

Juan Serrano

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SUMMARY

Over a decade of experience as Systems and Site Reliability Engineer with specialization in optimizing backend system scalability, resilience, and efficiency. A proven leader in capacity planning, incident response, and cost optimization, consistently achieving multi-million dollar annual savings. Dedicated to developing talent, with a track record of mentoring engineers from Intern to Senior levels.

EXPERIENCE

Systems Engineer | Snap Inc. | Device Lab Team

May 2023 – Current | Los Angeles, California

- **Managed and optimized the automated device testing suite** for the company. This service supports various models of Android and iOS physical devices, virtual (emulators/simulators), and web platforms.
- **Improved capacity, efficiency, and availability** by implementing and managing a provisioning service for thousands of on-prem managed macOS and Linux servers.
- **Optimized testing infrastructure** by driving the adoption of virtual devices company-wide, resulting in an approximately 60% increase in utilization and reduced yearly investments on physical hardware.

Staff SRE (Team Lead) to SRE I | Twitter Inc. | Core Storage and Ads Revenue Teams

July 2015 – Jan 2023 | San Francisco, California

Strategy, Leadership, and Mentorship

- Key contributor to team and cross-functional strategy, driving project resourcing and prioritization.
- Led and played a pivotal role in Revenue Infra's Capacity Planning process and initiatives.
- Mentored engineers from Interns to Senior levels across Revenue and Infrastructure teams, fostering growth and technical excellence.
- Led and optimized Incident Response and Management processes, enhancing system reliability and operational efficiency.
- Led Revenue Peak Traffic Event Planning for Black Friday and Super Bowl, achieving the first-ever zero-incident event.
- Established best practices for event planning, enhancing preparedness and system resilience.

Cost Reduction and Efficiency

- Spearheaded multiple cost reduction and efficiency initiatives, achieving >\$23M/year in savings and reclaiming >780K cores, along with significant OpEx reductions.
- Collaborated with the ML Prediction team to streamline their deployment process, define SLI/SLOs, and improve on-call efficiency, reducing actionable pages by 80%.
- Led the migration of 5PB of cold data from on-prem to GCP, optimizing storage costs and scalability.

Infrastructure and Systems Engineering

- Led key initiatives in developing the next-generation Twitter Ad Infrastructure, ensuring scalability, reliability, and efficiency.
- Wrote and reviewed architectural designs, defined SLI/SLOs, and implemented alerting, monitoring, and capacity planning for new services.
- Designed and deployed a fully automated staging environment, conducted load testing and performance analysis to optimize system performance.
- Managed a fleet of ~50K servers in the storage team, overseeing alerting/monitoring, deployments, system upgrades (CentOS, JVM, Kernel), capacity planning, backup storage/recovery, data migrations, and incident response.
- Led the development of Hardware Lifecycle Management automation, enabling efficient failure detection, server removal, and cluster expansion, significantly improving operational efficiency.

PUBLICATIONS

- [Building Twitter's ad platform architecture for the future](#)
- [Sharding, simplification, and Twitter's ads serving platform](#)
- [Storing and retrieving millions of ad impressions per second](#)
- [How we built Twitter's highly reliable ads pacing service](#)

SKILLS/TECHNOLOGIES

- **Programming Languages:** Golang, Python, Java, Bash, SQL
- **Orchestration & Containerization:** Kubernetes, Apache Mesos (+ Aurora)
- **Cloud Platforms:** AWS, GCP (Google Cloud Platform)
- **Databases & Storage:** MySQL, No-SQL, Cassandra, Kafka, Redis, Hadoop, ZooKeeper, Varnish
- **Monitoring & CI/CD:** Jenkins, Git, JIRA, Grafana, PagerDuty, Ansible, Puppet
- **Operating Systems:** Linux, MacOS, IOS, Android
- **Others:** Temporal, Cursor, Xcode

EDUCATION

Bachelor of Applied Science, Honours Computer Engineering, Co-op Program, University of Waterloo, Waterloo, ON, September 2010 – April 2015