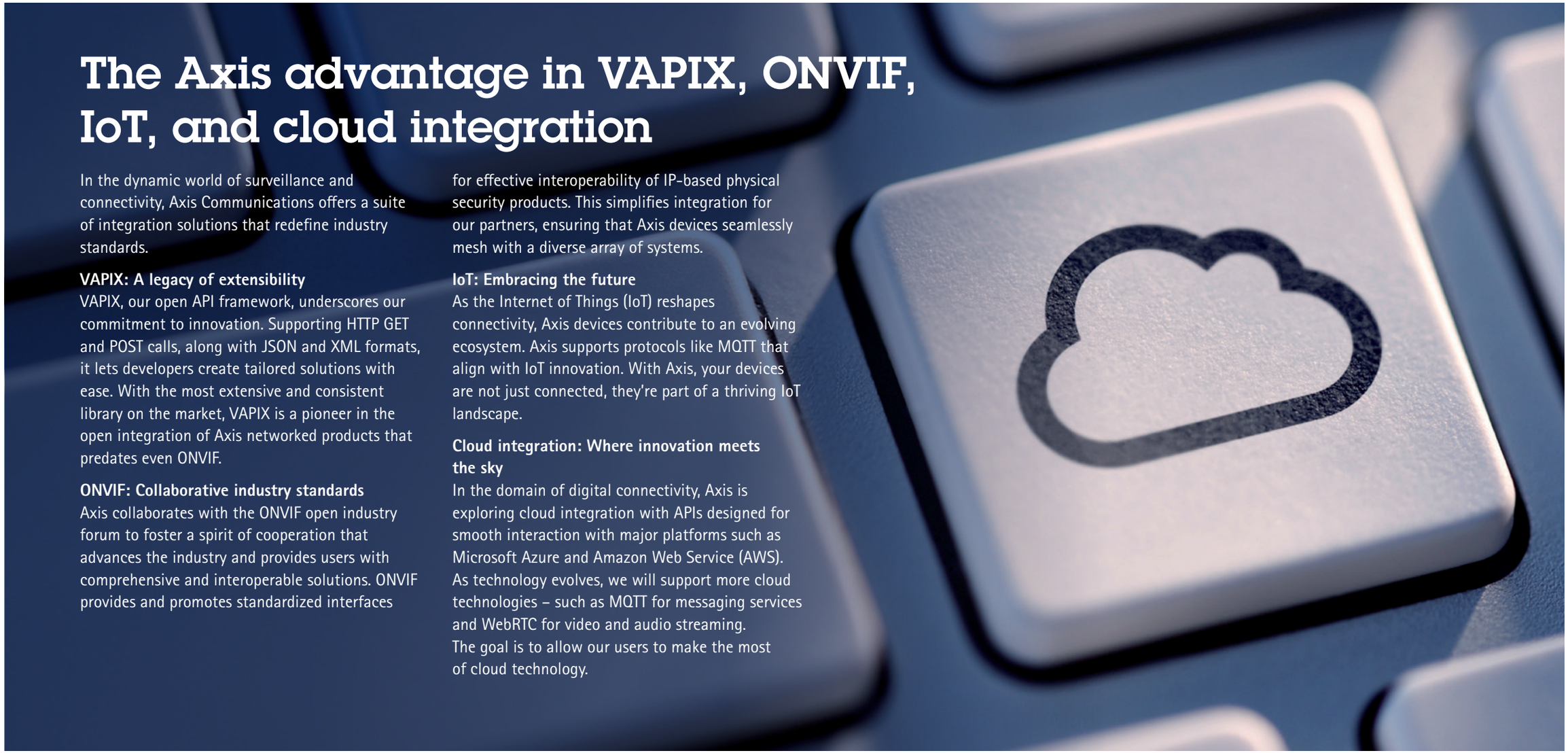
World-class integration

Integration plays a pivotal role for Axis products. We are committed to robust and consistent APIs that support easy integration across a diverse range of applications.

So you can create comprehensive solutions that harness the full capabilities of your Axis devices.

On the following pages, you can read more about VAPIX (our own API), our work with ONVIF and IoT, platform modularization with ACAP, and automation for network integration.

The Axis advantage in VAPIX, ONVIF, IoT, and cloud integration



In the dynamic world of surveillance and connectivity, Axis Communications offers a suite of integration solutions that redefine industry standards.

VAPIX: A legacy of extensibility
VAPIX, our open API framework, underscores our commitment to innovation. Supporting HTTP GET and POST calls, along with JSON and XML formats, it lets developers create tailored solutions with ease. With the most extensive and consistent library on the market, VAPIX is a pioneer in the open integration of Axis networked products that predates even ONVIF.

ONVIF: Collaborative industry standards
Axis collaborates with the ONVIF open industry forum to foster a spirit of cooperation that advances the industry and provides users with comprehensive and interoperable solutions. ONVIF provides and promotes standardized interfaces for effective interoperability of IP-based physical security products. This simplifies integration for our partners, ensuring that Axis devices seamlessly mesh with a diverse array of systems.

IoT: Embracing the future
As the Internet of Things (IoT) reshapes connectivity, Axis devices contribute to an evolving ecosystem. Axis supports protocols like MQTT that align with IoT innovation. With Axis, your devices are not just connected, they're part of a thriving IoT landscape.

Cloud integration: Where innovation meets the sky
In the domain of digital connectivity, Axis is exploring cloud integration with APIs designed for smooth interaction with major platforms such as Microsoft Azure and Amazon Web Service (AWS). As technology evolves, we will support more cloud technologies – such as MQTT for messaging services and WebRTC for video and audio streaming. The goal is to allow our users to make the most of cloud technology.

Platform modularization through ACAP

One of the key features of AXIS OS is that it enables platform modularization through the AXIS Camera Application Platform (ACAP). ACAP is a framework that lets developers create and deploy applications and services, such as video analytics, audio analytics, and other custom-tailored extensions to meet business requirements. ACAP applications are independent of the core AXIS OS functionalities and can be installed, updated, and removed without affecting the rest of the system. ACAP applications can also communicate with each other and with external systems using standard protocols and APIs.

Scalability and performance
ACAP uses the microservices architecture of the operating system on Axis devices. Each service can be scaled up or down independently according to the demand and load. This improves the overall performance and availability of the system and allows for efficient resource use and allocation.

Adaptability and customization
With ACAP, Axis devices are more versatile, adaptable, and customizable because they support different types of integrations, analytics, and devices. ACAP also reduces the coupling and increases the cohesion of the platform because each application is loosely coupled with the AXIS OS and highly cohesive within itself.

Maintainability and reliability
Each service can be tested, monitored, and debugged independently and in isolation. This simplifies troubleshooting and diagnostics and enhances the system's resilience and tolerance for faults. And it makes AXIS OS stand out when it comes to software quality.

AXIS OS for IT teams

Establishing proper automation and integration into IT infrastructure ensures appropriate security controls and can save time and money. Unnecessary system complexity is minimized. Some benefits of combining Axis devices and software integrated into enterprise IT infrastructure are that you can:

> Minimize system complexity by removing dedicated, physical device staging networks

> Save costs by adding automated onboarding processes and device management

> Take advantage of zero-trust network security controls such as IEEE 802.1X, IEEE 802.1AR

> Increase overall network security by introducing data encryption at a foundational level with the help of IEEE 802.1AE MACsec. So the Axis device contributes to network security, for example.

> Monitor the Axis device through standardized protocols such as Remote Syslog to allow for log and health monitoring, for example.

Secure networks based on zero-trust principles
Creating converged, secure networks based on zero-trust principles is key to eliminating isolated systems operating on their own. Higher security, lower costs for configuration and maintenance, and more IT-policy-driven enforcement are possible when Axis devices are integrated into the enterprise IT infrastructure using well-defined, open network protocols and standards.

An advantage for IT departments
IT departments are responsible for securing the IT network, so Axis devices are advantageous to them. Axis devices are easier to integrate, maintain, and operate thanks to their versatility and the fact that they are similar to IT solutions defined by open, standardized IEEE and IETF network protocols and shared design. Axis devices are like "trusted citizens" in customer networks that contribute to better security.