

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 ~23x 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 x \$23 = \$2,300/mo. Tiered with steady ingest: hot days 1-7 (7.8 TB x \$23 = \$179) + warm days 8-30 (25.6 TB x \$12.50 = \$320) + cold days 31-90 (66.7 TB x \$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.