Krishna Kumar

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Senior DevOps Engineer

DevOps / Site Reliability Engineer with 4 years of experience in Linux Systems, Automation, Networking, Cloud and Software Engineering..
I have deep interest in computer system/software engineering, opensource , Linux and Networking. I think in terms of holistic design of the systems and always works towards lygometric thinking. I find having a deep sense of learning and exploration towards problem solving and simplifying complex tasks into smaller problems rewarding.

I took a small career break from job to travel around and take rest from June 2022. Now I have started reapplying for jobs , I can be available for joining within 20 days from offer.

Professional Experience

Senior DevOps Engineer

Nova/Flock - Directi : Senior DevOps Engg (August 2020 – May 2022) Bengaluru, India

- -Introduced Golang to Team | Developed Protocol middleware's in golang as well as some bulk data collection tools.
- -Mentored and motivated other team members to start using golang.
- -Worked and guided juniors to build a data collection tool to collect bulk amount of data from internet (using container fleet , streamlit and Amazon S3)
- -Built **Big Data Integrations**(Athena/S3/Glue/Python) for mail infrastructures which enables Support to troubleshoot and Business to Analyse.
- - Worked on **terraform code and saltstack configurations** to **replicate** whole **infrastructure** to **another region** (including ECS components, LBs DNS, VMs, Queues, IAM)
- - Take part in Reviews, Debugging Issues, Architecture Discussions, Interviews

DevOps Engineer

Flock - Directi : DevOps Engg (August 2018 – August 2020) - Bengaluru, India

- -Built custom managesieve filter protocol server for Cpanel Mail Servers.
- -Changed Metrics collection strategy from adhoc collection to collect **USERED** Metrics collections. Defined **SLI, SLO and improving alerts.**
- -Designed Mail migration architecture and successfully completed migrations with zero downtime.
- - Successfuly designed and built AntiSpam, Ratelimiters, IPReputation/WarmUPFrameworks, IP Blacklist Monitoring and PushNotification Framework for Infrastructure.
- -Built **Log Pipelines**(ELK,rsyslog), Metricscollectors(python/shell) and Monitoring/Backupscripts : Migrated **Large MySQLtables** with zerodowntime using percona and gh-ost tools.

DevOps Engineering Intern

Media.net - Directi DevOps Engineering Intern (Jan 2018 – July 2018)

- -Built Benchmarking Framework(A wrapper over FIO and sar),that helps to benchmark hardware performance before deploying any Application on VMs(Python , Mongo , Flask)
- -HAProxy and Varnish SAAS for developers (Kubernetes, Python, KONG)

Educational Qualifications

Indian Institute of Information Technology - Allahabad

B.Tech (Electronics and communication Engineering)
CGPA : 8.34/10

Tech Stack / Skills

Languages - Python, Golang, C++ and bash
DB/Store - MySQL, MongoDB, Redis
CloudTech - AWS-
EC2,RDS,Route53,SSM,Cloudfront,S3,Glue,Athena,Cloudwatch,SNS,SQS
- Data Structures and Algorithms
Systems : Linux Administration (Filesystems, Memory management, Process optimisation) ,TCP/IP Stack, DNS, L7/L4/L3 Loadbalancing, SMTP, IMAP
Infrastructure Management : Conf&Automation (Terraform, SaltStack),
Monitoring (Shinken,TSDB,Prometheus,grafana & SLI, SLO, SLA, USERED Principles) ELK, Kubernetes, Docker, Docker-compose, HAProxy, Nginx LoadBalancing L7,L4, Distributed Systems, Sharding.
CI/CD: Jenkins and Travis CI

Major Projects (Apart from DevOps Operations/Automations)

Postfix TCP tables (Golang, Postfix, MySQL, Redis)
A base protocol server which implements postfix tcp tables protocol in golang and then extending to two different projects for mysql query results caching (for optimization) and domain SLD based mail IP routing.

Region Replication (Terraform and saltstack)
Have worked on writing infrastructure as code for replicating us-east region infrastructure to frankfurt germany also worked on transforming current saltstack configurations to work on another region seamlessly

Mail Filters And Policydaemon (Golang, MySQL, Python)
Developed a golang application for variety of mail filtering needs and fast filtering/processing of millions of mails passing through them each day. Developed a golang rewrite of opensource policyspf app.

Data Pipeline and AntiSpam Framework (Python, S3, Athena, Glue,AWS Fargate, ELK, MYSQL)
Includes mail transactions data collection from logs, categorisation and scoring. with scores takes decision to block/ratelimit/choose outbound IP. This project also stores data into S3 in parquet format and is used for business analytics.

Ratelimitd (Python, Redis)
An async tcp server which implements postfix policy protocol to ratelimit number of emails sent/received by a user, domain and ip based on various inputs.