Tiger Surveillance

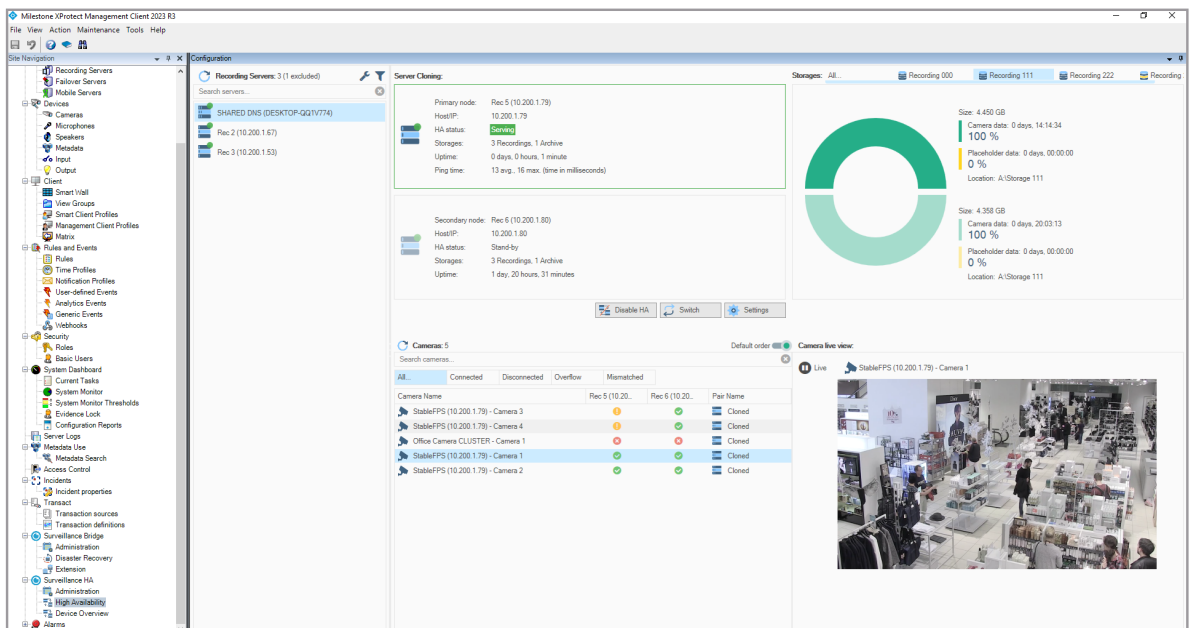# **Surveillance HA** for Recording Servers − Server Cloning

Use Case | **Automated Failover for Video Surveillance**

Surveillance HA for XProtect Recording Servers is a straightforward clustering solution designed for High Availability, featuring zero-loss failover. This cluster operates on an active-active model. Using this software plug-in, two identical XProtect Recording Servers can be configured to form a fault-tolerant cluster, dramatically enhancing system resilience and data protection. When operating under the Server Cloning mode, Milestone's Management Server sees a single recording server. There is no additional configuration required. Surveillance HA automatically copies configuration from the primary server to the secondary server. Configuration is easy as devices only need to be attached to a single server.

When operating in this mode, the failover takes place within the cluster. The Management Client and Smart Client are always connected to the cluster.

From the list of servers, the user can quickly see which node, primary or secondary is "Serving". When selecting a specific server, the user not only sees which of the primary or secondary node is currently serving, but also sees the status of the node and if any data is missing.

How Server Cloning Works

Step 1: Normal Operation

Server Cloning operates at the server level. During normal operation, two standard XProtect Recording Servers record the same camera feed (unicast). Both servers record concurrently to enhance system reliability, ensuring an unbroken chain of operation. Both servers share identical configurations, including frame rates, motion detection, resolutions, and retentions. With Server Cloning, there is always a 1:1 relationship between the servers.

Primary Recording Server | Heartbeat / Recording Server HA | **Secondary** Recording Server

Management Client and Recording Servers

Standard Smart Client Zero-Loss Failover
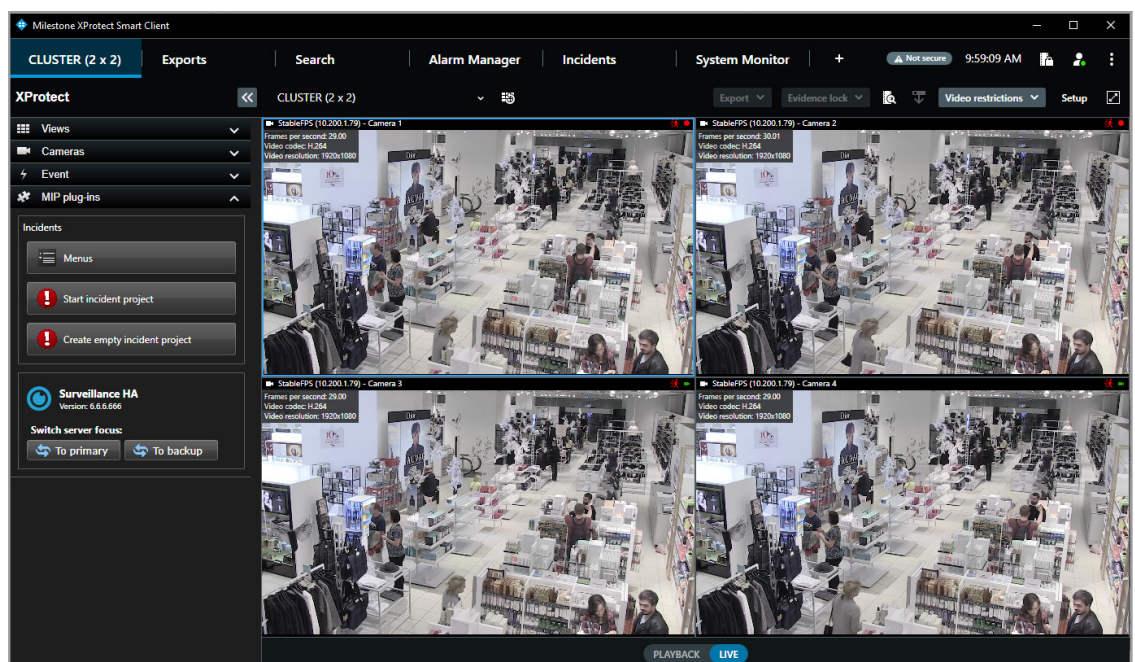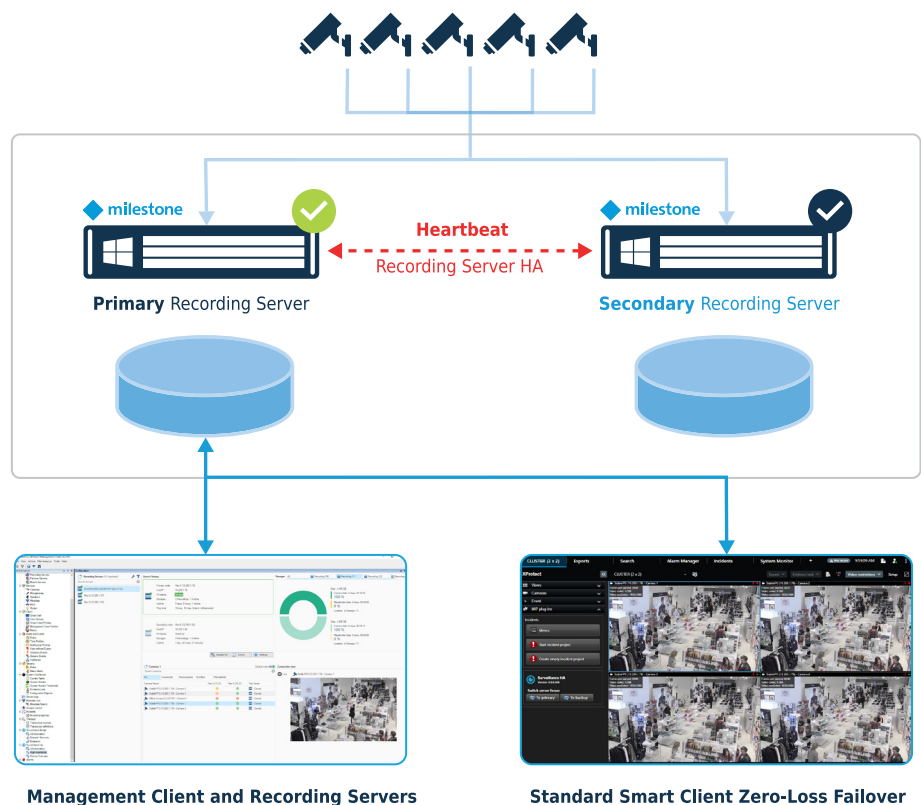
Step 2: Failover

In the event of manual "Switch" or a server failure, the "Serving" role is transferred to the "Stand-by" server. This seamless operation ensures that the Management Clients and Smart Clients reconnect automatically, unbeknownst to them that they are now sourcing data from a different server.

Management Client and Recording Servers

Standard Smart Client Zero-Loss Failover
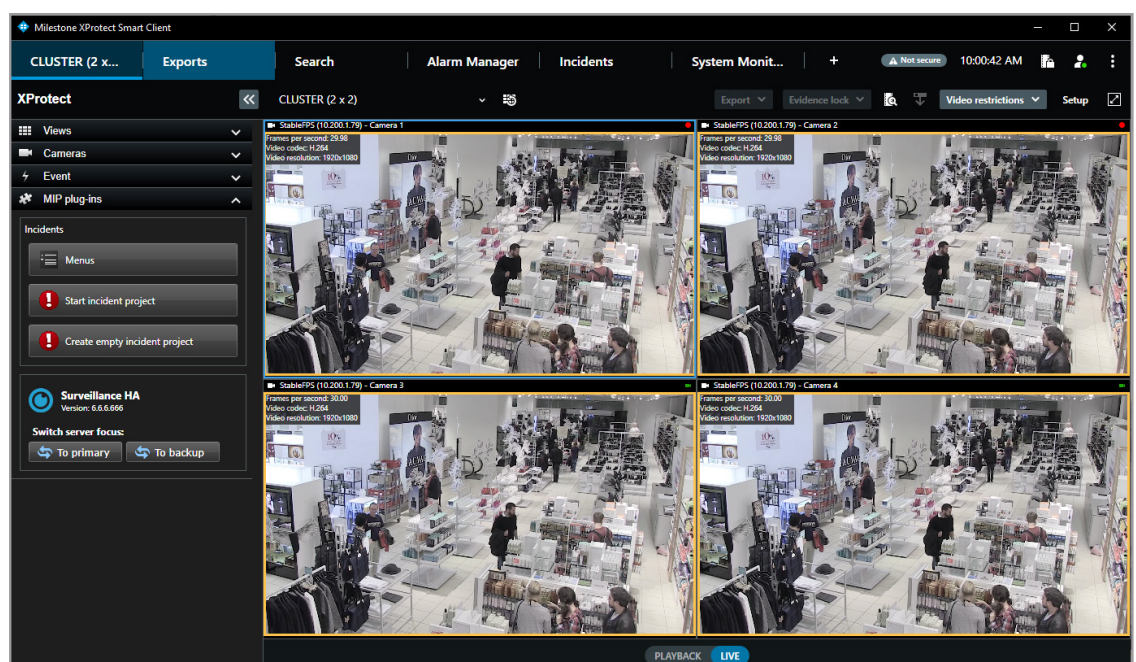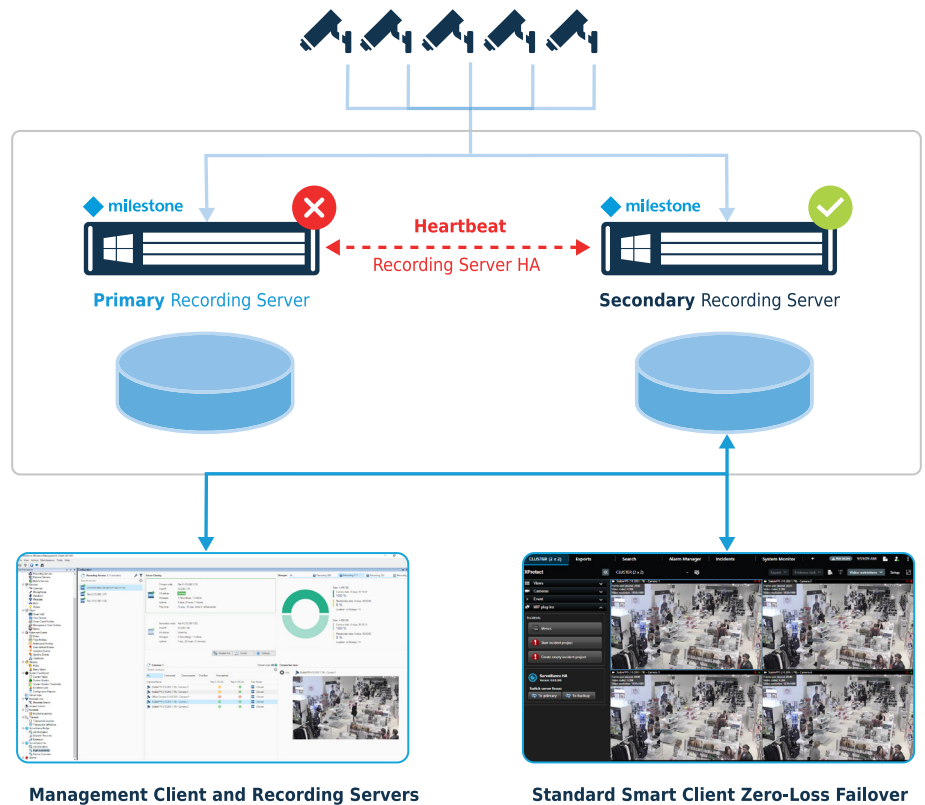
Step 3: Backfilling

Backfill takes place in two steps. First, during startup, Surveillance HA creates placeholder files on the server with less data. As soon as the placeholder files are in place, Surveillance HA starts the recording server and begins the backfill process in the background. Note that automatic backfilling needs to be enabled to occur. This feature can be kept enabled at all times for automatic backfilling or it can be set to "Placeholder data" and manually switched to "Enabled" for more controlled backfills.

Management Client and Recording Servers   **Standard Smart Client Zero-Loss Failover**
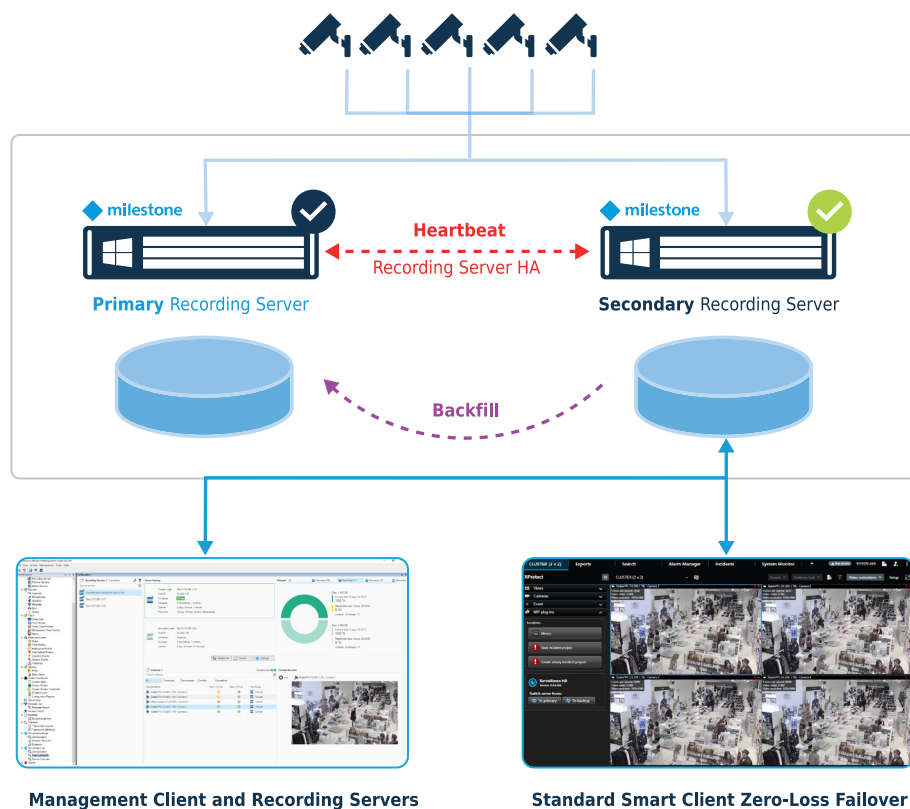
Warning: Manually starting the recording server will prevent the backfilling operation from succeeding. Always let Surveillance HA start the recording server after it finishes creating placeholder files.

Step 4: Failback

Once backfilling operation completes, both servers have access to all recordings and the system has achieved equilibrium again. If the administrator prefers to serve from the primary server, they can initiate a "Switch" command at a suitable time or let it occur automatically.

Management Client and Recording Servers   **Standard Smart Client Zero-Loss Failover**
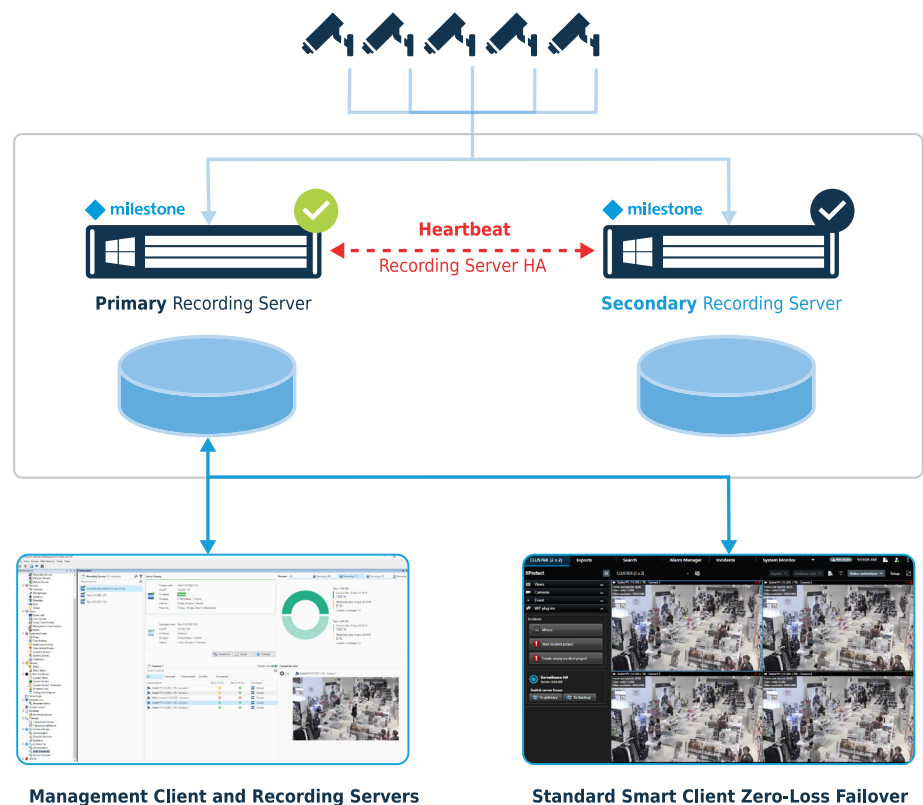
Smaller Storage

Note that while Milestone will always "see" the same retention on both servers, it is possible to configure a smaller physical storage on the secondary server. In this scenario, the Milestone timeline will continue to display the full retention period. However, if the operator moves the play head outside the physical storage range, Milestone will fail to display any video, as only the primary server has valid data for that period.

Note: This feature currently requires special configuration.
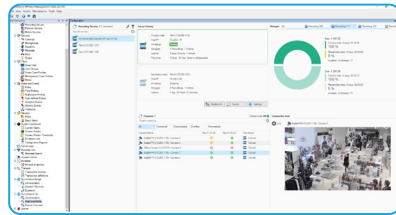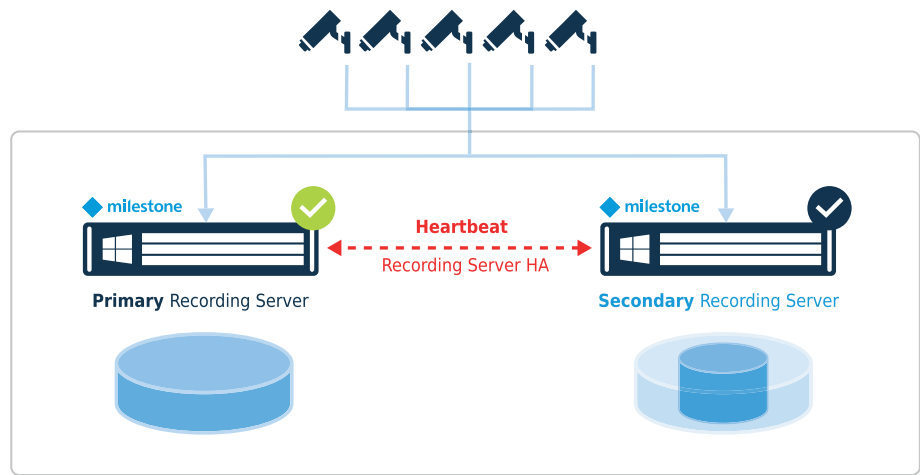
Management Client and Recording Servers
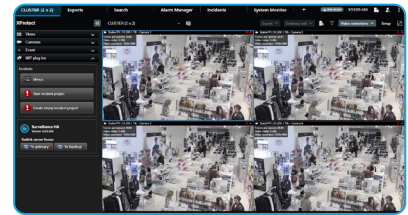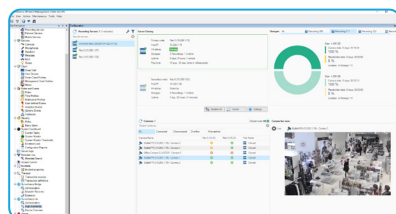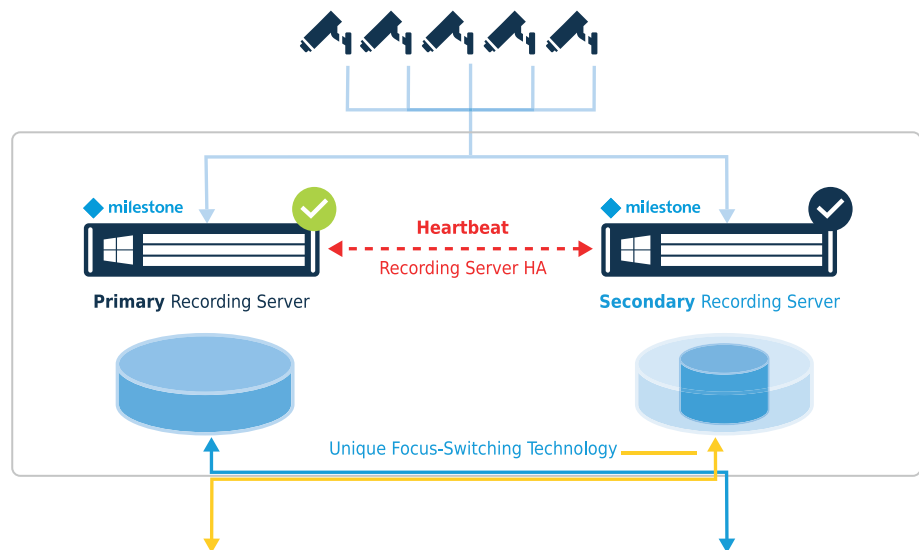
Standard Smart Client Zero-Loss Failover

Focus switching

The Device Overview tab provides a list of any camera mismatch, in overflow, or disconnected. This allows for efficient camera troubleshooting without disrupting normal operations. The unique Focus Switching feature (only available with DNS configurations) allows admin to monitor camera feeds from the alternative server in the Management Client while the Smart Client(s) continue to show the feed from the primary server.

Management Client and Recording Servers
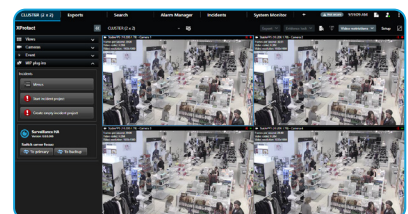
Standard Smart Client Zero-Loss Failover

Conclusion

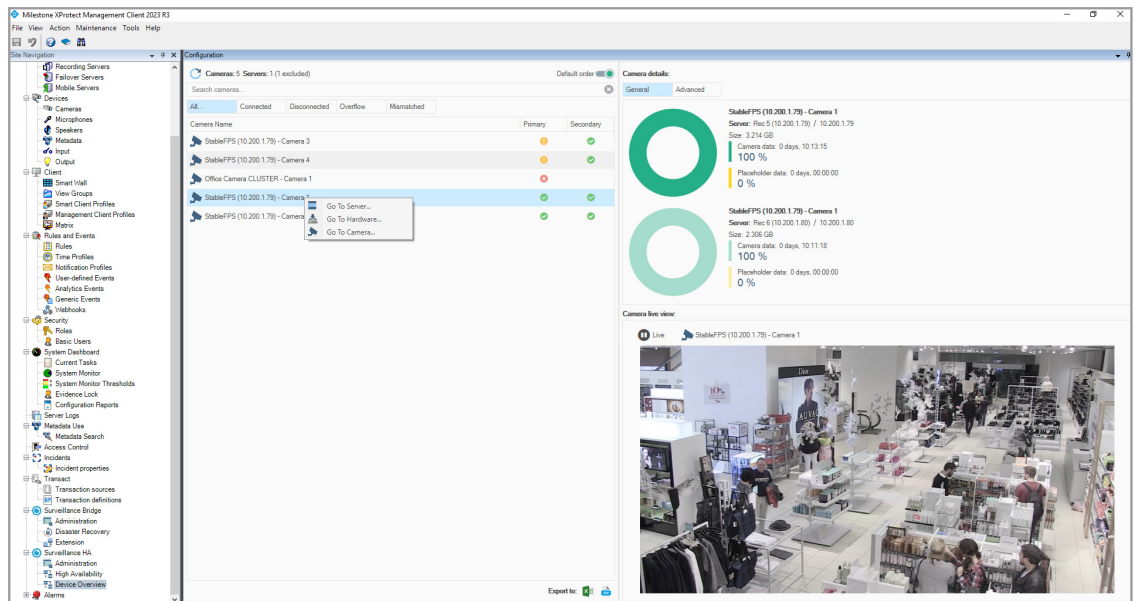Operating Surveillance HA for XProtect Recording Servers in Server Cloning mode is the easiest and most transparent way to achieve High Availability. As Milestone sees a single server, configuration and maintenance are easy. It is fully compatible with all third-party applications and plug-ins. Best of all, there is no need for complex and expensive Microsoft Clustering or Hyper Converged Infrastructures.

Surveillance HA Benefits:

1. **Continuity and Reliability:** Surveillance HA automatically switches to a secondary server during hardware failures, eliminating downtime and ensuring seamless operations. Enhances security and reliability and simplifies software upgrades.

2. **Data Redundancy:** By maintaining parallel recording on both primary and secondary servers, Surveillance HA ensures data redundancy, safeguarding important surveillance data against loss.

3. **Seamless Operations:** The transition between the primary and secondary servers is smooth and virtually unnoticed by users, maintaining operational consistency.

4. Zero Data Loss: Once the primary server is back in operation, the missing data can be restored efficiently from the secondary server, ensuring a fully restored timeline.

5. Flexible Configuration: It offers the flexibility to have different retention periods on the secondary server, potentially saving on storage costs while still retaining crucial data.

6. Focus-Switching: Enables complete management of the non-serving server during normal operations, allowing for the troubleshooting of various connectivity issues, including cameras, without interrupting service. This feature requires DNS entries.

7. Global View: Easily identify camera mismatch, connectivity issues, or recording problems across any recording servers.

8. Easy Integration: Integrates easily with existing infrastructures, including compatibility with all Milestone XProtect tiers of software license, making it a suitable choice for any setup.

9. Legal and Regulatory Compliance: Ensuring continuous recording can be vital in meeting legal and regulatory requirements for surveillance in certain industries or regions.

About Tiger Surveillance

Tiger Surveillance is a software development company specializing in data management and protection for video surveillance workflows. Founded in 2022 and headquartered in Alpharetta, Georgia, the company is powered by Tiger Technology, an established technology provider of storage, data, user, and media management solutions.

The Tiger Surveillance portfolio includes solutions designed to extend and protect storage infrastructure on premises, in any cloud tier or any remote data center. The company's flagship product Surveillance Bridge enables customers to adopt the cloud for unlimited capacity and disaster recovery thus optimizing costs & resources and extending retention times.

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