

# Multimedia – Video Surveillance

Direct Video Data Solution

## Introduction




The evolution and continual progress of the Internet has led to a boom in the multimedia industry. The [video surveillance market](#) is expected to grow to the value of \$71.28 USD billion by 2022, at an estimated CAGR (Compound Annual Growth Rate) of 16.56 percent. The industry is undergoing a paradigm shift, moving away from traditional broadcasting models towards cloud-based platforms.

## Background




Video surveillance is an essential component for security systems. It acts as the physical foundation for key departments or sites to carry out real-time monitoring activities. Cloud-based video surveillance solutions are gaining popularity among small and medium-sized enterprises due to their reliability, security, and low cost of deployment and maintenance.

A high-resolution video surveillance management system requires huge amounts of storage and network bandwidth. With IP cameras (IPCs) and cloud computing becoming increasingly popular, cloud-based video surveillance solutions have significantly lowered construction and maintenance costs for platform providers.

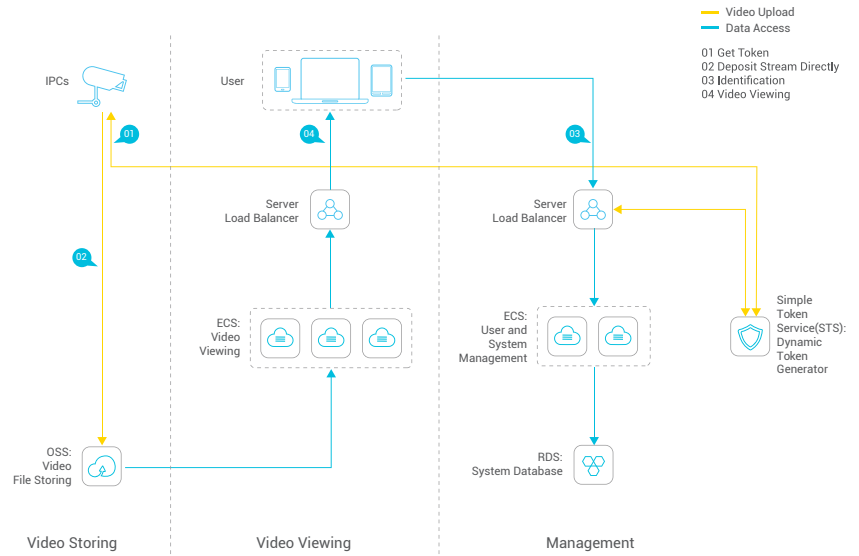
## Highlights

-  Reduces construction cost
-  Reduces development costs
-  Enhances system security

## Benefits

-  Tailored solutions for the video surveillance industry
-  Low cost of deployment and maintenance
-  Scalable and secure network and bandwidth

## Recommended Solution Architecture



This solution makes use of Object Storage Service (OSS) to provide direct video stream storage capabilities. The surveillance video stream is directly taken from the IPCs and written to OSS, removing the need for a video segmentation cluster. In this solution, the IPCs must keep the Alibaba Cloud account access key (AK) for direct access to OSS. Multiple access keys can be generated and used accordingly. However, this creates a potential security risk. Therefore, this solution uses Simple Token Service (STS) to provide temporary tokens for IPCs. With a temporary token, an IPC can still directly access OSS, but there is no risk of AK leakage. This solution also reduces the overall system cost.

OSS provides Append Object for data or media content to be appended to the existing file with no loss of stored data. This allows the video stream to be stored directly. The uploaded content can be accessed even when this object (file) is not completely written, allowing for file storage and video playback within seconds. STS integrates the user's system permission verification function and provides temporary tokens to verified devices. This allows users to effectively control device permissions.