

Abhishek Kumar
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Education

- **Indian Institute of Technology (IIT) , Bombay**
Master of Technology (M. Tech), Computer Science and Engineering(CSE) *July, 2017*

Experience

Member of Technical Staff, Qubole

September 2019 - Present

- **Jenkins Infrastructure Revamp:** Migration of Build & Bake automation to Kubernetes cluster. Project decentralised the build ownership from Ops to respective teams owning package resulting in significant drop in on-call issues.
- **Version Controlled Jenkins Set-up:** Migration of Jenkins infrastructure to automated and version controlled process using Ansible playbooks, Groovy scripts and Terraform configurations.
- **Centralised Management and governance for AWS Accounts:** Management of around 30 AWS accounts including centralised account creation using Control Tower, centralised billing using AWS Organization, team wise IAM role based access provisioning using Single-Sign-On and centralized governance using Service Control Policies.
- **Cost Saving Initiatives:** Helped the organization in cost-optimization initiatives during Corona pandemic. Reduced the AWS cost by around 50k\$ in less than a month.
- **AWS Resource Provisioning:** Provisioning of Automated, version controlled and peer-reviewed process of AWS resource creation using Terraform and 3rd party tool named Atlantis.
- **Build Pipelines:** Setup CI/CD pipelines for all supported clouds to make sure each commit go through standard process and gets tested well enough before it can make it to the production.
- **Internal Tooling:** Continuous Development and maintenance of wide variety of Python and Golang based internal tools to make development and deployment more efficient, accurate and faster.

Software Engineer, DataXu

July 2017 - July 2019

- Development of an IaC Golang tool to manage company's critical AWS resources in a versioned and automated environment by codifying the AWS resources into configurations.
- Implementation of Golang, Jenkins based tool to grant temporary, auditable cross account S3 bucket access in prod account to an IAM role in staging account.
- Redesigned company wide AWS access leveraging Single Sign-on. Efforts involved configuring fine grained roles for SSO and provision of a wrapper over aws-cli to authenticate a user against Okta using SAML assertion to retrieve temporary STS credentials from AWS.
- Development of a Python based break-glass procedure to assume elevated permissions in AWS while handling escalations.
- Provisioning of Athena workgroups to get better cost distribution between teams and applications.

Technical Exposure

- **Certification:** Oracle Certified Professional, Java SE 6 Programmer
- **Languages:** Golang, Python, Bash scripting, Groovy, Java
- **Cloud:** Vast experience in AWS services. Ad-hoc experience on GCP, Oracle, Azure.
- **DevOps:** Jenkins, Docker, Kubernetes, Ansible, Terraform, Packer

Academic Projects

- Implementation of Distributed File Server Based on RAFT Consensus Protocol using Golang
- Implementation of Zero Knowledge Authentication protocol using Golang
- IITB Network Monitoring and traffic analysis using Zabbix and custom Java based internal tool