MatriVideo NVR Feature - Failover

A Contingency Plan for Server Failure

Failover Features

- Automatic NVR Failover
- Automatic Failback
- N + S architecture
- Average switchover takes less than 30 seconds
- Unlimited standby servers possible
- Unlimited Failover: Standby servers have the capability to act as failovers for other standby servers and even failover servers
- No need for a central server eliminating the possibility of Single Point of Failure

H3 Hybrid

High Availability.

Maintain uptime with standard failover features and a distributed architecture

High Resolution.

Support multiple IP video compressions such as H.264, MPEG-4, and MJPEG and image resolutions from CIF/ D1 to multiple megapixels

High Intelligence.

Apply proven real-time video analytic scenarios to live and recorded IP video

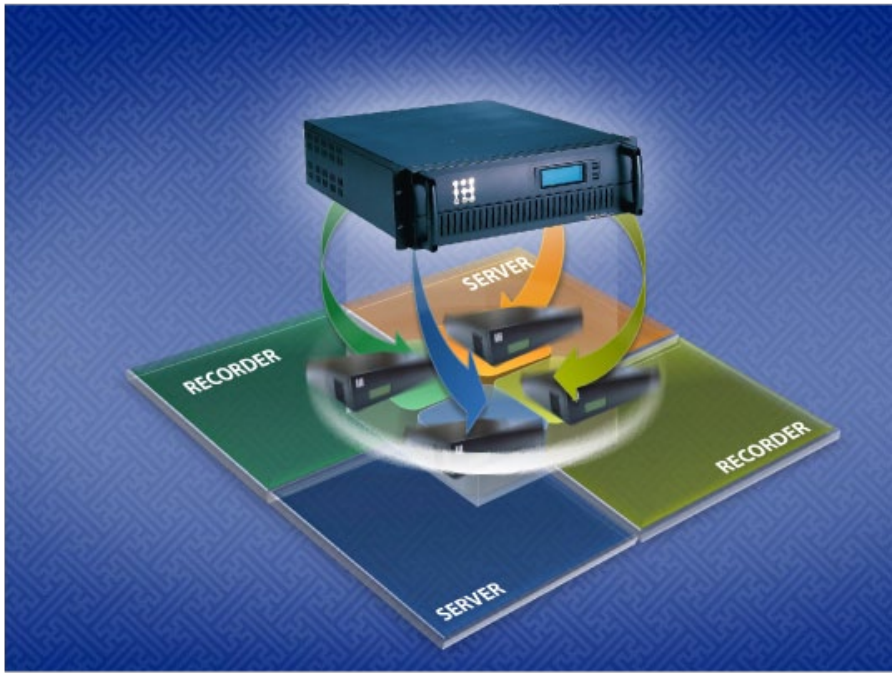
For organizations maintaining a surveillance system downtime means lost business intelligence data gathering opportunities, wasted resources, and exposed liability and security threats. Servers are bound to fail due to hard drive, power supply or a chipset malfunction which means that security systems need a contingency plan.

A Tale of Two Architectures

Traditional analog cameras are physically connected to a Digital Video Recorder (DVR) through individual coaxial cables. When a DVR server fails, an administrator has to physically disconnect the analog channels, remove the failed unit, and reconnect the cameras to the new unit resulting in extended downtime. This outdated model doesn't support failover.

In contrast, IP cameras, as well as Network Video Recorders (NVRs), are virtually connected to the ethernet. In the event of an NVR malfunction, the IP video continues to be accessible on the system. In other words, NVRs do not act as a single point of entry to the architecture for camera feeds.

Instek Digital's MatriVideo NVRs are specially designed to support failover. A MatriVideo NVR can be placed on standby to monitor operational NVRs' status and configuration settings. When server failure becomes apparent, the spare NVR will take over the responsibilities of the failed server – failover. By using MatriVideo NVRs and implementing failover architecture, administrators can maximize their surveillance system's uptime.



Eliminating Single Point of Failure

To further maximize uptime Instek Digital's architecture has been designed to remove single point of failure. The adoptive distributed architecture allows any standby server to take over responsibilities for any malfunctioning server, even those of a malfunctioning standby server. A central server is unnecessary under this design - eliminating single point of failure. Instek Digital's distributed architecture accommodates NVR failover to ensure maximum uptime and peace of mind.

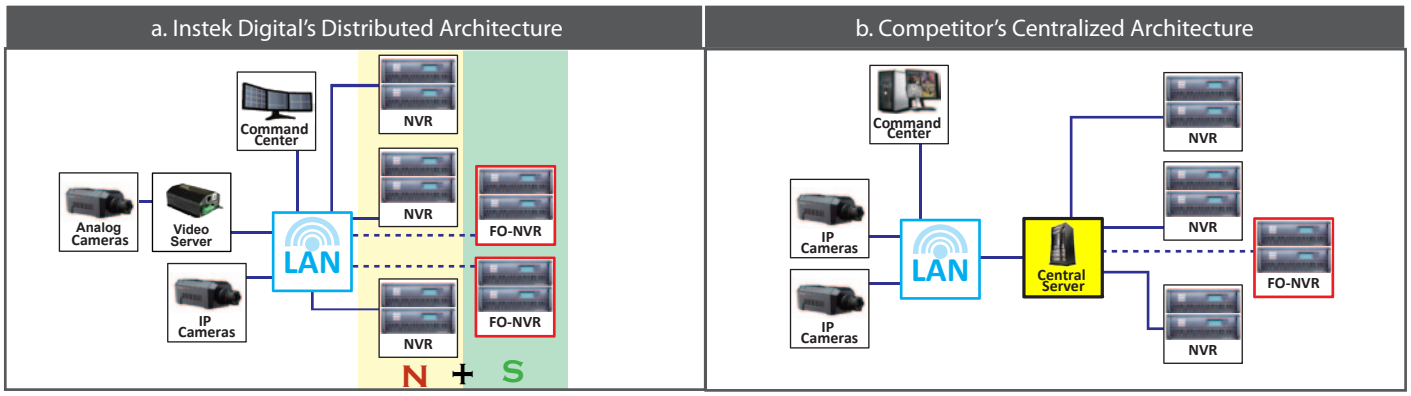


Figure 1.1 Distributed vs. Centralized Architecture (a) Instek Digital's distributed architecture has multiple servers connected directly to the LAN, so if one fails the Failover Network Video Recorder (FO-NVR) can take over the functions and the system will retain uptime. 'N' stands for the active servers and 'S' for the servers on standby. (b) A centralized architecture features a central server acting as a conduit between the NVRs and the LAN. If the central server malfunctions, the entire system will fail – single point of failure.

Maximum Uptime, Minimum Maintenance

Instek Digital's latest range of MatriVideo NVRs support automatic failover in the event of power supply or chipset failures. A failover NVR will kick in automatically when a live NVR dies and inherit the recording responsibilities through instantaneous automated switching. Once the dead NVR has been repaired, the failover NVR will recognize the repaired NVR's unique ID, return all camera responsibilities, and resume its role as a standby server, thereby continuing to give your security system true 24/7 coverage with minimum human administrative action.

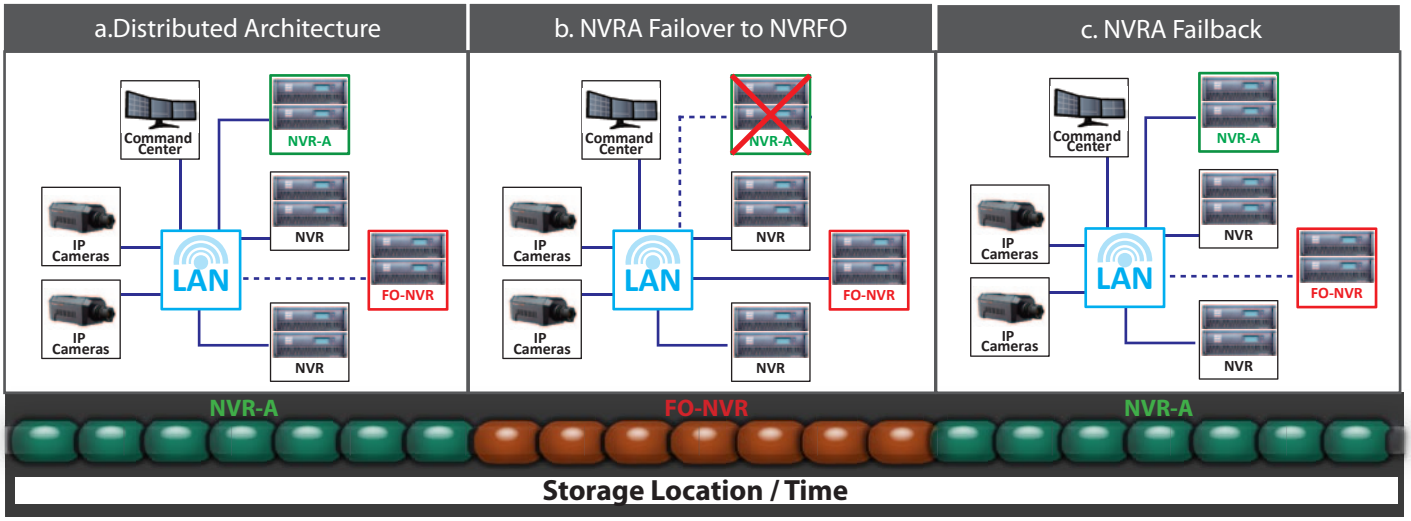


Figure 1.2 Failover and Fail Back Over Time and Location of Data Storage (a) Instek Digital's distributed architecture featuring a Failover Network Video Recorder (FO-NVR) acting as a watchdog. (b) NVR-A fails over to FO-NVR. (c) NVR-A is repaired and the FO-NVR fails back.

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