Nagendra Sanka

Bringing 7+ years of hands-on expertise in designing, deploying, and securing Microsoft Azure and AWS services, encompassing both **IAAS** and **PAAS**. My comprehensive skill set in both Azure and AWS, coupled with proficiency in **DevSecOps**, **Kubernetes**, and **Terraform**, allows me to architect, manage, and secure cloud-native applications efficiently and effectively while adhering to best practices and industry standards.

Strong knowledge in designing IT Operations and network automation. Certified in **Az-400**(DevOps Expert),

**Az-200**(Azure Developer).

# Summary

Azure, AWS & DevOps:

* Extensively involved in migrating solutions from On-Premise to Cloud strictly adhering to Zero Trust Framework.
* Expertise on implementing infrastructure on cloud using IAC – Terraform, ARM templates & Cloud Formation templates
* Handled Enterprise Azure tenants and Azure CSP accounts.
* Expert in configuration management using Ansible (Ansible Tower) especially for network automations.
* Orchestrated the transition to containerized environments using Docker and Kubernetes, enhancing application deployment speed and system reliability
* Good experienced with monitoring tools such as **AWS** **Cloud** **Watch**, **Nagios**, **Elasticsearch** **Logstash**/**Fluentd** **Kibana** (**ELK**), **Grafana,** and **DataDog**.
* Experience in deploying .net, node js, and java applications to different environments which

includes designing, development and implementation.

* DevOps CI / CD integration using Jenkins, Azure DevOps, Bamboo, GitLab.
* Implemented robust CI/CD pipelines with Jenkins, GitLab CI, Github actions, Argo CD and Azure DevOps, incorporating SecOps practices to enhance security measures, thereby reducing release cycle times and elevating overall software quality.
* Worked on Azure resources such as **AKS**, **ACS**, **VPN**, **Azure** **VM**, **VMNet**, **VMSS**, **Azure** **AD**, **Azure** **Data** **Services**, **Azure** **Storage**, **Azure** **Databases (SQL & CosmosDB**), **Azure** **Backup**, **Azure Site Recovery, Azure Batch, API Management, Azure App Services**.
* Proficient in AWS Cloud Services such as **IAM, EC2, S3, AMI, VPC, Auto-Scaling, Security Groups, Route53, ELB, EBS, ECR, EMR, RDS, SNS, SQS, DynamoDB, Lambda CloudWatch, CloudFormation, CloudFront, Snowball, and Glacier.**
* Experience in cyber security practices and implementing security tools for logging and monitoring.
* Experience in implementing High availability using Availability Sets and Availability Zones and Autoscaling
* Coordinated different teams across the globe to deploy different builds to different environments on parallel

development for multiple projects.

# Technical Skills

**Languages**: Python, C#, SQL, JavaScript, jQuery, jinja, YAML Bash, HTML/CSS

**Databases**: MongoDB, Postgresql **Message Queue**: kafka, RabbitMQ **Public Cloud**: Azure, AWS, GCP

**Configuration management**: Ansible, Stackstorm, servicenow orchestration, AWX(Ansible Tower)

**Container Orchestration**: Aks, EKS, Kubernetes, Helm

**CI/CD**: Git Lab, Azure DevOps, Jenkins, Bitbucket, Argo Cd

**Static and dynamic code analysis**: Sonar Qube, veracode, Trivy, Helm lint, Yaml Lint, OWASP ZAP

**Infrastructure as a code**: Terraform, ARM templates, Azure CLi

**Web Framework**: .net MVC **ITSM tool**: Service-now **Data Visualization**: Tableau

**Monitoring Tools**: Grafana, Prometheus, Kiali, Log analytics workspace, cloudwatch, Splunk

# Experience

**Research Engineer** Aug 2022 – Present

*West Virginia University MorganTown, WV*

* Led the adoption of containerization for applications, improving scalability and security.
* Led end-to-end planning and execution of AWS migration, ensuring a smooth transition from on-premises infrastructure to the AWS cloud, aligning with business objectives
* Conducted capacity assessments and implemented strategies to ensure scalable and reliable systems.
* Configured Kafka clusters for fault tolerance, scalability, and optimal performance.
* Implemented Kafka Connect to ingest data from external sources into Kafka topics.
* Developed and maintained automated processes using scripting languages (e.g., Python, Bash) to improve system reliability and efficiency.
* Established and refined incident management procedures, resulting in a 20% decrease in mean time to resolution (MTTR).
* Conducted in-depth performance analysis, identifying and addressing bottlenecks, leading to a 25% improvement in system responsiveness.
* Implemented cost optimization measures during migration, right-sizing instances, and optimizing resource utilization, achieving a balance between performance and cost efficiency in the AWS environment
* Engaged in Version Control, Build and release Management, and proficiently executed deployments to DEV, QA, and PROD Environments utilizing Azure DevOps principles and CI/CD methodologies. Achieved an 80% reduction in deployment time, enhancing overall operational efficiency
* Implementation of security measures in CI/CD pipelines (SAST, DAST, IAST).
* Creating CI/CD pipelines for deploying Azure services using Azure DevOps (focused on created reusable tasks) and DevOps best practises.
* Working and deploying AWS Solutions using EKS, EC2, S3, IAM’s, VPC’s, Subnets, Security Groups, Elastic Load balancer (ELB), Lambda and auto-scaling groups.
* Working on Jenkins, troubleshooting the existing build jobs. Fixed build and config issues for creating/destroying VPC, Subnets and for orchestration new instances in AWS.
* Migrated legacy stack to Kubernetes, deployed applications using EKS and also on-prem using Kubernetes stack.
* Automated and created pipeline for application deployment using ArgoCD, AWS Code-commit and Jenkins.
* Performance tuning, Monitoring, Capacity planning and alerting system implementation with Prometheus/Grafana.
* Implementing security best practices in small-scale industries under the supervision of the Department of Energy (DoE) is a crucial task to safeguard these businesses from potential cybersecurity threats and vulnerabilities

**Senior Cloud and DevSecOps Engineer** Feb. 2021 – Aug 2022

*Harman International Bangalore, India*

* Handled Harman’s Enterprise Azure account (Design, Deployment, Security & Maintenance).
* Integrated Elasticsearch with Logstash for centralized log management, enabling efficient log analysis and troubleshooting.
* Managed and optimized Apache Tomcat servers for hosting Java web applications in a production environment.
* Troubleshooted and resolved performance issues to enhance overall application responsiveness.
* Lead the implementation of security measures for IaaS services, ensuring adherence to best practices and regulatory compliance and hence reduced the security threats by 30%
* Tailored security solutions for migration projects, including **site-to-site VPN, gateway configurations, and Web Application Firewall (WAF), Azure Firewall, NSG’s, Router tables, Service Endpoints and Private Endpoints** setups based on project requirements.
* Implemented and fine-tuned Kubernetes-based Event-Driven Autoscaling (KEDA) to efficiently scale pods based on events in Confluent Kafka, ensuring optimal performance and reduced resource usage by 40%.
* Microsoft AKS version 1.17.9 stopped supporting HELM v2.0, hence I have migrated HELM v2 to v3 and tested it in a lower environment as well as promoted across all the environments.
* Worked with Devops Integrating Security tooling in CI/CD Pipeline SonarQube and Snyk for Static Code analysis and identify Vulnerabilities in Library Dependencies
* Stored all the SSL certificates in azure key vault and integrated with AKS to auto sync with new updates
* Setting up Builds with Azure DevOps and deploying into Microsoft Azure services.
* Setting up CI/CD pipelines with Azure DevOps for nodejs, .net and UI Path projects with SecOps practices.
* Setting up Azure DevOps deployment gates for Production environments based on security scans.
* Proficient in orchestrating and managing Kubernetes deployments using Helm, streamlining application packaging, deployment, and maintenance through the creation and customization of Helm charts, resulting in improved scalability and efficiency of containerized applications
* Proficient in using **Terraform** for Azure and AWS resource deployments to enable efficient infrastructure as code.
* Working on Jenkins, Automated CI/CD for multiple environments. Created Jenkins pipeline jobs for multiple microservices.
* Configured Disaster Recovery for production and BETA environment
* Managed Identity and Access Management (IAM) roles, defining and implementing policies to control access to Azure resources.
* Worked extensively on Meta Data tools and Data strategy assessments
* Implemented security scanning, IAM for CI/CD pipeline with AWS, Jenkins and GitHub.
* Experience in AWS Cloud Services EC2, S3, VPC, AWS Glue, lambda functions, Cloud Watch, Auto scaling, Route 53, IAM, Cloud Front, WAF, Application load balancers

**DevOps Engineer** Mar 2017 – Feb 2021

*Ntt Ltd Bangalore, India*

* Played a pivotal role in developing an in-house automation platform, leveraging Kubernetes as the foundational base. Engineered and deployed essential functions in alignment with microservices architecture, utilizing diverse Azure Cloud resources for platform setup. Resulted in a significant cost reduction for the vendor platform, achieving a remarkable 70% cost savings.
* Designed and developed event-driven automation workflows utilizing APIs, connecting to end nodes via SSH/Telnet to automate tasks and streamline the end-to-end solution. Led a project automating the handling of 2500+ monthly requests and incidents, resulting in a remarkable 70% reduction in FTEs.
* Setting up Builds with Azure DevOps and deploying into Microsoft Azure services
* SSL certificate setup for GitLab through Nginx
* SonarQube installation and configuration on Linux Platform
* Expertise in writing Dockerfiles for the microservice applications
* Key contributor in ETL process development for DataLake logs using Python, Spark, and Azure Databricks resulting in a 50% boost in data processing efficiency and 30% faster report generation improving metrics
* Create Ci/Cd pipelines for automation platforms components using Azure DevOps.
* Working on security groups and networking for cross communication between internal and external vendor connectivity.
* Create Ci/Cd pipelines for deploying stackstorm jinja files using Git Lab.
* Developed multiple Ansible playbooks to build Network Automations and deployed in AWX
* Developed .net MVC UI application for Cisco Bugs and Field Notices

**DevOps Engineer** Dec 2015 – Feb 2017

*Ins Zoom India Pvt Ltd Bangalore, India*

* Worked as .net MVC Full Stack Developer on Immigration product.
* Creating Ci/Cd pipelines for deploying .net code to IIS servers using Git Lab.
* Developed RestApi’s for Mobile App Zister which helps to check changed immigration forms.
* Delivered numerous workshops on Immigration product to various Law Firms.

# Education

*Masters in Computer Science -* **West Virginia University:** Morgantown, WV

*Bachelors in Computer Science and Engineering* **- KL University -** Vijayawada, India