

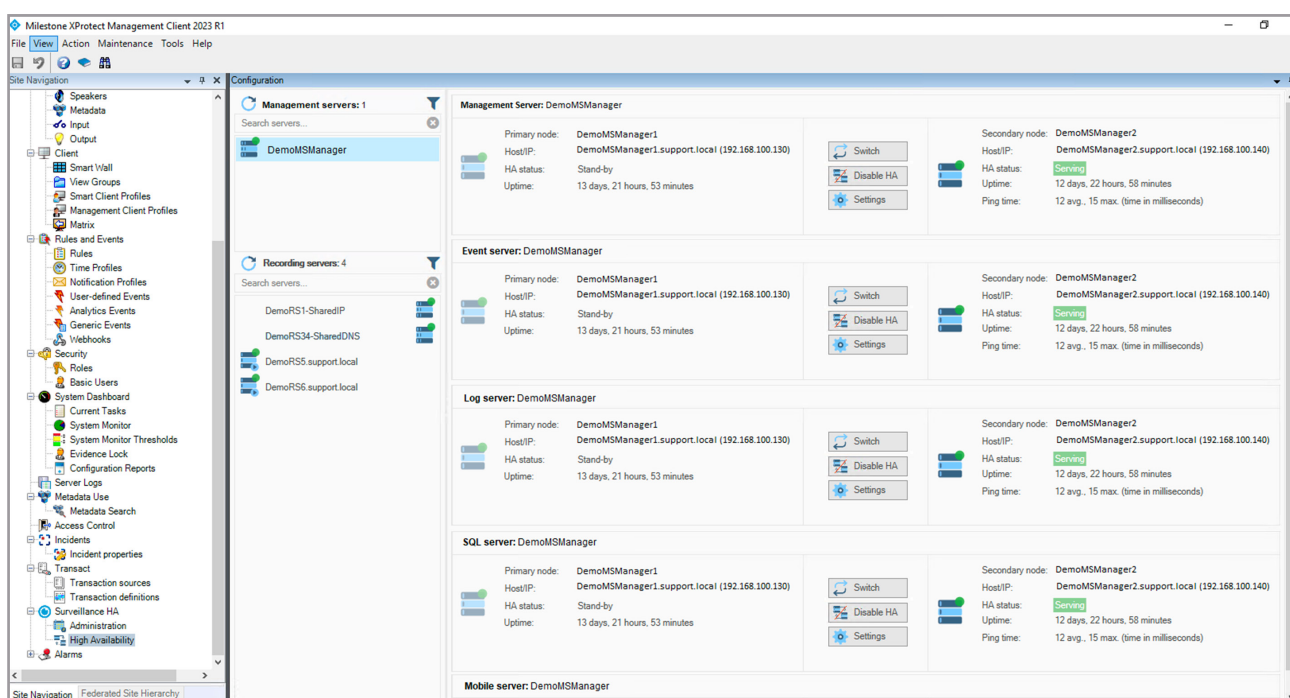
Surveillance HA for Management Server

Use Case

Automated Failover for Video Surveillance

Surveillance HA for Management Server is a clustering solution designed for High Availability. It features SQL database replication as well as application failover. This cluster operates on an active-passive model.

Surveillance HA for Management Server does not require any special hardware, SQL server, or Milestone licenses. It manages the entire stack of Milestone applications, which can be hosted on a single or separate hardware platform pairs.



As Milestone applications depend on a SQL server to store and preserve their configuration, each service can fail independently from the SQL server (and from each other). Three SQL server configurations are supported:

- In a **“Multi-site”** configuration (most popular), two host platforms, each running a Management Server and an SQL server, are turned into a cluster. Both the SQL server and the Management Server fail together (ex: a pair of Huskies).
- In a **“Cross-connected”** configuration, the two SQL servers and two Management Servers are hosted on four independent host platforms, which can fail independently from each other.

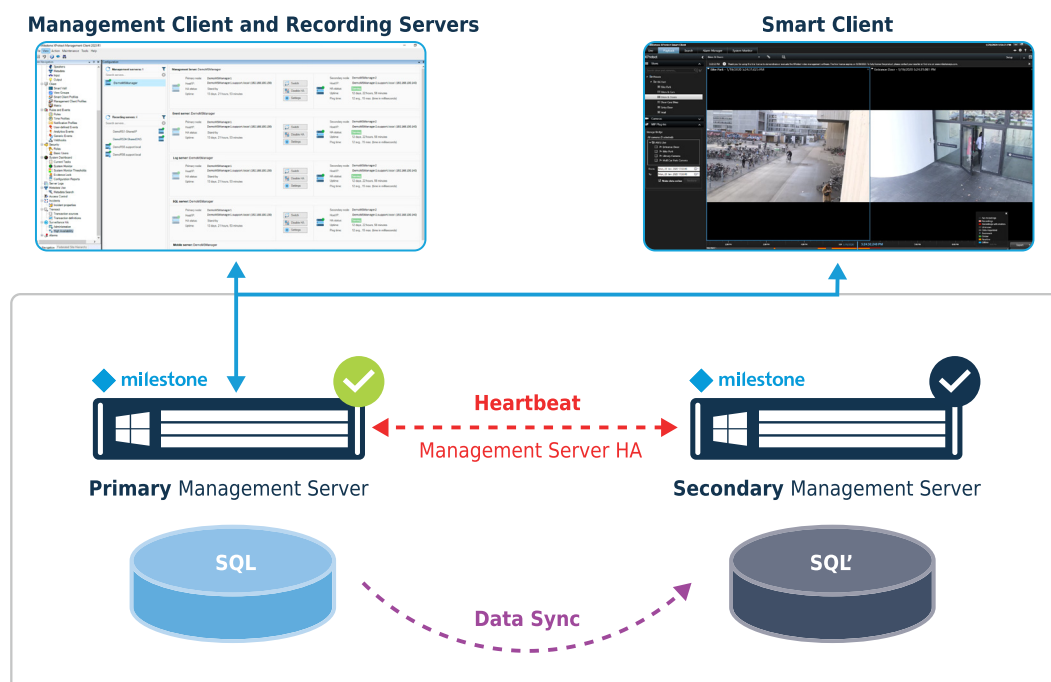
- In a “**Centralized**” configuration, two Milestone Management Servers rely on a single, highly available SQL server (ex: Microsoft SQL Enterprise). In this case, Surveillance HA does NOT manage the replication/failover of the SQL server.

Below examples showcase operations with a Multi-site configuration. For the sake of simplicity, references to “Management Server” imply other Milestone services (Event Server, Log Server, etc.).

How Surveillance HA for Management Server Failover Works

Step 1: Normal Operation

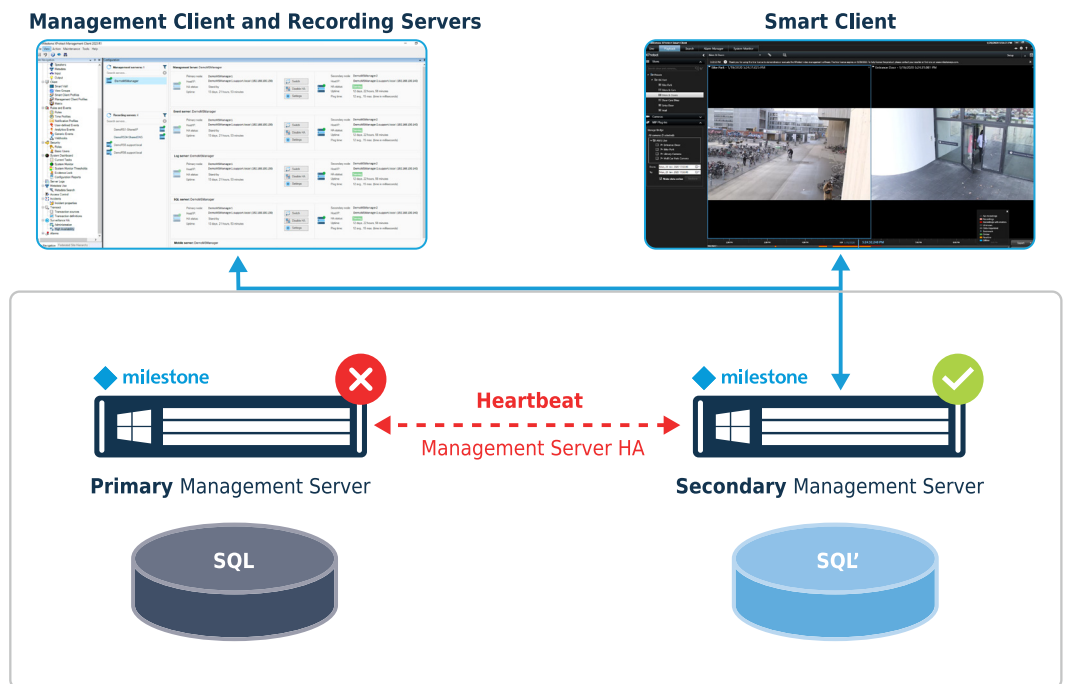
During normal operation, the Primary server is “Serving” and the Secondary server is in “Stand-by” mode. This means all Recording Servers are obtaining their configuration from the Primary server. Surveillance HA takes care of replicating SQL changes to the Secondary server.



Step 2: Failover

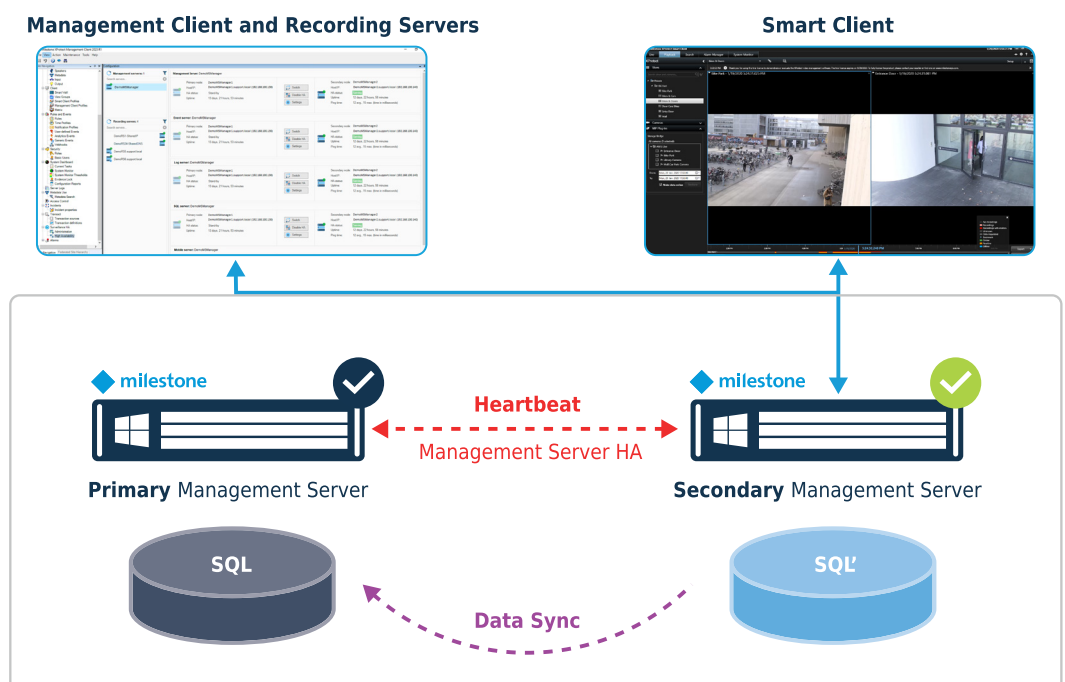
The “Serving” role is transferred to the “Stand-by” server manually or in the event of a failure. In this case, the cluster’s virtual IP (or hostname) address will now point to the Secondary server, and the Milestone applications

will automatically be launched. The data sync that previously took place between the “Serving” and the “Stand-by” servers ensures that the Milestone applications always wake up with an up-to-date configuration, allowing them to resume operations seamlessly. Recordings are uninterrupted. The switch duration is determined by adding the fault-detection time (set by default to 30 seconds) to the Management Server’s start-up time.



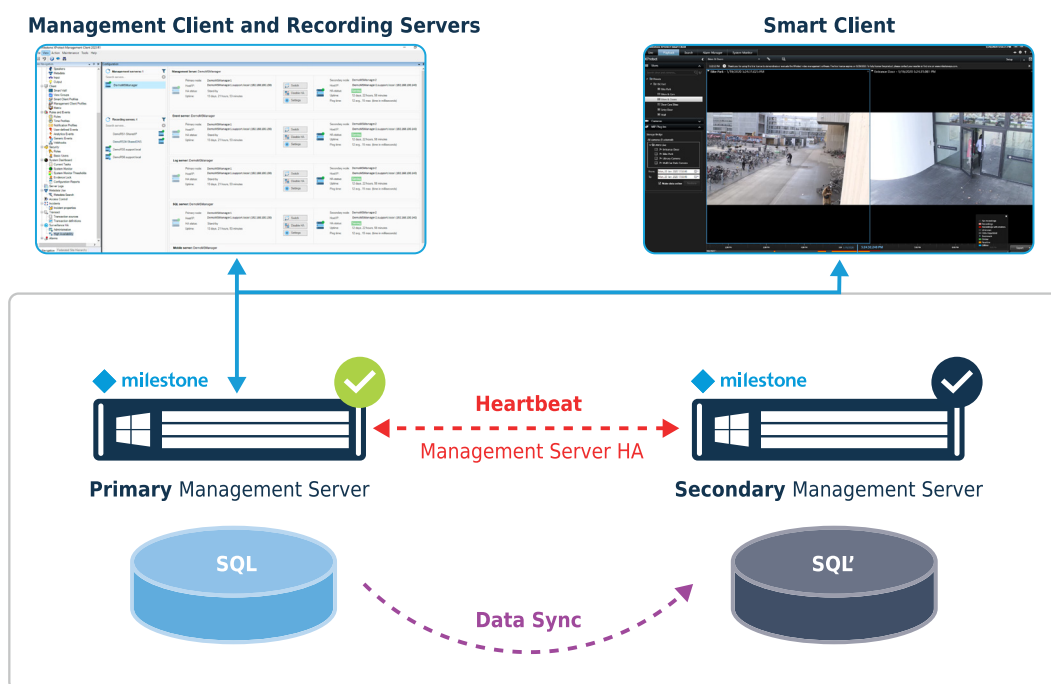
Step 3: Data Sync

Data sync continues to take place between the Secondary, now “Serving” and the Primary, now “Stand-by” servers to maintain databases up to date.



Step 4: Return to Normal Operation

The administrator can assign the “Serving” role to either the Primary or Secondary server dynamically.



Note: In the event both servers were down, if the primary and secondary servers are brought back up at the same time, the primary server will always take precedence over the secondary server. Since Milestone applications always read their configuration from the SQL server, it makes no difference which server comes up first as long as the SQL server is still running (e.g. Centralized and Cross-connected configurations). However, if the SQL server went down along with the applications (e.g. Husky pair), and the secondary server is known to contain newer data, it should be brought up first to ensure that the most recent configuration is preserved.

Conclusion

Surveillance HA for Management Server is an easy to deploy, cost-effective, all-in-one solution that ensures High Availability of the Milestone XProtect Management Server. It supports the entire stack of Milestone applications, and it does not require any specialized hardware or software.

Surveillance HA Benefits:

- 1. Continuity and Reliability:** Surveillance HA automatically switches to a secondary server during maintenance or hardware failures, eliminating downtime and ensuring seamless operations. Enhances security and reliability and simplifies software upgrades.
- 2. Supports the entire stack of Milestone applications:** One license of the software supports the Management Server, the Log Server, the Event Server, the SQL Server, as well as the Mobile Server (planned for future release).
- 3. Configuration Redundancy:** By maintaining parallel configurations on both primary and secondary servers, it ensures all critical information is safeguarded against loss.
- 4. Seamless Operations:** The transition between the primary and secondary servers is smooth, maintaining operational consistency.
- 5. 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.
- 6. Legal and Regulatory Compliance:** Ensuring continuous recording can be vital in meeting legal and regulatory requirements for surveillance in certain industries or regions.
- 7. Cost-Effective:** Eliminates the need for costly and complex Hyper-Converged Infrastructures or clustered operating systems.

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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