

# Technical paper.

## **AXIS Camera Station Cloud Storage**

## Introduction

This add-on service complements AXIS Camera Station Edge & Pro installations, offering storage in the cloud, so your recordings are always available, even if your primary storage is down. Perfectly matched to Axis cameras, this easy-to-deploy service is fully maintained by Axis.

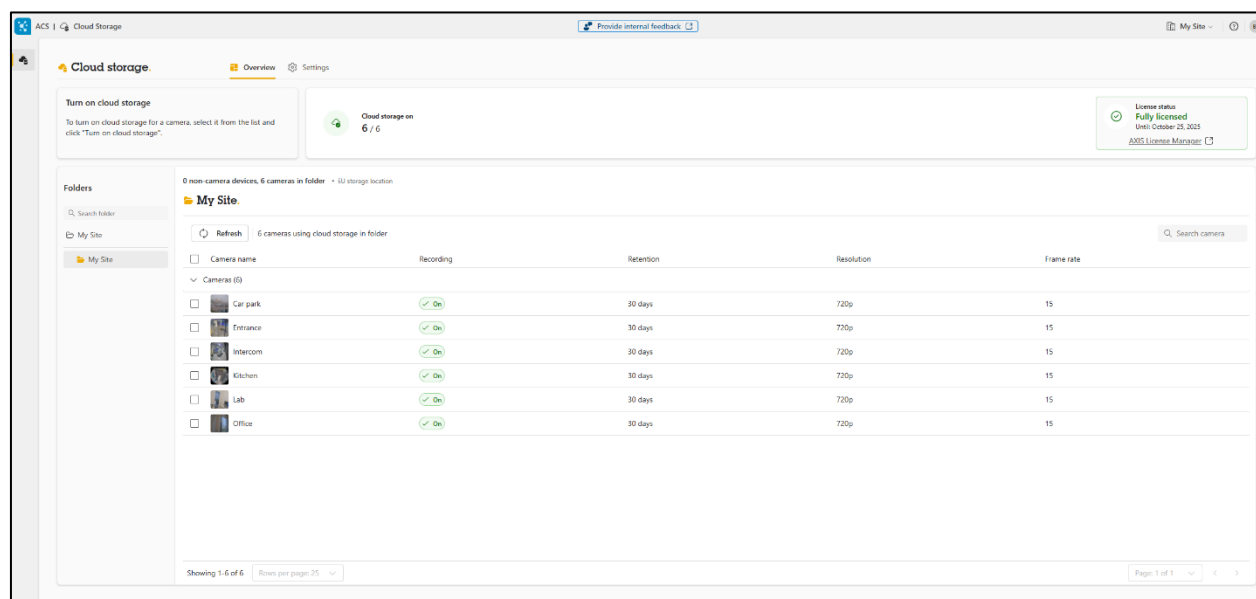
Data is stored encrypted in the selected region and password-protected with two-factor authentication. Additionally, a time-based subscription buys you the right to use this continuously updated, supported service for one year on selected cameras and sensors.

This paper covers the technical aspects of AXIS Camera Station Cloud Storage.

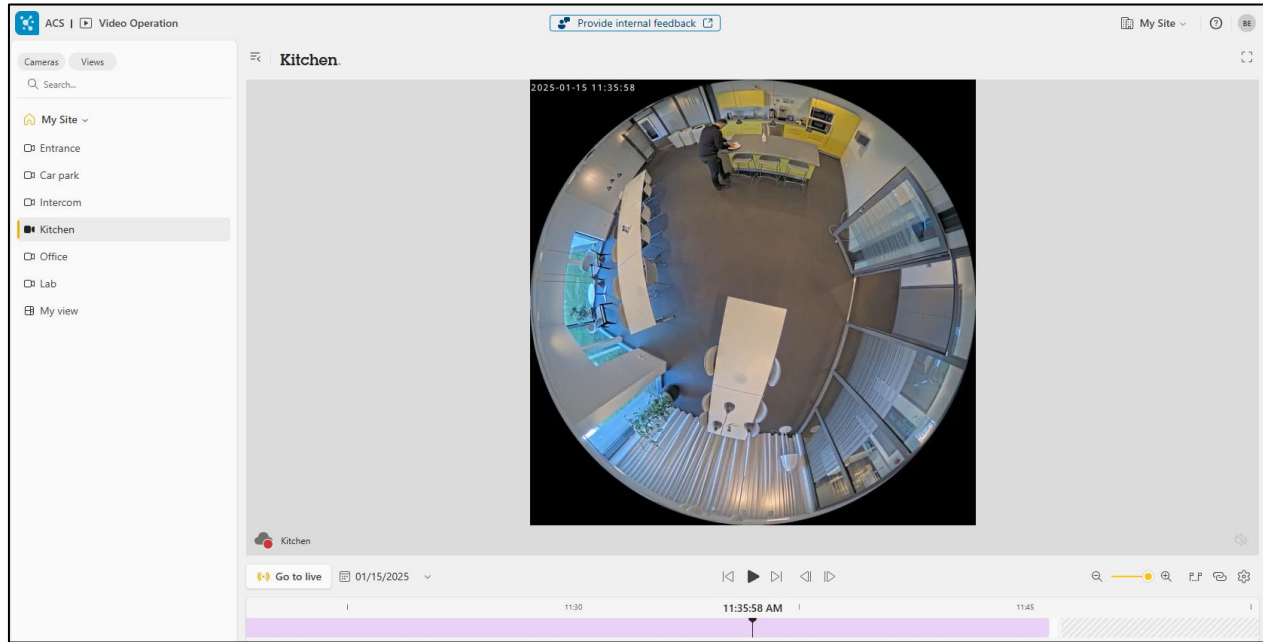
## Activation & video playback

To begin using AXIS Camera Station Cloud Storage, it needs to be activated for your organization. This is done via My Systems, [mysystems.axis.com](https://mysystems.axis.com). Read more [AXIS Camera Station Cloud Storage manual](#). Once activated, the subscription begins, and you must allocate licenses within 30 days. Licenses are obtained from Axis partners.

Individual cameras/sensors can be enabled by selecting from the list.



Video playback is done via My Systems, Video operation, where cloud recordings can be selected and viewed in the timeline.



Read more [AXIS Camera Station Cloud Storage](#)

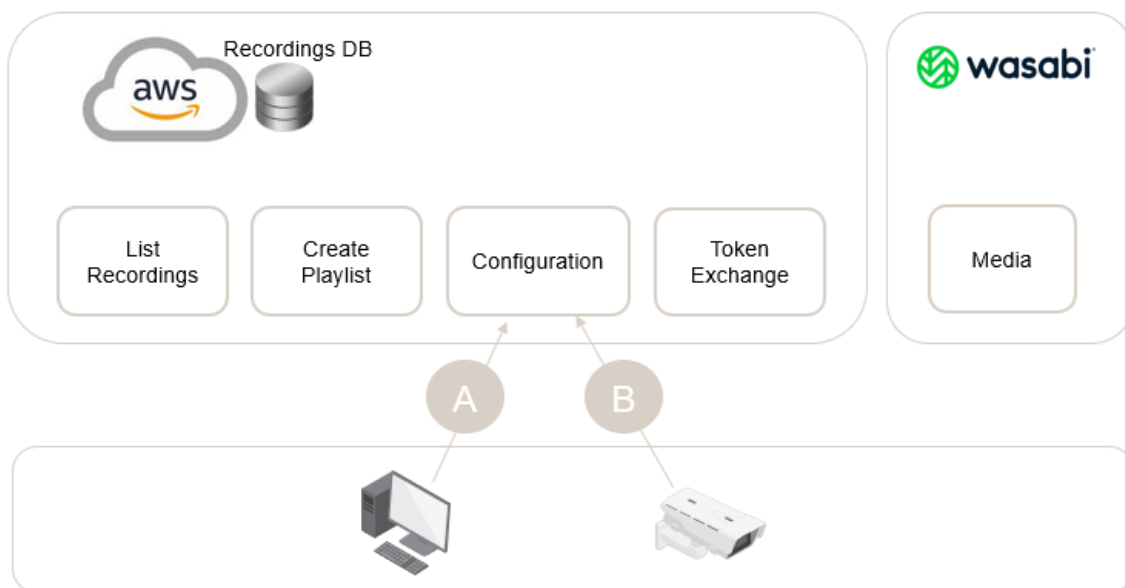
## Technical details

The prerequisites for activation of AXIS Camera Station Cloud Storage are:

- System setup of AXIS Camera Station Edge or Pro.
- AXIS Camera Station Pro Server or devices in AXIS Camera Station Edge must be registered to Connected services.
- Devices in the system need internet access.
- AXIS OS requirement: Cloud Storage can be enabled on cameras with firmware version 11.11.73 or later. Read more > [AXIS Camera Station Cloud Storage – Compatible products](#)

## Solution overview

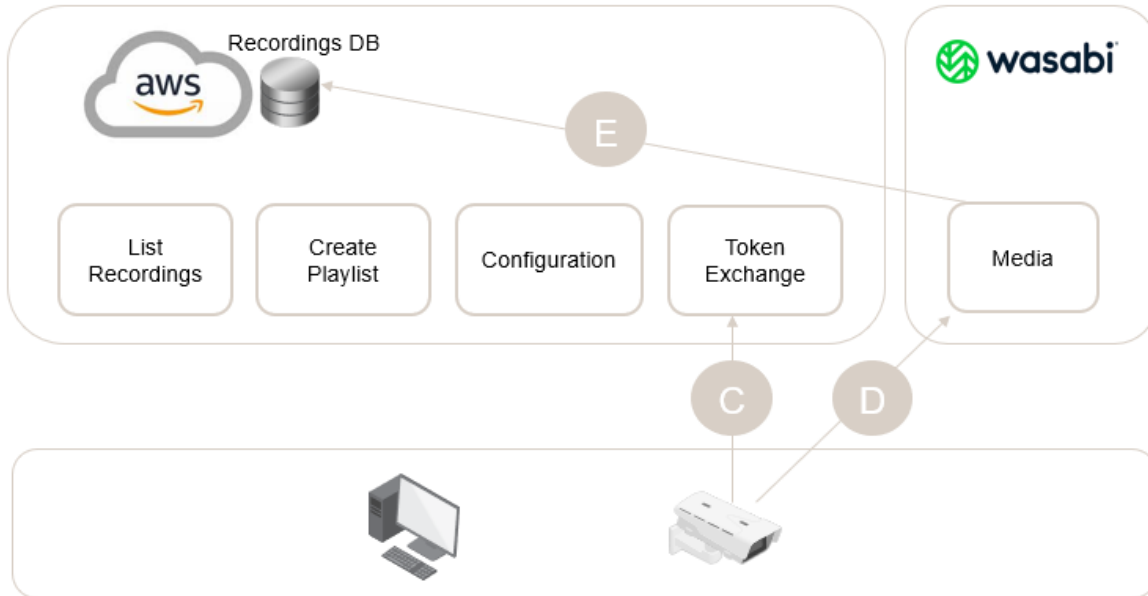
### Configuration of cloud storage



A – Cloud storage activation

B – Configure camera

## Upload cloud recordings

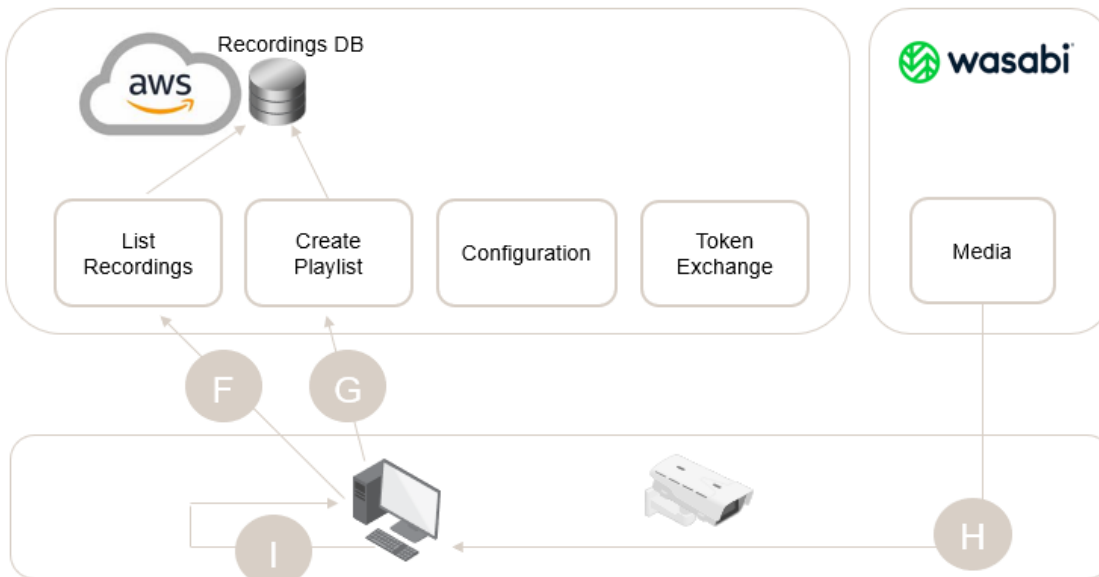


C – Fetch temporary credentials

D – Encrypt media and upload

E – Index recording metadata

## View cloud recordings



F – Fetch recordings

G – Create playlist

- H – Fetch encrypted media listed in playlist
- I – Decrypt & present media in the web client for the user

## Cloud storage End-to-End encryption

AXIS Camera Station Cloud Storage is secure by default, using safeguards like single sign-on, password protection, OAuth 2.0, and two-step verification. All data is encrypted in transit and at rest.

Encryption in transit: TLSv1.2. Encryption at rest: AES-128-bit.

Video footage is stored remotely in fully secure and redundant data centers that are certified for System and Organization Controls 2 (SOC-2).

## Encryption with key servers

- The video is encrypted using a symmetric key (AES-128).
- The symmetric key is encrypted and decrypted using an asymmetric key-pair (RSA-2048). The private key of the key-pair is protected by the Key Server.
- The encrypted video and the encrypted symmetric key are downloaded by the web player.
- The web player decrypts the symmetric key using the Key Server (the private key never leaves the Key Server).
- The web player uses the symmetric key to decrypt the encrypted video.

## Multi-regional support

AXIS Camera Station Cloud Storage supports data storage across different regions, giving users full control to choose where their data is stored by configuring region-specific settings.

## Supported regions

- Australia (Sydney)
- Canada (Toronto)
- EU (Frankfurt, Germany)
- UK (London)
- US (N. Virginia)

## Q&A

### **Q: What happens to my cloud recordings if my network connection is lost?**

A: A stable internet connection is essential, e.g. outbound NAT, allowing devices to communicate with (external) public networks. For intermittent connections, the device handles outages as follows: Cameras use stream caches to temporarily buffer video during short network disruptions. If the buffer fills, unsend video is dropped. However, interruptions can lead to secondary issues, such as cache bursts and bandwidth limits multiplied across multiple devices, creating potential failure points. To minimize cloud recording loss, local storage is recommended as a fail-safe, ensuring uninterrupted recording even during connection issues.

### **Q: I am encountering an error when attempting to activate cloud storage on my AXIS Camera Station Pro site. I am using the AXIS S22 Appliance Series. What could be causing this issue?**

A: AXIS Camera Station Cloud Storage is a camera-to-cloud solution that requires the cameras to have a direct connection to the internet. When using an AXIS Camera Station S22 Appliance recorder, the cameras connected to the recorder do not have internet connectivity by default, which prevents activation of the cloud storage solution.

If connected to the server uplink U2, it is recommended to connect to server uplink U1 and disable the DHCP function on the AXIS S22 Appliance switch and set a static IP address in the same range as your existing network.

Read more <https://help.axis.com/en-us/axis-s2208-mk-ii#setup-in-a-corporate-network>

### **Q: What URLs must be allowed in the firewall for AXIS Camera Station Cloud Storage to function?**

A: For AXIS Camera Station Cloud Storage to connect to required services, read more in [AXIS Camera Station Cloud Storage manual](#)