Quantum

YOUR VIDEO INFRASTRUCTURE CHECKLIST:

MANAGING VIDEO AS A STRATEGIC ASSET

Video data is increasingly seen as mission critical, whether it's being used for surveillance and security or for any number of other applications, such as traffic analysis, facility utilization, energy management, production optimization, or telehealth services. Unfortunately, many organizations rely on outdated infrastructure that can't keep pace with the requirements of today's mission-critical video. It's not just about achieving faster throughput - it's about improving the ability to capture, protect, and leverage video data as a strategic asset while reducing total cost of ownership (TCO), risks, and liabilities.

Assessment Checklist

The checklist below can help you in assessing if the infrastructure that your organization has in place for video surveillance and security operations is mature and capable of supporting mission-critical video.

Here are the hallmarks of a mature video infrastructure. Check all that apply:

RESILIENCE

☐ Infrastructure is optimized for write-intensive video workloads to eliminate the risk of dropped frames and image degradation.

☐ High availability and fault tolerance can be achieved without requiring redundant hardware and software or impacting storage efficiency by replicating data.

☐ Video and other data remain available and accessible, even if multiple disks and/or an entire appliance are unavailable.

☐ The servers hosting your video recording and storage do not represent a single point of failure.

☐ Infrastructure includes intelligent monitoring and analytics for proactive system health monitoring and automated notification.

COST OF OWNERSHIP

☐ Large amounts of video can be stored in a compact and efficient footprint to reduce power, cooling, space, and management costs.

☐ Infrastructure resources can be shared or pooled to optimize performance and resource utilization and don't result in islands of stranded, underutilized resources.

☐ Multiple security applications (video management, access control, video analytics, intrusion detection, etc.) can be consolidated on common infrastructure to reduce costs and simplify management.

SCALABILITY/MANAGEABILITY

☐ Server and storage resources can be deployed on a pay-as-you-grow basis to minimize unnecessary overprovisioning and upfront expense.

☐ Storage, compute and bandwidth can be scaled independently or together as camera count, retention times, or other requirements change.

☐ The infrastructure, even multiple systems or sites, can be managed and updated from a single pane of glass by non-technical administrators.

☐ Resources scale non-disruptively through automated and centralized management.

⚠️

The Take-Away

To manage video data as a strategic asset, companies need a smart infrastructure that is purpose-built for mission-critical video — one that is designed for video-based workloads, reduces risk and liability, and is simple to manage and scale.

LEARN MORE:

www.quantum.com/video-surveillance

Purpose-Built: Recognize the Difference

Hyperconverged infrastructure (HCI) combines server, storage, and networking resources in modular appliances to provide simplified deployment, scaling, and management. But are general-purpose HCI or virtualized server-SAN systems a good fit for mission-critical video environments? Check out the differences below:

Considerations	HCI Purpose-Built for Mission-Critical Video	Conventional HCI
Video Workload	Optimized to capture every frame at any frame rate	Optimized for read-heavy workloads (databases), not write-heavy workloads (video)
Resilience	Protects video data through a fault tolerance method known as Erasure Coding, a more storage-efficient method than replication	Relies on replication for data protection which consumes more available capacity and has substantial performance overhead, making it impractical for realtime processing of video data
Hardware Failure	Uninterrupted performance in the event of component failure	Cannot handle node failures without substantial performance degradation
Scalability	Easily scale up with cost-optimized storage-only nodes (a plus for video, when storage growth outpaces compute needs)	Requires you to buy more costly full HCI nodes (which means deploying compute power that you don't need)

Do You Rely Solely on NVRs?

The network video recorder (NVR) has been the industry standard for video surveillance for many years. With the growing sophistication of video surveillance systems and the growing importance of video data, NVRs may not always be the right answer.

Consider these factors when choosing between HCI and NVRs:

- If security is mission-critical and you have zero tolerance for system downtime, HCI is the right answer.

- If you would benefit from the simplicity of consolidating multiple physical security applications onto common infrastructure, HCI can eliminate the islands of individual servers and workstations inherent   with NVRs.

- Large environments benefit from the resilience and simplicity at scale that come with HCI. In a small environment where managing each recording server individually isn't overwhelming, NVRs are a good choice. Be sure to factor in future growth when determining the right fit.

- Remote sites/branch offices tend to have smaller camera count and storage capacity, so NVRs make sense. However, if those locations need high availability, HCI is more appropriate. Main core sites tend to have large storage capacity, camera counts, and multiple security applications, making HCI the best fit.

Managing Video As a Strategic Asset

To take care of your video data, work with a vendor that understands what it takes to manage video as a strategic asset for mission-critical use cases. **Quantum's VS-HCI** is a purpose-built infrastructure supporting video management systems (VMS), video storage, and video analytics that also enables the consolidation of other security applications, such as access control, onto an integrated server and storage platform called hyperconverged infrastructure (HCI). With Quantum VS-HCI, you can realize savings and operational benefits over conventional NVR and 3-tier approaches (separate server-storage-network systems).

Cloud/
VSaaS

Video
Analytics

Visitor
Mgmt

Video
Mgmt.
Software

Q

Access
Control

Evidence
Mgmt.

PSIM

Reporting &
Compliance

- **Cut TCO in half**
- **Reduce video storage requirement by 50%**
- **Reduce footprint and management by 85% vs NVRs**
- **Reduce power and cooling**
- **Reduce software management and maintenance costs**

Quantum®

Quantum technology, software, and services provide the solutions that today's organizations need to make video and other unstructured data smarter — so their data works for them and not the other way around. With over 40 years of innovation, Quantum's end-to-end platform is uniquely equipped to orchestrate, protect, and enrich data across its lifecycle, providing enhanced intelligence and actionable insights. Leading organizations in cloud services, entertainment, government, research, education, transportation, and enterprise IT trust Quantum to bring their data to life, because data makes life better, safer, and smarter. Quantum is listed on Nasdaq (QMCO) and the Russell 2000® Index. For more information visit www.quantum.com.

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