VEGA SYSTEMS

CASE STUDY

Critical Infrastructure VMS Modernization

Zero-Downtime Migration and Cybersecure Redundancy

In Partnership With

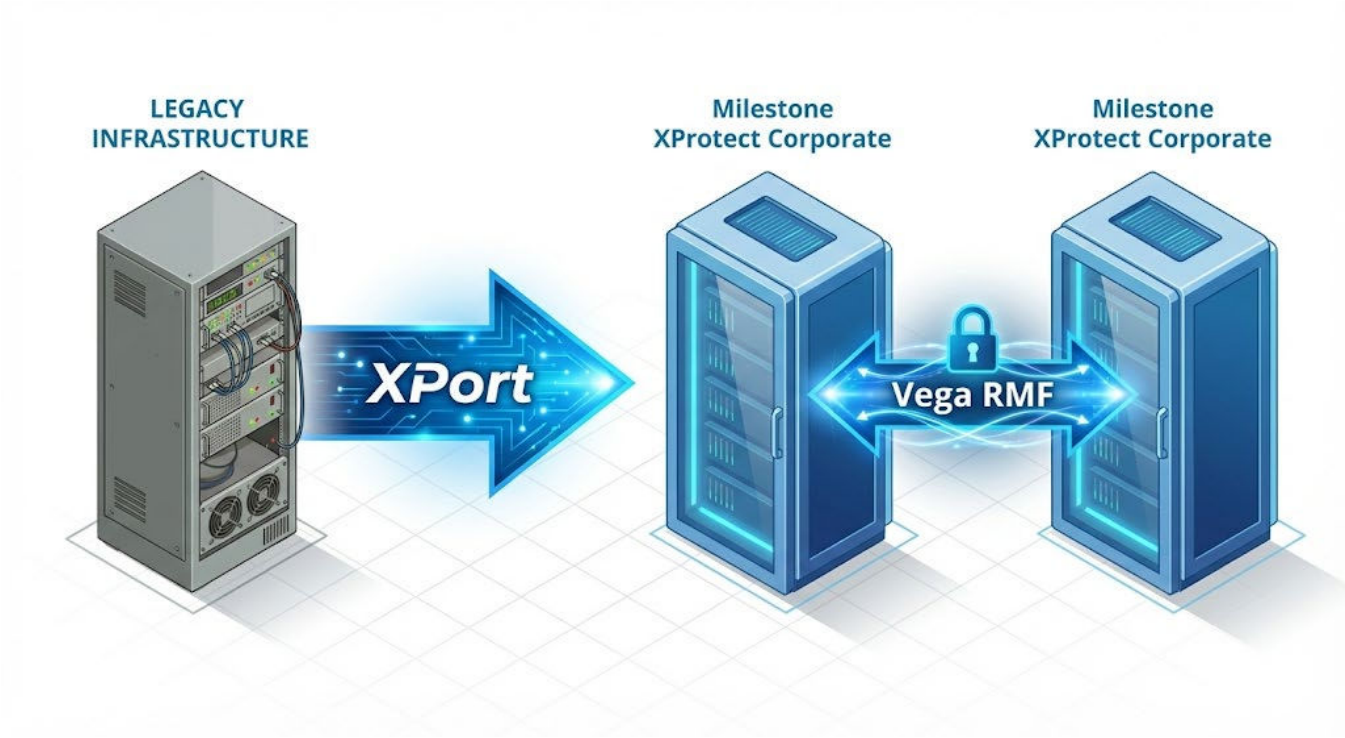
Hall & Kay Security Engineering

United Kingdom | Critical Infrastructure

XPort • Redundancy Management Framework

February 2026 | v2.0

Project At-a-Glance



Industry:	Critical Infrastructure
Location:	United Kingdom
System Integrator:	H&K Hall & Kay Security Engineering
Timeline:	6 Weeks (100% Remote Deployment)
VMS Platform:	Milestone XProtect® Corporate
Key Solutions:	Vega XPort, Redundancy Management Framework (RMF)

Executive Summary

A major critical infrastructure facility in the United Kingdom required a comprehensive upgrade of its aging Video Management System (VMS) infrastructure. The facility's existing setup relied on SQL clustering for redundancy, a traditional approach that was not only complex to manage but also introduced cybersecurity vulnerabilities.

The customer sought a streamlined path to upgrade their hardware and Milestone XProtect software, while simultaneously migrating to a modern, cybersecure, active-active redundancy architecture. In partnership with Hall & Kay Fire Engineering, Vega Systems delivered an end-to-end infrastructure upgrade. Using Vega's XPort and Redundancy Management Framework (RMF), the entire migration was completed remotely in just six weeks with zero operational downtime, preserving critical historical data and strengthening the facility's security posture.

ZERO	6	2
Downtime	Weeks Remote	Active Data Centers

The Challenge

Critical infrastructure operations depend heavily on continuous video surveillance. Any loss of situational awareness directly impacts security, safety, and operational continuity. The customer faced several interconnected challenges:

Aging Infrastructure

The existing hardware was nearing the end of its life, necessitating a migration to new server infrastructure while maintaining operational continuity.

XProtect Version Upgrade

The customer needed to upgrade to a newer version of Milestone XProtect to access current features and maintain vendor support.

Legacy Redundancy Architecture

The existing SQL clustering approach was complicated to manage and presented cybersecurity risks. Traditional clustering replicates everything, including errors and malware, from primary to standby systems in near-real-time. Ransomware encryption would be instantly mirrored across the entire deployment.

Complex Traditional Migration Path

Traditional VMS migration is operationally risky and dependent on manual intervention. The process requires installing legacy software on new infrastructure, performing an SQL database migration with manual edits to XML files, and then upgrading to the target version: a multi-step workflow prone to human error and configuration drift. Historical footage is typically lost.

> **The Bottom Line**
>
> The customer needed a partner who could deliver both migration expertise and cybersecurity-first redundancy design—without operational disruption or data loss.

The Vega Solution

Vega Systems provided a comprehensive solution addressing all customer requirements through three integrated components:

XPort: Automated Migration in One Step

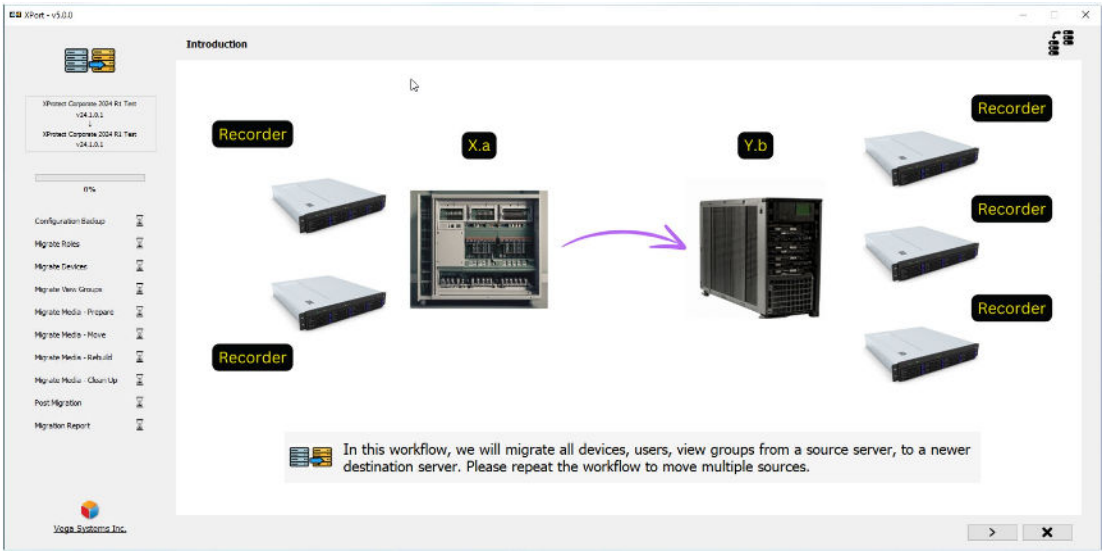
XPort transformed what would have been a complex, multi-step manual migration into a streamlined, automated workflow:

✓ **Single-Step Migration:** Rather than installing legacy software, performing database migration, and then upgrading, XPort enabled a single automated workflow that migrated directly to the target XProtect version.

✓ **No XML File Manipulation:** XPort's API-based approach eliminated manual editing of XML configuration files—a process that previously required specialized expertise.

✓ **Historical Footage Preservation:** Unlike traditional approaches that lose historical recordings, XPort enabled migration of select archived footage to the new infrastructure.

✓ **Zero Downtime:** The migration workflow maintained continuous operation throughout the transition, ensuring no gaps in security coverage.



RMF: Cybersecure Active-Active Redundancy

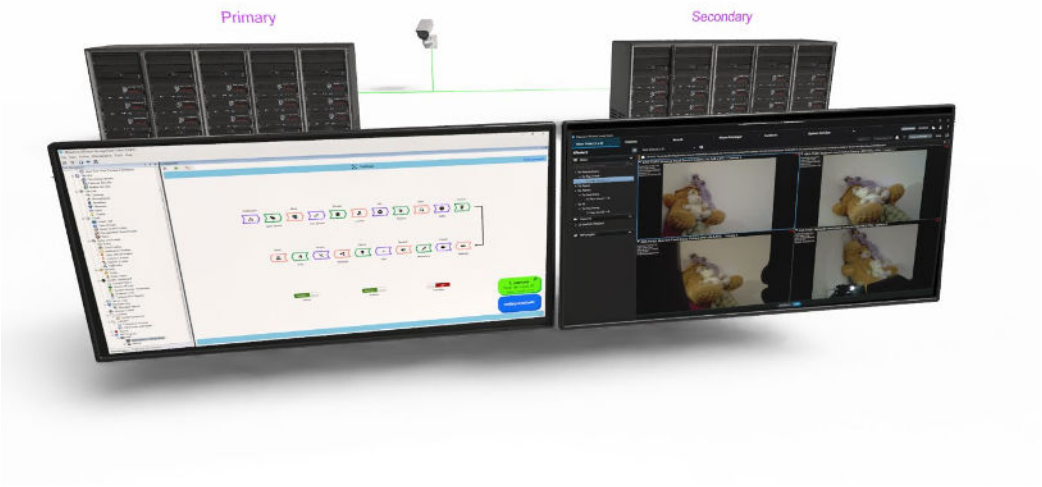
The Redundancy Management Framework replaced legacy SQL clustering with simplified, modern, cybersecure architecture:

✓ **Independent Data Centers:** XProtect Corporate deployed in a federated configuration with independent SQL databases at each site, eliminating shared attack surfaces and blocking lateral movement of threats.

✓ **Active-Active Operation:** Both data centers always remain fully operational, with video recorded simultaneously at each location.

✓ **Object-Level Synchronization:** Instead of blind byte-level replication, RMF synchronizes through Milestone's API at the object level. Each change can be validated, logged, or blocked before crossing between sites.

✓ **Near-Instant Stream Recovery:** Client-side intelligence enables near-instant recovery of live video from alternate data centers. Operators maintain situational awareness even during infrastructure failures.



> ***"RMF breaks blast-radius propagation — ransomware is blocked at the perimeter, not replicated."***

Architecture Design

Vega Systems provided complete architecture design inputs and deployment expertise, ensuring the new infrastructure was optimally configured for both performance and security. This included XProtect Corporate deployment under federation, integration of RMF components, and validation of the complete redundancy workflow.

Implementation

The entire infrastructure upgrade and migration were completed remotely over a six-week period. Hall & Kay Fire Engineering coordinated on-site activities as needed, leveraging their expertise in deploying security systems across infrastructure environments.

Results

Metric	Outcome
Migration Downtime	**Zero**
Project Duration	6 weeks (100% remote)
Redundancy Architecture	Cybersecure Active-Active
Select Historical Footage	Preserved and migrated
SQL Clustering Eliminated	Yes — reduced attack surface

> **Why It Matters**
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> This deployment demonstrates that critical infrastructure facilities can modernize their video management systems without compromising security or experiencing downtime—a capability essential for 24/7 operations.

Partner Perspective

> *"Vega Systems recently supported us with the migration of an existing Milestone XProtect system using their XPort Tool and RMF Software. Their team was extremely helpful throughout the entire process, providing clear guidance and resolving challenges quickly and professionally. The migration was completed smoothly, and the customer was very pleased with the final result. We highly appreciate Vega Systems' expertise and support, and we look forward to working with them again soon."*
>
> **— Gary Donnelly, Account Manager – Security, Hall & Kay Security Engineering**

About Hall & Kay Security Engineering

Hall & Kay is a leading fire protection and security systems integrator serving the United Kingdom. With expertise spanning sprinkler systems, fire detection, gas suppression, and integrated security systems, Hall & Kay designs, supplies, installs, tests, and maintains systems across commercial, industrial, healthcare, data centers, and infrastructure environments.

Website: https://hk.co.uk

Vega Products Deployed

XPort: Content portability solution for Milestone XProtect that automates migration workflows, enabling one-step migration across hardware, versions, and deployments while preserving configurations and historical footage.

Redundancy Management Framework (RMF): Cybersecure redundancy software for Milestone XProtect providing recording server, management server, and SQL redundancy with active-active architecture, client-side failover, and object-level synchronization.

Learn More

To discuss how Vega Systems can help modernize your video management infrastructure with cybersecure redundancy and simplified migration, contact us:

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