What is Endura

Introduction

Endura is a complete solution for high definition video encoding, recording, and display. Endura is Pelco’s enterprise-class, IP-based video security solution. More than just a set of products, Endura is Pelco’s premiere security imaging architecture which delivers a range of solutions that continues to transform the security industry and provide new value to customers. Endura offers unparalleled reliability, scalability, and a superior image. Endura controls the origination, transport, recording, and display of integrated, security-related audio and video. Endura combines powerful distributed system architecture with a robust hardware/software platform that leverages the functionality of today’s Ethernet Networks, guaranteeing interoperability and performance. Carefully designed and developed to provide security professionals the tools they need for success, it offers a powerful yet extremely easy and configurable solution for the most sophisticated security applications.

Mission

Endura has the following goals:

- to increase both the reliability and security of video security networks
- to increase both the performance and image quality of video security networks
- to reduce the complexity of deploying and managing large video security networks

Advantages

How is Endura better than current competing approaches?

Reliability

Endura accounts for potential failures within parts of the system with:

- redundancy — various parts of Endura have fully functioning backups that can completely take over all responsibilities in case the primary component fails
- distributed design with node independence — though all Endura components are designed to work together, in the event of a failure; various Endura nodes are able to operate autonomously. For example, all recording units are able to operate independent from the main system, in the event of a system wide failure

Cross-platform

Endura operates on both Windows and Linux platforms.

Flexibility
No longer limited by traditional, centralized approaches, Endura offers an unconstrained platform for designing and implementing video security systems. There is virtually no end to how Endura's components can interact and share video, audio, and control information. Endura allows for many variations for configuration based on individual customer's specific needs. Due to its standards based design, Endura is prepared to integrate with new classes of future products. Furthermore Pelco provides an SDK which provides even further customization for Endura and interoperability with other security systems.

**Scalability**

Endura’s design allows it grow with the customer’s needs almost indefinitely without a negatively affecting performance

**Management**

One of Endura's main advantages is minimal configuration of newly installed Endura components. This is possible because Endura takes full advantage of leading edge technology standards such as Universal Plug and Play (UPnP), allowing for fast, error-proof installation and set up.

**All in One Solution**

The Endura platform offers all the components necessary for designing, installing, and utilizing complete networked digital video systems. With encoders, decoders, network video recorders, PC workstations, video console displays, storage expansion boxes, IP cameras, DVRs, and advanced management technologies, customers now have all the tools necessary for building a high-performance video security system

**Security**

Endura has both physical and software features to ensure its own security. Pelco engineers have accounted for potential security breaches in Endura's design, thus making it very difficult for potential attackers to compromise a deployed Endura system.

**Open**

Pelco provides a complete API (Application Programming Interface) for all Endura 2.0 components, allowing other systems manufacturers to develop interfaces for and leverage Endura's capabilities. Additionally, Pelco has developed interfaces in Endura 2.0 for several third-party IP cameras as well as fiber channel or iSCSI-based storage solutions, allowing system administrators to take advantage of existing SAN storage for video recording.

**Backwards Compatibility**

Any Endura 2.0 component can be seemlessly integrated into existing Endura systems, giving access to legacy products for complete backward compatibility. Endura 2.0 is designed to be backwards compatible with Endura 1.0. The existing network topology defined in Endura 1.X will work in Endura 2.0. Endura 2.0 offers the feature to record cameras outside of an NSM’s subnet.

**EnduraStor**

EnduraStore technology allows video recording with a consistent high image quality, greatly increasing recording duration while keeping storages costs at a minimum.
Storage Pooling

Storage pooling, unique to Endura 2.0, sets a new standard of reliability and scalability for network video recording. Storage pooling dispenses the risk of video loss across multiple NVRs. Specifically it allows for:

- automated failover: in the unlikely event of a NSM5200 failure, cameras are automatically distributed across the remaining NSM5200s in the storage pool, providing NVR failover
- automated stream load balancing: using advanced network load balancing, in which groups of cameras are automatically recorded onto a storage pool consisting of multiple NSM5200s
- dynamically adding units to a pool for growing storage, eliminating the need to buy 3rd party storage.

Note

All NSMs must reside in the same subnet for automated failover to function.
With storage pools, camera assignments are automatically rotated to ensure that all available storage is symmetrically utilized.

All the benefits without the complexity: storage pools are masked by a public API, resulting in no required changes for 3rd parties.

**EnduraView**

This is an Endura feature that constantly monitors and automatically adjusts the viewing system for the best possible picture quality. EnduraView ensures that high definition video will not overload workstation or other live video stream clients, constantly monitoring and automatically adjusting the viewing system for the best possible picture quality; while reducing the impact on the underlying network.

Today’s PCs lack the processing power to display multiple HD streams simultaneously; which results in video artifacts, random pauses during playback, or other issues. EnduraView solves these issues by dynamically changing the displayed bitrate and resolution. Specifically when moving from a single HD video stream into a multi-camera view, EnduraView automatically subscribes to the lower bitrate/resolution on secondary streams. This also results in less network traffic.

**Zones of Interest**
Customers often select megapixel cameras for their ability to replace several standard resolution cameras while providing powerful digital zoom capabilities. The Endura 2.0 Workstation’s Zone of Interest capability allows a user to maintain the panoramic view of the scene and designate zones of interest into which to independently zoom. These zones can then be located anywhere on one of two monitors supported by the workstation, and provide virtual camera views without incurring additional network or processing load for supporting multiple cameras.

**Endura Mapping**

The Endura Mapping interface gives operators the ability to display the physical location of cameras, alarms, and other Endura devices throughout a facility. Careful integration with the Endura Workstation makes setting up a map fast and intuitive. A flexible user interface with powerful filtering and navigation tools makes working with maps an effective way of monitoring a large and
disparate system for the operator.

With the advent of Endura 2.0, Endura Mapping now supports script execution and management, Sarix IP cameras, and H.264 video.

**SNMP**

Endura 2.0 will support SNMP v3, allowing integration with third-party systems for network monitoring. SNMP v3 support will be made available in a future update this year.