FAILURE SAFETY

SeeTec
An OnSSI Company

REDUNDANCY/FAILOVER WITH SEETEC CAYUGA

Fail-Safe Video Surveillance Solution

High availability with SeeTec Cayuga is achieved by a combination of redundant system management and fail-safe recording. Using low-cost and available equipment, you can reduce the downtime of your system to a minimum – regardless of its complexity.

■ THE CHALLENGE

Regardless of the purpose of the application, one of the fundamental requirements for a video management system (VMS) is permanent availability. This essentially comprises two aspects:

- Interruption-free access to the system from the operator station

- Reliable and continuous recording of relevant image data

In order to meet these requirements, a fine tuned approach is required, which allows the system to continue to operate even if a network connection or a recording server fails. SeeTec Cayuga offers solutions to cope with a variety of failure scenarios: within the standard packages, cost-effective and easy to configure.

■ REDUNDANT SYSTEM MANAGEMENT

A failure of the central system management – in particular the user and rights management – can be bridged by redundant system administration. This solution is already available in SeeTec Cayuga S100 at no extra cost. If the central administration server is no longer accessible, a proxy server takes over which caches all relevant configuration data and access rights. The system runs in "island mode" and can continue to be operated.

■ FAILOVER RECORDING

Failover recording of video streams from different cameras is much more demanding on the architecture, since large amounts of data have to be diverted and the network must not become a bottleneck. Here SeeTec Cayuga offers two solutions:

FAILOVER RECORDING

The configuration of additional recording servers ensures that even when a server fails, the video data can be stored. In SeeTec Cayuga the recording server (also Device Manager or DM) is responsible for the management of the existing cameras in the system and constantly exchanges information with the administration server. To implement a failover concept, an additional failover recording server is configured in the system for each recording server. Of course, a failover server can also be configured for multiple productive recording servers.

Possible failover scenarios

- There is one failover recording server for multiple productive recording servers: ideally, it must be sufficiently powerful so that it can take over the tasks of all productive recording servers at the same time for the duration of the failure.

- There is a failover recording server for each productive recording server: The performance of this server must be sufficient to handle the tasks of the productive recording server for the duration of the failure.

- There are two productive recording servers, one of which is the failover recording server of the other: both must be so powerful that they can take over the tasks of the other productive recording server for the duration of the failure.

If the productive recording server fails, the management server notices the failure and starts the components on the failover recording server. After a short switching time, the image recording continues. Once the productive recording server is available again, the management server stops the relevant components on the failover recording server and restarts them on the original (productive) recording server.

All data remains on the server it was recorded on - even if the productive server is available again, no recordings need to be synced back. This saves time, the network is not burdened unnecessarily and the performance of the CPU is still fully available.

Failover Recording Server

Recording Server Failure

Management Server

Productive Recording Server

Client
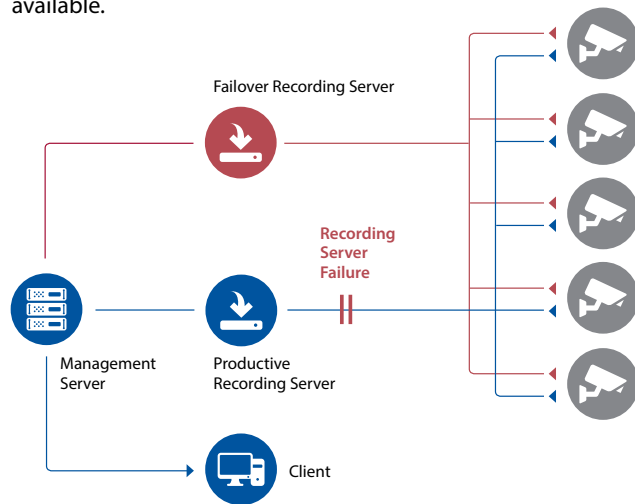
YOUR BENEFITS

- Cost-effectiveness through the use of standard hardware

- No expert knowledge of complex cluster systems required

- Minimum switching times of less than two minutes until the system is available again after a failure

- Minimal loss of image data in case of a system failure

RECORDING ON THE EDGE DEVICE

In edge recording, image data is stored on an internal memory (e.g. SD card) of the device to bridge connection failures between the camera and the recording server. If the connection between camera and server is interrupted, recording gaps occur. When using edge recording, however, the recording gaps on the server can be filled with the recordings from the internal memory of the camera after restoring the connection. Time patterns for the recording as well as the maximum recording size are taken into account.

Additionally, Microsoft Cluster and Virtualization are supported.