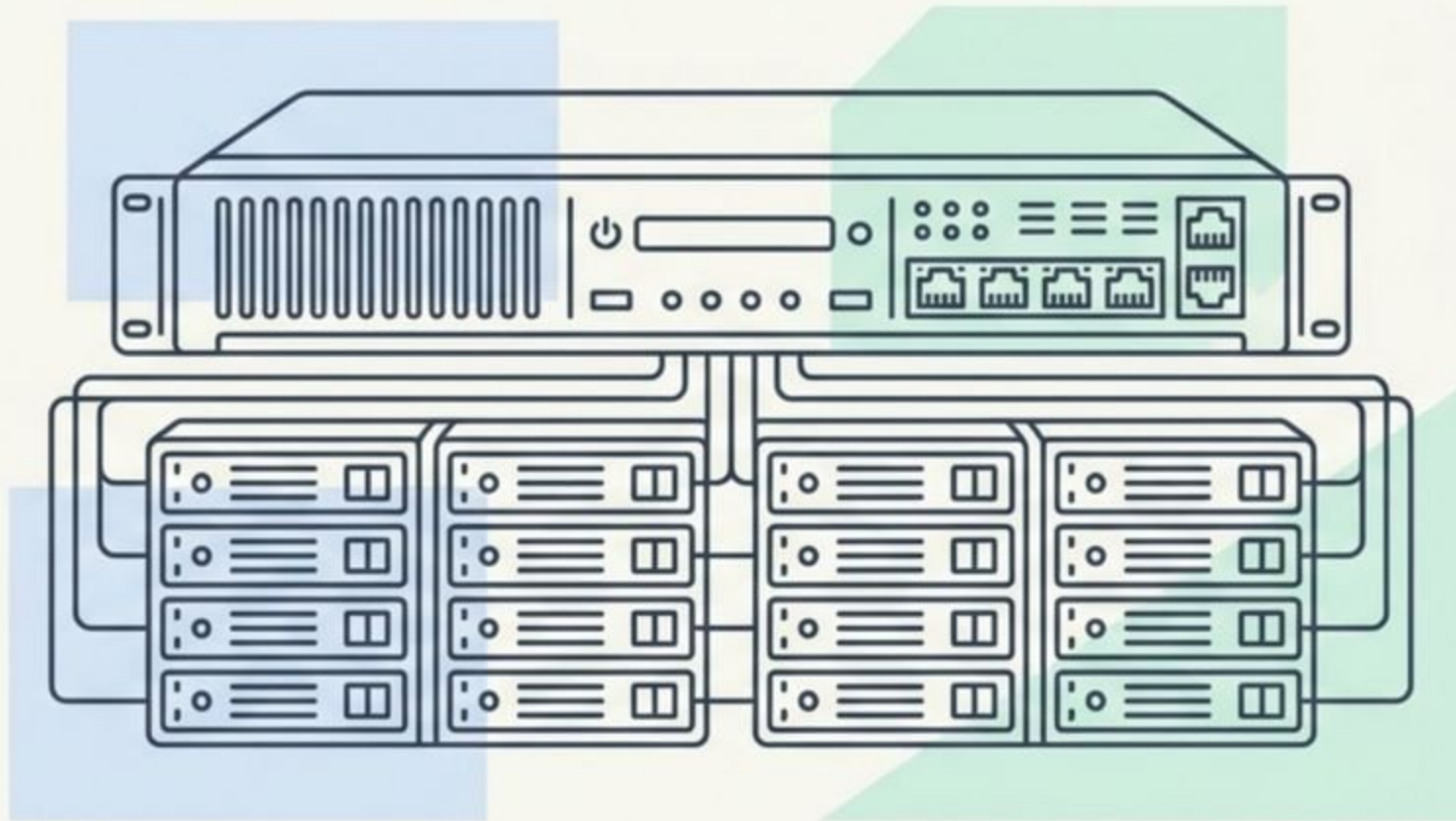


RAID Support

Enterprise-Grade Hardware Storage Solutions for Continuous Video Surveillance

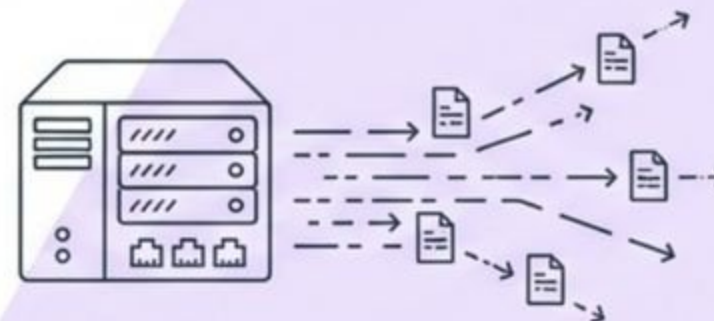


Overview

The Unique Demands of Video Recording Storage

- Video surveillance storage fundamentally differs from typical IT storage.
- It is continuous, write-heavy, time-sensitive, and usually sized for long retention periods.
- Hardware RAID across multiple levels ensures scalable, high-performance, and fault-tolerant video storage for continuous surveillance recording.

Typical IT Storage



Surveillance Storage



Hardware RAID

Features

Balancing Core System Needs



Availability

Keep recording even if a disk fails (depending on RAID level).



Performance

Sustain required write throughput without dropped frames.

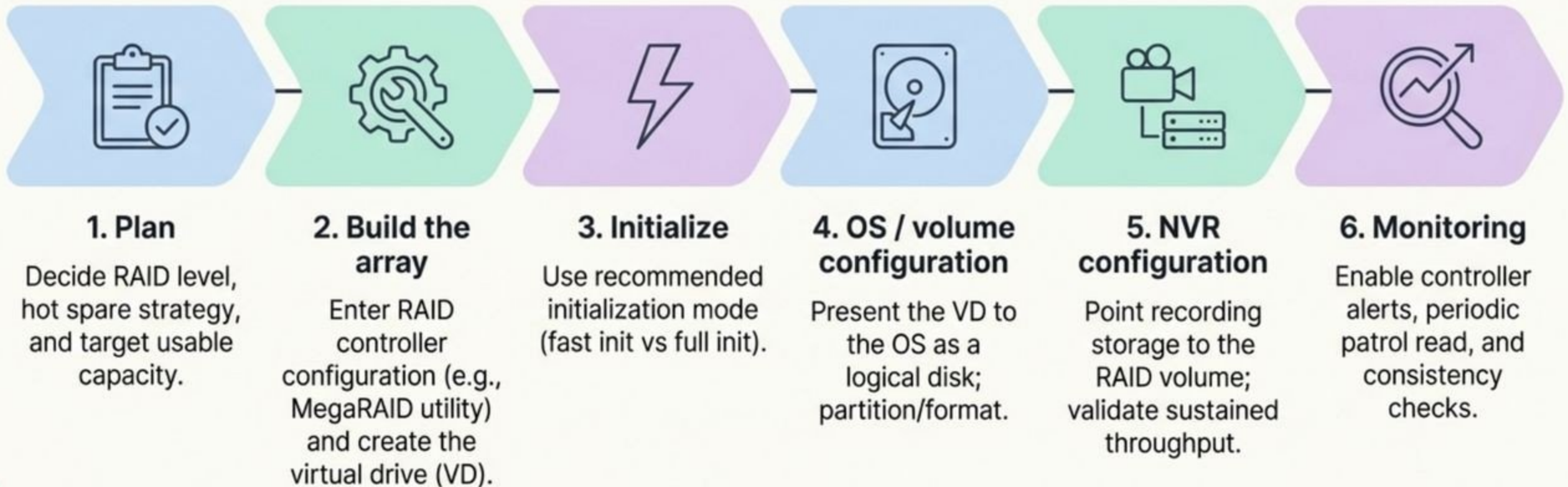


Capacity efficiency

Maximize usable TB while keeping acceptable risk.

Architectures

Implementation Workflow on ACTi INR Appliances



Applications

Recommended Configuration Patterns by Scale

Decision Factors: Disk count / chassis bays, retention target (days), total bitrate (Mb/s), fault tolerance requirement, and rebuild risk.



Small arrays (4–6 disks)

- RAID 5 (capacity-friendly)
- RAID 10 (performance-first)



Larger arrays (8–16+ disks)

- RAID 6, RAID 60, or RAID 50
- Depends on throughput vs resilience goals.



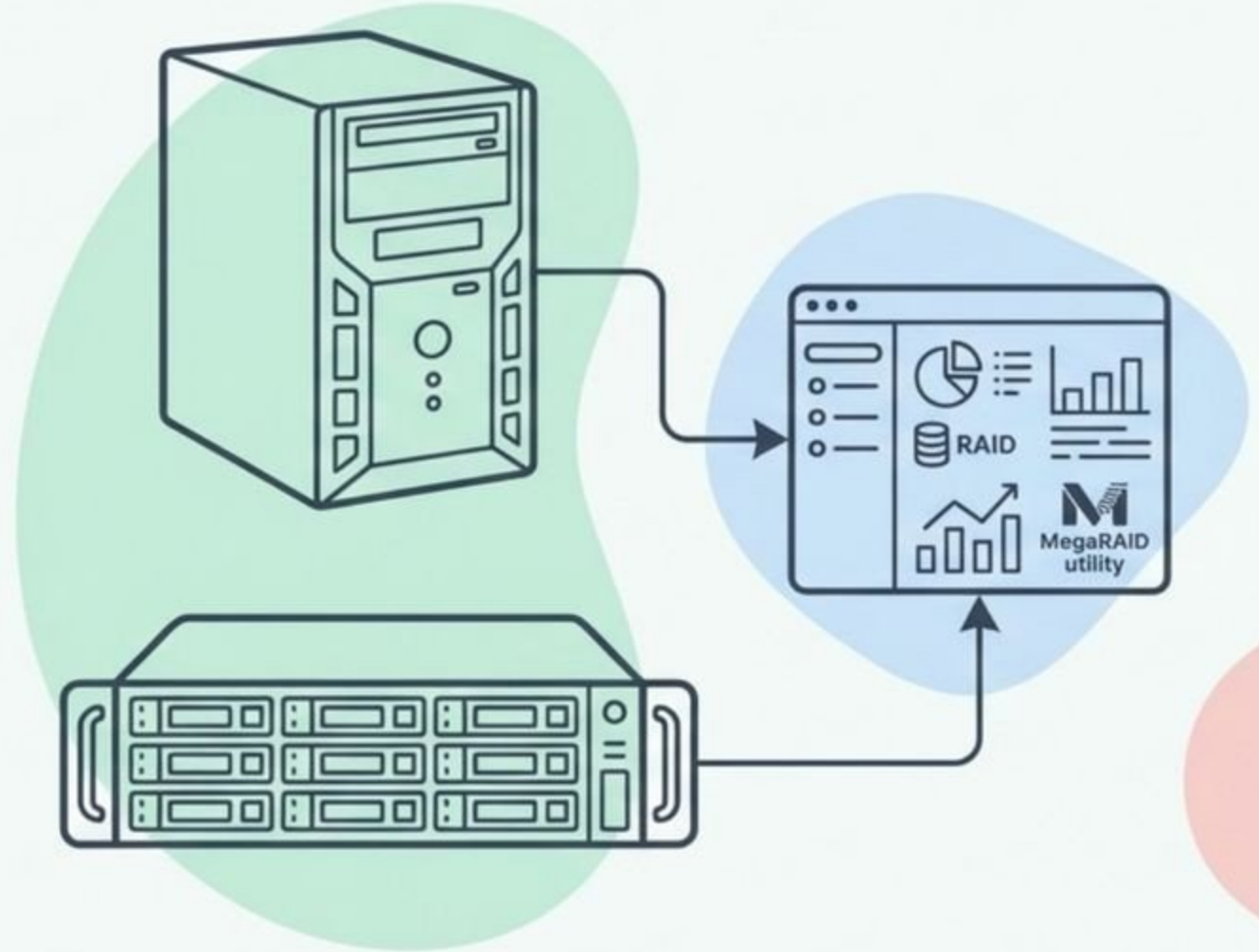
Mission-critical recording

- RAID 6, RAID 10, or RAID 60
- Prefer these to drastically reduce risk during long rebuild windows.

Solutions

INR Series Servers & Hardware Integrations

- ACTi's NVR server-class appliances (INR series) are explicitly designed around hardware RAID.
- Integration with robust RAID controllers, utilizing MegaRAID-class utilities to manage arrays.
- Supports massive capacity and redundancy, ensuring fault-tolerant video storage for continuous, heavy-write surveillance operations.



Product Introduction

Product Matrix: Supported Hardware RAID Series

Specification	Details
Product Type	NVR / Server
Product Family	INR Series Server-Class Appliances
Key Differentiator	Hardware RAID Add-on Card integration supporting Continuous, Write-Heavy Operations.
Supported RAID Levels	0, 1, 5, 6, 10, 50, 60 (Model dependent).
Form Factors	6-bay up to 12/16-bay chassis arrays.



Product Introduction

Comparison: Supported RAID Levels

RAID Level	Description	Visual Concept
RAID 0	Max capacity & performance, no redundancy (not recommended for critical recording).	
RAID 1	Mirroring, simple redundancy, usable capacity ~50%.	
RAID 5	Single-disk fault tolerance, good capacity efficiency; rebuild times can be long with large disks.	
RAID 6	Two-disk fault tolerance, safer for large arrays; more parity overhead.	
RAID 10	High write performance + redundancy; capacity ~50%, strong for heavy continuous recording.	
RAID 50 / 60	Combines striping across RAID 5/6 sets, used in larger disk counts for better performance/resilience.	

Summary

Key Takeaways for Project Success

- Video storage requires specialized fault tolerance due to continuous, write-heavy data loads.
- ACTi INR Series natively supports hardware RAID 0-60 via robust utility controllers.
- Select RAID configurations deliberately based on chassis bay count, total bitrate, retention days, and rebuild risk tolerance.



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