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https://tpunuk.github.io/portfolio-website/

PROFESSIONAL SUMMARY

- Senior Cloud & Site Reliability Engineer with 10+ years of experience architecting, automating, and operating large-scale, mission-critical distributed systems across AWS and Azure. Specialized in Kubernetes-based microservices platforms, CI/CD engineering, infrastructure-as-code, and high-availability production systems serving high-traffic enterprise workloads.
- At T-Mobile, owned reliability and deployment stability for 120+ Kubernetes microservices, sustaining 99.9%+ availability and reducing MTTR by ~30% through structured incident leadership, deep root cause analysis, observability engineering, and release guardrails.
- Extensive experience leading Sev-1/Sev-2 incident response and implementing systemic reliability improvements that reduced recurring production defects by ~25%, strengthened authentication resilience, and improved service-to-service communication stability.
- Strong background in defining reliability standards aligned with SLO-driven practices, balancing release velocity with operational stability, and proactively identifying scaling and configuration risks before customer impact.
- Proven expertise designing resilient multi-cloud architectures leveraging AWS and Azure networking, IAM, encryption, and secure multi-tenant infrastructure patterns to ensure scalability, compliance, and fault tolerance.
- Advanced experience in CI/CD optimization (GitLab CI, Jenkins, cloud-native pipelines) supporting 100+ services, implementing deployment guardrails, automated validation, and predictable zero-impact production rollouts.
- Skilled in observability engineering using Splunk, Prometheus, Grafana, ELK, and Dynatrace to reduce alert fatigue, improve fault isolation speed, and enhance end-to-end system visibility across distributed environments.
- Demonstrated ability to reduce operational toil through automation, strengthen reliability culture through structured post-incident reviews, and align engineering reliability initiatives with broader business and customer-impact objectives.
- Trusted to lead high-risk production changes and infrastructure updates, performing impact analysis, risk assessment, and validation planning to ensure controlled, zero-downtime implementations across enterprise environments.
- Demonstrated ownership mindset by driving initiatives from design through implementation and post-production stabilization, ensuring accountability for outcomes, long-term reliability improvements, and measurable operational impact.

TECHNICAL SKILLS

- Programming Languages : Bash/Shell, Power-shell, XML, GoLang, JAVA, Python
- Cloud Technologies : AWS, Azure, GCP and Open Stack
- Build Tools : Maven, Ant, Ms-build and NodeJs
- Version Control : GIT, SVN, Bitbucket, CVS, Gerrit, TFS
- Configuration Integration : Jenkins, GitLab, GitHub actions and Bamboo
- Configuration Management Tools : Ansible, Chef and Terraform
- Containerization : Docker and Kubernetes
- Package Management : Nexus and Artifactory
- Tracking Tools : SonarQube, JIRA and Junit
- Web/Application Servers : Apache, Nginx, Tomcat, Web Logic and Web Sphere
- Databases /Framework : MYSQL, DynamoDB.
- Monitoring Tools : Splunk, Dynatrace, Elastic Search, and Nagios
- Operating Systems : CentOS, LINUX/UNIX/Windows, Ubuntu.

PROFESSIONAL EXPERIENCE

T-Mobile **April'25-Present**
Role: Sr. Devops SRE Engineer **Bellevue,WA**

Responsibilities:

- Owned reliability of customer-facing microservices running on Kubernetes, maintaining 99.9%+ availability across high-traffic production environments.
- Led 20+ Sev-1/Sev-2 production incidents annually, driving cross-functional war rooms and reducing MTTR by ~30% through structured diagnostics and escalation improvements.
- Conducted deep root cause analysis on IAM token lifecycle failures, authentication breakdowns, ingress misrouting, and recurring 5xx spikes, implementing preventive controls that eliminated repeat outages.
- Defined and enforced safe release strategies including staged rollouts, canary deployments, rollback mechanisms, and post-deployment validation, reducing post-release production defects by ~25%.
- Owned end-to-end deployment reliability for 120+ microservices on shared Kubernetes platforms, ensuring stable CI/CD promotions across DEV, staging, and production clusters.
- Managed GitLab CI/CD pipelines for 120+ services, standardizing build, image validation, artifact promotion, and environment configuration workflows.
- Designed deployment guardrails including pre-release validation checks, rollout monitoring, secret validation, and automated health verification to prevent cascading failures during large-scale releases.

- Identified and remediated Kubernetes misconfigurations (PDB, resource limits/requests, ingress rules) and environment drift, preventing release-related service instability.
- Built and enhanced observability dashboards using Splunk and Grafana, improving incident detection time by ~40% and accelerating distributed system fault isolation.
- Automated operational workflows and Kubernetes access tooling using Python and Bash, reducing repetitive manual effort by ~35% and improving on-call responsiveness.
- Partnered with IAM, infrastructure, and platform teams to stabilize authentication flows, resolve token rotation issues, and strengthen inter-service communication reliability.
- Authored structured post-incident reviews and drove follow-up remediation tracking, reducing recurring incident volume and elevating overall SRE maturity.

Amex **Nov'24-March-25.**
Role: Sr. Cloud Engineer **Phoenix, AZ**

Responsibilities:

- Deployed and managed Azure Shared Image Gallery and Azure Image Builder using Terraform to deliver standardized golden images across primary and DR regions.
- Architected and deployed **Azure Shared Image Gallery** and Azure Image Builder using Terraform, ensuring scalable, secure, and reusable golden images for enterprise workloads.
- Implemented fully automated image pipelines for Windows Server 2022 and Ubuntu 20.04, embedding security agents, runtime libraries, and baseline configurations as per company standards.
- Integrated Security Adoption Framework (SAF) policies into image creation and deployment workflows, ensuring all VM images meet internal security benchmarks from Day 0.
- Enabled seamless cross-region DR by replicating golden images from US West 3 to US East 2, validating access and version consistency post-replication.
- Enforced **RBAC** policies and scoped access to image galleries using Terraform, ensuring principle of least privilege and team-level segregation.
- Restricted VM provisioning to only approved golden images by deploying Azure Policy definitions as code, ensuring tight governance and consistent builds across environments.
- Provisioned and configured Azure Update Management via Terraform, **automating patch** installation schedules for production and non-production workloads.
- Defined dynamic patch classification rules for security and critical updates, while routing optional patches for business approval via automated Jira workflows.
- Automated post-patching workflows using Azure Automation runbooks, including reboot orchestration and service health validation to reduce manual interventions.
- Built Terraform modules for Azure Automation accounts, log analytics workspaces, shared image gallery resources, and update schedules used as standards across CCOE.
- Integrated Palo Alto Networks Panorama with VM deployments, applying region-aware firewall rules during provisioning and ensuring **HA** sync between US West and East regions.

- Integrated image deployment and patching pipelines into Azure DevOps, enabling Infrastructure as Code practices and consistent deployment experiences across Dev/Test/Prod.
- Set up **Azure Monitor** dashboards and alert rules to track image deployments, patch success/failure rates, and compliance metrics across all environments.
- Logged all task activity, testing results, and remediation actions in Jira, aligning efforts with CCOE's agile delivery process using structured Kanban workflows.
- Prepared and published detailed usage documentation and adoption guides in Azure DevOps Wiki, covering **golden image** usage, patching timelines, and troubleshooting.
- Led technical enablement for app teams and developers, helping them onboard to the shared image strategy, resolve patching issues, and self-serve image deployments.
- Validated image and patch rollouts through structured tests in sandbox and QA environments, confirming app compatibility and logging findings in Jira for audit traceability.
- Maintained consistent alignment with the **Azure Foundation** Services Plan, ensuring all rollout milestones and compliance metrics were met on schedule.

NCR	**May'22-Oct'24**
Role: Sr. Software Engineer	**Dallas, TX**

Responsibilities:

- Spearheaded the creation and implementation of end-to-end DevOps solutions across Azure and GCP, enhancing workflow efficiency and system reliability.
- Developed multiple-component CI/CD pipelines using Jenkins to facilitate both regular and ad-hoc releases, aligning closely with evolving business needs.
- Led the operation of migrating usage of existing DevOps tools to Azure DevOps. Configured Azure DevOps portal and created Repos for Source Code management, configured azure pipeline for build operations, configured artifacts in Azure DevOps for string Artifacts, and configured Boards for daily scheduling, ticketing and updating tasks.
- Designed and enforced comprehensive security measures including IAM roles, RAM, RBAC policies, and VPC configurations, ensuring stringent compliance with enterprise standards.
- Utilized Azure ARM, and Terraform to automate infrastructure deployment, achieving consistent and secure environment setups.
- Experienced in migration data between different TFS platforms (in-place upgrades, TFS integration Platform, TFS VC-GIT, TFS-VSTS/Azure DevOps)
- Managed Docker container clusters with Kubernetes, enhancing deployment processes and system resilience.
- Implemented GitOps workflows using Argo CD, optimizing software delivery pipelines and ensuring high availability of applications.
- Building/Maintaining Docker container clusters managed by Kubernetes Linux, Bash, GIT, Docker.

- Implemented Kubernetes manifests, helm charts for deployment of microservices into k8s cluster.
- Managed Kubernetes charts using Helm and created reproducible builds of the Kubernetes applications, managed Kubernetes manifest files & releases of Helm packages.
- Integrated Docker orchestration framework using Kubernetes creating pods, config maps and deployments.
- Implemented and managed **Azure Kubernetes Service (AKS)**, implementing **Azure AD integration** for secure user authentication and **network policies** to enforce security within the cluster.

FOX Entertainment **Nov'21-April'22.**
Role: Sr. Cloud ENGINEER **Dallas, TX**

Responsibilities:

- Designed and implemented complex reusable data ingestion and transformation pipelines on AWS using step functions, Glue, S3, DynamoDB, API Gateway, SNS, SQS etc
- Delivered results in scaled agile framework using CI-CD pipelines built on AWS using ECS, Docker images and Jenkins.
- Built reusable deployment pipelines Jenkins pipeline which pulls images from ECR and deploy into Kubernetes cluster using helm.
- Extensively involved in infrastructure as code, execution plans, recourse graph and change automation using Terraform managed AWS infrastructure as code using terraform.
- Build various data ingestion, transformation and cataloguing pipelines ingesting data from diver's sources like streaming services, microservices, APIs, databases, data warehouses etc.
- Responsible for customer end to end delivery being a part of data engineering teams on couple of projects by implanting solution on AWS cloud platform.
- Responsible for managing infrastructure for multiple AWS accounts by provisioning (s3, ELB, EC2,RDS, Route 53, IAM, Security groups, etc) with IAC.
- Developed and deploy scalable tools and services to manage machine learning training, inference, model versioning, model promotion/demotion, and model performance evaluation/tracking.
- Managed and secured containerized applications using **Amazon EKS**, leveraging **AWS IAM roles for service accounts (IRSA)** for secure identity management in Kubernetes clusters.
- Deployed SAS Viya application for data analytics team on EKS which is new to org.
- Migrated bitbucket to GitHub for all Data Analytics team.
- Work with data team to provide complete infrastructure with applications like Airflow, Tableau, SAS for new business analytics in AWS cloud environment.
- Worked with Custom AMI's, created AMI tags modified AMI permissions. Configuring and Networking of Virtual Private Cloud (VPC), Developed Cloud Formation scripts to automate EC2 instances.

CIGNA **April'21-Nov'21.**
Role: DevOp's ENGINEER **Dallas, TX**

Responsibilities:

- Automated configuration management and deployments using Ansible playbooks for recourse declaration and also creating roles and updating playbooks to provision infra by using Ansible.
- Used AWS Route53, to route the traffic between different availability zones. Deployed and supported Mem-cache/AWS Elastic Cache and then configured Elastic Load Balancing (ELB) for routing traffic between zones.
- Creating and updating autoscaling groups as per the requirements for our infrastructure.
- Migration from GitLab to GitHub and configured complete CICD pipelines.
- Responsible for infrastructure application like Airflow, Tableau.
- Created Security Groups, configuring Inbound /Outbound rules, creating and importing Key Pairs.
- Initiated cloud watch for instances and using them in Auto-scaling launch configurations.
- coordinate with developers with establishing and applying appropriate branching, labelling and naming conventions using GIT source control. Initiated responsibility for administering the GIT servers which included install, upgrade, backup, adding users, creating repository/branches, performance tuning, troubleshooting issues and maintenance.
- Extensive exposure to Configuration Management policies and practices with regards to SDLC along with automation of scripting using BASH/Shell scripting.
- Experience on working with the Issue tracking and Documentation tool JIRA and Confluence.
- Used Airflow for orchestration and scheduling of the ingestion scripts.
- Created a customs python script for Sync jobs and configured cronjobs accordingly.

NIKE **March'20-April'21.**
Role: Cloud Devops ENGINEER **Portland, OR**

Responsibilities:

- Responsible for Release Automation (software and content deployments) across all environments - Dev, QA, staging & production or all product & platforms, under AWS. This includes working with the Digital Program and Portfolio management group to develop, implement and maintain a continuous integration & delivery methodology.
- Involved in scrum ceremonies (stand-up, grooming, planning, demo/review and retrospective) with the teams to ensure successful project forecasting and realistic commitments.
- Created monitors, alarms and notifications for EC2 hosts using Cloud Watch.
- Experienced in Cloud automation using AWS Cloud Formation templates.
- Deployed Infrastructure on AWS utilizing as IAM, S3, EC2, RDS, VPC, EFS, Cloud Formation, Route 53 and managed Network and security.
- Implemented NetApp cloud volumes CVS and ONTAP solution for cloud data management for our applications.
- Working mostly on Atlassian stack migrating to AWS and participating in Production deployments.

- Re-engineered a Static website using Route-53 DNS failover and s3 website hosting, when service is not running it can route traffic to static website.
- Refactoring AWS pipelines as per the request from team.
- Leveraged various AWS solutions like EC2, S3, IAM, EBS, Elastic Load Balancer (ELB), Security Group, Auto Scaling and RDS in cloud Formation.
- Created snapshots and Amazon machine images (AMI) of the instances for backup and created Identity Access Management (IAM) policies for delegated administration within AWS.
- Configured RDS instances using Cloud Formation and Terraform and used Terraform to map more complex dependencies and identified network issues.
- Encrypting all sensitive data, including DB snapshots and AMI using AWS managed keys.
- Setup AWS EFS shared storage for NIKE internal applications such as CROWD etc.
- Build Jenkins jobs to create AWS infrastructure from GitHub repos containing Terraform code and administered/engineered Jenkins for managing weekly builds.
- Deploying some of software inventory agents like crowd strike upon CIS request.
- AWS cost saving by reviewing and modifying all resources with no performance Impact.

COMCAST **March'19-Feb'20.**
Role: DevOp's ENGINEER **Philadelphia,PA**

Responsibilities:

- Worked a major part in improvising the performance of operations by creating AWS parallel and nested stacks using CloudFormation Template (CFT) with IAM users, EC2, ASG, RDS instances in a multitier environment.
- Performed AWS cloud deployments for web-apps running on AWS Elastic Beanstalk (EBS) with monitored using Cloud-watch and VPC to manage network configurations.
- Created custom policies using IAM with MFA with for AWS Cloud resources and Groups and maintained IAM roles and User credentials.
- Created and managed a Docker deployment pipeline for custom application images in the cloud using Jenkins. Also used Docker containers for eliminating a source of friction between development and operations.
- Wrote Docker files for micro services, also dockerized testing environment for those services.
- Implemented an automated test strategy for testing the functionality of services using Concourse-CI and Docker.
- Contributed for python library which continuously integrate, test and deploy clusters through fully automated Concourse pipelines.
- Created Docker images using a Docker file, worked on Docker container snapshots, removing images, and managing Docker volumes.
- Implemented Cloud Formation Templates to provision and auto deploy EC2 Instances.
- Setup and configuration of Web servers using Apache and NGINX.
- Implemented Cloud Infrastructure as a Service environment using open-source technology.
- Created pillar & grains for automation of the application with Infrastructure Management tool salt Stack Server.
- Monitor and provision AWS environments and respond in accordance with client playbooks.

- Conduct patching for AWS environments via Salt stack, AWS Systems Manager, and custom scripts.
- Extensively used Perforce as a Configuration Management tool to manage source code and for automating configuration management using Salt Stack.
- Automate Deployment using configuration Management tool like Ansible to provision amazon AWS Instances to enable Continuous Deployments.
- Expertise in designing the Cloud Formation Template on YAML or JSON format to support the Elastic Beanstalk application environments.
- Leveraged several Jenkins plugins to automate tasks like code coverage, metrics, aws-ec2 plugin, and job creation.
- Implemented Multithreading module and complex networking operations like race route, SMTP mail server and web server Using Python.

AT&T/ERICSSION **May'18-Nov'18.**
Role: CI&CD ENGINEER **PLANO,TX**

Responsibilities:

- Deployed infrastructure on AWS utilizing as EC2, RDS, VPC and Managed Network and Security, Route 53, Direct Connect, IAM, AWS S3, Glacier and Cloud Watch Monitoring Management.
- Experience with mount on EFS file systems on on-premises datacentre servers to connect with VPC and Direct connect.
- Provisioned Linux machines on AWS, creating AMIs, user administration on AWS, assign Elastic IPs, creating machine under VPC, configured autoscaling and defined cloud formation JSON templates (CFT).
- Virtualized the servers on AWS using the Docker, created the Docker files and version controlled them.
- Implemented Cloud Formation Templates to provision and auto deploy EC2 Instances.
- Expertise in designing and Implement databases in the infrastructure using RDS resulting high availability, best IOPS. Leverage automated backups feature of RDS to enable point in time recovery.
- Automate Deployment using configuration Management tool like Ansible to provision amazon AWS Instances to enable Continuous Deployments.
- Experience using DevOps tool Terraform in provisioning AWS machines. Implemented a continuous deployment (CD) pipeline involving Open stack, Ansible to complete the automation from commit to deployment.
- Automation of deployment of OpenStack (Kilo) services using shell scripts for Centos 7.
- Experience in Installing, setting up & Troubleshooting Ansible, created and automated platform environment setup through Ansible playbooks in YAML.
- Managed local deployments in Kubernetes, creating local cluster and deploying application containers.
- Wrote Ansible Playbooks with Python and SSH as the Wrapper to Manage Configurations of AWS Nodes and Test Playbooks on AWS instances using Python.

- Managed Ansible Playbooks with Ansible modules, implemented CD automation using Ansible, managing existing servers and automation of build/configuration of new servers.

ACI Software Pvt Ltd **Oct '14 – June'16**
Role: Devops Engineer **Hyderabad, India**

Responsibilities:

- Performed and deployed Builds for various Environments like QA, Integration, UAT and Production Environment.
- Maintained detailed documentation of moderately complex system specifications, including system installation procedures, system backup, recovery techniques and system test methods.
- Extensively worked on Jenkins to implement continuous integration (CI) and Continuous deployment (CD) processes. Have solid understanding of CI practices and automation of application build processes.
- Writing shell scripts for automation of daily tasks, documenting the changes that happen in the environment and in each server, analysing the error logs, analysing the User logs, analysing the /var/log/messages.
- Configuring New Jenkins Plans or cloning and modifying Existing Jenkins plans for multiple parallel releases.
- Troubleshooting Jenkins build issues or post WAR file deployment issues
- Installed, configured, and managed Puppet Master/Agent, wrote puppet custom modules and Manifests, and downloaded pre-written modules for infrastructure provisioning.
- Wrote puppet modules for the Tomcat/Apache/Splunk forwarder services in our distributed infrastructure.
- Used Puppet to manage Web Applications, Configuration Files, Database, and Packages.
- Implemented Puppet modules for server housekeeping. Built a new CI pipeline. Testing and deployment automation with Jenkins, and Puppet.
- CI/CD pipeline from code commit to project build test cases till the deployment to a prod environment.
- Utilized Puppet to automate single-command provisioning for development and production environments for operation tools start up.
- Responsible for creating test automation scripts for each feature of the application, which have corresponding java and JSON files using cucumber and Espresso framework.
- Created and maintained Puppet Modules to manage configurations and automate installation process.
- Extensive experience in SCM concepts: Branching, Merging, Check-in/out, Labelling, Tagging, Packaging, Baselines and Releases. Installation and configuration.

EDUCATION

- Master's in computer science from NEW ENGLAND COLLEGE, 2018 NH, USA.
- Master's in data Analytics from NEW ENGLAND COLLEGE, 2022 NH, USA.
- Bachelor's in computers science 2012, INDIA.