



11 Reasons Video Surveillance is Moving to the Cloud

Comparison of VSaaS vs. Internet-Connected Security Camera Systems



Any Question?

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What is VSaaS?

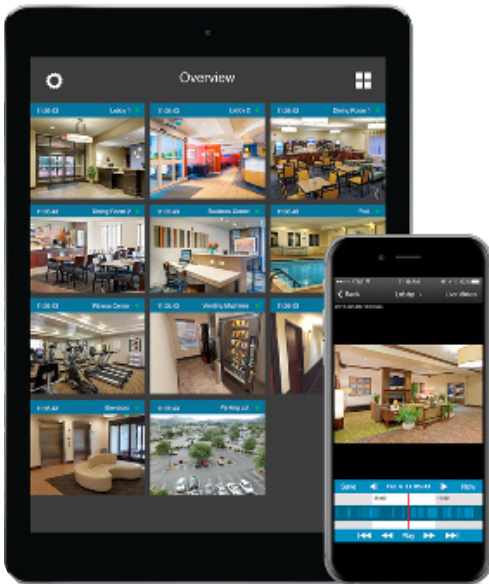
VSaaS, or **Video Surveillance as a Service**, refers to hosted cloud-based video surveillance.

The service typically includes video recording, storage, remote viewing, management alerts, cyber security and more.

93 percent of businesses have now adopted cloud solutions. Cloud technology advances and greater bandwidth availability are making VSaaS – also called cloud video surveillance – is increasingly attractive.

This report provides **11 comparison points** of key differences between “VSaaS” cloud-based video management system (VMS), and an internet-connected traditional DVR, NVR, or VMS.

See it as a checklist that can help you assess which system type will best fit your company’s and/or your customers’ needs.



11 Reasons Video Surveillance is Moving to the Cloud

Short on time? Here are the top 11 reasons why to move Video Surveillance in the Cloud.

1. SYSTEM INSTALLATION
2. SYSTEM SUPPORT
3. PAYMENT STRUCTURE
4. TOTAL COST OF OWNERSHIP
5. STORAGE RETENTION FLEXIBILITY
6. ADDING & MANAGING CAMERAS
7. BANDWIDTH MANAGEMENT
8. TECHNOLOGY LONGEVITY, APIs
9. CYBER SECURITY
10. REMOTE ACCESS
11. REDUNDANCY & RELIABILITY

1. SYSTEM INSTALLATION

Internet-Connected Traditional DVR/NVR/VMS

Deploying a traditional system is a long, complex process. You must install the operating system software, configure your routers, set up storage servers, configure your cameras, and install the application software.

Cloud-based VMS / VSaaS

A cloud-based system has on-demand deployment. You plug in the on-premise bridge appliance and can auto-configure your cameras. (Additional information on camera management and support can be found in reason 6).

2. SYSTEM SUPPORT

Internet-Connected Traditional DVR/NVR/VMS

It is a manually intensive process to support and maintain the on-site hardware and software, firmware and configuration updates.

Cloud-based VMS / VSaaS

Because the compute-heavy hardware and software are 'in the cloud', with only an on-site bridge appliance to connect the cameras to the cloud-based VMS, the ongoing support is done off site by the provider.

3. SYSTEM SUPPORT

Internet-Connected Traditional DVR/NVR/VMS

The systems have a high up-front capital expense for the system hardware and software. Ongoing support expenses can be unpredictable.

Goals not aligned, due to prevalent "pay when it breaks" approach. The hardware pricing is uneven as the company scales and needs more cameras and storage.

Cloud-based VMS / VSaaS

The 'Video Surveillance as a Service' model has an extremely low up front capital expense, along with a predictable monthly operating cost.

The integrator and customer's goals are aligned, with pricing based on a pay as you go for what you use" via a monthly subscription fee based on number of cameras and retention period. The system grows with the customer's business.

4. TOTAL COST OF OWNERSHIP

Internet-Connected Traditional DVR/NVR/VMS

The initial cost is high, including high cost hardware/software, and installation.

The ongoing costs include: an annual maintenance fee, Router configuration, System Configuration & Operating System backup, OS security patches, Remote network access, IT staff time, Space, Power, Tampering repairs, Training staff for retrieval, SW update installation, PC client SW install/upgrades, Central management, Redundancy, Mobile apps, Video backup, Cyber security expertise & support, and Multi-site integration.

Cloud-based VMS / VSaaS

The initial cost is low, typically a low cost bridge appliance.

When all costs are factored in, the ongoing monthly subscription costs are lower due to the economies of scale from the shared cloud infrastructure and support. These elements are discussed in more detail in other sections.

5. STORAGE RETENTION FLEXIBILITY

Internet-Connected Traditional DVR/NVR/VMS

A traditional DVR, NVR or VMS, will store the video on-site.

The storage retention is rigid, as you are limited by hardware capacity you chose when you purchased and installed your system. If you want to increase the resolution or retention period of your cameras, you must buy additional or replacement hardware and configure it.

Cloud-based VMS / VSaaS

Advanced cloud systems offer a flexible combination of on-premise and cloud storage. You get same smooth access regardless of where the video is viewed or stored. Ask your provider, as some systems where the camera talks directly to the cloud, cannot store video on-premise.

You can instantly increase resolution or retention period, without having to modify your existing hardware. Because cloud systems utilize a large shared cloud infrastructure for video storage, they provide tremendous economies of scale and flexibility.

6. ADDING & MANAGING CAMERAS

Internet-Connected Traditional DVR/NVR/VMS

The systems typically support a broad array of analog & IP camera choices.

Once initial camera wiring is complete, users must manually connect & configure new cameras.

Cloud-based VMS / VSaaS

Advanced cloud systems also support broad array of analog & IP camera choices.

Once the initial camera wiring is complete, cameras are configured automatically. Dashboards show camera status with instant alerts for camera or internet issues.

7. SYSTEM SUPPORT

Internet-Connected Traditional DVR/NVR/VMS

Bandwidth required for remote viewing. On-site video recording storage requires no bandwidth.

Cloud-based VMS / VSaaS

Bandwidth required for remote viewing. On-site video storage buffering requires no bandwidth - but majority of storage is streamed, requiring bandwidth. Some cloud systems have highly advanced bandwidth management to reduce consumption & provide smoother remote viewing.

8. TECHNOLOGY LONGEVITY, APIs

Internet-Connected Traditional DVR/NVR/VMS

Traditional systems have a shorter time to obsolescence. They may start with robust features, but their core feature set is fixed at time of hardware purchase. You can download firmware updates, but limited ability for technology updates. Plus updates are manual & support intensive.

APIs are closed and generally require signing an NDA. API functionality is limited.

Cloud-based VMS / VSaaS

Rapid technology evolution. Provider sends automatic technology updates through the internet to your on-site appliance. Your system is continuously evolving for new innovations, has longevity.

APIs for analytics, integration & applications are open and publicly published. Fully functional APIs can be used in other systems.

9. CYBER SECURITY

Cyber-security is top of mind for management. Cyber-security is a double threat for cyber security, both for the physical security system itself and as an attack vector to rest of network.

We have a detailed white paper on Cyber-security best practices for video surveillance for cloud and internet- connected traditional systems.

Internet-Connected Traditional DVR/NVR/VMS

End user requirements for remote access to their videos have resulted in traditional DVRs, NVRs and VMS's typically being connected to the internet by the integrator or installer for remote video access. The result is the need to install and configure firewall.

The end customer then monitors for attack vector vulnerabilities such as: operating systems, open ports, on-site vendor software.

Cloud-based VMS / VSaaS

Advanced cloud-based video management systems do not have the cyber-security vulnerabilities of traditional systems. There are no open ports, no on-site firewalls, and no on-premise software. No firewall installations are required.

Some cloud VMS vendors have dedicated cyber security teams to monitor new vulnerabilities, such as Ghost and Heartbleed, and apply instant security patches via the cloud to the on-premise appliance.

10. REMOTE ACCESS

Internet-Connected Traditional DVR/NVR/VMS

With traditional systems, remote video access was typically not architected into the original system, but rather added on due to customer requirements. The quality of video access can be unpredictable, with choppy streaming and poor image quality.

Additionally, encryption is rare, creating privacy concerns. Browser Incompatibilities are common.

Cloud-based VMS / VSaaS

Cloud-based systems were architected for remote access. Advanced systems have smooth video access & streaming.

Additionally, some provide encryption at rest & in transit. Universal web browsers support and mobile apps are common.

11. REDUNDANCY & RELIABILITY

Internet-Connected Traditional DVR/NVR/VMS

Traditional DVRs, NVRs and VMS's have highly variable redundancy levels. Further, internal IT staffing is required to maintain the redundancies.

The duplicate servers are often idle, adding to the overhead expense.

Cloud-based VMS / VSaaS

Cloud data centers have double and triple redundancy. The shared infrastructure results in fullserver utilization and economies of scale.

Advanced cloud systems provide a couple of days of on-premise storage as a back-up to protect against the internet going down, along with instant alerts.

SUMMARY

Following the well-established trend of other industries, video surveillance is moving to the cloud.

The primary functionality drivers include rapid technology evolution, cyber security, retention flexibility, smooth remote access, and other factors.

Financial consideration are the reduced capital expenses and lower total cost of ownership due to economies of scale. Further, the pay only for what you use 'as-a-service' payment model better aligns end customers, security integrators and system vendors for ongoing support and the growth and evolution of the customer's business.

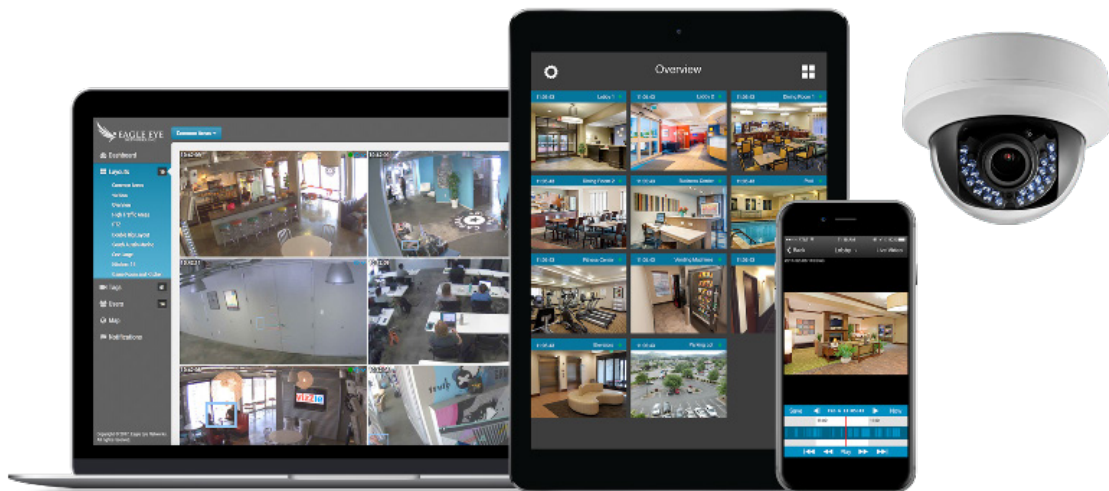
More efficient and effective management come in the form of on-demand deployment, superior multi-site integration and management, and instant system alerts, such as for offline cameras.



LOOKING FOR HOW TO MOVE TO THE CLOUD?

*Learn More About Eagle Eye's
Video Management System Platform*

Eagle Eye Networks was created to make video security easier. Camera systems have traditionally been complex and challenging for people to manage. With the Eagle Eye Cloud Security Camera VMS, you can deploy multiple cameras at multiple locations, without installing software or purchasing large servers. Learn more VMS in the Cloud, explore the platform we have to offer, or talk to one of our specialists today.



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