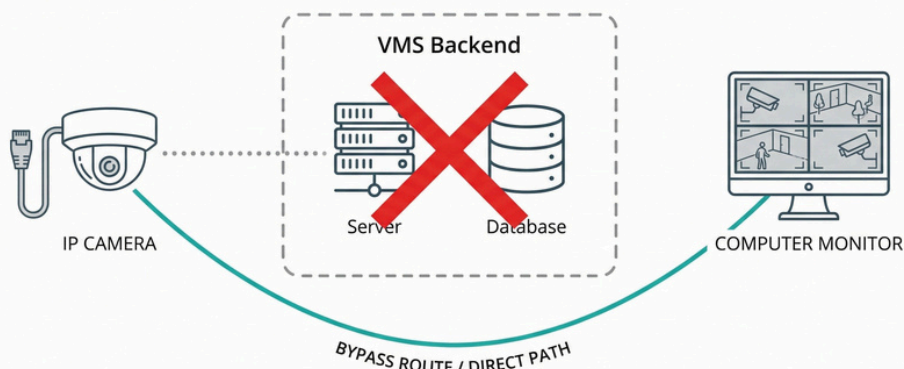




SureStream is a client-side failover solution that provides direct camera-to-client video streaming for Milestone XProtect environments. It embeds an ONVIF video client inside the XProtect Smart Client, enabling operators to stream live video directly from cameras when VMS backend services are unavailable.

Functional Description

The Hairpin Problem

In standard Milestone XProtect architecture, all video must travel through the Recording Server before reaching the operator's Smart Client. This "hairpin" path creates a critical single point of failure. If the VMS backend crashes, the screen goes black.

The SureStream Solution

SureStream creates a direct, resilient path from camera to client. When backend services are unavailable, operators switch to preconfigured SureStream views and immediately resume live streaming via ONVIF—completely bypassing the VMS backend.

Scope

SureStream provides live video only. Playback, recording, and analytics require operational VMS servers.

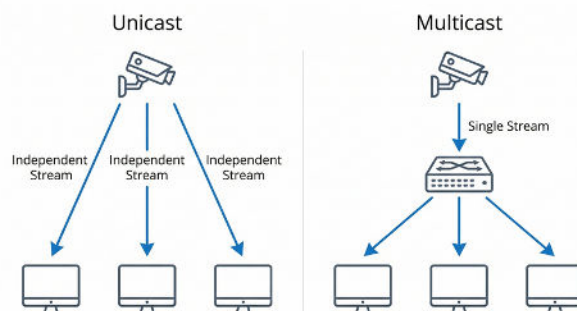
Cost Model

Licensed per camera device.

Transport Modes

Unicast: One-to-one streaming. Each client establishes an independent connection to the camera.

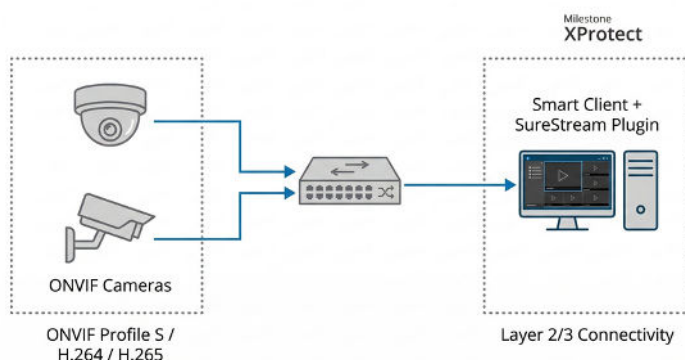
Multicast: One-to-many streaming. The camera sends a single stream that multiple clients can receive simultaneously. Requires IGMP snooping on network switches for bandwidth efficiency.



PTZ Support

Full pan-tilt-zoom support via direct ONVIF commands. Operators retain camera control even when the VMS backend is offline.

System Requirements



VMS Compatibility

- **Platform:** Milestone XProtect
- **Supported Editions:** Corporate, Expert, Professional+, Express
- **Validated Versions:** XProtect 2019 R3 and later

Installation Components

- **Management Server:**
 - SureStream Management Plugin
 - Handles configuration & licensing
- **Smart Client Workstation:**
 - SureStream MIP SDK Plugin
 - Install on each failover workstation
 - Handles Streaming

Camera Requirements

- **Protocol:** ONVIF Profile S compliant Video Codecs: H.264, H.265 (HEVC), MJPEG
- **Authentication:** ONVIF credentials required
- **Network Access:** Direct IP reachability from Smart Client and Management Client

Licensing

- **Model:** Per MAC address (workstation)
- **Activation:** Online or Offline supported

Network

Ports

For detailed port requirements by streaming mode, see: docs.vega25.com/surestream/ports

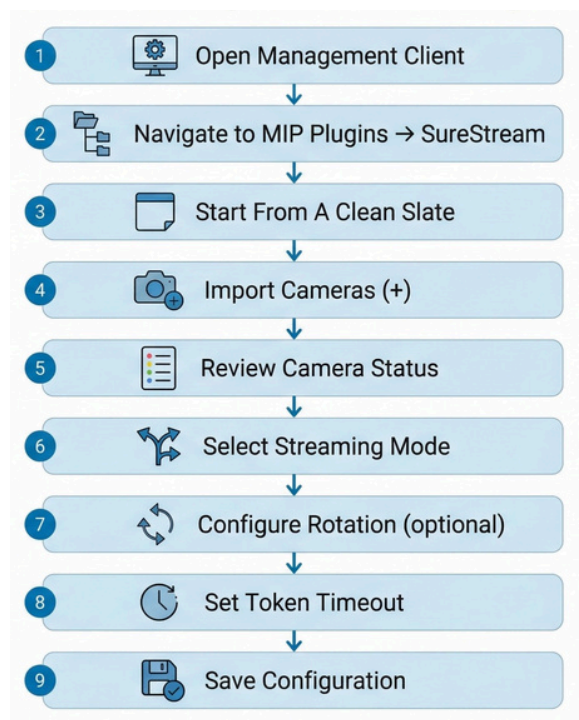


Tip: Test Connectivity First

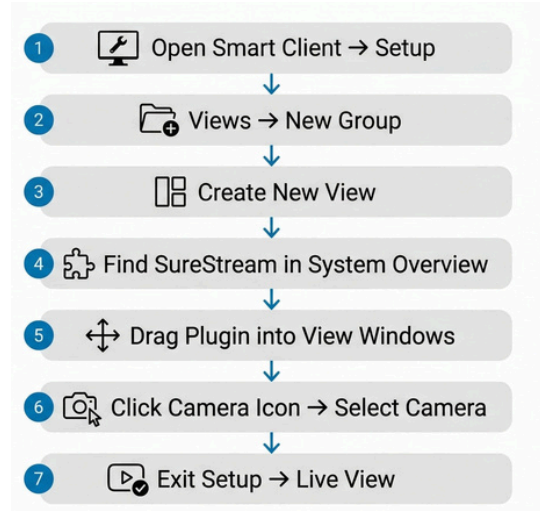
Before configuring SureStream, verify that the Smart Client workstation can reach each camera's IP address directly. Use ping or a browser to access the camera's web interface (<http://camera-ip>).

Configuration

Cameras



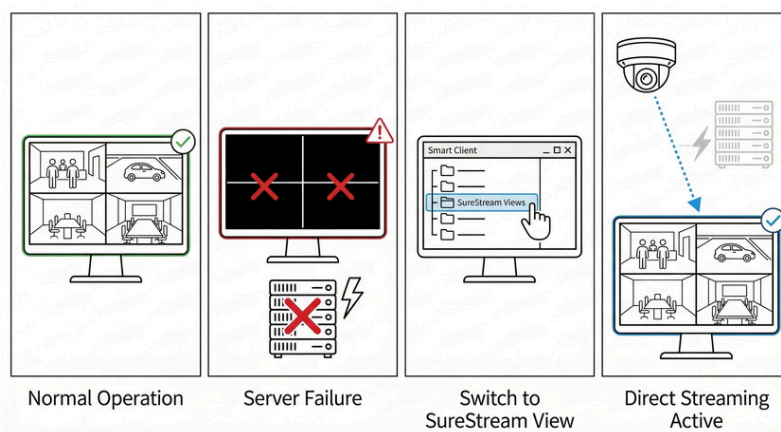
Views



! Token Timeout

Smart Clients automatically log out when the Management Server is offline. Extend the token timeout based on the expected repair time to avoid automatic logouts during outages.

Operation



Client Performance

Test Platform

Smart Client Machine

- OS: Windows 11 Pro
- CPU: Intel Core i7-13700T (16 cores, 24 logical)
- RAM: 16 GB
- GPU: Hardware acceleration enabled

Configuration

- VMS: XProtect 2023 R2
- Camera: Pelco D6230L
- Codec: H.264 High Profile
- View Layout: 3x3 (9 cameras)
- GOP: 30
- Max Bitrate: 5000 kbps

Performance Results

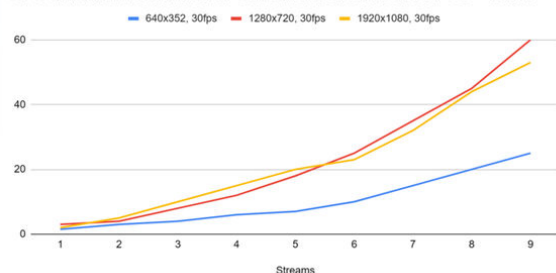
Maximum

3x3 grid (9 cameras) per SureStream view on the test platform at 1080p. Native XProtect views with more cameras must be split into multiple SureStream views.

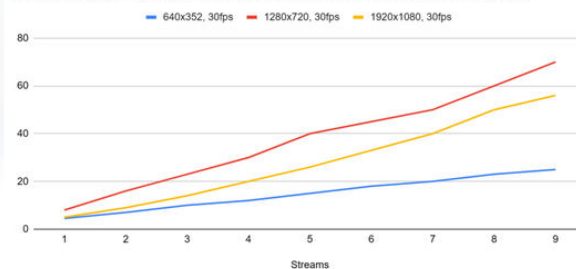
Example

4x4 native view (16 cameras) → Two 3x3 SureStream views

CPU utilization vs Number of Concurrent streams at 30 FPS - v9.0.0



GPU utilization vs Number of Concurrent streams at 30 FPS - v9.0.0



Resources & Support

Documentation

 docs.vega25.com/surestream

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Related Products

RMF (Redundancy Management Framework)

Active-active redundancy with dual recording and rapid failover between data centers.

XPort

Automated migration and consolidation for Milestone XProtect deployments

Nidhi

Automated media backup and restore to cloud or SMB storage.

Atlas

Secure video transport over cellular/wireless for mobile and remote assets.

Request a Demo

See SureStream in action — watch us pull the plug on a server and keep video alive in real-time.

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