Video security goes to the cloud

Hosted video can help reduce complexity and costs, while boosting security

"Not only does this eliminate the need for dedicated viewing software, but it also enables users to view video anywhere they have Internet access."

CSO Magazine Online

Over the past couple of years, you could hardly pick up a business magazine or newspaper that didn't trumpet how "cloud computing" was transforming the way companies use technology. Now the cloud is changing the way companies deploy physical security.

Cloud computing means that businesses can access technology services over the Internet from a 3rd party provider who owns and maintains those servers and other equipment in its facility.

Online banking, email, and Customer Relationship Management (CRM) solutions such as Salesforce.com, are among the many cloud computing applications that companies have embraced for important and sensitive business operations.

Cloud storage is quickly emerging as a popular service for companies that have enterprise-level needs without an enterprise-level budget. Two recent studies by cloud storage provider Egnyte and market research firm Spiceworks found that the use of cloud storage by small- and medium-size businesses doubled in the second half of 2010, and then doubled again in the first six months of 2011.

Given the growing importance of cloud computing, it makes sense that centralised video storage is now going to the cloud. With hosted video – as this development is called – the video data itself is streamed over the Internet to a secure storage system residing with a 3rd party service provider.

This setup eliminates the equipment and maintenance chores that are required when companies store and manage their own video data onsite. Hosted video can provide a higher level of security, with fewer technical hassles. In addition, with hosted video you don't need to spend scarce capital on expensive hardware or labour and installation costs.

As Source Security Magazine notes, "The ability to achieve remote redundancy of video data, true 'plug and play' installation, remote access to the video, and a lower cost video surveillance system, are all factors that will encourage this market to grow."

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Is the cloud right for you?

When evaluating hosted video solutions, you need to carefully examine your business needs, personnel, and current technology resources. Plus there are two otherprimary video-security choices – traditional systems and hybrid systems.

Traditional video-security systems – where a company owns, manages and maintains the equipment end-to-end – often makes sense for larger facilities. Traditional setups can be ideal for companies that already have a technology infrastructure in place, a skilled technical staff that can customise the system to its specific needs, and a security staff large enough to monitor numerous cameras.

A hybrid system provides the ease of use of a hosted solution with the ability to store high resolution, high frame rate video locally. The video may be stored at the customer's premises on the camera itself, or on a low cost Network Attached Storage (NAS) device, and also stored remotely in a hosted data centre.

The newest option, hosted video, is appealing for operations that have important security needs, but lack the technology or personnel necessary for traditional or managed video solutions.

Hospitals, boutiques and other retail locations, schools, convenience stores, quick serve restaurants, gas stations, bank branches and government facilities with four to 10 cameras present unique and critical security challenges that are among the "sweet spot" for a hosted video solution. So are firms that require redundant storage of sensitive information or a more secure environment.

Reduce labour and technical know-how

One thing all these industries have in common is that they generally lack huge technology staffs and large budgets. With this in mind, hosted video is designed to reduce the amount of labour and technical know-how needed to provide video security at a site. Using hosted video, there are no separate digital video recorders (DVR) or network video recorders (NVR) to manage; there isn't any software or equipment to update, and there's no need to upload patches or update virus protection. All those vital chores are handled by the service provider, ensuring you have the most current forms of protection while freeing up your staff to focus on more strategic duties. Hosted video is a "plug and play" solution that only requires a business to have an IP camera or encoder, and an Internet connection.

Since a network configuration is unnecessary, installation is simple. The video camera and any local storage chosen as an additional safeguard are preconfigured to automatically register with the host site when they are connected to the network. This means the hosted server can communicate with the cameras and any storage devices onsite without complex IP magic such as port forwarding or fixed IP addressing. This shortens the installation time on site, minimizing the disruption to the business.

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Source Security Magazine

Understandably, many companies want to preserve their current investment in technology. If there are existing analogue cameras, video encoders can send the analogue streams over the Internet, eliminating the need to upgrade to an IP camera. Compression technology, such as H.264, allows users to send superb video quality over DSL or cable modem connections.

Companies that want megapixel or HDTV clarity sometimes add an inexpensive NAS device to their system. Other companies record high-definition onsite and stream a lower-resolution to the cloud as a backup.

With hosted video, users can take advantage of any web-enabled device – such as a smart phone, a laptop or desktop PC – to remotely access their video, and see both live and archive video through a secure viewing portal that is intuitive to use.

"Not only does this eliminate the need for dedicated viewing software, but it also enables users to view video anywhere they have Internet access," notes CSO Magazine Online.

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Hosted video is a way to maximise choice, so it's easy to identify the best setup for any given budget and future needs.Gain added security Cloud computing is already used for many services that demand the highest level of security, like email and online banking. Hosted video offers the same protection as those other cloud services, including-multi-level password, SSP encryption, VPNs, and firewalls.

Hosting providers are required to meet stringent compliance regulations, such as SaaS 70, RSA Encryption and ISO 27001-compliance. This provides the peace of mind that the video stored with a hosting provider will be safe and available when needed.

In some ways, hosted video offers greater security than maintaining the video onsite. With hosted video there's no concern that a thief will make off with the video by just grabbing a camera or DVD recorder. "As with so many devices we don't use on a regular basis, we often don't notice right away that it has stopped working," says Business Security Information, a blog focused on small business security. "With most DVRs or NVRs, we don't notice that it is no longer recording until we need some of the recorded video."

Some organisations are concerned that their video will be lost if their network goes down, but a traditional analogue-based system will be "down" when the DVR is being serviced – and if it needs to be replaced, no video may be recorded for days or even weeks. Also, any video surveillance system will cease to work if the power goes out. Some companies with an unreliable network or weather concerns mitigate this concern by also having a NAS device with an uninterruptible power supply (UPS) onsite for redundant storage.

With hosted video, companies can leverage the cloud provider's economies of scale to get service and features that a smaller business cannot afford to acquire on its own.

"A cloud based solution is very appealing to enterprise customers because it offers flexibility to customers who pay only for what they use"

Source Security Magazine

Benefits of the cloud

Hosted video provides numerous ways to help improve security and operations, including:

// Monitor risk-prone areas. It's simpler to keep a watchful "eye" on daily operations with a hosted video solution – whether at a bank, restaurant, school, or other type of business with one or several locations. A healthcare facility might rely on hosted video to help ensure a safe and secure environment for patients, visitors, staff, physicians and suppliers around-the-clock. Hosted video provides a cost-effective and efficient way to monitor multiple entrances, expensive equipment, and a large quantity of pharmaceuticals.

Education facilities have found that hosted video can help identify problem areas where students are more likely to smoke, fight, commit vandalism, or sneak off campus. Risk-prone areas – like a stairwell, the space adjacent to an ATM, or a cash vault or room in a retailer's location – can be monitored 24/7.

// Enforce safety policies. Hosted video provides an easy way to help ensure positive identification of all individuals entering a facility, as businesses can get and retain close-ups. Plus, it's easier to enforce operational and safety policies by providing rapid response to safety and security hazard breaches, and false alarm verifications can help reduce false alarm fees.

// Enhance loss prevention. With constant eyes on a location, hosted video can help thwart shoplifting, monitor cash transactions and combat "sweet-hearting"– where a cashier gives away merchandise without charge to a "sweetheart" customer (such as a friend, family, or fellow employee). Schools can help deter theft, vandalism, and behavioural incidents on campus or on buses.

// Provide redundant backup. Banks with smaller footprint branches can get smaller configuration cameras, and provide redundant / off-site storage of critical video of vaults, cash rooms and teller lines should video devices be damaged or stolen. Hospitals can record and store video of personnel entering patient rooms.

// Provide safe escorts. Hosted video can provide peace of mind to employees working in isolated situations. Video escorts can provide added security for employees who are walking to and from the parking lot late at night or who need to open or close a one-person facility.

// Meet compliance mandates. For companies that accept credit cards, hosted video can monitor PCI transactional compliance with secure remote storage to comply with auditing regulations (SAS 70 and ISO 27001). In addition, some larger companies add hosted video to their existing video network if compliance or internal policies require secure off-site archiving.

// Improve marketing and merchandising. Using hosted video, retailers can ensure end-cap displays have been assembled properly and seasonal decorations have been removed as scheduled. Dedicated cameras can even gather data on how customers move around a store, guiding retailers on more effective selling strategies. Banks can use hosted video to analyse traffic flow patterns, monitor queue lines, dwell time and product promotion kiosks.

// Heighten operational efficiency. Hosted video solutions can monitor deliveries without an employee presence. Policies can be more easily enforced, whether they refer to hospital personnel washing their hands, students arriving on time, or retail workers adhering to a dress code. If there's a need to focus security on a new area, cameras can be repositioned easily without running coaxial cables.

Always be future-proofed

A key benefit of a hosted video solution is that there's no need to purchase and maintain more servers and equipment than required at present. "A cloud based solution is very appealing to enterprise customers because it offers flexibility to customers who pay only for what they use," says Source Security. If your needs increase, the hosted video service provider can provision the additional resources.

With companies giving increased scrutiny to budgets, hosted video holds great appeal for those that want to stretch their physical security dollars without compromising the level of security. The cloud approach can help reduce the total cost of managing physical security, and free security professionals to focus on security issues rather than on maintaining and supporting technology.

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