HCI vs NVR:
The Pivot3 Advantage

Maximize Performance and Scalability, Eliminate Downtime and Data Loss

Modern Network Video Recorders (NVRs) are based on Direct Attached Storage (DAS) technology, and were designed to mimic obsolete analog VCRs and DVRs. But most IT organizations have evolved to virtualized servers and shared storage infrastructure (SAN), and stopped using DAS decades ago due to its highly inefficient operation and critical susceptibility to downtime and data loss. Many security implementations, however, have continued to rely on aging and inadequate DAS architecture for increasingly sophisticated video surveillance systems. Pivot3 Hyperconverged Infrastructure (HCI) brings the best of both worlds, merging the resiliency and efficiency of SAN with the simplicity of DAS, and optimizing performance for challenging workloads like video surveillance.

VIDEO SYSTEMS CHANGE CONSTANTLY

Evolving needs and technologies demand seamless scalability

NVRs cannot scale. The only way to grow is to add more NVRs, which leads to stranded islands of storage and bandwidth, inconsistent retention times and unreliable performance. It also requires complicated provisioning, constant management and manual load balancing.

Stranded islands of storage that do not scale

Seamless resource pool that scales simply and without disruption

Pivot3 aggregates storage and bandwidth from all nodes into a single pool, eliminating resource islands. Each added node provides storage and bandwidth for all cameras, and resources are automatically load balanced with no user intervention and no system downtime.

5 OUT OF 9 SERVERS FAIL EVERY YEAR

Average failure takes 1-2 days to recover, leading to major vulnerabilities and liabilities

No single points of failure

When NVRs fail, recording stops and both live and recorded video becomes inaccessible. Drive and controller failures can lead to the permanent loss of video data. RAID technology can protect data against only one or two drive failures, and results in very long rebuild times and poor system performance. Software failover adds significant costs and prevents access to recorded video.

Pivot3 eliminates downtime and data loss. Built-in server failover ensures video is always recording and live video is always accessible. Patented Scalar Erasure Coding protects data against up to five simultaneous drive failures, or the failure of an entire node. Live and recorded video is always accessible, even during major hardware failures. And no redundant equipment, special software or extra licensing is required.

POOR SYSTEM PERFORMANCE LEADS TO IMAGE DEGRADATION AND VIDEO LOSS

Video is highly variable, high bandwidth and write intensive

DAS is designed for general-purpose applications

NVRs based on Direct Attached Storage are designed for read-intensive applications, typically lacking advanced capabilities like solid-state caching and resource aggregation. Video is bottlenecked, and performance suffers during video data spikes and hardware failures.

Dropped frames result in image quality degradation and video loss

Pivot3 is optimized for video surveillance

Pivot3 is the only storage system optimized for video surveillance. Aggregated storage, solid-state cache and bandwidth are accessible by all cameras - regardless of which physical node they are associated with - ensuring video is captured without frame loss. Optimum performance is sustained during data spikes and hardware failures.

Data evenly distributed across nodes, crystal clear images even during spikes

VIDEO SYSTEMS CAN QUICKLY OUTGROW AVAILABLE RESOURCES

Cost and complexity can spiral out of control
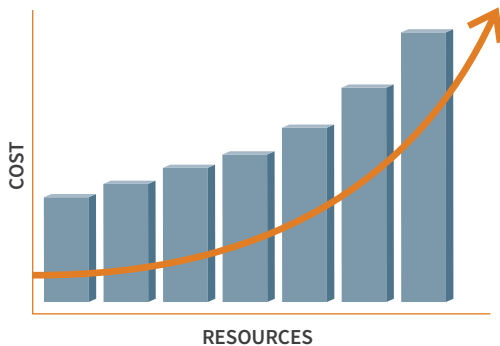
NVRs: Extensive Hidden Costs and Complexity
To deliver the necessary resiliency and scalability, NVR-based systems require redundant hardware, software and licensing. Storage utilization is highly inefficient, resulting in the need to over-purchase to meet performance and retention demands. And administering multiple disparate systems adds substantial cost and complexity.

Pivot3: Enterprise-Class Infrastructure Without the Cost and Complexity
Built-in server failover eliminates the need to purchase redundant hardware and software, and can ensure high availability to all applications – not limited to just video. Patented Scalar Erasure Coding delivers up to 94% usable storage capacity. Automated management and proactive maintenance vastly reduces complexity.

PERFORMANCE. RESILIENCY. SCALABILITY.

For more information, visit Pivot3.com

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