

Video Surveillance as a Service

Moving Video Surveillance Capabilities to the Cloud



Growing concerns about safety and security are driving continued adoption of video surveillance equipment. According to research firm Markets and Markets, the global video surveillance market is expected to see a compound annual growth rate of 15.4 percent through 2022, with the greatest demand among retailers, financial institutions and other organizations in the commercial sector. Because video surveillance systems are hardware-intensive, cameras, storage devices, servers and related equipment comprise the bulk of the market.

Pivot Technology Solutions is helping organizations minimize their capital investments in video surveillance equipment with its Video-Surveillance-as-a-Service (VSaaS) offering. VSaaS combines on-site video cameras with cloud-based storage and software in a pay-per-use pricing model. Video data is streamed to a local bridge where it is compressed and encrypted. The bridge establishes a secure connection with the service provider's cloud, and uploads the cached data using intelligent bandwidth management.

VSaaS enables organizations to offload the management of their video surveillance infrastructure while gaining the virtually

limitless capacity of the cloud. In addition, Pivot's VSaaS solution features video management software that enables secure, single-pane-of-glass monitoring and sophisticated analytics that can leverage an organization's existing investments in legacy cameras.

While many traditional video surveillance solutions require partnerships with local security subcontractors, Pivot offers a full-service solution with national scope to support large, multi-site organizations. Pivot also brings deep technical expertise and experience in networking and data management that traditional security and alarm installers do not offer.



Why VSaaS?

Video surveillance cameras have become increasingly sophisticated even as prices have dropped. Today's digital cameras provide much higher resolution than their analog counterparts, so fewer cameras are required to get adequate coverage. IP-enabled devices attach to the data network, allowing greater flexibility in camera placement while eliminating the need to install and manage separate video cabling.

However, video surveillance places considerable demands on the data network and storage infrastructure. High-resolution video consumes a significant amount of bandwidth and requires ever-increasing amounts of storage capacity for long-term data retention. DVRs are typically deployed at the network edge to capture video data locally, but these devices hold only seven to 30 days' worth of data. Video footage must be transferred across the network to centralized storage for archival and analysis.

In order to review video data remotely, organizations must open up ports to the Internet to allow access to the storage devices. This poses a risk of data theft and tampering and increases security threats. According to a recent report from Flashpoint and Level 3 Threat Research, hackers are targeting insecure DVRs to build botnets for launching distributed denial of service (DDoS) attacks.

Pivot VSaaS relieves the burden on the in-house IT infrastructure and eliminates the security risks associated with DVR-based systems. The local bridge provides Power over Ethernet (PoE) ports to support video cameras, and adequate storage to cache video data prior to upload to the cloud. A centralized interface provides access to video footage within seconds, either from the local bridge or the cloud. The solution is monitored around the clock to ensure that all cameras are functioning properly.

Key Business Benefits

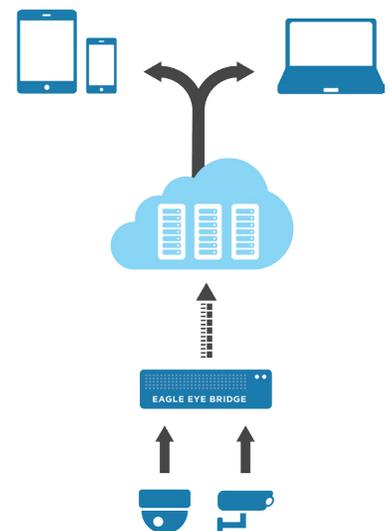
VSaaS brings all of the benefits of the cloud to video surveillance applications, while enabling organizations to retain control over their video data. In addition to minimizing capital investments and IT overhead, VSaaS delivers significant business value through:

- **Rapid deployment.** VSaaS is a turnkey solution that eliminates the need to implement servers, storage, network gear and software.
- **Simplified administration.** The cloud provider handles the ongoing management, maintenance and support of the infrastructure.
- **Optimized costs.** Monthly fees are determined by the amount of video consumed, based upon resolution and data retention times, and the service can be turned on or off as needed on a per-camera basis.
- **Reliability.** The compute and storage infrastructure is designed for video and hosted in Tier IV data centers with triple redundancy.
- **Scalability.** The solution can scale linearly as business and data retention requirements change, without the need to over provision resources.
- **Data security.** Video data is fully encrypted at rest on the bridge, in transmission to the cloud and at rest in the cloud archive.
- **Investment protection.** Analog-to-digital conversion enables organizations to enjoy all the benefits of the cloud-based video management system without replacing analog cameras.

Extended Use Cases

Video surveillance systems are primarily deployed to enhance safety and security. However, VSaaS solutions with advanced analytics capabilities open up opportunities for a wide range of use cases. For example:

- Retailers can use video data to analyze customer flow through the store and response to promotions and displays.
- Fitness chains can get information about how often various pieces of equipment are used, and at what time of day.
- People-counting algorithms can help retail and restaurant chains calculate customer traffic and conversion rates.
- Centralized monitoring and mobile access enable elder care facilities to ensure patient safety without increasing staff.



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