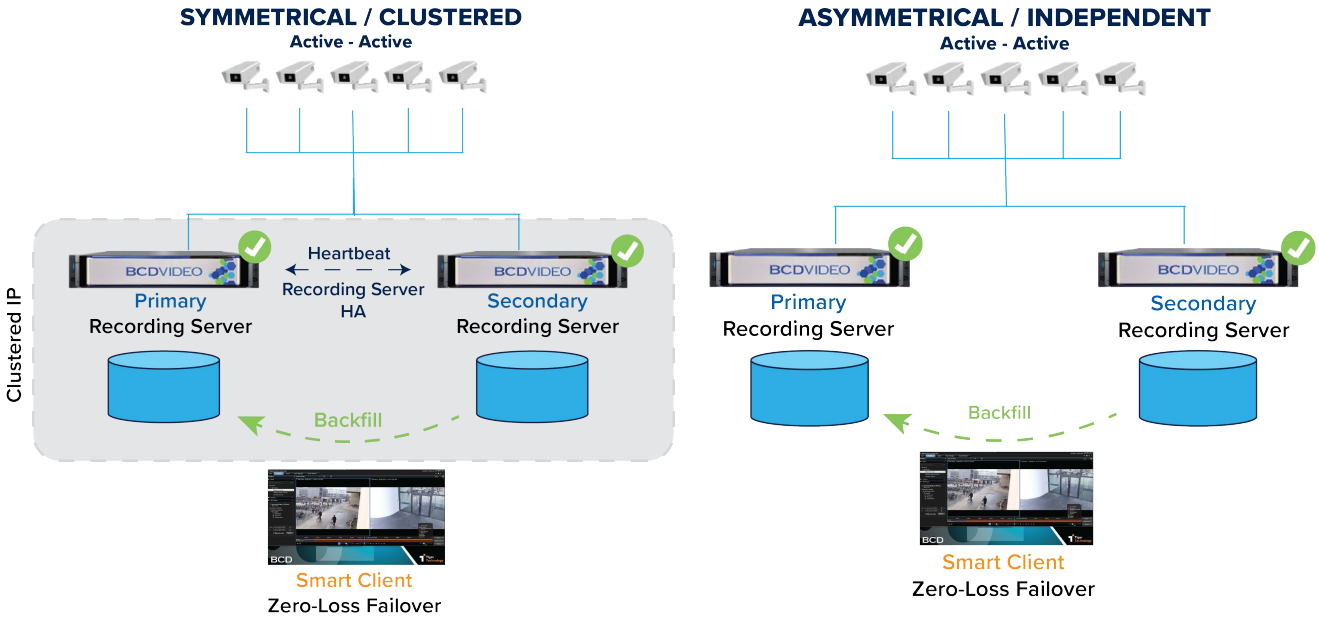
Surveillance HA for XProtect

Surveillance HA is a unique solution that provides Milestone XProtect with Zero-Loss Failover. The software only plug-in supports two failover configurations for maximum flexibility. The basic operational diagram for each active-active configuration is shown below:



In the **Symmetrical** configuration, the Primary and the Secondary servers share the same configuration and form a cluster. From a Management Server perspective, both servers “look” like a single machine.

In the **Asymmetrical**, non-clustered configuration, the Primary and Secondary servers maintain completely independent configurations. They can even report to different (and Federated) Management Servers. Surveillance HA seamlessly connects Smart Clients to the selected camera feed via one of two available Recording Servers.

The following table highlights key functionalities and associated requirements:

	Milestone Failover Active/Passive (no replication)	Symmetrical Active/Active (clustered)	Asymmetrical Active/Active (independent)
Functionality			
Need **ZERO LOSS** Failover?		X	X
Need immediate access to **PREVIOUSLY RECORDED** camera data?		X	X
Need support for Milestone **ENCRYPTION**?	X		
Need to ALSO support the Milestone **FAILOVER** (for additional level of security)?			X
Need automatic **BACKFILLING** after recovery of primary server?	X	X	X
Need ability to apply HA across **DIFFERENT** number of cameras, resolutions, frame rate, etc.?			X
Need primary and secondary Recording Servers to support **DIFFERENT** retention periods?			X
Need support for **MULTIPLE** Management Servers (*)?			X
Need Live Camera **CONTINUITY** during and after failover	X	X	X
Need compatibility with **DISASTER RECOVERY & STORAGE EXTENSION** to cloud?		X	X
Requirements			
Requires a **1:1** failover server		X	
Requires camera streams to be **DIRECTED** to both Recording Servers	X	X	X
Requires Management Server and Recorder Server **PLUG-INS** to be installed		X	X
Requires Smart Client **PLUG-IN** to be installed			X
Requires camera **MATCHING** between primary and secondary Recording Servers			X
Requires two Milestone Recording Server **LICENSES** (Primary & Secondary)	X		X
Requires Recording Servers to share the **SAME CONFIGURATION**	X	X	

*) Smart Client must log out/in secondary Management Server OR use Tiger's Management Server HA

Functional Description

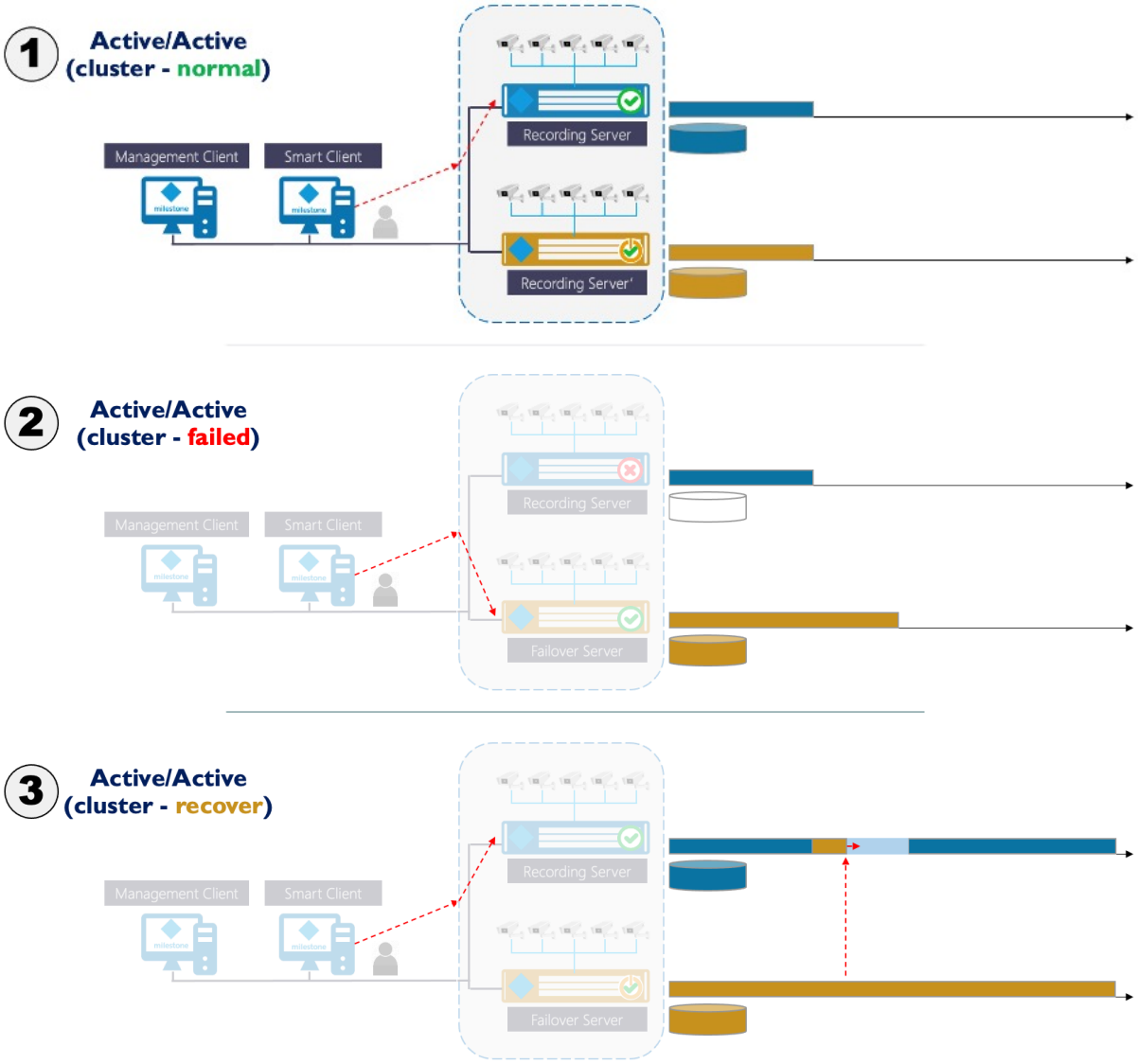
The following is the functional description for each failover configuration.

Symmetrical / Clustered

In this failover configuration, two recording servers (Primary & Secondary) are clustered together and are running in parallel. However, only one of them holds the representation token (the network identification). This means that Management Clients and Smart Clients will be directed to this “main” server (oblivious to the fact that there is a twin “shadow” server also running). Since both servers share the same configuration, they are both connected to the same cameras, and are recording independently the data to their own storage.

In the case of a failure of the Primary server, the network representation token is immediately transferred to the Secondary server. This only takes a few seconds and Smart Clients automatically reconnect, not realizing that data is now coming from a different machine.

When the Primary Recording Server resumes operations, the Secondary Recording Server recedes in the background and any missing data can be backfilled to the Primary Server.

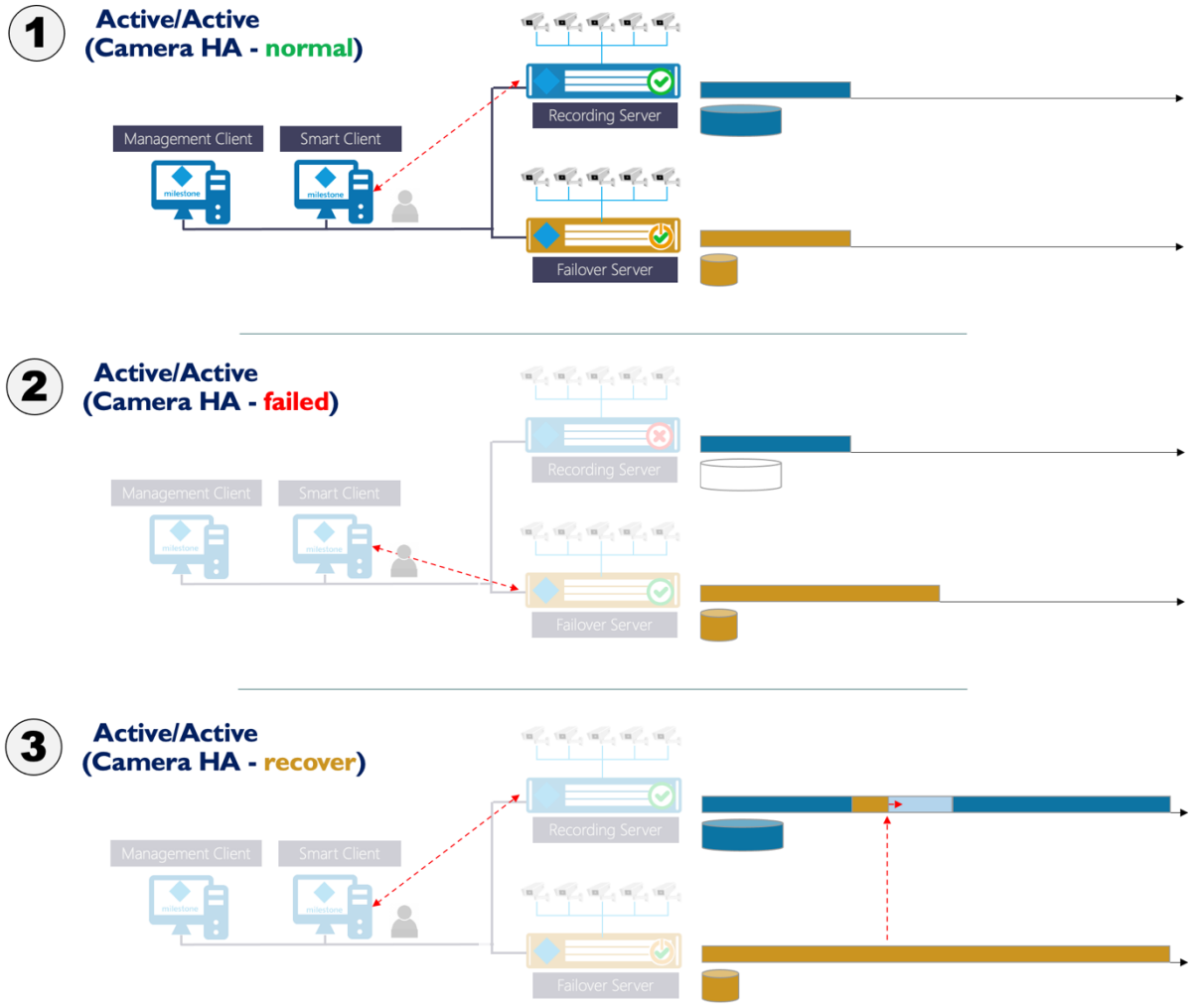


Asymmetrical / Independent

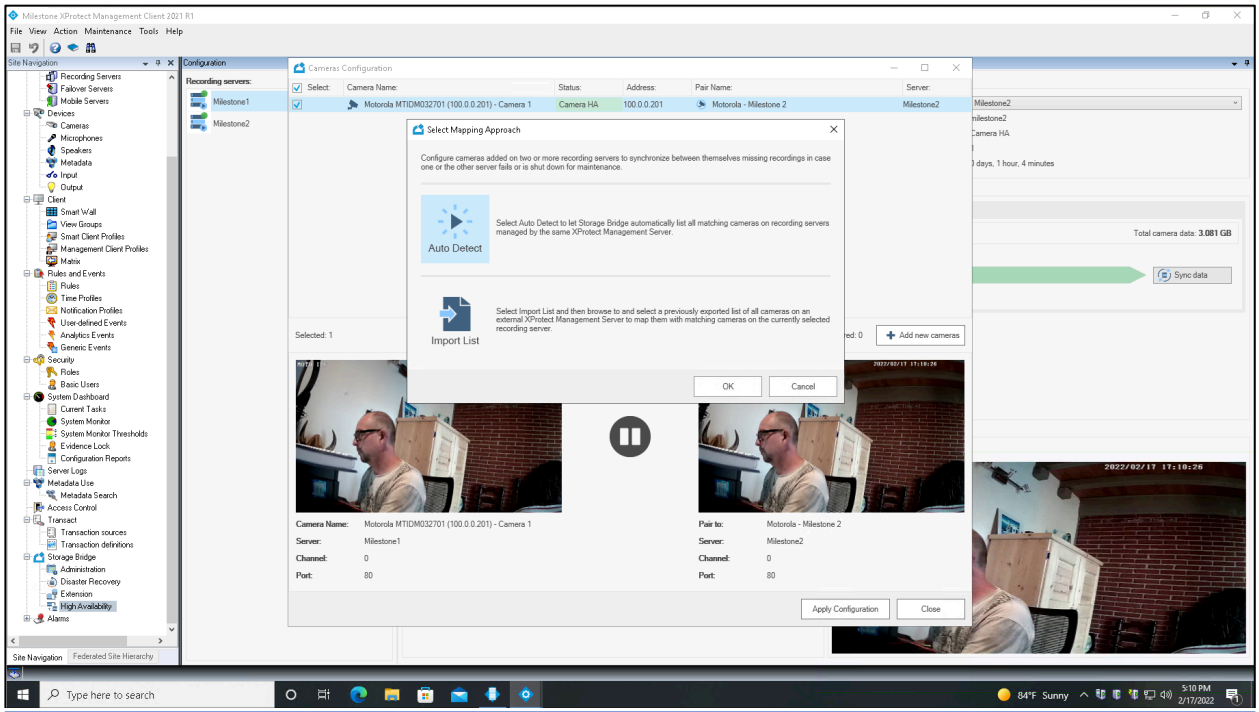
In this failover configuration, two recording servers are running independently (NOT clustered). For each camera, Surveillance HA keeps track of whichever Primary and Secondary Recording Servers are connected to it. When Surveillance HA detects that a camera feed is no longer available from the Primary Recording Server, it automatically re-routes the Smart Client to the Secondary Recording Server where this camera is continues to be recorded.

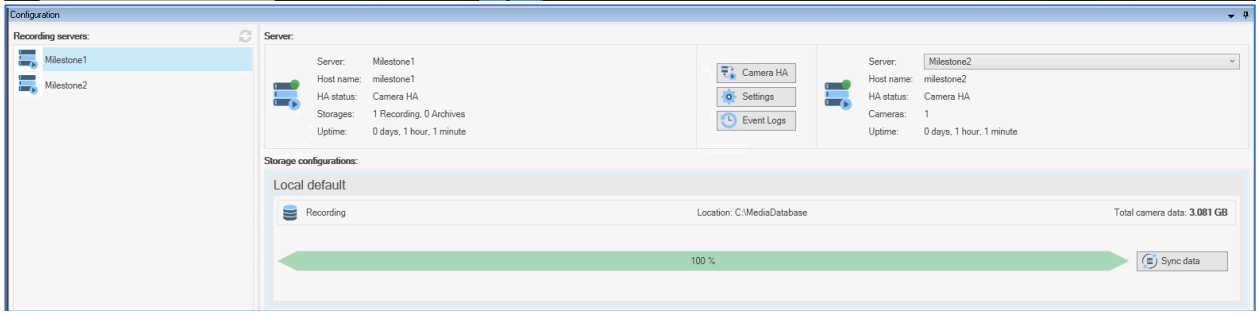
When a particular camera data becomes available again from the Primary Recording Server, Surveillance HA will re-route the Smart Client back to it. Any missing data for that camera can be automatically backfilled onto the Primary Server.

This configuration offers the most flexibility, as pairing for failover is done at the camera level between ANY two Recording Servers receiving its feed. The only drawback is that this configuration requires an extra step to pair the cameras (which is highly automated!) and requires Milestone licenses for ALL Recording Servers.



Non-Clustered HA interface with Automatic Camera Mapping:


Select Mapping Approach
Auto Detect
Import List
OK
Cancel
Apply Configuration
Close


Configuration
Recording servers:
Milestone1
Milestone2
Server:
Storage configurations:
Local default
Recording
Location: C:\MediaDatabase
Total camera data: 3.081 GB
100 %
Sync data