

Cisco Video Surveillance Manager

The Challenge

The use of video for safety and security and new applications is rapidly growing. As a result, the number of cameras and locations to be monitored is proliferating, as is the need for storage of recorded video. Additionally, while video surveillance monitoring has traditionally been limited to security operations centers, the ability to use IP networks opens up a myriad of challenges and opportunities for accessing live and recorded video.

These new realities challenge security operations with how to:

- manage these expanding video systems in terms of number of cameras, storage, multiple and remote locations, and bandwidth constraints
- securely provide access to various users, from multiple locations, to enhance collaboration
- support multiple vendor devices (cameras, encoders, access control systems, etc) and applications (command and control, video analytics and more)
- integrate video with other networked applications

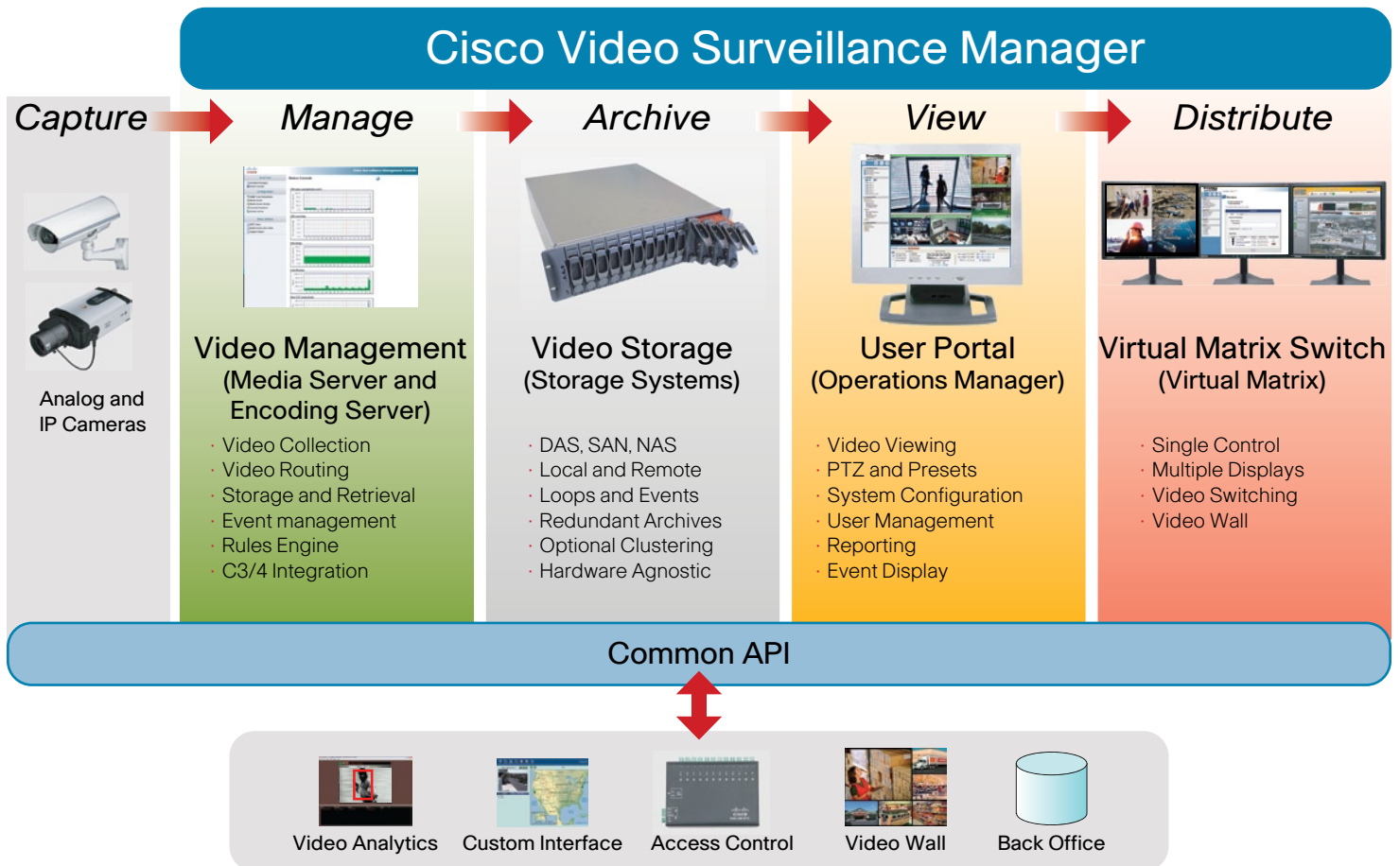
The Solution

The Cisco Video Surveillance Manager (VSM) allows operations managers and system integrators to build customized video surveillance networks that meet their exact requirements. The software suite enables highly scalable and flexible video systems that are easily managed, monitored and permit the retrieval of live or recorded video anywhere, anytime via a web browser interface on a variety of clients.

Using highly reliable Linux operating system equipped common off the shelf (COTS) hardware and IP network-protocols, VSM interoperates with a wide range of third-party devices and applications allowing customers to mix and match system components as desired. Authorized network users can view and control live video from IP or encoder-connected analog cameras or retrieve recorded video from IT caliber storage. Any number of cameras and various fault-tolerant recording options can be used, including offsite storage for disaster recovery.

Cisco Video Surveillance technology effectively protects customers' investments. The VSM can evolve as new technologies become commercially available. Systems can be scaled to meet changing or growing needs by adding standards-based cameras, servers, storage, technologies, and users as needed.

With the expertise that comes from the leader in networking, Cisco video surveillance convergence with network infrastructure can optimize bandwidth and storage utilization. By integrating and synchronizing video with other networked applications, the true value of video and system investments can be unlocked.



Cisco Video Surveillance Encoding Server

The Cisco Video Surveillance Encoding Server (ES) is an all-in-one appliance that encodes, distributes, manages, and archives digital video feeds. Each server encodes up to 64 channels and provides up to 9 TB of storage. It offers the power and flexibility to meet a diverse range of video surveillance requirements and is cost-effective and simple to install.

Cisco Video Surveillance Encoding Server features include:

- Flexibility to use a broad array of analog cameras and IP cameras
- Simultaneous MJPEG and MPEG-4 encoding
- Loop- and event-tagged video recording
- Optional external storage
- Motion detection
- CIF, 2CIF, and 4CIF, up to 30 fps
- PTZ and alarm inputs



Cisco Video Surveillance Media Server

The Cisco Video Surveillance Media Server (MS) is the core component in the VSM, enabling distribution, archiving, and management of video feeds. It offers the power and flexibility to meet a diverse range of video surveillance requirements and can coexist on an IP network with other IT applications.

Powerful video management:

- A standards-based architecture that provides the flexibility to use a broad range of devices, codecs, viewing platforms, and network topologies
- Plug-and-play support for encoders, DVRs, and fixed and pan-tilt-zoom cameras
- Low-latency video with high-quality images, including megapixel resolution
- Simultaneous support for JPEG, MPEG-2, MPEG-4, and H.264
- Unparalleled scalability in terms of number of sites, cameras, viewers, and storage

Flexible archiving:

- Archives at different frame rates, durations, and locations
- Efficient redundant multi-site archiving that conserves bandwidth
- Loop- and event-based video and audio recording
- Record on motion and clipping capabilities

Sophisticated system tools:

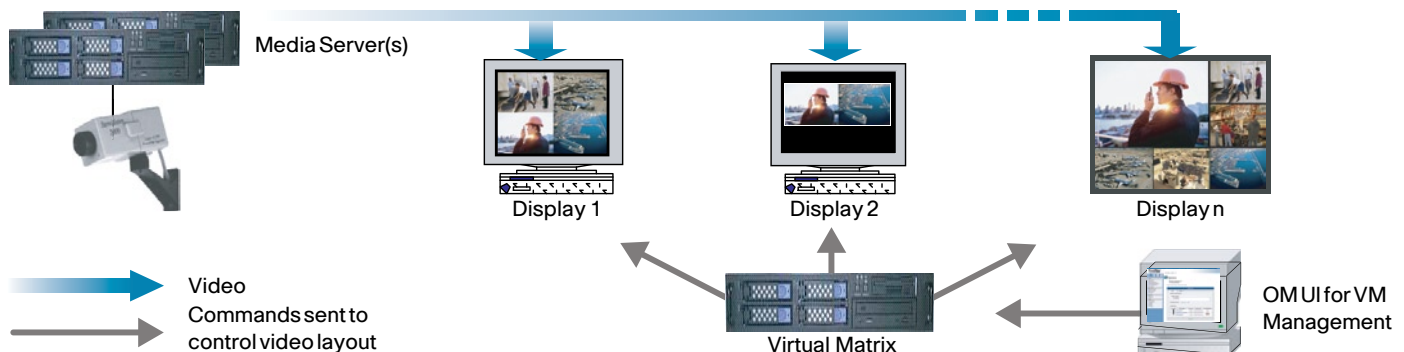
- Enhanced diagnostic tools that provide notification and API support for failure of proxies and archives
- Simplified configuration that allows data to be mass-imported from a spreadsheet
- Supports redundancy configurations, including failover and complex high-availability scenarios
- Backup utility that supports configurations of devices, archives, events, and PTZ for a quick and easy restore to a secondary server
- Minimized load on video servers platforms by streaming only the active video channels
- Integration with 3rd party Electronic Access Control
- Allows existing Media Server to sync with Operations Manager with a click of a button

Cisco Video Surveillance Virtual Matrix

The Cisco Video Surveillance Virtual Matrix software enables an intelligent digital video management system that allows any operator or integrated application to control what video is displayed on any number of physical and virtual monitors, both local and remote. Using the IP network to provide aggregation and transmission of video from cameras and recording platforms much like the function of a classic analog video matrix switch, offering capabilities the analog switches could never deliver. The Virtual Matrix is easily integrated with other systems to automatically display video in response to well defined triggers. These triggers can include access control and fire systems in buildings, outdoor motion sensors, or even radar systems for military applications. It brings complete flexibility to the delivery of live and recorded video to demanding command centers providing high-availability access to network video for 24x7 monitoring applications.

Cisco Video Surveillance Virtual Matrix features include:

- Easy integration with intelligent systems
- Flexible delivery of both live and archived video
- Ability to control multiple video displays from a single station
- Distribution to video wall for command centers
- Video access for 24x7 monitoring



Cisco Video Surveillance Manager

Cisco Video Surveillance Operations Manager

The Cisco Video Surveillance Operations Manager enables organizations to quickly configure and effectively manage complex video applications throughout the enterprise. It meets the diverse needs of administrators and operators by providing multiple Web-based consoles to configure, manage, display, and control video throughout a customer's IP network. A single Operations Manager can manage a large number of Media Servers, Virtual Matrixes, cameras, and users.

The Cisco Video Surveillance Operations Manager provides administrators with:

- Customizable branding and appearance
- Server, encoder, DVR and camera administration
- Scheduled and event-tagged video recording
- Record on motion capabilities
- User and role management
- Detailed activity reports and system audit
- Ability to push predefined views to any number of monitors with Cisco Video Surveillance Virtual Matrix
- Ability to schedule to operator shifts, event filters, temporary views, and more

The Cisco Video Surveillance Operations Manager provides operators with:

- Secure login
- Flexible video displays
- Views with both live and archived video
- PTZ controls and presets
- Digital zoom and instant replay
- Archive review and clipping
- "Record Now" feature while viewing live video
- Event setup and event notifications
- Ability to search video based on motion

Instant Replay

Allows users to instantly replay video. Users can pause live video, step forward and backward, and jump back to live viewing.

Repeat Segment Playback

Operator can define a segment of time in an archive to playback repeatedly.



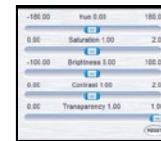
Forensics SmartSearch

Allows users to search video based on motion within a defined window.



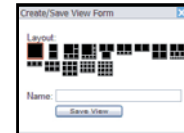
Digital Zoom

Allows users to digitally zoom on live or archived video.



Video Enhancement

Allows users to enhance the video by adjusting the hue, saturation, contrast and brightness.



Operator Defined Views

Operator can define a view by specifying a layout and video feeds and then giving it a name.

Cisco Video Surveillance Storage System

The Cisco Video Surveillance Storage System(SS) provides flexible options for storing video and audio using cost-effective, IT-caliber storage devices. Combine Cisco Video Surveillance Media Server internal storage with DAS, SAN, and NAS to store the video in multiple locations where it can be secured and accessed most efficiently. Video can be stored in loops, one-time archives, or event clips triggered by external systems. Provide redundant storage and remote long-term archives. Expand the storage as your system or requirements grow. Institute stored video lifecycle (retention) management rules to ensure availability of the data.

Cisco Video Surveillance Storage System benefits include:

- SAN, NAS, and DAS configurations
- Internal storage up to 24 TB (on the Media Server)
- SAN arrays that support up to 42 TB per array, 420 TB per rack
- Redundant archives
- RAID 0/1/5 configuration
- Optional clustering for failover protection
- Online access to video at more than 100 times faster than tape
- Redundant power supplies and RAID controllers

Why Cisco

Built on industry standards, Cisco Video Surveillance Manager allows you to build a powerful, scalable security system that meets your specific needs, including the ability to interoperate with a wide range of third party products from cameras, to command and control to video analytics, access control systems as well as servers and storage. With a software and hardware solution set, Cisco products can be updated and upgraded to support new features; this just can't be done easily with analog products.

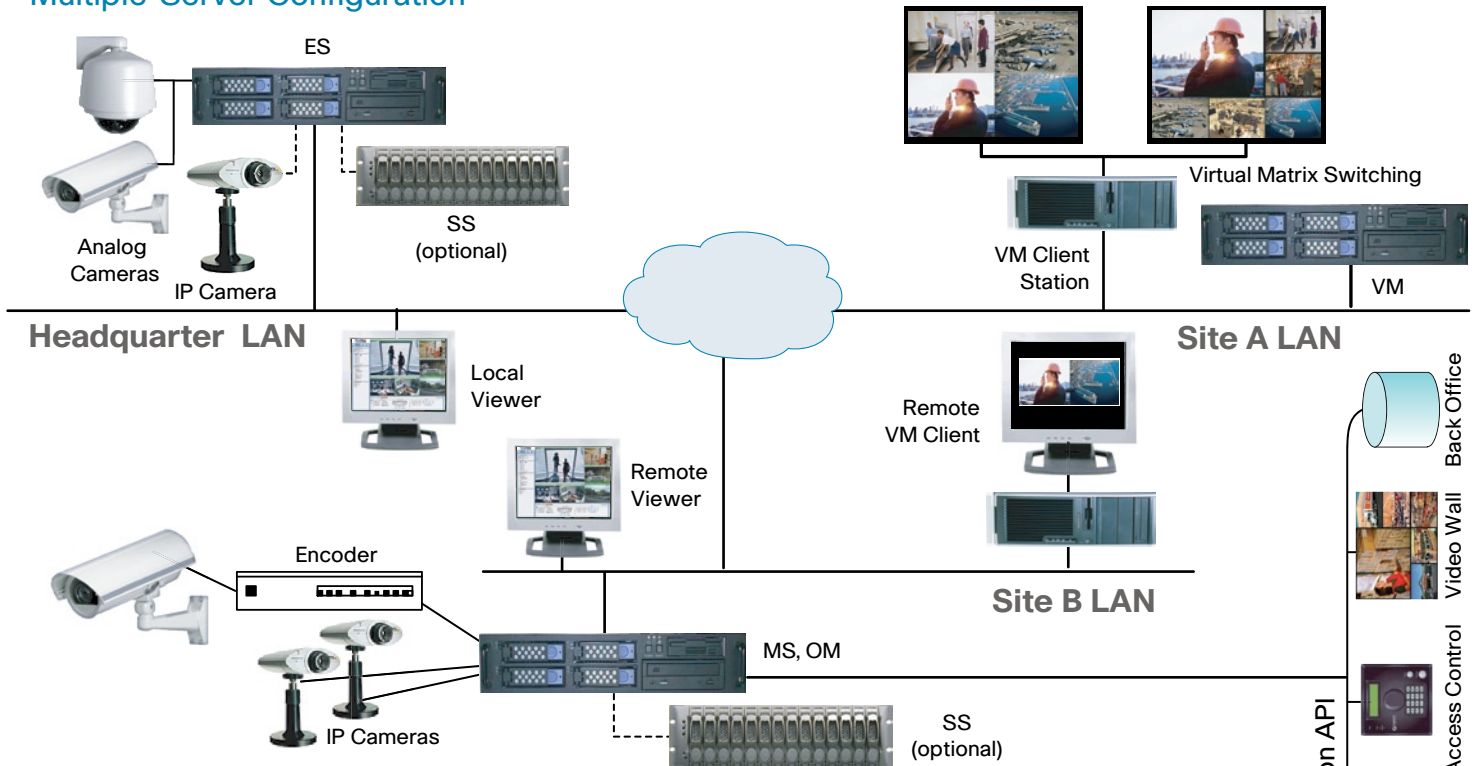
Cisco technologies and convergence expertise help businesses and organizations improve their return on investment and lower their total cost of ownership. With vast experience in digital video, including video surveillance, Cisco engineers understand how to use the power of an IP network to deliver new, innovative capabilities in a highly scalable and secure manner. As a trusted advisor and networked physical security user, Cisco has helped forward-thinking organizations maximize the value of their systems, personnel, and applications for more than 20 years. With deployments in transportation, airports and ports, military, education, municipalities, retail and more,

the Cisco Video Surveillance Manager products meets the uncompromising needs of many safety and security professional today.

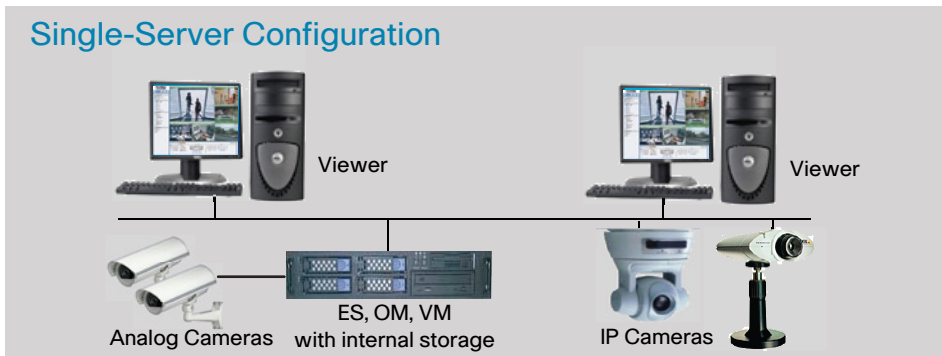
Cisco video surveillance solutions can meet your safety and security needs for today and tomorrow. Contact your Cisco account team and Cisco Physical Security Authorized Technology Provider today to get your own personal demonstration, and understand how Cisco can help you ensure the safety and security of people and assets while unlocking the true value of your video system.

www.cisco.com/go/videosurveillance/

Multiple-Server Configuration



Single-Server Configuration



MS - Media Server
 ES - Encoding Server
 SS - Storage System
 OM - Operations Manager
 VM - Virtual Matrix