ANKIT SINGH RATHI

DevOps Engineer | AWS Solutions Architect Professional Certified | ankitrathi.info | CKA | CKAD | Ex Walmart SE

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EXPERIENCE

DevOps Engineer

01/2020 - Ongoing

Tradeling.com

Dubai, UAE

· Set up Infrastructure on self-managed kubernetes cluster from scratch on AWS using ansible, terraform and poseidon/typhoon. Generated k8s manifests using php.

- · Migrate all backend APIs to AWS Edge Optimized API Gateway and EKS. Also used AWS WAF, API Throttling, API Caching, Network LB and VPC Link
- · Caching APIs at AWS Cloudfront with dynamic origins thereby reducing the homepage response time by 75% (105ms to 25ms). Also used custom CORS and caching policies.
- Reduced the avg website load time in China by 80% (2500ms to 500ms) by testing with Zenlayer Global Accelerator, Huawei CloudConnect, Alibaba Global Accelrator, Geolocation Records and reduced the cost of solution from 3500\$ to 70\$ i.e. 98%
- · Closed around 70 plus vulnerabilities reported in ASV, Network VAPT, Web Application PT to make the infrastructure PCI compliant Level 1
- · Set up Monitoring for Tradeling Infrastructure from scratch using ELK stack, metricbeat, journalbeat and ansible which collects data from 50+ servers across 3 environments
- · Set up CI-CD on Github Actions and Docker Jenkins using ansible running 15000 jobs daily. Maintained jenkins jobs using groovy scripts
- · Created Monitoring Dashboards in Kibana for API Performance, MongoDB, NATS, MySQL, Kubernetes, Hosts, System Monitoring and Docker.
- · Daily Automated Releases using python script (2000+ lines of code) sending automated email change log of 50+ repositories to respective teams. Attend stand-ups and sprint planning sessions.
- · Maintaining Self Managed Databases including MySQL, MongoDB using docker-compose
- · Daily backups of MongoDB, MySQL using ansible being uploaded to AWS S3 buckets
- · 24/7 automated website monitoring using Prometheus, alertmanager, blackbox exporter with automated slack alerts.

DevOps Engineer

11/2018 - 01/2020

Accelya Group

Dubai, UAE

- · Setting up Infrastructure of the new customers for Development, UAT and Production Environments on Weblogic and Tomcat Platforms.
- · Migration of the build-jobs of 66 customers to separate the 'Builds & Deployments' phases.
- · Build JIRA Dashboard for the team. This was extensively used by all teams to log tickets and follow the DevOps Approach

Software Engineer

01/2017 - 10/2018

Walmart Labs

Bangalore, India

- · Set up Infrastructure for microservices on OneOps with DR enabled involving 1000s of servers across two data centers.
- · Created DevOps Automation Dashboard using Django, Python to automate splunk alert actions.

CERTIFICATIONS









PROJECTS

API Caching At AWS Cloudfront

By caching the GET APIs at AWS Cloudfront we were able to reduce the response time by 75% (105ms to 25ms)

- · Created dynamic origins with custom caching and custom CORS policy
- · Were able to achieve single digit millisecond latency for some GET APIs endpoints



FIND ME ONLINE



ankitrathi.info



https://codeaprendiz.blogspot.com

LinkedIn

in www.linkedin.com/in/ankit-singhrathi

GitHub

www.github.com/codeaprendiz

Stack Overflow

https://stackoverflow.com/users/5761 011/codeaprendiz?tab=profile

HackerRank

https://www.hackerrank.com/codeap rendiz

HackerEarth

https://www.hackerearth.com/@code aprendiz

SKILLS

Infrastructure As Code Tools

Ansible · Terraform · Cloud Formation

Cloud Providers

AWS · GCP · Alibaba · Huawei

Container And Orchestration

Docker · DockerSwarm · Kubernetes ·

ECS · Fargate

Languages

python · go · shell · nodejs · php

Version Control Systems

Git · SVN · Code Commit

Ingress Controllers

Traefik · Istio · Kong · Nginx

Monitoring

Grafana · Prometheus · Elastic Search ·

Kibana · Logstash · Splunk · Datadog ·

Journalbeat · Metricbeat · Alertmanager ·

Blackbox Exporter · Cloudwatch

Re-Architecting Backend APIs with AWS API Gateway

We improved the security and performance of all the backend APIs by using Edge Optimized AWS REST API gateway.

- · Applied AWS **WAF** at AWS API Gateway to improve the security of APIs.
- · Also used API throttling, API keys and custom domain names.
- · Used Edge Optimized REST API gateway to improve performance by using caching features
- · Other AWS Services used: Network Load Balancer, EKS and VPC Links

Architect Cloud Infrastructure for China - Multi Cloud

We improved the website performance in China by reducing the avg website load time by 80% (2500ms to 500ms). This project was multi-cloud and was implemented in 3 phases.

- · We initially used Alibaba Global Accelerator and geolocation records. Cost of the project was around \$3500 per month. We purchased dedicated bandwidth from HongKong to India.
- · We then used Huawei Cloud Connect, SNAT, DNAT, NLB, geolocation records. The cost was around \$1500 per month.
- · Finally we used Zenlayer Global Accelerator with geolocation records. This had the least cost of \$100 per month. This was based on data-transfer per month.

Migrating Self Hosted Services to AWS Managed Services

- · MySQL was migrated to AWS RDS MySQL
- · MongoDB was migrated to MongoDB Atlas
- · Elasticsearch was migrated AWS ElasticSearch
- · Self managed kubernetes cluster using kops was migrated to EKS

Monitoring And Logging Setup Using ELK Stack

Tradeling Monitoring and Logging Setup from scratch to set up dashboards

- · ELK i.e. Elastic Search, Logstash and Kibana was used. All were set up on individual instances using docker-compose and ansible playbooks
- · Journalbeat was used to set up logging for kubernetes. Metricbeat was used for getting metrics of kubernetes, instances, mongodb, mysql and NATs.
- \cdot $\,$ Dashboards set up for Kubernetes, System, Host, MongoDB, MySQL, NATs, Docker monitoring, URL monitoring and Alerts on slacks using Prometheus, Alertmanager, Blackbox-Exporter
- · Prometheus, Alertmanager, Blackbox-exporter set up done using ansible, docker-compose

Self Managed kubernetes infrastructure using opensource Typhoon

- · Created using AWS, Terraform and OpenSource poseidon/typhoon repository.Used reserved and spot Instances to save cost
- · The cluster was self healing. Whenever spot instance was terminated, lamda function would trigger a webhook in Jenkins which would run ansible playbook task to drain the corresponding kubernetes cluster node.

Automated Releases to Staging and Production

- Python script with 2000+ lines of code and triggered via ansible-task to automate release to staging environment which was in turn triggered through Jenkins
- · Automated Change Log-Email sent to the dedicated audience after the release
- · Live Updates of the release on Slack Channel showing status of builds and deployments

Infrastructure setup using Terraform, Ansible

- · Setting up 3 environments Prod, Stage, Dev
- · Each environment consisting of VPCs, EC2, Route53 records, Route tables, Security Groups, Bastion hosts, NAT Gateways etc
- · Planning regular upgrades of self managed services like MongoDB, MySQL, NATs

Payment Card Industry Data Security Standards (PCI-DSS) Compliance - L1

Tradeling Infrastructure was made PCI-DSS complaint L1 by closing ~70 vulnerabilities across different scans: ASV, Network VAPT and Web Application Penetration Testing.

- · Used AWS KMS to encrypt card holders data before it was saved to the database.
- · Provided necessary documentation and closed all the gaps that were high-lighted.

ankitrathi.info | DevOps Essentials

Creating a website for DevOps Essentials

- · Terraform: https://github.com/codeaprendiz/terraform-kitchen
- · Kubernetes: https://github.com/codeaprendiz/kubernetes-kitchen
- · Ansible: https://github.com/codeaprendiz/ansible-kitchen
- · DevOps-Essentials : https://github.com/codeaprendiz/devops-essentials
- · Linux https://ankitrathi.info/devops-essentials/linux-commands/linux-commands-index.html

SKILLS

Web Servers

Tomcat · Apache · Nginx · Jboss

Feroda CoreOS · Linux · Windows

Build Configuration

Maven · npm

CI-CD

Github Actions · Jenkins · Code Build ·

Code Deploy · Drone-Cl

Databases

Mysql · PostgreSQL · MongoDB · Oracle-SQL

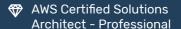
FDUCATION

B.E. Computer Science and Engineering

Bangalore Institute Of Technology 07/2013 - 07/2017 Bangalore, India

GPA **75** / 100

ACHIEVEMENTS



It took me around 290 hours spread across 4 months to prepare for the examination outside office hours.

Daily Automated Releases to Stage And Weekly to Prod

> It took a lot of sleepless nights to develop 2000+ lines of python code which sends live slack alerts for build status and deployment status, calculates the change log of 50+ repositories and send automated email to required audience

LANGUAGES

English

Advanced ••••

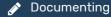
Hindi

Native ••••

PASSIONS



Coding



🦎 Healthy Lifestyle

숙 Learning