Storage-Tiering Decision Guide

Match the storage price to the footage's age. Figures are 2026 list/illustrative; pair with the article and your own retention rules.

The four storage tiers

Tier	Access speed	$/TB-mo (cloud)	Best for
Hot	Instant (ms)	~$23.00	Live + last few days; active scrubbing
Warm	Instant (ms) + fee	~$12.50	Last few weeks; occasional review
Cold	Minutes-hours	~$3.60	Months old; rarely read, kept for retention
Archive	Hours	~$0.99	Long legal retention; almost never read

The cost-per-TB gap is the whole point

Cloud object storage runs ~23× from hot (~$23/TB-mo) to deep archive (~$0.99/TB-mo). On-prem rhymes: ~$60-80/TB NVMe (hot), ~$18/TB surveillance HDD (warm), ~$5/TB LTO tape (archive). In 2026 the fast-vs-bulk gap is wider than usual after an HDD price surge - so leaving old footage on the wrong tier costs more this year.

The lifecycle-policy recipe

Write everything to HOT (it absorbs the continuous write load). Then a lifecycle policy (ILM) transitions by age - e.g. Warm after 7 days, Cold after 30, Archive after 90 - and an expiration rule deletes at the retention limit. Never write continuous video straight to a cold/archive tier (per-request charges, slow, and new footage is the hottest data).

Worked example - 100 TB on 90-day retention

All hot: 100 TB × $23 = $2,300/mo. Tiered with steady ingest: hot days 1-7 (7.8 TB × $23 = $179) + warm days 8-30 (25.6 TB × $12.50 = $320) + cold days 31-90 (66.7 TB × $3.60 = $240) = ~$739/mo. About a 68% cut, and operators see no change inside 30 days.

The retrieval-cost trap (read before tiering)

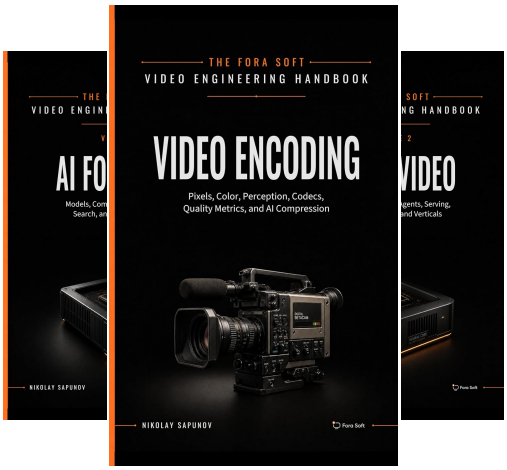
Cheap tiers are dear to read. (1) Retrieval fees: pulling tens of TB from cold/archive can erase months of saving - tier by how often footage is read, not by age alone. (2) Minimum durations: 30 days (IA), 90 (Glacier), 180 (Deep Archive) - never move footage to a tier whose minimum exceeds your retention. (3) Cold/archive retrieval takes minutes to hours - keep anything an operator needs fast on hot/warm.

Your tiers - map each footage age to a tier

Footage age band	Tier	Cloud class / media	Delete at

Illustrative 2026 figures (AWS S3 list prices, US East; on-prem market prices). Costs and retrieval fees vary by provider and region. This is engineering guidance, not legal advice - confirm retention limits and deletion duties with qualified counsel.

Companion to: 'Storage Tiers (Hot, Warm, Cold, and Archive)'
www.forasoft.com/learn/video-surveillance/articles-vms/storage-tiers-hot-warm-cold-archive



GO DEEPER · THE 7-VOLUME HANDBOOK

Fora Soft Video Engineering Handbook

Seven volumes, 9,000+ pages: encoding, streaming, audio and AI for video products — from the pixel to production.

By Nikolay Sapunov, CEO at Fora Soft · Kindle & paperback on Amazon

Browse the handbook on Amazon →

This guide maps footage age to hot, warm, cold and archive tiers and shows the retrieval-cost trap. Our seven-volume handbook covers what sets the bytes in the first place: Volume 1 for codecs and bitrate, Volume 6 for analytics that decide which clips stay hot, Volume 7 for cost per stream-hour at scale.

WHAT YOU WILL FIND INSIDE

- Codec and bitrate choices that set TB per camera
- Search indexes that let cold footage stay cold
- Event and motion analytics that flag clips worth keeping
- Running cost per stream-hour across storage tiers

THE FULL HANDBOOK · 7 VOLUMES · 9,000+ PAGES · ALL ON AMAZON

Vol. 1 · Video Encoding — pixels and color to H.264, HEVC, AV1, quality metrics and AI
Vol. 2 · Video Streaming I — network transport, contribution and ingest, HLS, MPEG-DASH, CMAF
Vol. 3 · Video Streaming II — ABR, CDNs, players, WebRTC, DRM and the economics of delivery
Vol. 4 · Audio for Video I — PCM, codecs, loudness, accessibility, real-time voice processing
Vol. 5 · Audio for Video II — jitter buffers, lip sync, Atmos, quality metrics, neural codecs
Vol. 6 · AI for Video I — models and inference, computer vision, speech, search, generative video
Vol. 7 · AI for Video II — real-time pipelines, agents, serving, cost, compliance, verticals

Paying hot-storage prices for footage nobody watches?

We will design lifecycle rules across your tiers, model retrieval fees against real access patterns and wire it into your VMS or cloud storage. 250+ video products shipped since 2005.

Book a 30-min call → **WhatsApp →** **Email us →**