Cisco IP Video Surveillance Introduction

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Agenda

- Trends and Evolution
- Open IP Components
- Cisco's Solution
Trends and Evolution
Video Evolution

**VCR & Analog**
- Standalone box
- Poor image
- Hard to search
- No remote access

**DVR**
- Easier to search
- Consistent Quality

**NVR**
- DVR benefits
- More storage options
- Limited network connection

**Cisco Video Surveillance Platform**
- Secure viewing from anywhere
- Fail-safe redundant storage
- Easy integration with other systems
- Enterprise class storage and support

Open IP Platform
Commitment to Open Standards

Support of new IP Media Device API specification introduced by the PSIA to standardize how devices communicate with the network

- Defines uniform methods for how devices communicate with the network
  Discovery and Configuration
  Command and Control

- Ensures Systems Integrators can focus on value added capabilities rather than writing new device drivers

- Provides physical security and IT with cost effective options to evolve and customize solutions

The initial Physical Security Interoperability Alliance (PSIA) specification is endorsed by the following industry leaders: Adesta LLC, ADT Security Services, Cisco, CSC, DVTel, GE Security, Honeywell, IBM, IQinVision, Johnson Controls, March Networks, ObjectVideo, Orsus, Panasonic, Pelco, Santa Clara Consulting Group, Texas Instruments, Verint and Vidyo.
Open IP Components
Solution Components: Infrastructure

- **Network**
  - TCP/IP network, typically on Ethernet.
  - Conventional switches and routers.

- **Storage**
  - Redundant RAID storage
  - Direct Attached, SAN or iSCSI
Solution Components: Cameras and Applications

- **Video Encoders/IP Cameras**
  Source of digital video over IP. Compressed MJPEG, MPEG2, MPEG4.

- **Video and Application Servers**
  Open servers for streaming video between cameras, storage and viewers. May also run a Web server or application sever for delivering a Web application.
  (e.g. VSMS - VSOM – VSVM)
Solution Components: Client Side

- **Client Stations**
  - Windows PCs for video decoding, display and control.
  - Running Web browsers or specialized Windows applications.
Cisco’s Solution
Video Surveillance Manager (VSM)

Video Surveillance Media Server

Video Surveillance Operations Manager

Video Surveillance Virtual Matrix
Video Surveillance Media Server (VSMS)

- Video Surveillance Media Server is the core component in the Media Platform, enabling distribution, archiving and management of video feeds.

  Make video an information resource
  - Proxy and stream live feeds
  - Store and stream recorded media

  Infinitely customizable
  - Add custom UIs
  - Use best-of-breed codec: Motion JPEG, MPEG-2, MPEG-4

  Highly Scalable – Cameras, Clients, Storage
  - Share IT Infrastructure intelligently – Storage Systems and Bandwidth

  Open and distributed
  - Integrate with other systems
  - Expand system as needed
  - Harden System as needed (fail-over and redundancy)
Proxy-to-Proxy
Video Surveillance Operations Manager (VSOM)

- Enterprise solution
- Highly configurable to effectively manage complex video applications
- Browser-based UI
- Multiple web-based consoles to configure, manage, display, and control video throughout a customer's IP network.
- Unlimited cameras, storage, viewers
Video Surveillance Virtual Matrix (VM)

- Controls an infinite number of video displays on network
- Easily integrates with other systems
- Flexible delivery of live & archived video
- Distributes to Video Wall
- Controls multiple video displays from a single station
- Event/Action
  - Push video to remote screens
New line of Multiservice Platforms

- Leading Multiservice and IP Network capabilities
- Industry standard hardware
- Cost Effective, flexible for distributed systems

Cisco 3200
Mobile Solution

Cisco 2821
Multiple Services
Extended Modular Connectivity

Cisco 2851

Cisco 3825
High-Density Services
Modularity with Performance Optimized for “All-in-one” Solution

Cisco 3845

Cisco Multiservices Platform
Enterprise Branch Office

1RU
Up to 4TB
~ 50 streams

2RU
Modular storage
Up to 12TB

4RU
Modular storage
Up to 24TB
Resilient

Enterprise Campus

Scalability, Resiliency, Serviceability
Multi-Services Platform (MSP)
Integrated Services Router (ISR) Video Surveillance Modules

Cisco IP Video Surveillance Solution

EVM-IPVS-16A: Analog Video Encoding Module

NME-VMSS: Video Management and Storage System

Cisco 2821

Cisco 2851

Multiple Services

Extended Modular Connectivity (EVM, NM, AIM, WIC/VIC)

Cisco 3825

Cisco 3845

High-Density Services

Modularity with Performance Optimized for “All-in-one” Solution (HSDM, NM, EVM, AIM, WIC/VIC)

Enterprise Branch Office
Cisco IP Video Surveillance Cameras and Encoders
Cisco SD IP Cameras
Wide Dynamic Range (WDR) Imaging

- CMOS based digital imager and dedicated co-processor that replaces traditional CCD technology
- Every pixel has its own dedicated Analog to Digital Converter (ADC) vs. CCD with only 1 ADC for an entire array
- Pixel-independent shutter speed
- Pixel-independent exposure
Benefits
Optimal image in multiple lighting conditions

Cisco Imager

Typical Imager

Lack of truck detail

Cisco imager can pick up details in extreme lighting conditions, a common in warehouse applications.
Cisco SD IP Cameras
No Saturation with strong lighting

Cisco imager provides color detail even in extreme lighting with a manual iris lens, CCD technology is completely over-saturated
Summary
Platform for Video Systems

- Multiple formats and devices supported for video and audio sources

**Video Surveillance Media Server (VSMS)**
- support multiple simultaneous viewers with low latency
- support any required storage capacity
- HTTP command interface integrates easily with other applications

**Video Surveillance Operations Manager (VSOM)**
- Applications created using any standard development environment
- Open interfaces for database, image analytics, and other functionality

**Video Surveillance Virtual Matrix (VSVM)**
- Thin-clients provide a broad range of viewing options
For More info:

- The Web [cisco.com/go/physicalsecurity](http://cisco.com/go/physicalsecurity)
- Email Me [dosary@cisco.com](mailto:dosary@cisco.com)