Avinash Reddy Pothireddy

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SUMMARY

Experienced Site Reliability Engineer (SRE) and DevOps Engineer with expertise in cloud infrastructure, automation, observability, and distributed systems. Skilled in AWS, Azure, Kubernetes, Terraform, Ansible, and CI/CD, ensuring high availability, scalability, and performance optimization. Strong background in incident management, reliability engineering, chaos testing, and financial services. Passionate about building resilient, automated, and secure cloud-native architectures to drive operational excellence.

WORK EXPERIENCE

JP Morgan Chase & CO Site Reliability Engineer III

August 2022 – Present Plano, TX

- Designed highly available, fault-tolerant distributed systems with automated provisioning, scaling, and failover strategies in AWS and Kubernetes using Terraform
- Implemented observability solutions using **Grafana**, **Dynatrace**, **Data Dog**, **Cloud Watch**, **X-Rays and Splunk**, enabling real-time monitoring, logging, and alerting for distributed systems.
- Established SLIs, SLOs, and error budgets, aligning system reliability with business goals.
- Designed and maintained SLO-based alerting with black-box and white-box monitoring, improving system reliability and incident detection.
- Automated log analysis and anomaly detection, reducing mean time to detection (MTTD) for incidents by 30%.
- Developed **custom dashboards** for **latency**, **performance**, **and health metrics**, driving data-driven system optimizations.
- Led blameless post-mortems and authored RCAs, enhancing incident response processes and reducing recurrence.
- Reviewed and optimized distributed architectures migrating to AWS, improving scalability and reliability with ECS Fargate,
 EKS, and Docker.
- Developed self-healing infrastructure with event-driven automation, leveraging AWS Lambda, Step Functions, and Kubernetes Operators to proactively remediate failures.
- Ensured high availability and scalability by implementing auto-scaling, load balancing, and multi-region deployments.
- Automated infrastructure provisioning with Terraform and Ansible, ensuring scalability, repeatability, and compliance.
- Designed and optimized CI/CD pipelines using Jenkins and GitLab, reducing deployment time and operational toil.
- Implemented blue-green and canary deployments, ensuring **zero-downtime releases** with seamless rollback strategies.
- Applied chaos engineering to test resilience and failure recovery, improving fault tolerance and system uptime.

Apple Site Reliability Engineer

March 2020 – July 2022

Remote

- Enhanced system observability by implementing and maintaining real-time monitoring solutions using Splunk, Prometheus,
 and Grafana, proactively identifying issues before user impact.
- Designed and maintained SLIs, SLOs, and error budgets for Apple Pay, Apple Cash, and Apple Card services, improving reliability and reducing incident recurrence.
- SME for Apple Cash and AMEX, handling customer issue escalations, collaborating with Green Dot & Amex, supporting payment processing, incident management, and monitoring, ensuring seamless transaction flow.
- Provided on-call support and incident management, troubleshooting issues for Apple Pay applications and collaborating
 with external banking vendors (Amex, Discover, Visa, Mastercard, Goldman Sachs, Green Dot) to resolve
 customer-impacting incidents.
- Led **blameless postmortems**, conducted **root cause analysis (RCA)**, and implemented long-term fixes to improve Apple Pay's service reliability.
- Developed automated alerting and telemetry pipelines, reducing false positives and increasing monitoring efficiency by 25% for Apple Cash.
- Created end-to-end monitoring solutions for Apple Cash family features, identifying and resolving 50% of customer facing backlog tickets and 30% of Amex-related Apple Pay issues.
- Built and optimized CI/CD pipelines for Apple Pay Later, integrating with Amazon EKS and CloudFormation, reducing
 deployment cycles by 50%.
- Automated AWS infrastructure provisioning for Apple Pay Later using CloudFormation Templates (CFT), minimizing manual configuration errors by 30%.

Automation Engineer

Plano, TX

- Created, tested, and deployed YAML and ENV files in AT&T Integrated Cloud and Network Cloud, ensuring seamless
 deployments.
- **Developed YAML & Python scripts** for **zone-specific upgrades**, reviewing changes with leads and verifying merged code in the integration pipeline to uplift versions and fix bugs.
- Designed and maintained **Kubernetes deployments**, creating **Pod definitions**, **services**, **and YAML configurations** to customize workloads in a **Kubernetes environment**.
- Automated Kubernetes operations, troubleshooting pod-related issues and optimizing interactions with the Kubernetes API Server, reducing manual intervention.
- Developed and automated infrastructure provisioning using **Ansible playbooks** for virtual and physical instance management, configuration, patching, and software deployment in Azure environments, leveraging **Azure Virtual Machines (VMs)**, **Azure Container Instances (ACI)**, and **Azure Kubernetes Service (AKS)**.
- Built and managed Docker container images, handling tagging, pushing, and container lifecycle management using Docker consoles.

SKILLS

- Programming and Scripting Languages: SQL, NoSQL, Python Shell, Bash, C, C++, YAML, XML, JSON
- Observability & Monitoring: Logging & Monitoring (Splunk, Dynatrace, Nagios, Prometheus, Grafana, Datadog, New Relic, ELK Stack, Cloud Watch, X-rays, Thousand Eyes), Distributed Tracing (Jaeger, OpenTelemetry), Log Aggregation & Analysis
- Site Reliability Engineering: Incident Management & Root Cause Analysis, Reliability, Availability, and Performance
 Optimization, Chaos Engineering & Disaster Recovery, FMEA, Service Level Objectives (SLOs) & Error Budgets, Capacity
 Planning & Autoscaling
- CI/CD & DevOps: GitHub Actions, CircleCI, Jenkins, Docker, Kubernetes, Spinnaker Infrastructure as Code (Terraform, CloudFormation), Configuration Management (Ansible, Chef)
- Cloud Technologies: AWS(EC2, ECS Fargate, EKS, Lambda, DynamoDb, S3, VPC, Route53, IAM) & Openstack
- Agile & Collaboration: JIRA, Confluence, GitHub
- Chaos Engineering & Failure Injection Testing: Gremlin, AWS FIS, Chaos Mesh

EDUCATION

Master's Degree in Computer Information Science - Kent State University
 Bachelor's Degree in Electronics and Communication Engineering - JNTUH
 Hyderabad, India

CERTIFICATIONS

- Amazon Web Services Solutions Architect Associate
- CKA: Certified Kubernetes Administrator
- HashiCorp Certified: Terraform Associate
- Gremlin Certified Chaos Engineering Professional