Axis cloud solutions in education

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AXIS COMMUNICATIONS

Introduction to the cloud

"The cloud" refers to servers that are accessed over the Internet, and the software and databases that run on those servers. Cloud servers are located in data centers all over the world. By using cloud computing, users and companies do not have to manage physical servers themselves or run software applications on their own machines.

Cloud servers can be used, among other things, to store and retrieve video, audio and metadata from a surveillance system. Video and audio streams, or data from IP connected devices, provide endless possibilities and many industries, including schools, have started to realize the added value that a surveillance system can bring.

Hybrid cloud solutions

Cloud solutions overall require constant Internet access which implies higher latency compared to local viewing. In addition, it requires more knowledge to integrate cloud solutions.

A hybrid cloud approach combines the best of two worlds. Hybrid cloud means that an organization is mixing cloud with on-premises infrastructure depending on the needs.

A hybrid approach may be optimal for many organizations, combining on-premises servers and limited cloud investment. Schools can maintain control over their data while also benefiting from cloud features like remote access and device management.

Connected devices facilitate valuable data

As cameras are already a part in many school security systems, they convert what is happening in a scene into data and actionable insights, providing benefits beyond security for automation and business efficiency. Moreover, connected edge devices, such as IP cameras, are able to offload on-premises and cloud solutions by reducing latency, need for bandwidth and storage costs.

Schools that decide to take a cloud-based approach, can use connected edge devices as a key differentiator, and applying them across all parts of their campus. Actionable insights can be maximized by combining data from multiple sensors, e.g., IP cameras and smoke detectors, in the cloud.

Schools can leverage integrated solutions in the cloud for:

Video surveillance solutions – cameras, encoders, VMS, recorders, analytics, and applications.

Access control solutions – from identification and entry control to advanced capabilities, open access control solutions integrate seamlessly with other systems.

Audio solutions – complete, high-quality audio solutions for bell schedule, mass notification, deterrent messaging, public address, paging or even for background music.

Wearable solutions – used by campus security to deter offenders, protect people and assets, and document forensic evidence.

Cloud benefits for schools

Cost savings and subscription models

As with all organizations, schools can leverage the "pay for what you need" cloud subscription model, allowing a shift from a capital expenditure to a more manageable operating expenses model. Additionally, planning, administration and infrastructure costs are typically handled by the cloud provider. Subscription for cloud tools is typically less than purchasing old-school software licenses. And these tools can be accessed on multiple devices, providing more flexibility to students, teachers, and staff.

Reliability, security, compliance

Keeping sensitive student or financial data in the cloud rather than on a hard drive can prevent data from being compromised or stolen from a physical device. Additionally, top cloud providers keep latency low, and deliver unparalleled data backup and disaster recovery. Data stored in the cloud is always available, automatically secured, and can be easily and economically backed up. Data can also be tagged for automatic disposal upon the expiration of records retention deadlines.

Flexibility

Cloud solutions can allow for both on site as well as remote viewing capabilities, such as the case of property surveillance and intrusion protection. Cloud also allows for greater flexibility for the IT department to focus more on overall school objectives vs. maintaining systems, which often becomes a full-time job.

IT simplification/scalability

With cloud solutions, schools can more efficiently ramp up/down services or increased user demand without all the time-consuming, costly, and related processes required to set up on premise hardware.

High performance computing

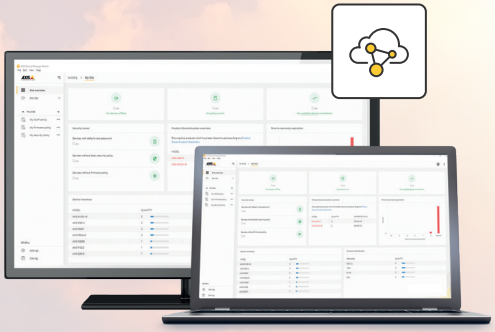
Cloud-based solutions can help to process complex scientific workloads. And with the ability to store and share petabytes of data, cloud makes it easier to share results and collaborate. Pulling in more data also allows for enhanced analytics, such as the use of AI algorithms. Cloud solutions allow for centralized storage, archiving, and management of data, such as video surveillance footage, eLearning content, research, academic lectures, libraries of images/video/audio, multimedia files from sports, film, and communications programs.

Managed services are a popular choice

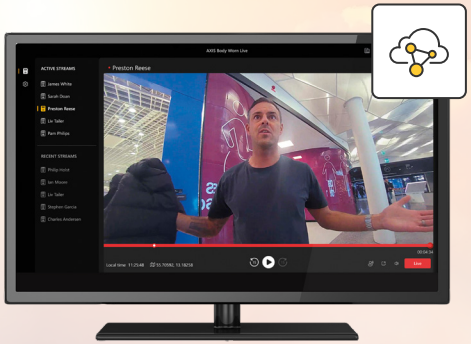
While cloud or hybrid solutions offer advantages, they also introduce complexity in terms of management, security, and optimization where both on-premises and cloud-based solutions exist in parallel. Managed services are therefore increasing in popularity in the security industry.

A managed system is more reliable and ensures smooth integrations, proactive cybersecurity, consistent performance, automatic updates (e.g., software), as well as compliancy with industry standards. Axis provides managed services, such as secure device onboarding, user management, multisite management, device management, live video operations, media to cloud, compliance, governance, SLA, and audit logs.

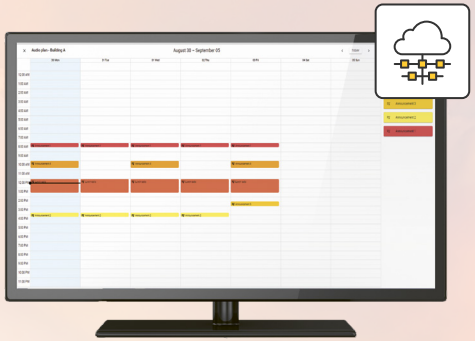
AXIS Camera Station



AXIS Device Manager Extend



AXIS Body Worn Live



AXIS Audio Manager Center

Axis offers a range of cloud-based services and hybrid alternatives to suit every need.

AXIS Camera Station
Powerful and flexible video management and access control software, with cloud-based services such as a web client for video operation.

AXIS Device Management Extend
Remotely manage and stay aware of devices and their status on all sites across their lifecycle, from one centralized location.

AXIS Body Worn Live
Live streaming from body worn cameras via cloud-based application.

AXIS Audio Manager Center
Remotely manage your audio content across all your schools, including scheduled announcements, live announcements, background music, etc.

Axis Cloud Connect

Axis Cloud Connect is an open hybrid cloud platform that together with Axis devices enables managed services, such as system and device management, and video and data delivery and security and support. Axis hosts, delivers, and runs digital services, e.g., keeping the system up to date to ensure product quality and cybersecurity.

The **SOC 2® Type 1** attestation for Axis Cloud Connect further demonstrates that Axis has implemented robust security controls and practices to ensure data protection. By using solutions powered by Axis Cloud Connect you get more flexible and efficient video operations, device lifecycle management and access to secure data, from anywhere at any time.

By using software based on Axis Cloud Connect, schools can take advantage of a unified platform for mass notification, storage and archiving, services managed via one portal, open architecture, and system scalability with multisite structure.

Cloud security best practices

With the right partner, procedures, and protocols, cloud solutions can lead to increased security.

The right partner can help you stay compliant with changing regulations, and with "zero trust" network principles (never trust, always verify), responsible vendors ensure their devices play well with existing IT infrastructure. Appropriate procedures ensure that only authorized users can access data based on their specific profile.

Centralized information helps to ensure visibility across multiple sites and environments. Data is being protected by distributed cloud storage and cloud security capabilities that are designed to safeguard data against attacks.

Student privacy and data protection

Students' privacy and data protection is imperative within a school infrastructure. Leveraging appropriate cloud solutions should provide benefits of:

Data storage and access controls

Cloud solutions allow for centralized storage and management of surveillance data, such as video footage from security cameras. This data can be secured with robust access controls, encryption, and audit trails, limiting who can view or access the data.

Privacy masking

Advanced video analytics can be used to automatically redact or obscure sensitive information, such as student faces or personally identifiable information, from surveillance footage before it is accessed or stored.

Secure remote access

Cloud-based solutions enable authorized personnel, such as school administrators or law enforcement (if necessary), to securely access surveillance data from remote locations, without the need to be on-site or handle physical storage devices.

Scalability and redundancy

Cloud infrastructures can provide scalable storage and computing resources to handle large volumes of surveillance data, as well as redundancy and backup capabilities to ensure data integrity and availability.

Centralized policies and compliance

Cloud platforms can help implement and enforce consistent data privacy and security policies across multiple school sites, ensuring compliance with relevant regulations, such as the Family Educational Rights and Privacy Act (FERPA) and the Children's Online Privacy Protection Act (COPPA).

Data retrieval

1

Data ownership and accessibility
It's essential to understand who owns the surveillance data stored in the cloud and what rights the organization has to access and retrieve that data upon termination of the cloud service subscription.

2

Data extraction and migration
Cloud service providers should offer mechanisms for customers to extract and migrate their surveillance data in a secure and efficient manner.

3

Time constraints and deadlines
There may be specific time windows or deadlines imposed by the cloud service provider for data retrieval after the subscription ends. Schools should plan accordingly and initiate the data retrieval process well in advance to avoid any potential data loss or disruptions.

4

Data integrity and completeness
During the data retrieval process, it's crucial to ensure that the surveillance data is retrieved in its entirety, without any loss or corruption. Appropriate checksums, encryption, and verification processes should be in place to validate the completeness and integrity of the retrieved data.

5

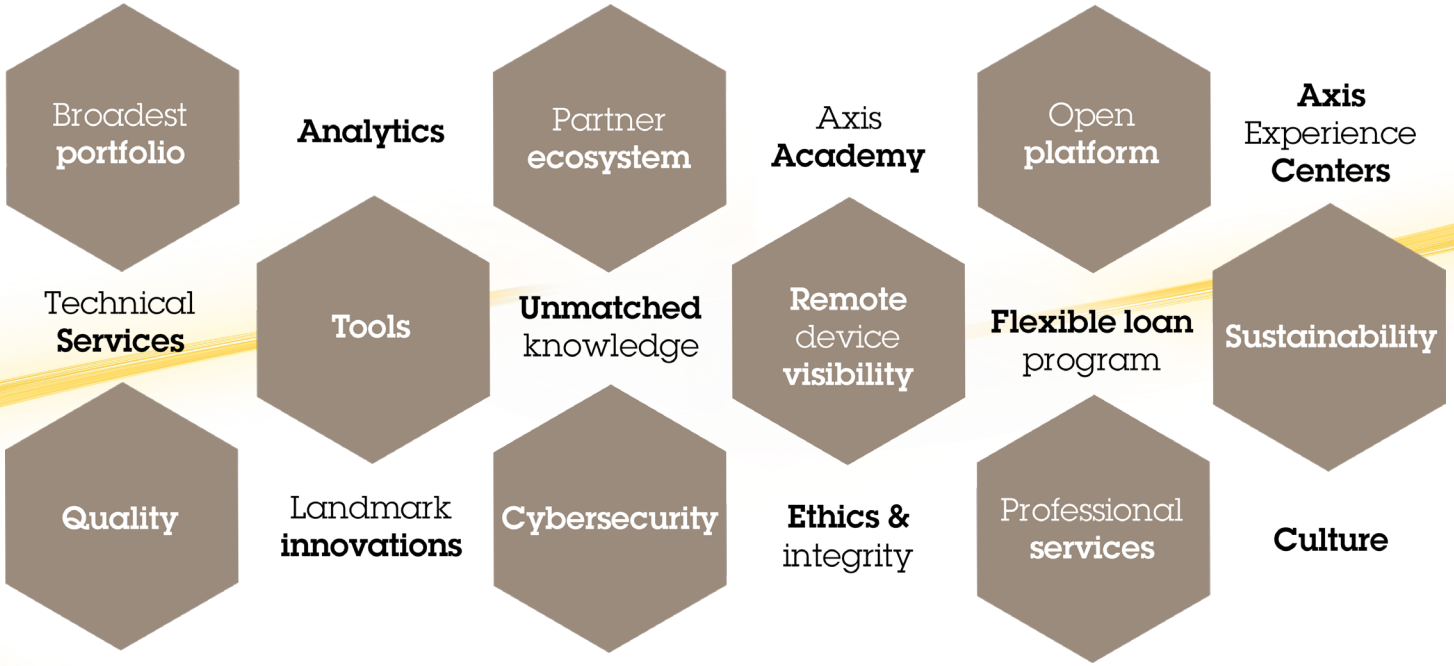
Long-term storage and archiving
After retrieving the surveillance data from the cloud, schools should have a plan in place for securely storing and archiving the data for any future reference or legal purposes, in compliance with relevant data retention policies and regulations.

The Axis Advantage

Choose the right cloud partner based on vendor trust, reliability, and cybersecurity strategy.

You can trust our cutting-edge physical security solutions to deliver unmatched value.
And yet with Axis, there is so much more.

The 18 Advantages



Ready to learn more? Visit www.axis.com/solutions/education

About Axis Communications

Axis enables a smarter and safer world by creating solutions for improving security and business performance. As a network technology company and industry leader, Axis offers solutions in video surveillance, access control, intercom, and audio systems. They are enhanced by intelligent analytics applications and supported by high-quality training.

Axis has around 4,000 dedicated employees in over 50 countries and collaborates with technology and system integration partners worldwide to deliver customer solutions. Axis was founded in 1984, and the headquarters are in Lund, Sweden.