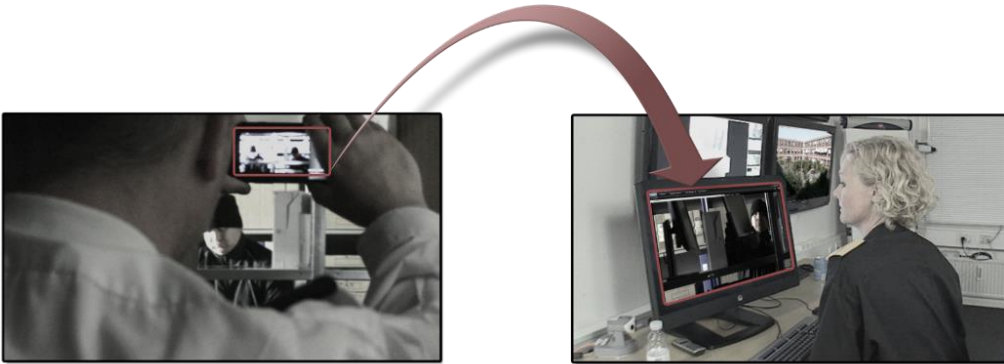


Respond to incidents as they happen



Cover angles not covered by fixed cameras

Video Push – Key capabilities



1

Live video, including audio, can be shared instantly with command and response center staff

2

Can be recorded for later investigations as complementary evidence

3

Document the location of pushed video by associating a GPS position with the captured live video

4

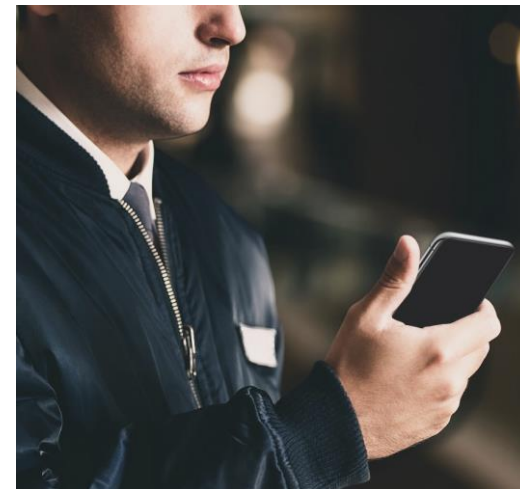
An additional hardware device license is required for each mobile device, which should be able to push video to the system.

Two-way audio in XProtect Mobile

Add audio to the video installation with the possibility to listen to audio and speak through connected cameras with the push-to-talk functionality in XProtect Mobile



Listen in remotely while the incident is happening and take the right action



Converse with people you see on the camera



Prevent incidents before they happen

Two-way audio - How it works

Listen to audio

Listen to audio captured by the microphone connected to the camera and increase situational awareness by hearing what what you can't see

Add audio to evidence

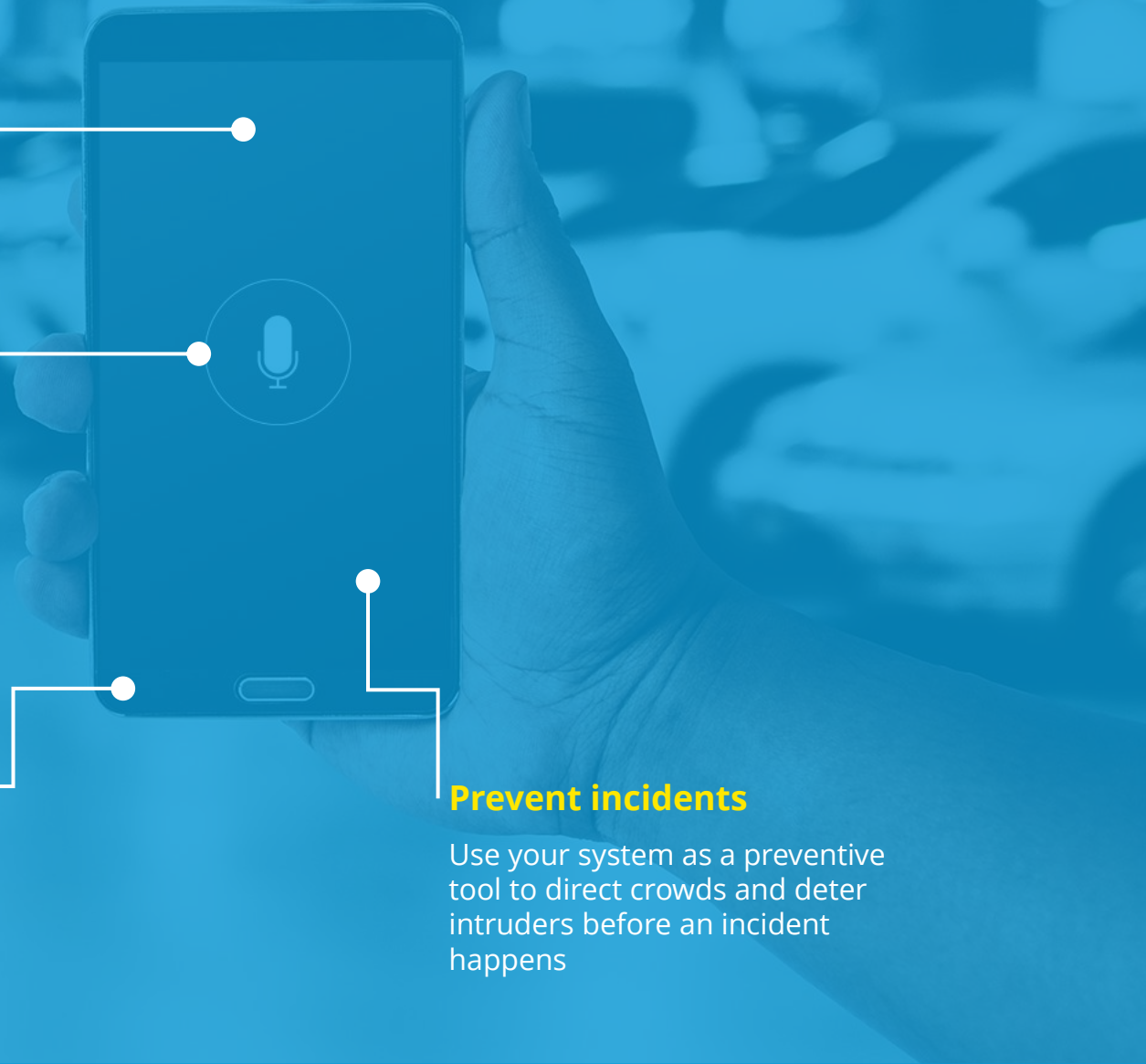
Add another layer to exported evidence with high-quality AAC audio. Share it easily with the authorities, when needed

Speak through the camera

Speak through the speaker connected to the camera and communicate with people on camera, ie. when asking to enter the premises via Access Control

Prevent incidents

Use your system as a preventive tool to direct crowds and deter intruders before an incident happens



Control outputs in XProtect Mobile

Whether or not physically on-site, users can control outputs like switching lights on and off and granting or denying access control requests. This ensures uninterrupted security operations while on the move



In control from anywhere



Manage access requests remotely



Respond to incidents quickly

XProtect Web Client

XProtect Web Client is an intuitive, web-based interface to view, play back and share video



Quick to learn and simple to operate for users of all levels



Provides instant access to the most used functions



Available in 30 languages

XProtect Web Client – Key capabilities



1

XProtect Web Client provides remote access to the surveillance system from all common browsers and computer operating systems

2

XProtect Web Client runs on any Internet-enabled computer or device without installation, including optional browser plug-ins

3

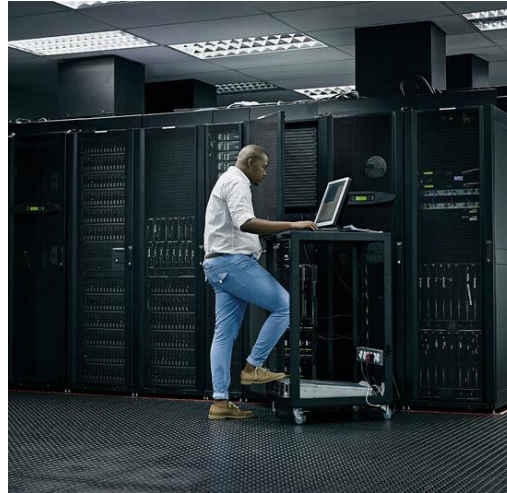
Listen to audio captured by the camera and speak through the camera-connected speakers directly from the Web Client wherever you are

4

Send video (AVI) or still images (JPEG) with other online users, eliminating the need to burn evidence to a DVD or put it on a USB flash drive

Hardware acceleration in the Recording Server

With hardware acceleration in the Recording Server, the video motion decoding is moved from the CPU to the GPU resulting in a significant reduction in the CPU load, lower total cost of ownership and increased performance



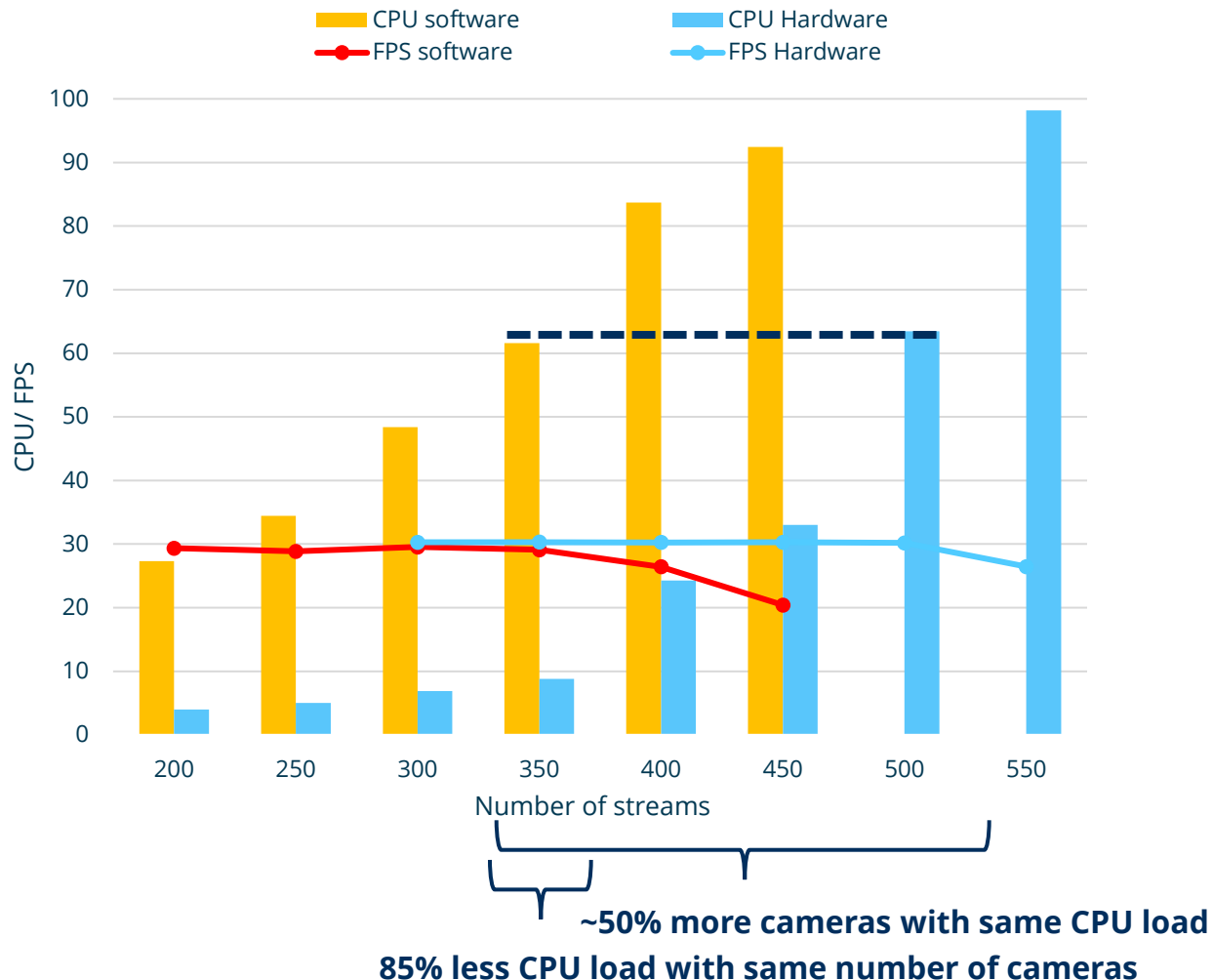
Increase the number of connected cameras per server

Maximize the potential of your resources and avoid unnecessary hardware costs



Save on maintenance and overhead costs by running a smaller server network

Hardware acceleration in the Recording Server



1

Video decoding for video motion detection is moved from the CPU to the GPU removing the bottleneck created by the hardware

2

XProtect will balance the load between the Intel GPU and the added NVIDIA graphic cards automatically to maximize the potential of the hardware and minimize the CPU load

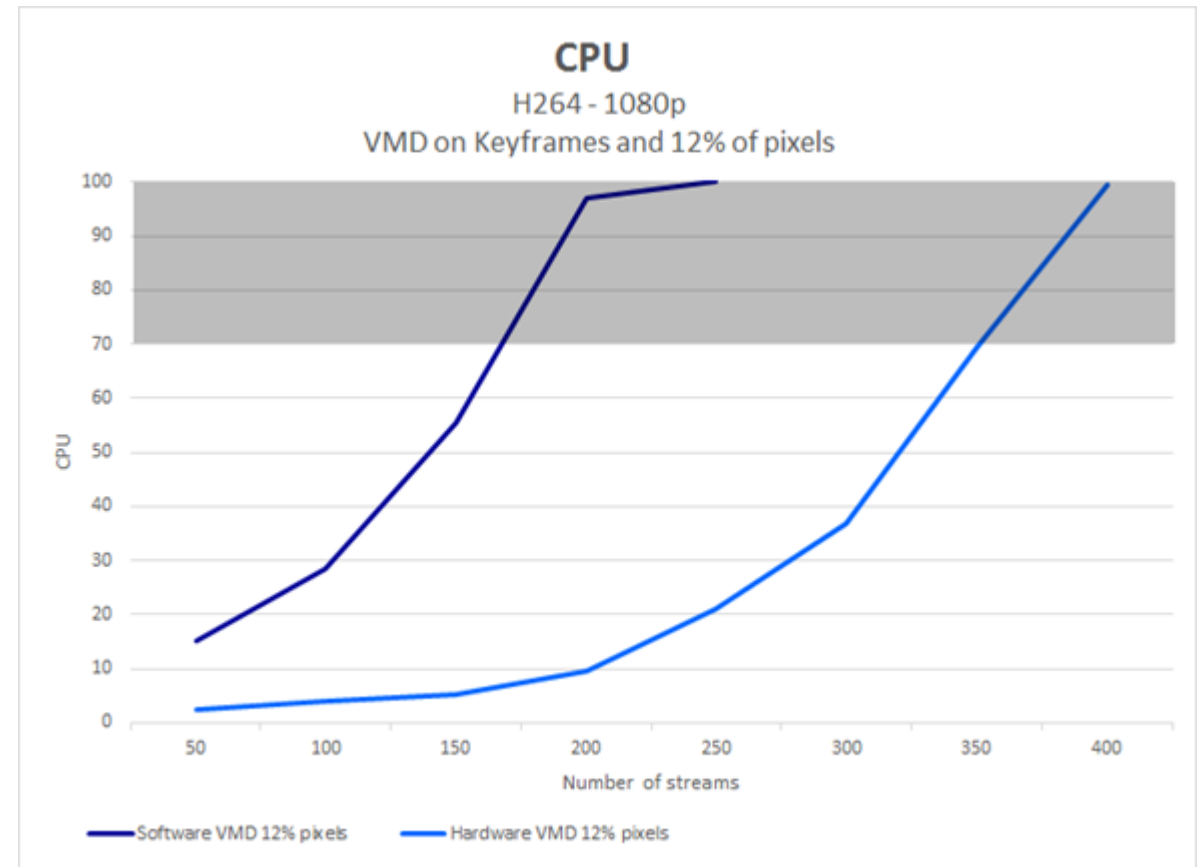
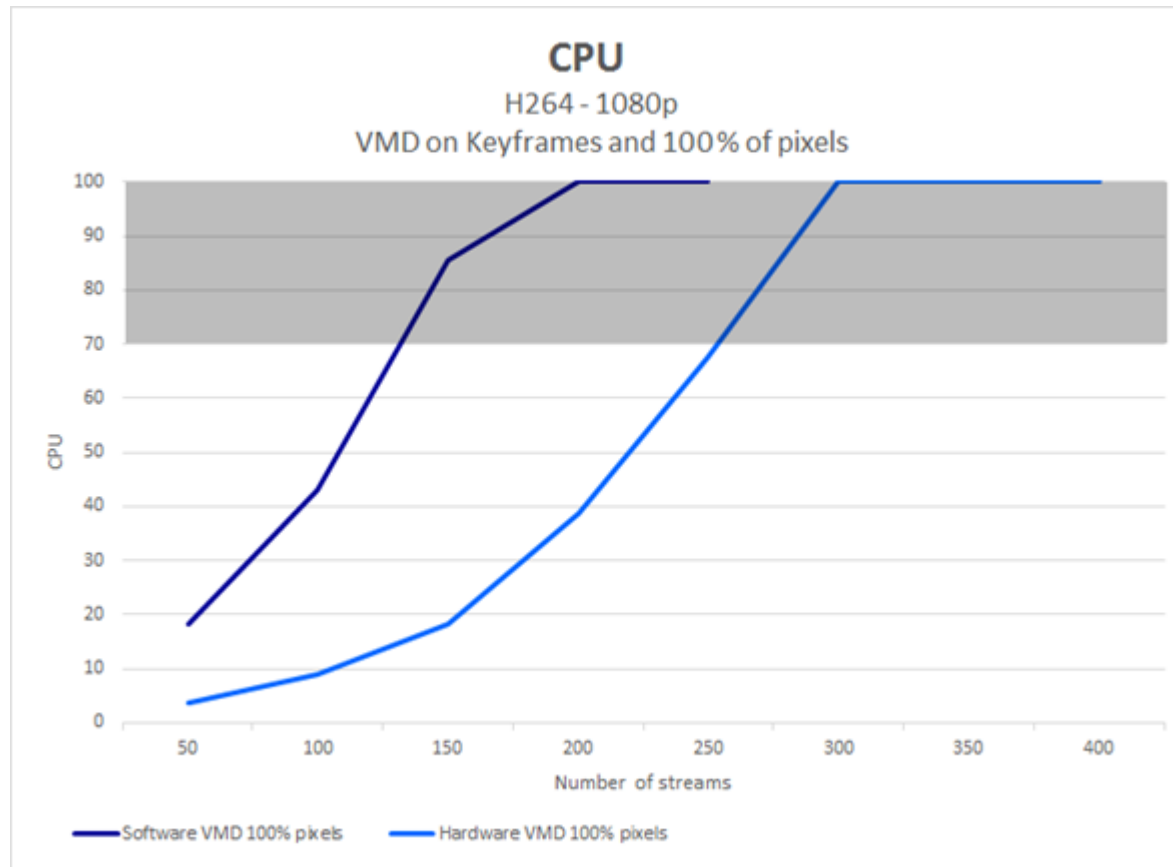
3

Hardware accelerated video decoding and video motion detection utilizing both Intel and NVIDIA GPUs is available in XProtect 2018 R2 version and later

Server specs: Intel i7-6700K, Intel HD Graphics 530, Windows 10, 16 GB RAM. Video feed: H264 1280X720, 30 FPS, 1 Mbit/s. Note: Three Recording Server instances used due to same driver used for all cameras

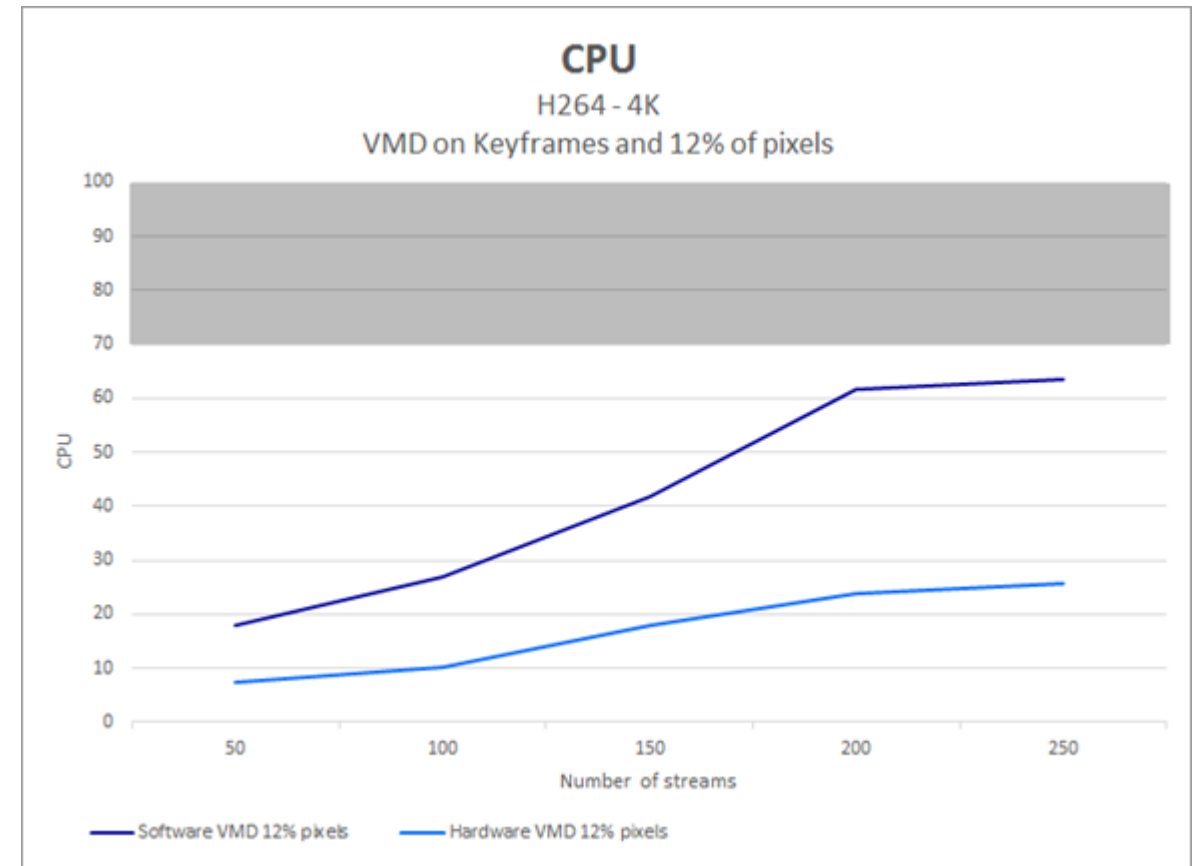
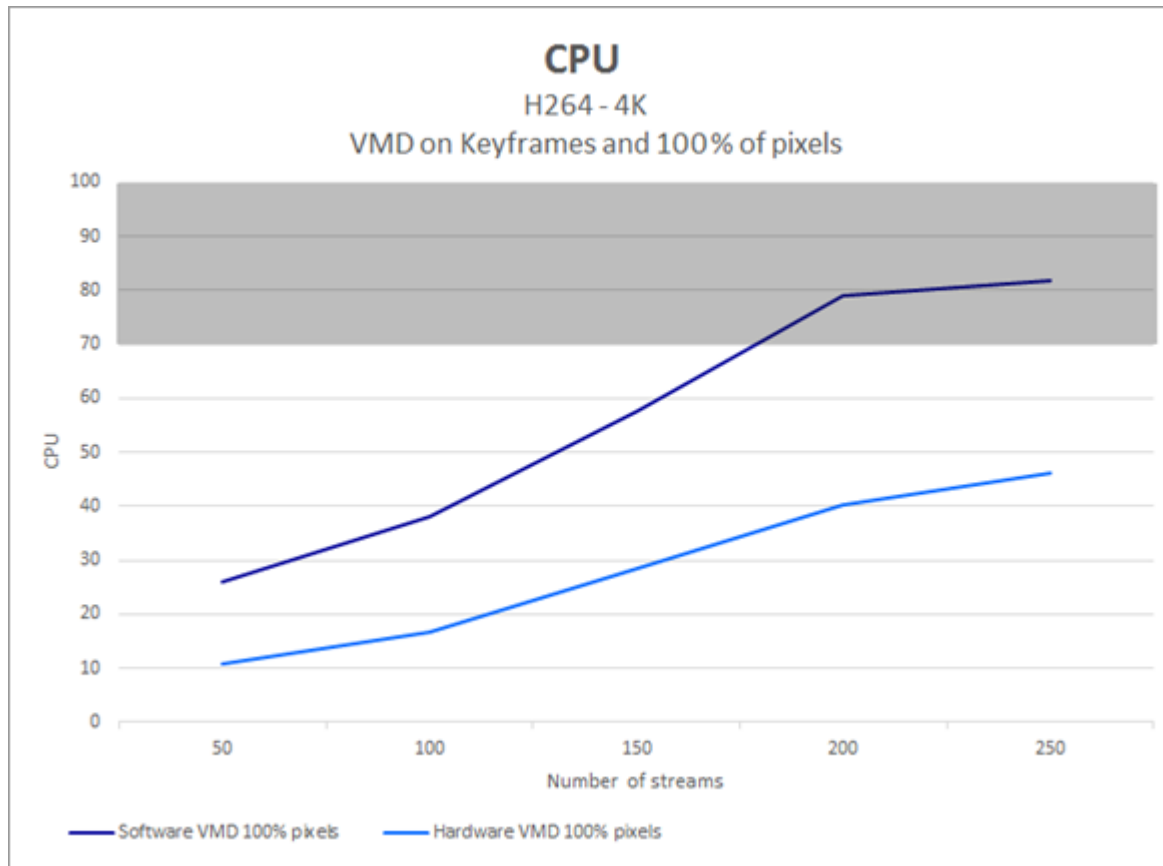
Hardware acceleration in the Recording Server

Hardware Accelerated VMD - Performance 1080p



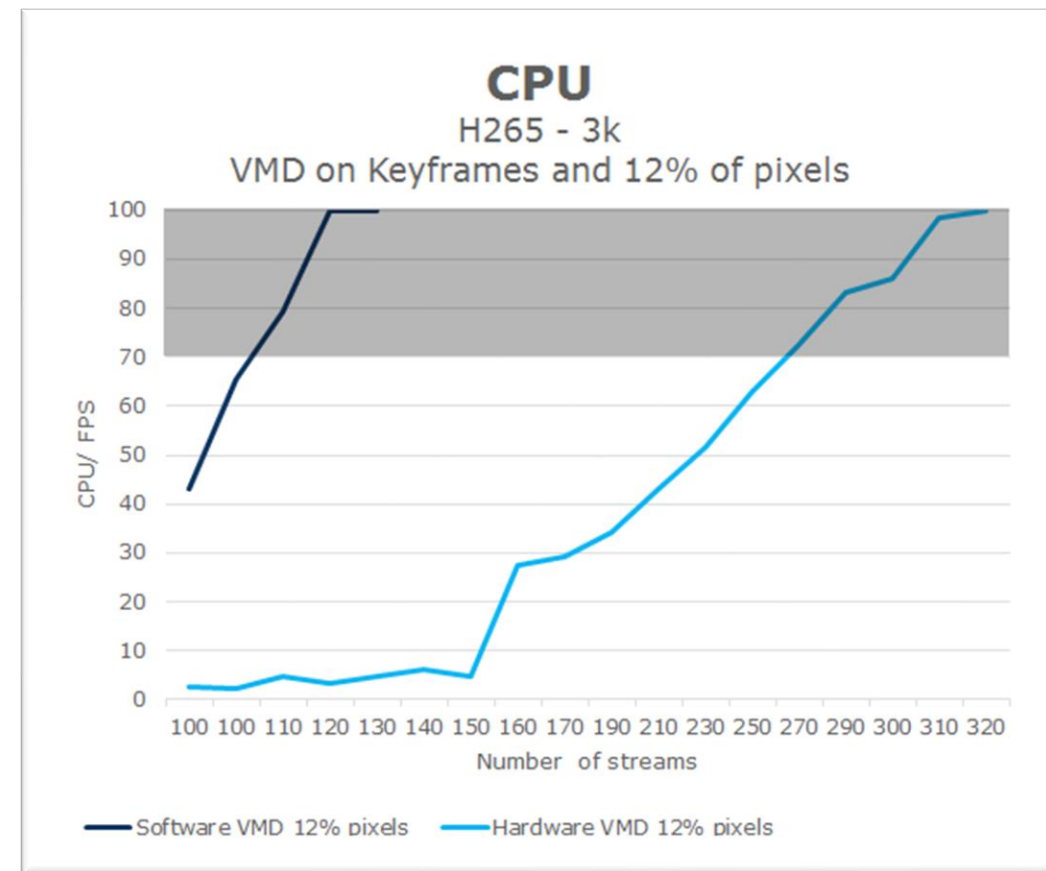
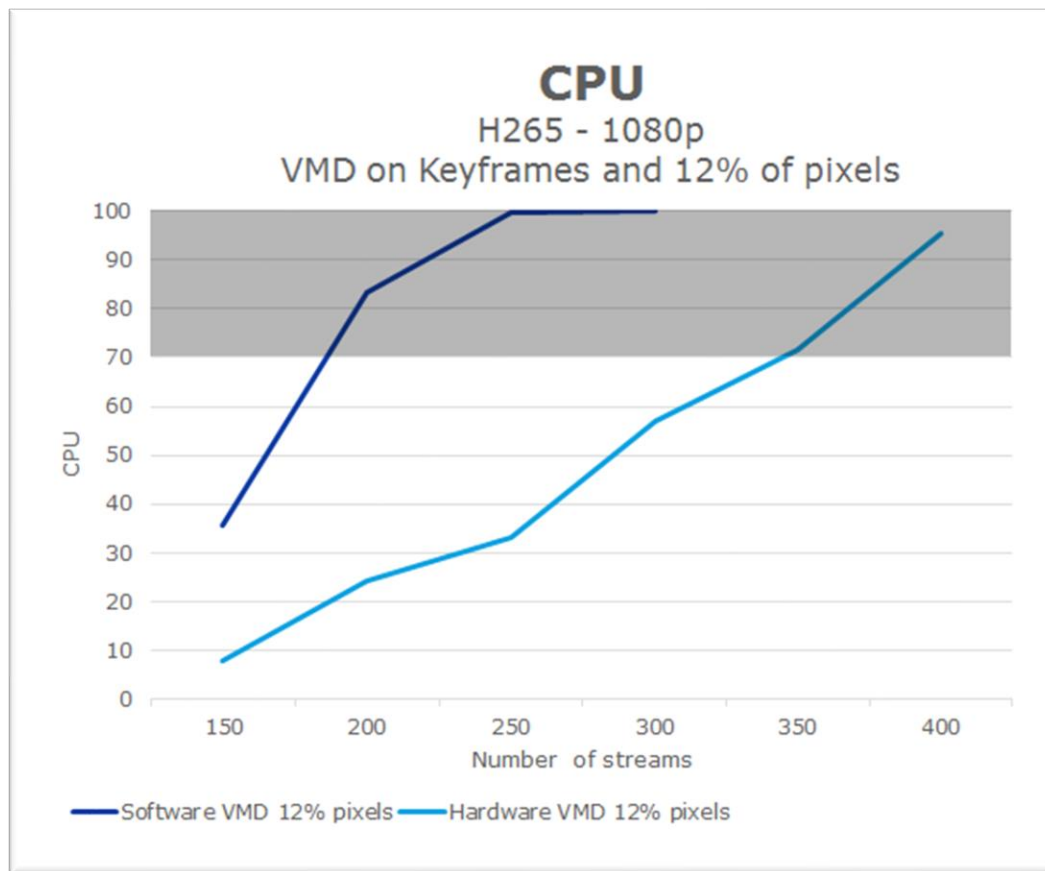
Hardware acceleration in the Recording Server

Hardware Accelerated VMD – Performance 4K



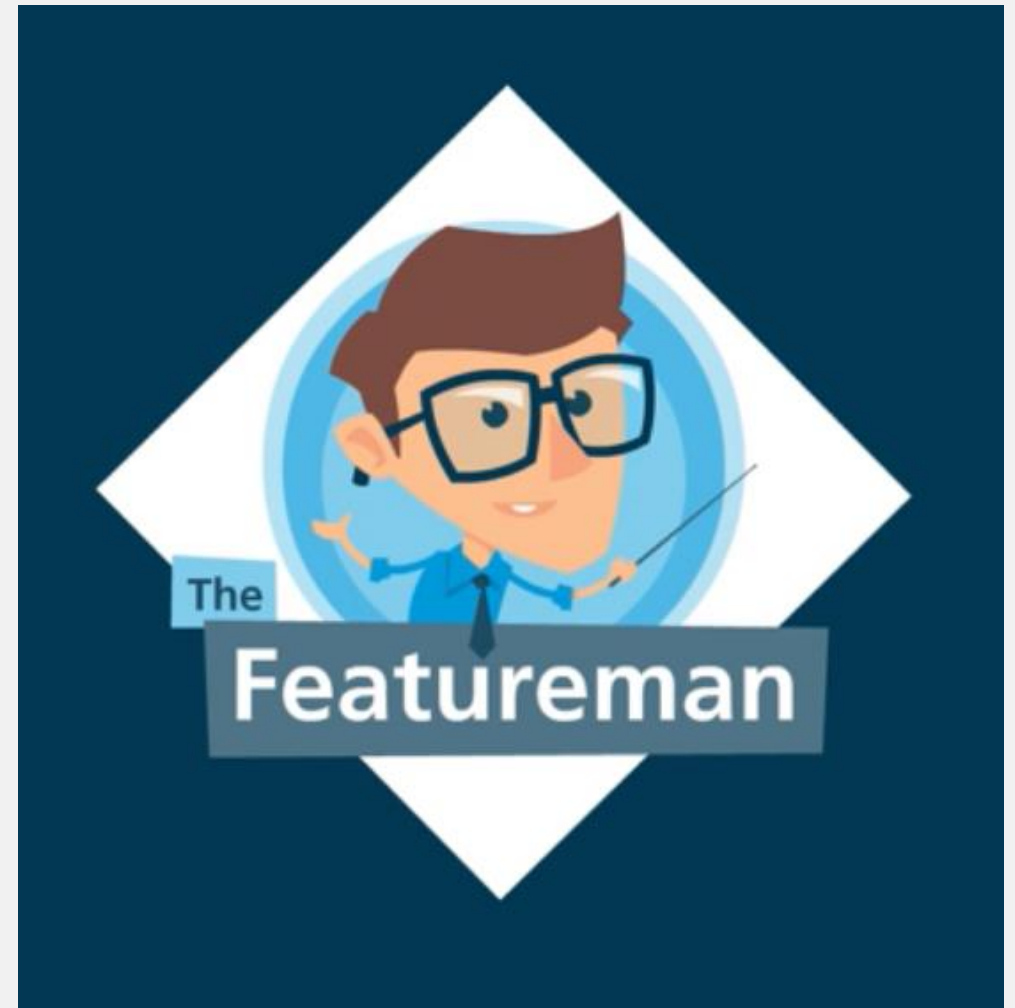
Hardware acceleration in the Recording Server

Hardware Accelerated VMD – Performance H.265



Learn more

- Let our VMS expert, Eric Featureman, teach you about hardware acceleration and how it can help you improve your system's performance while saving on hardware costs
- Watch it here:



Adaptive streaming

Adaptive Streaming makes it possible for the viewer to receive a lower resolution stream from the recording server when a high resolution one is not required. The result is reduced load on the Recording Server and the Mobile Server and a more seamless viewing experience for the user



A smoother and more fluent viewing experience

Substantial savings on hardware currently needed to decode high-resolution video streams



Better use of bandwidth that can then be utilized for other needs in the organization

Adaptive streaming – Key capabilities



1

Adaptive streaming is useful when you view multiple live video streams. It optimizes the performance of the XProtect Recording and Mobile server and improves the viewing experience

2

Currently supported for live video in the XProtect Smart Client, XProtect Web Client and XProtect Mobile

3

Optimizes video quality - selects the stream with the lowest available resolution that is equal to or higher than the requested resolution

4

Optimizes server performance - reduces the requested resolution and then selects the stream with the lowest available resolution that is equal to or higher than the reduced request

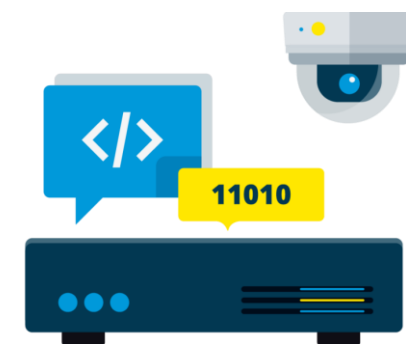
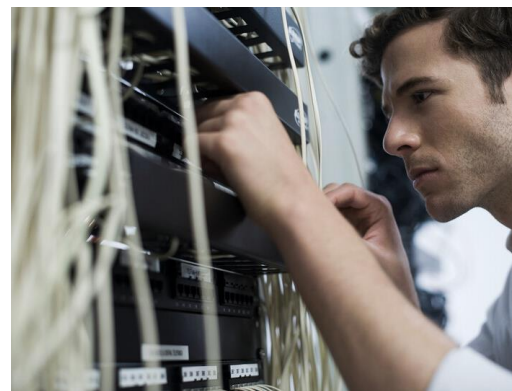
Pre-recording buffer in RAM

To enable pre-event recording in conjunction with motion detection, alarms, etc., the Recording Server operates with a RAM based pre-buffer. This means that Video pre-buffer is stored in RAM and video is only written to HD when needed



Extends the lifetime of disk drives, keeping maintenance and disk replacement costs low

Optimizes the use of the physical disk, and increases the overall recording performance

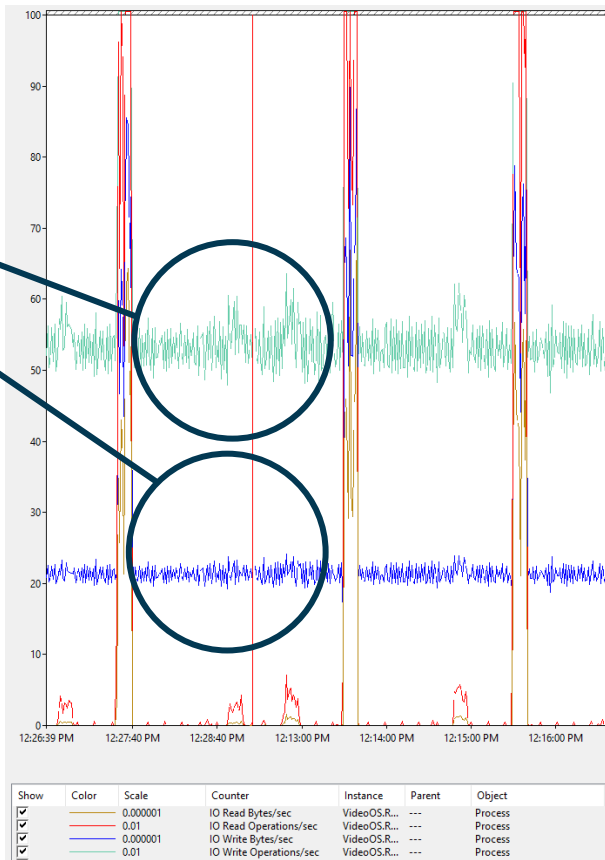


Prevent circumstances where video recordings are missing due to a malfunctioning system or component

Pre-recording buffer in RAM – How it works

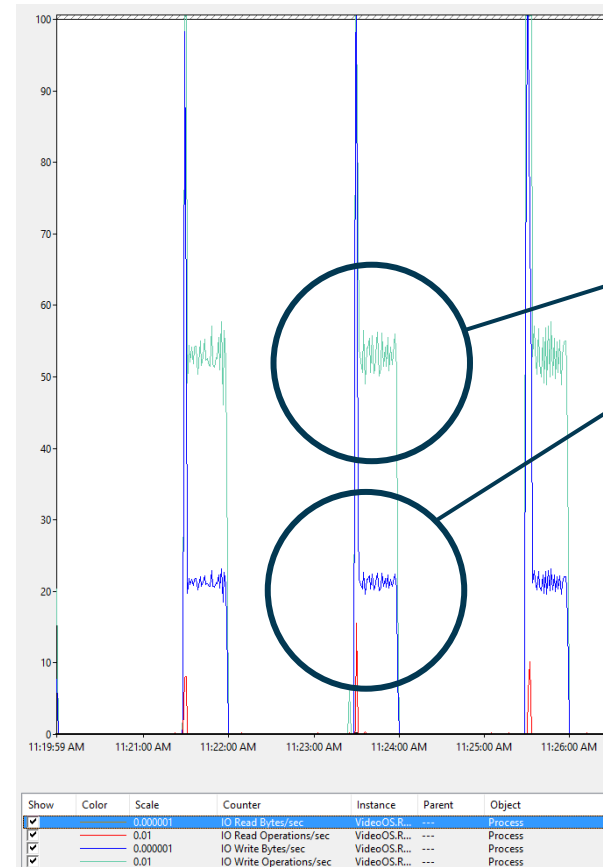
Pre-buffer on Disk

Continuous
high number of
write and read
operations

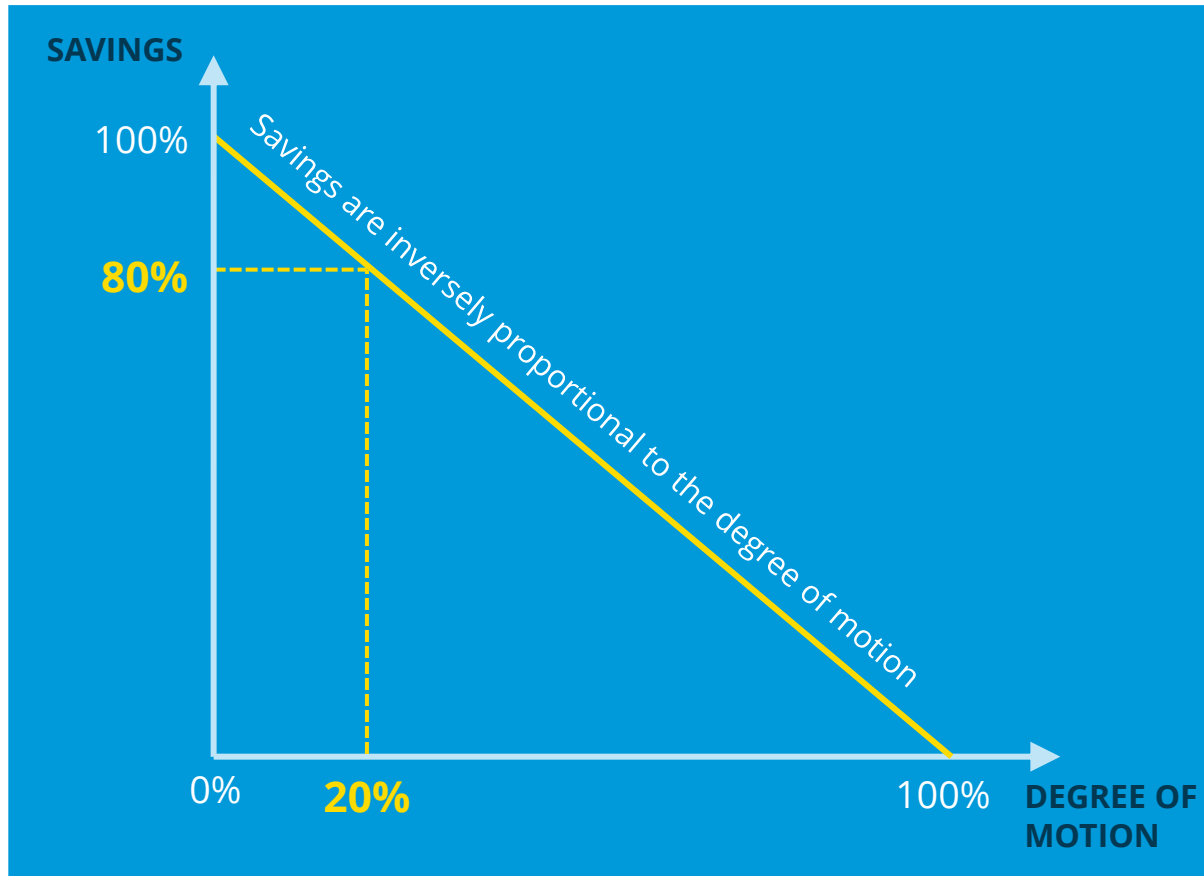


Pre-buffer in RAM

Video written
to disc **only**
when
required



Pre-recording buffer in RAM – Key capabilities



1

Reduced server cost as it allows more cameras per recording server and lower specification disk storage can be used

2

Minimizes wear and tear on disc systems, reduces power, heat and cooling needs while significantly reducing the cost for disk maintenance

Multicast

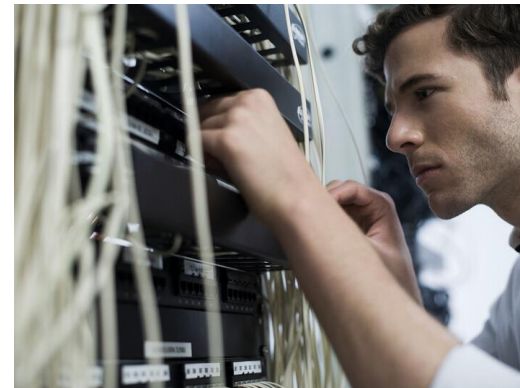
XProtect supports multicasting of live streams from the recording servers. If multiple XProtect Smart Client users want to view live video from the same camera, multicasting helps save considerable system resources



Helps save bandwidth and system resources

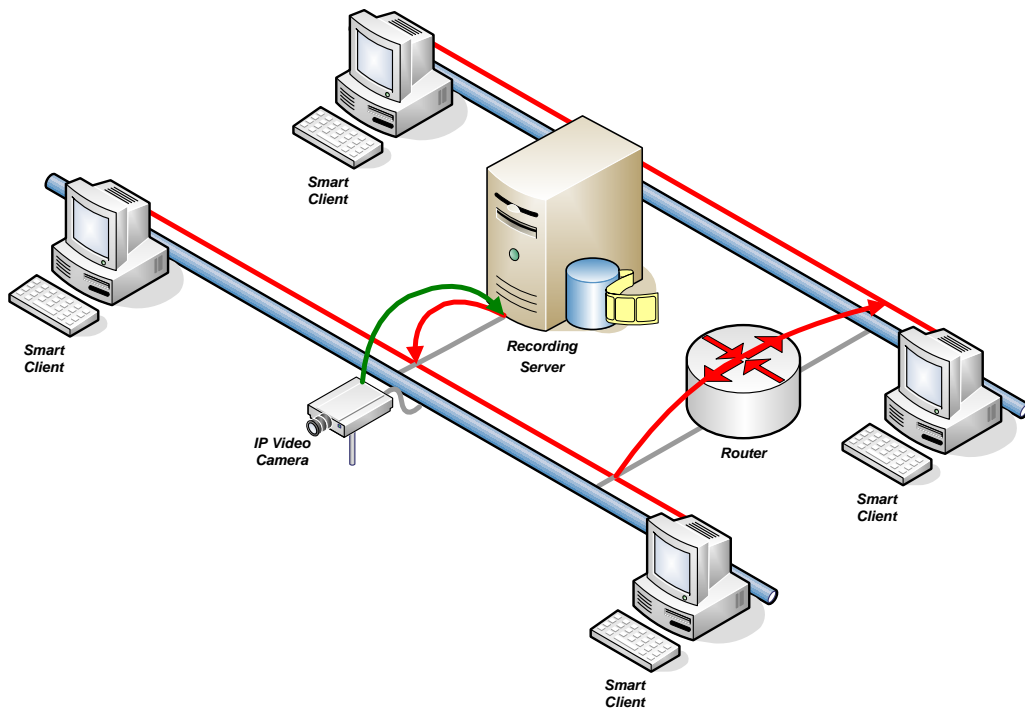


Particularly useful when multiple clients require live video from the same camera



Multicasting is only possible for live streams, not for recorded video

Multicast – Key capabilities



1

In situations where several clients want to view the same live camera multicasting can significantly save system resources

2

Unicast sends an individual stream to each client, multicast sends one stream to all clients

3

Multicast is especially useful for installations with XProtect Smart Wall, where multiple clients often require the same live view

4

The infrastructure must support IP multicasting standard IGMP (Internet Group Management Protocol) to reach remote networks

System monitoring

PEACE OF MIND

XProtect offers various ways to monitor the health of the system to ensure a continually functioning system

System Monitor

System monitoring
via Maps in XProtect Smart
Client

Customer Dashboard
(for resellers)

System Monitor

The System Monitor is a dedicated real-time monitoring function embedded in XProtect VMS. It covers servers, storage, cameras and the VMS itself and ensure reliable operations and optimal use of available system and network resources



A dedicated tool for holistic system monitoring

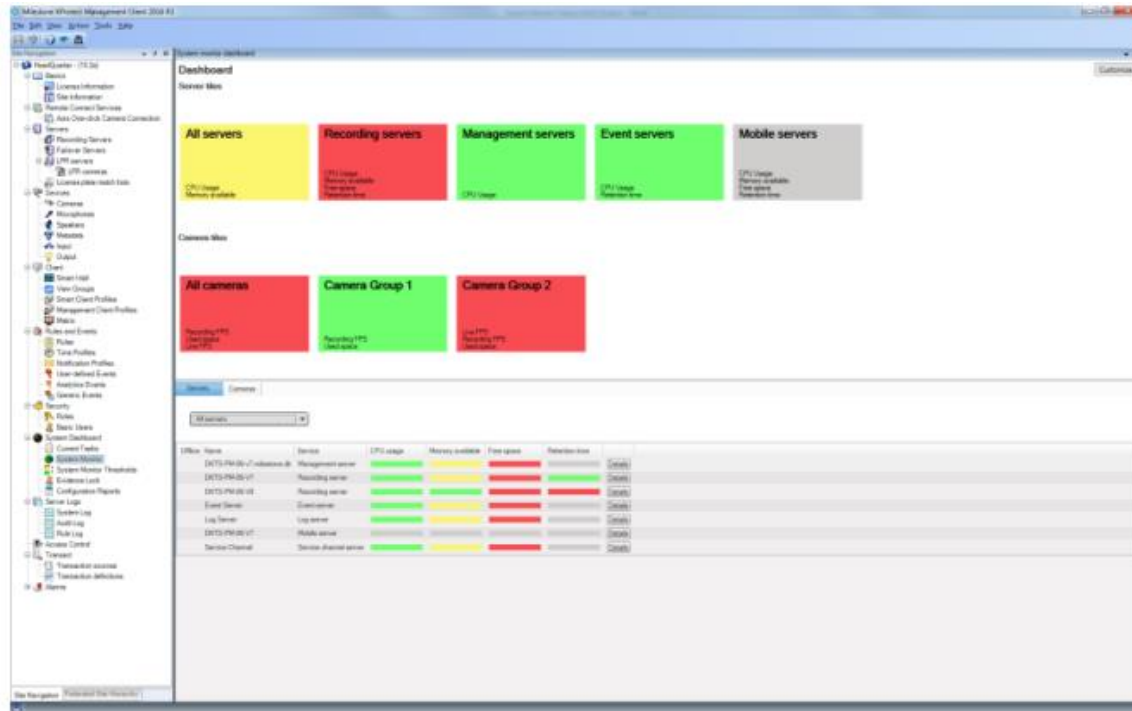


Helps ensure stable and reliable operation



Fast problem identification and location

System Monitor – Key capabilities



1

The system monitor is customizable, and each tile can represent a group of system components, such as management servers, recording servers or cameras

2

The tiles are color coded according to the operational status of the objects they represent providing a at-a-glance visual overview

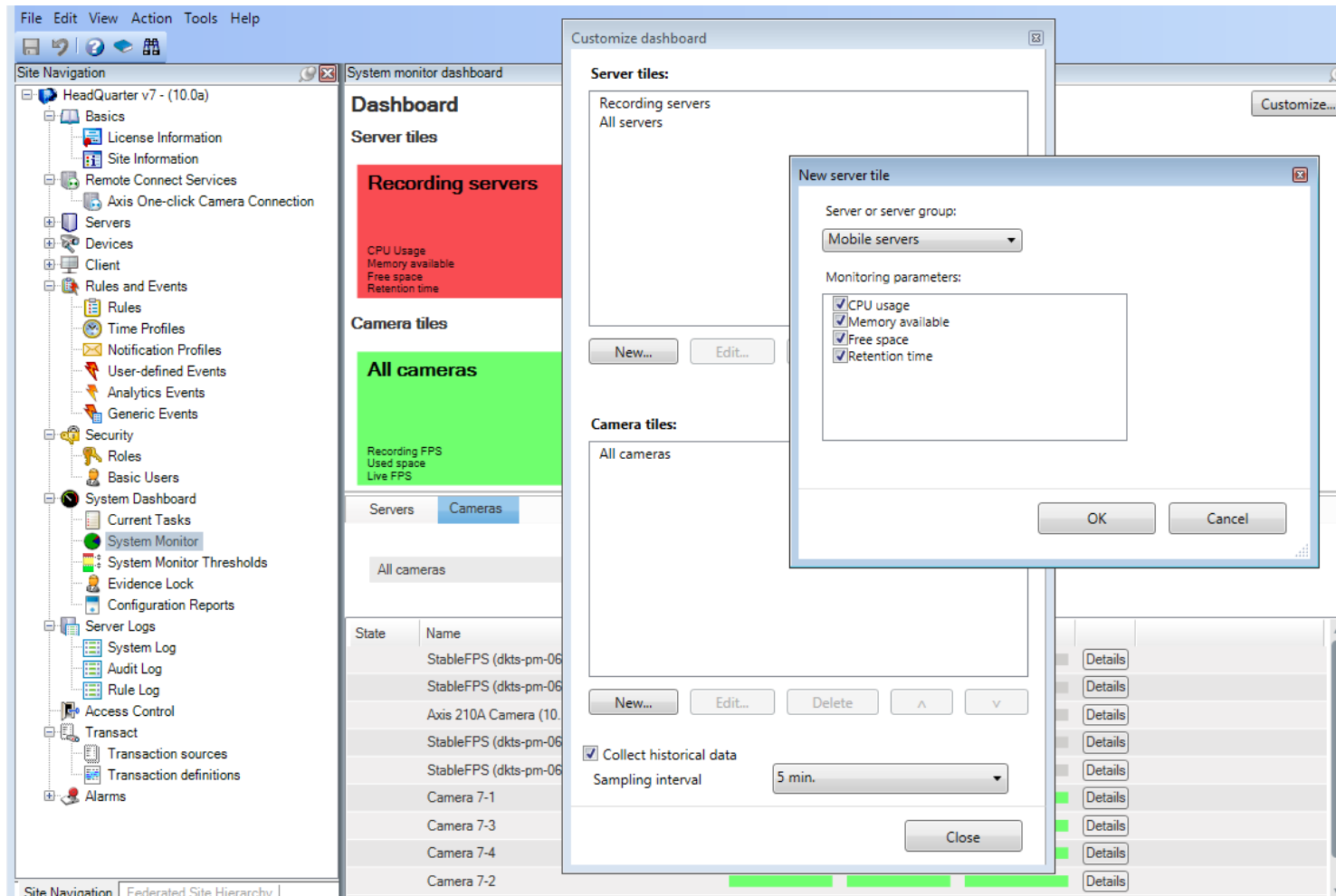
3

The System Monitor is an integral part of XProtect Expert and XProtect Corporate and is available via the Milestone Management Client, XProtect Smart Client or XProtect Smart Wall

4

The System Monitor can be used as a predictive video storage monitoring function as it raises an alarm if the video storage is not sufficient to accommodate predicted future video recordings

System Monitor – the tiles

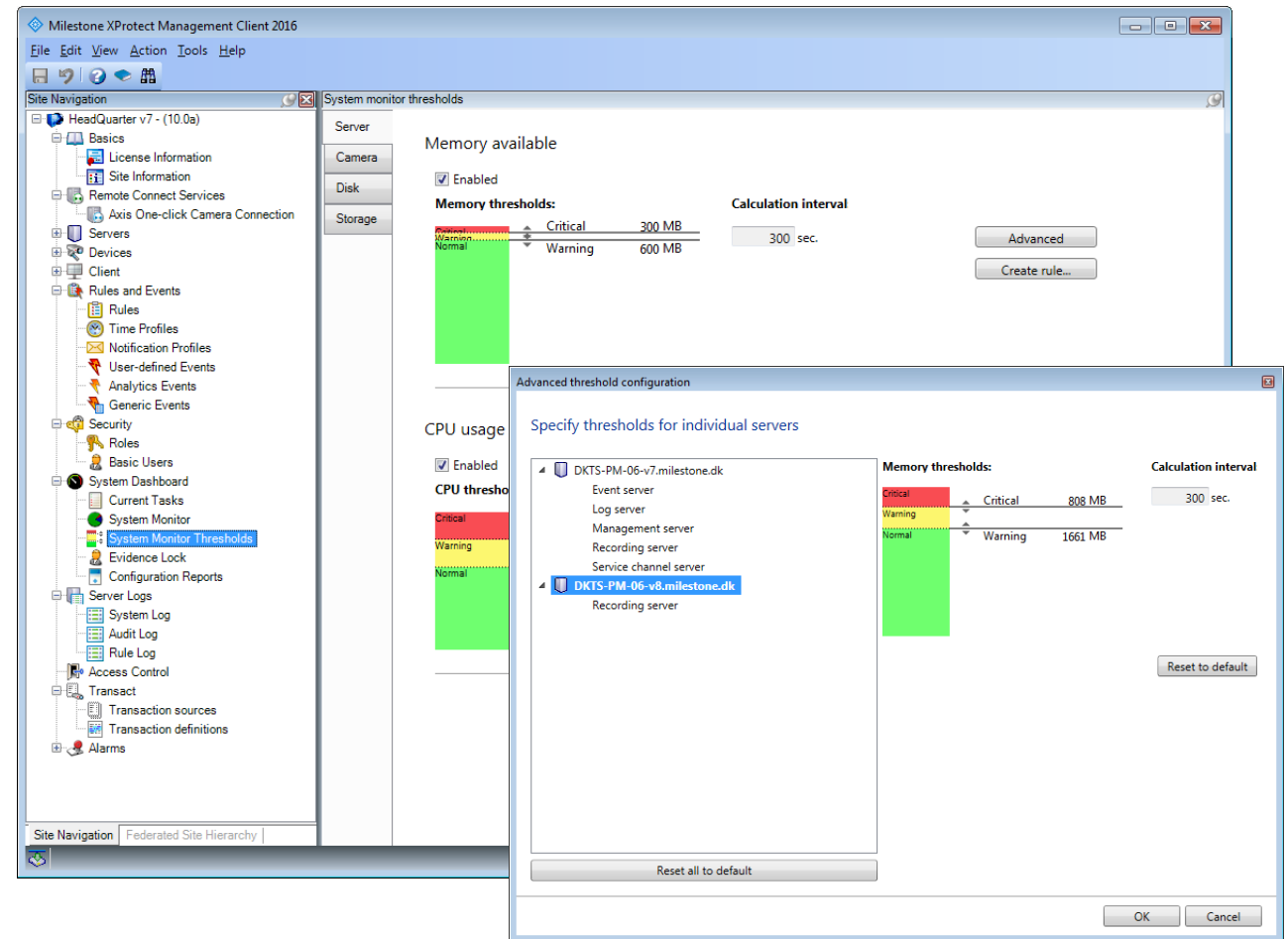


The dashboard is tile based and each tile can represent:

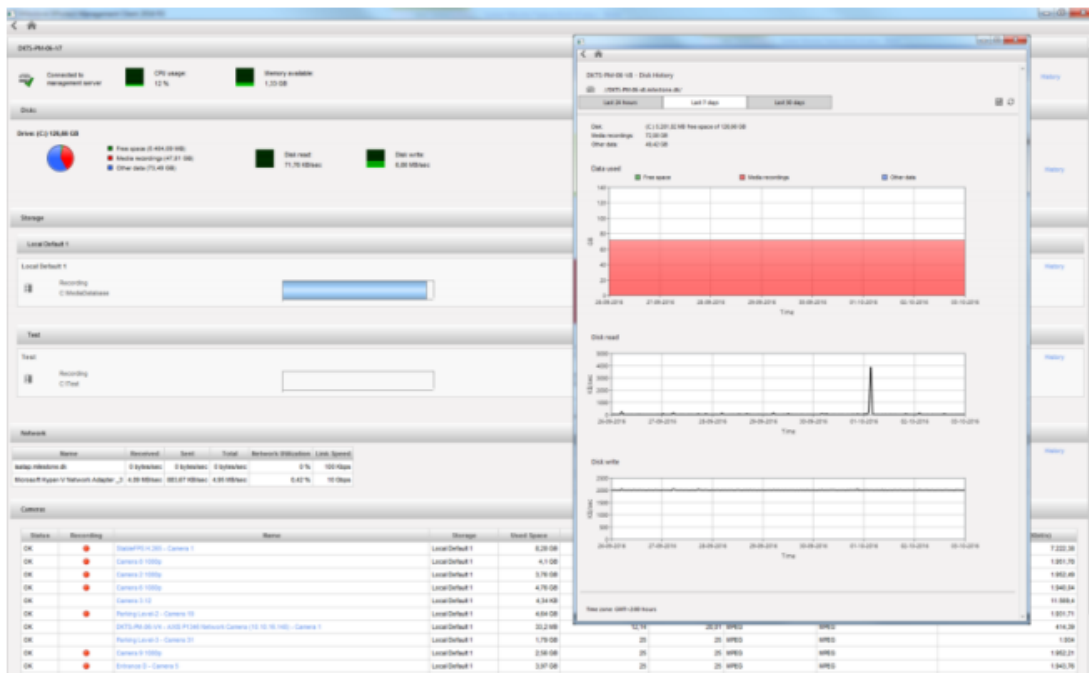
- Servers
- Cameras
- Individual items or group of items

System Monitor – monitoring thresholds

- It works with three states based on thresholds and calculation interval
 - Normal (green)
 - Warning (yellow)
 - Critical (red)
- General thresholds can be customized per “item” monitored
- Changing state triggers events that can be used in rules, alarms and update the state in the System Monitor



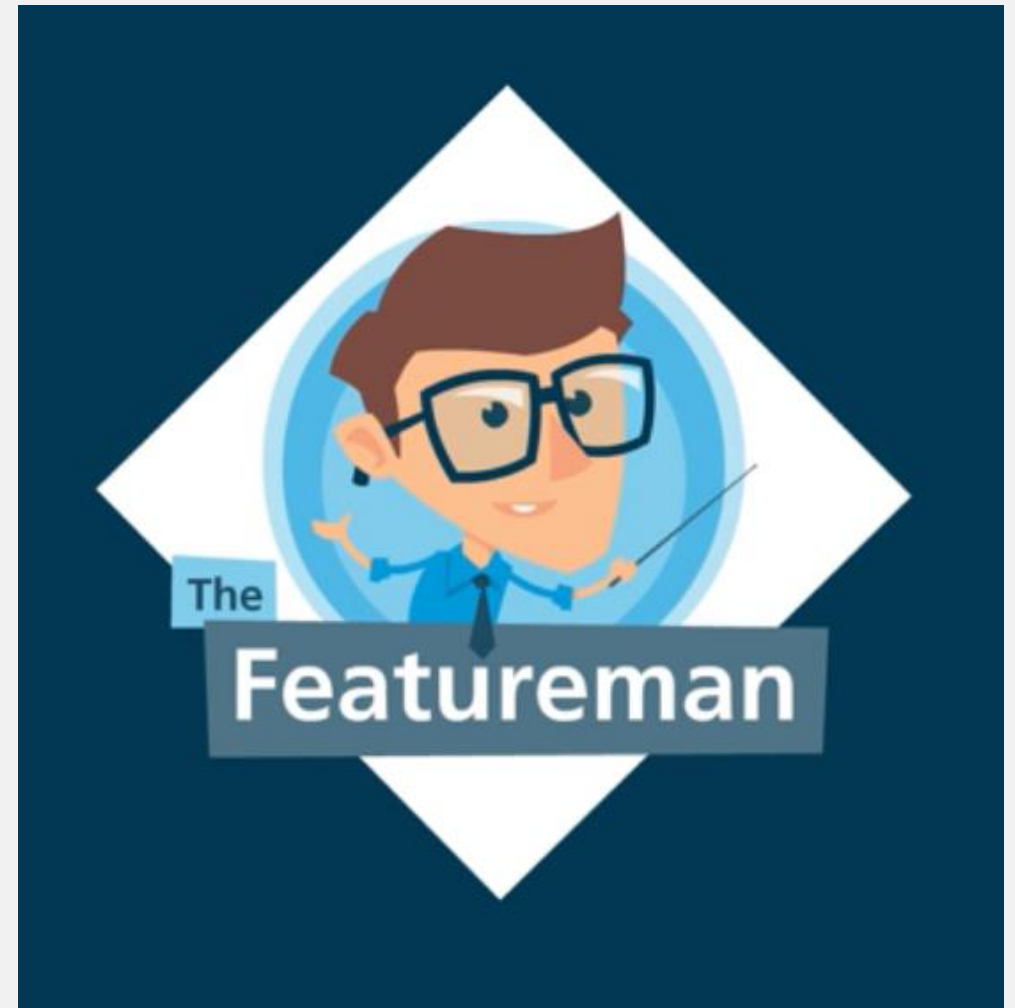
System Monitor – problem location and analysis



- In the event of a system problem, it is possible to make an instant problem location and root-cause analysis
- System administrators get a list of items covered by the affected tile by simply clicking on the tile in the dashboard
- Once the problem is located, a detailed data and historical data patterns for the failing system component enables the administrator to perform a first-level root-cause analysis

Learn more

- Let our VMS expert, Eric Featureman, teach you how the System Monitor assures a continuous workflow and makes sure your system is always running smoothly
- Watch it here:



System Monitoring via Maps

System administrators can use the map function in the XProtect Smart Client to monitor operational system status. When activated, the status notification indicates when cameras, recording servers and interconnected systems require attention, or are not operational



Easy location of failing device/unit

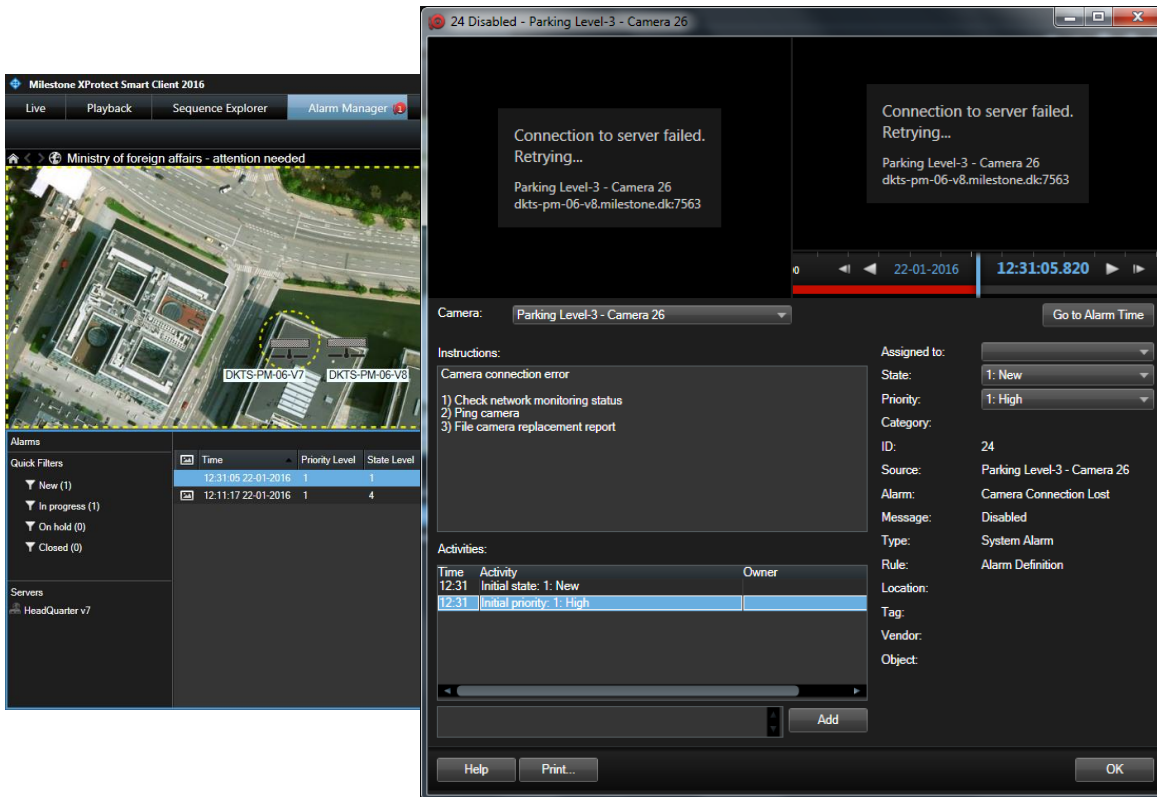


Instant notification with drill down possibilities



Direct access to error descriptions and images

System monitoring via Maps – Key capabilities



1

Different status level indications (alarm, warning and errors) clearly indicate the severity of a system issue, allowing the administrator to take prompt action on critical matter

2

Visual status notification of individual servers, cameras and other security peripherals

3

Propagation of system alarms in map hierarchy with direct access to status details

4

Provides the ability to do first level troubleshooting

Milestone Customer Dashboard

An online system monitoring service designed for your system integrator or administrator that gives a real-time status overview of the system health and provides error notifications in case anything needs attention



Rest assured that potential system issues will be solved before they interrupt your business

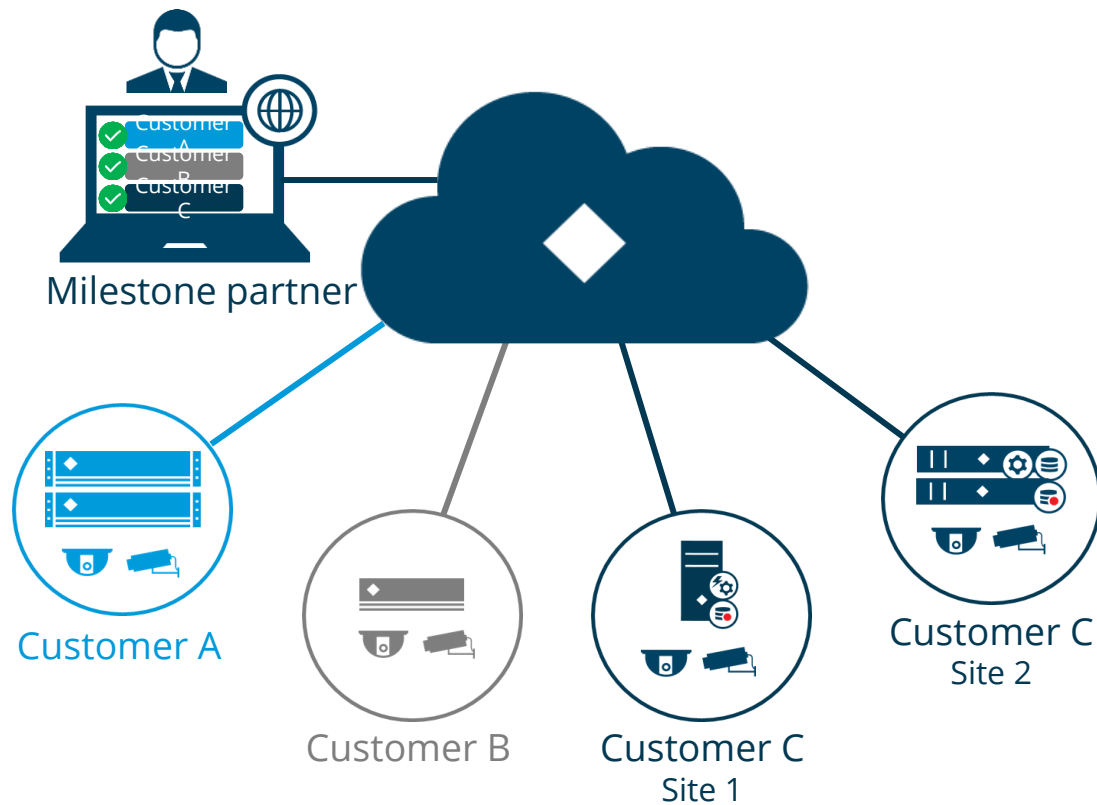


Help your system integrator help you



Prevent circumstances where video recordings are missing due to a malfunctioning system or component

Customer Dashboard – Key capabilities



1

Works out of the box once enabled in the VMS and supports all paid XProtect VMS products and the Husky NVR series

2

Available to all system integrators via My Milestone and only requires an Internet connection and a valid Milestone Care Plus agreement

3

To ensure the highest level of **data integrity**, the information coming from each system to the Customer Dashboard is sent through the https protocol while encrypting the transportation channel with SSL

4

To ensure the highest level of **data privacy** only the partner who registers the SLC has access to the data being sent to the Customer Dashboard

Customer Dashboard – how it works

The Customer Dashboard receives continuous system status information from the XProtect system and displays it in an easy and intuitive online interface

- Filterable and searchable error list from all connected systems
- Configurable email notifications
- Monitor multiple installations at once or group individual systems into one single customer group
- Monitor and document system uptime
- Works with all paid XProtect VMS products and the Husky NVR series
- Full-screen mode for 24/7 monitoring

Camera
connected



Server
running



Storage
capacity



System
health



How Customer Dashboard makes a difference

Advantages for HYATT HOTELS

- HYATT Hotels had no standardized security platform and everything was stored exclusively onsite
- With more than 600 locations, HYATT wanted a standardized platform built on an open architecture
- XProtect now deployed in more than 100 locations enabling the partner, VSEC Services to use the Customer Dashboard to monitor the health of all installations
- Customer Dashboard and Milestone Interconnect were key differentiators when selecting Milestone because they make it possible to monitor all the tiers from a central location, providing critical, cost-effective tools for Hyatt



"We can see that all sites are up and working, and if something does happen in that process, we get an alert so we can immediately respond to the problem."

Vade Pinell, Owner of VSEC Services

