Hrishikesh Shinde
Email: hello@hrishi.dev
Phone: +44-7304222199

LinkedIn : https://tinyurl.com/2ny6p7c3
Github : https://goo.gl/fxgUHY
Blog : https://hrishi.dev

SUMMARY

Seasoned Infrastructure and Site Reliability Engineer, experience in leveraging Linux, containers technologies, and SRE principles to design resilient, high-performance systems for on-prem and cloud environments.

Skilled in Python, Bash, Ansible, and Terraform for automation, infrastructure provisioning, and Linux administration/performance optimization. Strong background in observability engineering, including metrics, logging, and automated alerting frameworks and debugging complex problems.

I like working alongside App / Dev leads to understand, analyse & improve a setup, typically involving proposing solutions, working through projects to completion. I prefer to work with an entrepreneurial mindset with a strong sense of ownership, problem solving mindset and keen focus on developer experience.

In recent time, developed very strong focus for building for low latency trading infrastructure to HPC systems for quant research environment.

PROFESSIONAL EXPERIENCE

JP Morgan & Chase Co, London, UK
VP Software Engineer(Sr Lead)(Container platform and cloud engineering), Oct 2024 - Present
Leading and contributing to build the next iteration AWS offering at the firm

- Designing and implementing the next version of AWS offering - using custom controller library for terraform lifecycle, AWS blueprints using custom terraform modules - for EKS, ECS, Data analytics services
- Working with CIB electronics trading to move data analytics services to the next generation of AWS cloud offering using EKS and AWS services

DRW HOLDINGS, London, UK
SRE, Container and Linux engineering , December 2022 - October 2024
Building and Operating hybrid container platform infrastructure spanning on-prem, and cloud with 120+ Kubernetes clusters

- On-Call trading support for trading desks, risk analysis, exchange connectivity for market data services, and internal infra. services to troubleshoot K8S/Linux and trading systems issues
- Contributed in building and rolling out greenfield on-prem Kubernetes offering using cluster API, Linux/VMWare ESX, Metal3(PXE) to automating Linux bare metal hosts provisioning with NVidia GPU and CUDA drivers/Solaflare N/W cards/exchange connectivity and build custom Linux images using packer/ansible, shell scripting, cluster provisioning automation pipelines
- Contributed in building and rolling out the greenfield cloud Kubernetes offering with AWS EKS using terraform IaC/terragrunt, bash scripting, custom github action pipeline. Supported data analytics/ETL services for research infrastructure(HPC) using karpenter(autoscaler), Apache airflow and Slurm integration on Kubernetes
- Performance optimization for the Kubernetes systems to run low-latency trading by supporting native multicast networking, CPU isolation/pining for containers which reduce jitter by ~30-40%
- Integrating NFS, Bucket and Block storage(iSCSI) systems with Ceph/Pure storage/Weka/AWS storage providers and tune the Linux based system performance by executing extensive storage benchmarks using custom eBPF solution to run Kafka, Grafana mimir, PostgreSQL on bare metal hosts

- Partner with Commodities and FIO, GD1, Crypto, EEIO desks and trading platform to modernise the infra., automate workflows and productionize reliability of trading applications/services written in python/C++ using devops/SRE principles principles
- Automate release upgrade and patching services for the Kubernetes system which reduced the management toil >50 % and increased reliability >40% using golang/python service, ansible, and writing custom release scheduler using golang for 120+ fleet of clusters
- Contributed refactoring SLI/SLO and alerting system configuration using Prometheus, Grafana, Alertmanager to observe fleet of infra to using templatized configuration system which reduced the mean response time by 30-40%
- Build a system to generate the monthly billing trading desk/end user org for onprem vsphere estate using prometheus, python and shell scripting
- Contribute extensively in documenting platform offering, incidents postmortems and collaboration meeting notes

JP Morgan & Chase Co, London, UK
VP Software Engineer(Lead Engineer)(Cloud engineering and SRE), April 2021 - November 2022
Contributed building large scale opinionated cloud offering on AWS and EKS services spanning >1600 clusters

- Contributed in developing the opinionated infra. stack blueprint for provisioning EKS cluster, RDS, Redshift cluster, MSK(Kafka), Elastic cache by developing 30+ terraform modules
- Evangelizing the platform offering and features through online sessions to accelerate the platform and public cloud adoption throughout the firm. Partner with CIB, AWM, CCB and key users to onboard application and data services on the AWS cloud
- Proactively engage in providing solutions to diagnosing production issues/incidents reported by customers/SRE teams and supporting cluster upgrades using blue-green deployment method
- Proactively contributing to product roadmap by observing gaps with customers issues
- Integrated the CNI solution using enterprise cilium to replace the calico to reduce to latency for key services, wrote the automated test suites using golang to verify the integration
- Integrated the CSI solution to provision the EBS backed volumes for stateful container workloads
- Optimized provisioning period from minutes to a few seconds for the 2000+ volume of concurrent certification signing requests and rearchitect certificate services which reduced the infra cost by 20K+ USD/month
- Actively Involved in leading, pairing/knowledge sharing with a team of 10-12 engineers/consultants
- Proactively documenting design proposals, product features and end user documentation

Product Madness, London, UK
DevOps Engineer, April 2020 - April 2021
Contributed to cloud migration services from on-prem to GCP and enhancing existing game services infrastructure

- Executed the live migration of the gaming service from environment GCP over GKE, CloudDB and GCP networking services - designed the initial infra and capacity planning, provisioning infra using the terraform/ansible
- Maintained the infra. services for on-prem, GCP using ansible/shell scripts, terraform and Linux builds

Red Hat Inc, Bangalore, India
Sr. Software Engineer, June 2017 – April 2020
Contributed in building a new CI/CD service for OpenShift platform and hosted developer platform on Kubernetes/OpenShift

- Contributed to the TektonCD open-source project by writing new APIs to improve orchestration pipeline execution and implementing pipeline metrics using Prometheus to gain performance insights and implement SLIs/SLOs using Kubernetes controller pattern(Core contributor).
- Design and build a CLI tool that improved users' experience e.g. streaming pipelines logs using golang
- Owned the complete product packaging as an operator of OpenShift Pipelines beta release for the OpenShift-4 platform and automated the entire release pipeline using python, shell scripts, and CI
- Contributed workload idling platform service using Kubernetes controller pattern and golang which reduced the resource utilization of Kubernetes/OpenShift clusters by ~60% per cluster using golang/mux backend
- Wrote the custom proxy middleware service using golang which served upto 1K requests/seconds
- Diagnosed and fixed a few critical issues that improved the resiliency of the developer platform significantly (e.g. https://goo.gl/JK9exr)
- Lead the team of 3-4 engineers

Persistent Systems Ltd, Pune, India
Sr. Software Engineer | June 2014 – Feb 2017

- Wrote an custom orchestrator service for private cloud installations that reduced setuptime to ~30 minutes and errors by 60%
- Build Database as a services to provision MySQL, MongoDB HA DB clusters on cloudstack private cloud, which allowed users to provision DB clusters for Dev and production environment in matter of minutes

LAB PROJECTS

- Build the Slurm clusters on Kubernetes to using Slurm + Kubernetes integration(Slinky) to run ML training using the dataset for orchestrating ML training and running inference workload using llm-d.

SKILLS/KNOWLEDGE

- **Cloud infrastructure:** AWS, familiar with Openstack
- **Clustering platforms:** Kubernetes (CAPI/EKS), OpenShift (Administration and development), Slurm(Administration)
- **Linux administration**: Debian and RedHat
- **Container Runtime:** Docker, ContainerD and Kata containers
- **Virtualization:** VMWare ESXi
- **CNI:** CIlium, Multus, Calico
- **CSI/Storage:** Ceph, Pure/Portworx, Weka, Vast, Qumulo
- **Programming/Scripting**: Hands on [Golang, Python, shell scripting], experience[Java], familiar with [C, C++]
- **IaaC:** Ansible/Chef, Terraform/Terragrunt, Pulumi
- **Databases**: MySQL(Community and Percona), MongoDB, Postgres, ETCD for state management, AWS DBx (HA clusters for all)
- **Data Orchestration:** Apache airflow, Dagster
- **Messaging/Queuing**: Redis, Familiar with Kafka, RabbitMQ
- **Logging and Monitoring**: ELK Stack, Splunk, Grafana, Prometheus/Thanos, FluentX, AWS Cloudwatch, Datadog
- **Paradigm/Techniques**: Object-oriented, Procedural, Functional, Serverless
- **System Programming:** Understanding Linux system calls and system programming (POSIX Sys. Calls)
- **Build Tools**: Maven, Gradle, GNU make, GCC
- **GitOps:** FluxCD, Github actions, TektonCD, Jenkins, familiar with Argo(Workflow and rollouts)

COMMUNITY CONTRIBUTIONS

- Conference Speaker - DevConf CZech
  https://www.youtube.com/@DevConfs/search?query=Hrishikesh%20Shinde
- Co-organiser for K8S Bangalore meetup https://www.meetup.com/kubernetes-india-meetup/
- Build Daily Linux Command App - https://play.google.com/store/apps/details?id=com.cmd.android

EDUCATION

Shivaji University, KIT, Kolhapur *2009 to 2012; Bachelor of Engineering in Information Tech.; First class with distinction*