

KEVIN TURCIOS

Senior Software Engineer | Cloud Storage · Distributed Systems · Infrastructure
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SUMMARY

Senior Software Engineer at Microsoft (ODSP Storage) who leads a team of ~5 engineers owning exabyte-scale blob storage tiering, delivering tens of millions of dollars in annualized storage cost savings while keeping archived data available and reads reliable. Runs the weekly storage-tiering cross-team sync, pairs aggressive infrastructure cost optimization with operational safety (observability, concurrency controls, rigorous review), partners with Azure Archive, and builds agentic AI workflows that take work items from definition to pull request. Seeking Senior and Staff backend and distributed-systems roles.

EXPERIENCE

Microsoft — ODSP (OneDrive and SharePoint) Storage **May 2022 – Present**
Senior Software Engineer (Aug 2023 – Present) · *Software Engineer II* (May 2022 – Nov 2023) *Remote (Rockville, MD)*

Cost Reduction at Exabyte Scale

- **Delivered tens of millions of dollars in annualized storage cost savings** by building and operating most of the team's blob storage-tiering cost levers: rolled out access-time-driven cold tiering to 100% of production (hundreds of petabytes per month), expanded Archive to three new regions, and scaled storage tiering safely across exabyte-scale storage.
- **Reclaimed hundreds of petabytes of unlicensed, fraudulent, and regenerable preview storage** by building a pipeline that moves it to lower-cost storage tiers, with fraud-archiving protections and a false-positive restore path.

Technical Leadership & Cross-Team Influence

- **Own the weekly storage-tiering cross-team sync:** drive the roundtable on delivery, priorities, and execution; consolidated tracking into a single system; required sandbox validation for risky fixes before region migration; and guide rollout decisions and design reviews (erasure coding, concurrency, outage mitigation).
- **Led a team of ~5 engineers and multiplied their output:** mentored 3 engineers, scoped 200+ work items owned by teammates, and performed 400+ code reviews across 53 authors, consistently catching correctness, fallback, concurrency, telemetry, and kill-switch gaps before production.
- **Partnered with Azure Archive** to align on regions for archiving and provided estimates and forecasts of expected archive volumes.

AI-Assisted Engineering

- **Building an agentic workflow that takes team work items from definition to a published pull request:** composed existing MCP servers and tooling with reusable agent skills for the team's common workflows, plus repo reviewer agents, with heavy investment in automated validation to reduce human review burden; now applying it to cut the team backlog while it matures toward greater autonomy.
- **Cut developer environment setup from ~45 min to ~5 min** with agent tooling that automates build, deploy, sandbox, and validation with captured evidence; adopted by teammates faster than expected (200+ agent sessions in two months). Co-authored a hackathon proposal for a storage-tiering developer agent.

Reliability, Availability & Architecture

- **Onboarded archived data to an SSD cache (limited early-ring rollout),** and added tier and size cost-attribution logging so billing could be validated.
- **Protected availability during regional and service outages:** identified that storage pools lacking cross-region redundancy must be excluded from Archive, and designed outage-recovery readiness for a prolonged Azure Archive outage.
- **Drove concurrency-safe tiering architecture** (durable work-item ownership, bounded retries, state reconciliation, conflict prevention) across archive, cold, reduced-redundancy, preview, and repair workflows; contributed to an archive storage-backend migration.

Operational Excellence

- **Led on-call for recurring incidents:** traced repeated Sev-2 alerts to a single stale-resource pattern and re-tuned alert severity, delivered the RCA for a cold-tier success-rate dip that led to actionable cold-tier volume monitoring, and designed monitors, runbooks, an incident playbook, and dashboards.

- **Exercised rollout judgment and engineering hygiene:** halted Archive expansion when poison queues began growing and required validation, shadow evaluation, safe defaults, and rollback paths before broader deployment; closed 240+ bugs (largely test and flaky-test hygiene) and retired legacy config, kill switches, and feature flags.

MicroStrategy

Feb 2018 – May 2022

Senior Software Engineer

Oct 2021 – May 2022 | Denver, CO

- Automated build pipelines shipping artifacts across AWS accounts to support FedRAMP certification (Python, AWS).
- Hardened Docker images by converting them to non-root, remediated Veracode/BlackDuck security findings, and managed open-source component approvals for third-party dependencies (Docker, Node).
- Integrated production infrastructure with Splunk for audit logging via Fluent-bit on Kubernetes; created an internal npm package adopted across engineering teams to bootstrap Docker-based apps.

Software Engineer

Apr 2019 – Oct 2021 | Tysons Corner, VA

- Enabled the production launch of SaaS offering Hyper.Now by building the infrastructure that runs the MicroStrategy platform and the REST APIs that manage customer environments.
- Decomposed a VM-oriented monolith into microservices independently deployable and scalable on Kubernetes.
- Built an auto-updating internal desktop app to configure, test, and deploy daily builds on local Kubernetes, EKS, or GKE (Electron, React, Material-UI).
- Delivered the Hyper.Now Service & Maintenance status page with live-data APIs on AWS Lambda, plus an internal infrastructure/build dashboard used by developers and executives (React, Material-UI).
- Pioneered a Service application unifying customer login, auto-signing customers into Workstation from an existing browser session and providing access to download other products.

Associate Software Engineer

Feb 2018 – Apr 2019 | Tysons Corner, VA

- Launched Subscription APIs letting customers subscribe to documents and reports on custom schedules (Java, Spring).
- Operated a remote diagnostics pipeline parsing daily customer-deployment data into a data warehouse (Node.js, AWS Lambda).

SKILLS

Languages: C#, .NET, Python, Java, Go, TypeScript, JavaScript/Node.js

Cloud & Storage: Azure Blob Storage tiering (Archive, Cold, LRS), AWS (Lambda, EKS), GKE

Infrastructure: Kubernetes, Docker, Helm, GitHub Actions, Fluent-bit

Reliability: P99/QoS dashboards & monitors, runbooks, feature flags & kill switches, Splunk

Frameworks: Spring, Flask, React, Material-UI, Electron

AI Engineering: AI-assisted development, agentic workflows, reusable agent skills, MCP (Model Context Protocol) servers, automated validation

EDUCATION & CERTIFICATIONS

University of Maryland, College Park — B.S., Computer Science

Dec 2017

Formerly certified: Certified Kubernetes Administrator (CKA, through Jan 2025); Certified Kubernetes Application Developer (CKAD, through Jul 2023)