

Theral Mackey

theral.mackey@gmail.com

408-373-3776

San Francisco Bay Area

Sr Operations engineer generalist with 20+ years of experience building and growing infrastructure for small startups to larger corporations.

Sr Video Core Services Engineer (L6)

Twitich

Dec 2018 - June 2023

Supported the work to modernize the Twitch video platform, and bring it into a scalable state for the future. This position included rearchitecting backend systems and services, migrating to and leveraging Terraform, implementing CI/CD and other operational best-practices. I also participated in the on-call rotation for the services we managed.

- Upgraded 50k+ baremetal Ubuntu and Centos servers across multiple teams from Puppet v3 to v5 without an incident
- Split the monolithic git repository into 217+ module-based repositories, maintaining full commit history of each
- Setup and managed puppet server fleet, with CI/CD in Github, deployed using R10k, enabling custom test environments and simultaneous use of Puppet v3 and v5
- Migrated all hosts from LDAP authentication to an AWS SSH Certificate based solution to comply with AWS standards
- Aided in creation of AWS IVS (Interactive Video Service)
- Created and managed tooling in python and bash to automate SSL Certificate ordering and testing; and DHCP reserved address assignment in Infoblox via AWS Lambda

Sr Systems Operations Engineer

Evernote

Feb 2012 - Dec 2018

Helped manage and streamline the production server fleet running the service, during growth from ~350 to 1000+ servers, while automating the build, test, and staging environments.

- Developed a 2FA authentication method using TOTP with FreeRadius and LDAP that works on non-2fa ready systems
- Deployed and maintained the LDAP/Radius central authentication services for corporate and operational infrastructure with credential sync into Google (gmail, gcp)
- Redesigned the staging and test environments and automated provisioning stand-alone stage environments in a single server
- Assisted in several physical moves between data centers, and ultimately the move into the Google Cloud (in < 70 days)

Skills

Server, Process and Network automation and monitoring, centralized authentication (LDAP, Radius, Kerberos, TOTP, SAML, OAuth), CI/CD, configuration, provisioning and management of cloud and hardware servers, VMs, and Containers, routers, systems and software, scripting, application development, patching and debugging.

Education

Georgia Institute of Technology
BME, Mechanical Engineering
1995 - 2000

Awards and Certificates

Certified Scrum Master

Scrum Alliance
2019 - 2021

Jim Markle Operational Excellence - Cbeyond

Awarded to the person or team demonstrating operational excellence on a major initiative with large impact to the company as a whole.

Awarded for automating most of the TRRO operational project and in recognition of previous automation work for Circuit ordering/testing and customer service change orders

- Maintained Jenkins CI/CD Build infrastructure, including Xen and VMWare build nodes running Linux, Windows and OS X. Worked on transitioning build infrastructure to Docker/GKE nodes
- Implemented Internal SSL CA and signed cert infrastructure

Systems Operations Engineer

Zetta

Jan 2009 - Feb 2012

Built the infrastructure to launch the initial product offering (cloud NAS), and helped pivot into the next offering of enterprise cloud-backup.

- Automation work with Xen and CFEngine to auto-provision and maintain virtual servers
- Setup and maintained DNS, DHCP, LDAP, Radius, Kerberos, RSA Securid, and Qualys, using LDAP as the centralized credential store
- Created end-user applications for managing centralized Auth and DNS, and implemented production side Authentication methods allowing service integration with customer's own internal auth servers.
- Implemented user and group level authentication per vhost/virtual_vhost for WebDav
- Implemented enterprise search for customers, using Lucene and Solr, and wrote a custom message bus driven scheduler app to feed the indexer.

Systems Operations Engineer

Ning

Aug 2007 - Jan 2009

Built and automated the production systems running this Social Network's production service, as well as some in-house IT systems.

- Setup central LDAP/Radius services with auth for Sun and Linux systems, WiFi 802.1x, and other network gear.
- Setup and managed internal Asterisk phone system based on Trixbox community server, including SIP phone provisioning and LDAP authentication
- Utilized jumpstart and Solaris Zones to assist with creation of a plug-and-play server provisioning system
- Created a deployment language leveraging an early version of Galaxy (now open sourced) allowing natural-language scripted complex deployments with live reporting

Systems Operations Engineer

Cbeyond, Inc

Jun 2002 - Aug 2007

Automated tedious manual processes to maintain low headcount at this telecom startup, while expanding from 3 to 8+ markets and transitioning to a publicly traded \$1b corporation.

- Wrote a T1 management and testing utility allowing the servicing iLEC to verify, test, and accept fulfilled T1 circuits on a webpage with a single button click, removing the need to Cbeyond staff to do so.
- Implemented a customer migration application to move a customer's network path as part of TRRO (Tri-annual Review Remand Order) mitigation. This project aggregated T1 circuits into backhaul DS3s to reduce cost. The application allowed NOC engineers to complete the project with a few button clicks, migrating all voice, VPN, public IP, and other custom configurations to the new route. Oversaw one direct report and a remote contractor to assist.