

OUT WITH THE OLD, IN WITH THE NEW

Mahmoud Abdelqader, Co-Founder of Cloudview outlines the ideal next-generation data management system for video surveillance



↑ Mahmoud Abdelqader, Co-Founder of Cloudview

Over the last few decades, the UK has firmly cemented itself as the number one user of video surveillance in the world, with approximately 4-5.9 million cameras in use out of the estimated 25 million security cameras in use worldwide. Whilst the video capturing ability of the video systems are usually front and centre in their feature offering, it is actually the data management aspect of these tools that make them stand out.

At first glance, capturing and handling the visual data that derives from the video footage may seem like a straightforward and seamless activity, however, when it comes to storing and managing large amounts of this type of data, things can get very tricky especially with the wrong approach or inadequate tools.

With the VaaS market continuing to head in an upward trajectory, organisations need to overhaul their visual data management processes in order to accommodate the increasingly sophisticated video surveillance solutions that are set to revolutionise how we collect and repurpose valuable visual data.

Outdated video surveillance operations

Over the last few decades, organisations have moved on from their outdated and simplistic use of video surveillance systems; these systems passively recorded images and footage onto video tapes as well as other local storage entities



such as memory cards and external hard drives. This meant that old video surveillance operators had to manually delete the footage/images from the previous week, or even day, to make space for more; what's more, they would need to be mindful of keeping the stored content safe from theft, hacks or being replicated for misuse. This level of data management was very time consuming, complicated, and unsecure.

In addition to this, this style of visual data management was incredibly inefficient, especially with the increasing usage of video surveillance

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for crime fighting and safety monitoring in public areas such as local parks, housing estates, private properties and town centres. Organisations responsible for setting up and managing these video surveillance cameras would have to find the budget and people-power to maintain such impractical usage of their video monitoring systems – with no alternative option.

Fast forward to today, organisations are now utilising video surveillance systems more proactively to identify and track people of interest. Moreover, they are also gathering detailed information about activities occurring in specific areas. As a result of this, they now require greater flexibility and options for storing and managing the visual data that derives from these video capturing systems.

It's becoming increasingly difficult to justify the allocation of personnel to manage these video surveillance cameras, especially given the powerful capabilities of technology today.

The emergence of next-generation technology, such as cloud computing, has given video surveillance adopters access to smarter and more powerful ways of storing, accessing and managing their visual data. However, picking and sticking with the right data management tool can be a minefield, especially when issues such as data privacy and security need to be considered.

Video surveillance cloud storage solutions provide users with a range of different storage options, simplifying the process of collecting, storing and retrieving visual data as well as enabling them

to remain compliant with data privacy and protection laws. A next-generation cloud-based data management solution should comprise of three key tenets – it should be simple, smart and secure.

Simple, smart and secure

Simplicity as a standard is something that most new cloud data management solutions should strive for, with many solutions now being built with simplicity at the heart of their innovation efforts.

Video surveillance cloud data management solutions should be easy to install, setup and operate, consolidating all recorded visual data from all the different surveillance cameras in operation into a unified, encrypted storage base; this is then held on extremely secure cloud servers that can be accessed from anywhere in the world. By removing the complexities that generally come with installing and setting up modern day video surveillance systems, users will be able to adopt and integrate next-generation visual data management systems at a fraction of the cost and time.

Smart functionality is another key tenet that every cloud-based visual data management solution should possess – this is because it removes the burden of constant monitoring and control away from users. Smart image detection, recording and the uploading of content in the cloud in a secure manner should all be major characteristics of such solutions.

With the automatic logging of date and time of events, users can access the cloud server to view, rewind, download and delete footage using a smart device such as a mobile phone or tablet at any time, from anywhere.

What's more, cloud solutions should also be highly configurable, allowing emerging technologies such as AI and machine learning to be built upon API interfaces. Subsequently,



this allows users to benefit from features such as the smart triggering of objects, viewing single or multiple camera sites/angles as well as accessing live or historical footage in real time, helping to identify specific events or subjects, all within the touch of a button.

Security and privacy should be two of the most important offerings when it comes to cloud-based video surveillance systems. Visual data that can easily be used to identify individuals is incredibly sensitive and should be treated as such with strong privacy and security measures.

According to video surveillance laws, users are legally obligated to ensure that data recorded by the surveillance cameras is stored securely and can only be accessed by authorised personnel. This means that not only do organisations need to use tools that have the necessary data protection safeguards in place, but they themselves need to also proactively make sure that they are following the right data privacy and protection laws.

From a solutions perspective, cloud-based video surveillance systems need to be developed with data security and 'privacy by design' at the core, along with high grade security protocols; this includes having built-in General Data Protection Regulation compliance for its users which helps to protect individuals' data rights, privacy and freedoms. Furthermore, it is simply not enough to just be GDPR

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compliant. Cloud solutions should undergo regular GDPR audits and obtain industry recognised certifications such as the ISO27001 as well as other international standard accreditations on managing information security.

Alongside GDPR compliance, users also need to combine this with powerful security practices including authorisation, authentication and, by extension, multi factor authentication. There should be clear IAM user-based roles that clearly distinguish which users are authorised to carry out which actions – this should be supported by robust authentication processes that can verify user identities before granting them access to certain privileges.

Given the pace at which technology has been developing, it is clear to see that the future of video surveillance lies in the cloud. As we move away from more traditional operating systems and old ways of working, it is now more important than ever before that organisations adopt cloud-based data management systems that are compliant with the law, provide simplistic and smart functionality and are backed by state-of-the-art privacy and security measures.