RONNIE MBUTHIA

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PERSONAL BACKGROUND

DevSecOps Engineer with years of experience in integrating security practices into DevOps processes to ensure continuous delivery and secure software development. Proficient in automating security controls, monitoring, and risk management. Strong background in CI/CD pipelines, cloud security, vulnerability assessments, containerization, and infrastructure-as-code (IaC). Passionate about creating secure, scalable, and efficient systems in fast-paced environments.

CORE PROFICIENCIES

- **Languages**: Python, Bash, Golang
- **Infrastructure as Code**: Terraform, Cloudformation, Ansible, AWS CDK
- **Cloud Platforms**: AWS, Azure, Google Cloud Platform (GCP)
- **CICD Tools**: CodePipeline, GitlabCI, Jenkins, GitHub Actions
- **Security Tools**: Rapid7,Zscaler,Qradar,SonarQube,Snyk,Okta,Virtru, Splunk,WAF
- **Containerization Tools**: Docker, Kubernetes, Helm
- **GitOps Tools**: Flux, ArgoCD, Spinnaker
- **Configuration Management Tools**: Vault, Secret Manager, SSM Store
- **Cloud Services**: AWS, GCP, Azure, Hetzner, OVH
- **Monitoring**: Grafana, Monit, Newrelic, Zabbix, DataDog, Cloudwatch, Nagios
- **Version Control:** Git, SVN
- **Web Servers:** Apache, Tomcat, Nginx
- **Virtualization tools**: Virtualbox, Hyper-V, VMware
- **Networking**: VYOS, IPSEC, VPN
- **Compliance and Auditing**: SOC 2, GDPR, HIPAA, PCI-DSS

WORK EXPERIENCE

The WoundPros ***04/03/2024 - 30/11/2025***
DevSecOps Lead

- Lead the implementation of DevSecOps practices to integrate security into CI/CD pipelines, enabling rapid and secure deployment of code.
- Automated vulnerability scanning and penetration testing in the pipeline using tools such as Rapid7, Qradar, Snyk, and SonarQube.
- Developed infrastructure-as-code (IaC) templates for cloud security configuration (AWS, Azure) using Terraform, Ansible and AWS CDK.
- Set up Okta to enable Single-Sign-On for our in-house apps, integrated with Microsoft User Directory to enable synchronization of user data and policies.
- Designed security monitoring and alerting solutions using Prometheus, Grafana, CloudWatch and ELK Stack to proactively detect and respond to incidents.
- Conducted regular security reviews, threat modeling, and risk assessments to identify potential security gaps.
- Worked with compliance teams to ensure adherence to industry security standards and regulations, improving audit readiness.
- Configured Virtru to enable and implement data security for information shared through emails, services and Saas applications.
- Reduced the mean time to resolution (MTTR) of security issues by 30% through automation and improved incident response processes.
- Spearheaded the development and management of CI/CD pipelines using CodePipeline, Bitbucket Pipeline and AWS CDK, automating build, test, and deployment processes.
- Managed cloud infrastructure (AWS, Azure) and ensured security hardening through AWS Security Hub, AWS WAF, IAM policies, and network access control.
- Implemented container security practices in Docker and Kubernetes, enabling more secure application environments.
- Developed custom scripts in Python and Bash to automate various security and compliance checks in the deployment pipeline.
- Collaborated with security teams to enforce security policies and conduct regular security audits on the cloud and on-premise infrastructure.
- Played a key role in reducing deployment time by 40% by automating infrastructure provisioning and configuration management.
- Implemented a secure multi-cluster Kubernetes environment with integrated secrets management and role-based access control (RBAC).
- Automated vulnerability scanning and security patching using open-source tools like Wazoo, AWS SSM and AWS Guard Duty

M-Gas Limited ***21/08/2023 - 29/02/2024***
DevSecOps Manager

- Led a team of DevOps engineers in designing and implementing CI/CD pipelines using GitHub Actions and Terraform Cloud (SpaceLift).
- Conducted training sessions for development and operations teams on best practices for AWS deployment and automation.
- Implemented VPN integration for Tigo, Vodacom and Airtel in Tanzania with Pfsense vpn software.
- Collaborated with security teams to integrate security measures into the deployment process, ensuring compliance with industry standards.
- Lead the design and implementation of security measures for AWS cloud environments, ensuring compliance with industry standards and regulations
- Implement and manage AWS security services, including AWS Identity and Access Management (IAM), AWS Key Management Service (KMS), AWS WAF, and AWS Security Hub.
- Collaborate with cross-functional teams to integrate security into the development lifecycle and promote a secure-by-design approach.
- Worked closely with cross-functional teams to gather requirements and design deployment strategies for various AWS-based projects.

Sendy Limited ***06/06/2022 - 31/07/2023***
Senior Reliability Engineer

- Bootstrapped and led the SRE resiliency team, dedicated to providing tools and procedures to build a highly available, reliable, scalable and performant platform.
- Developed ansible playbooks for installation and setup for Kubernetes with other various components on a bare metal environment.
- Developed terraform templates that manage the setup of DNS and traffic management on Cloudflare.
- Designed and implemented a continuous build-test-deployment system with multiple component pipelines using GitlabCI to support daily releases and out-of-cycle releases.
- Designed and implemented terraform templates to provision AWS EKS and its components facilitating the migration from bare metal environment to AWS Cloud.
- Designed and implemented enterprise pipeline to facilitate CI/CD uniformity and enforced security and development standards.
- Implemented continuous deployment through GitOps by integrating ArgoCD and Kustomize and/or Helm with our kubernetes clusters, this allowed the developers to initiate their own deployments for new applications and existing ones.

- Secured our internal network by using VYOS server as the gateway between the kubernetes nodes and using Wireguard for securing traffic in the private network.
- Worked with helm manager to create custom helm charts for various applications.
- Automated secret and configuration updates by setting up external secrets operators in our cluster to communicate with hashicorp vault and aws secret manager.
- Implemented full-stack monitoring using DataDog APM and logs with the use of vector.
- Introduced multi-provider redundancy for all edge infrastructure (DNS and Load Balancing)

M-Gas Limited 14/11/2020 – 31/05/2022
Devops Lead

- Automated release pipelines to achieve zero touch deployments across multiple accounts on our AWS Landing Zone environment using CloudFormation.
- Designed and implemented AWS infrastructure 100% via code.
- Creating, versioning and testing of scripts(Bash, Python), templates(Terraform, Cloudformation) to achieve a high level of automation for our cloud infrastructure.
- Setup of monitoring and alerting for our services by integrating the applications with Grafana, Cloudwatch and Datadog which reduced the mean time to detect failure from 30 mins to 5 mins or less.
- Established self-healing capabilities through usage of autoscaling groups integrated with codedeploy for applications hosted on servers(ec2) which reduced the mean time to respond from 30 mins to about 5 minutes.
- Reduce incidents caused by security concerns by fixing and mitigating findings/issues captured by AWS Security Hub, this improved our security score from 46% to over 70%.
  Hired and trained a team of three engineers to carry out the responsibilities within the devops scope.
- Analyzing and monitoring performance bottlenecks and key metrics using CloudWatch, Datadog and Grafana to optimize software and system performance.
- Configured and maintained Site-to-Site VPN connection for our meter traffic with Telcos such as Safaricom(Kenya) and Vodacom(Tanzania).
- Secured user access of in-house applications by integrating AWS Cognito Authorizer with SSO configured on Microsoft Azure AD.
- Engaging with external partners to redesign our production AWS network architecture to achieve multi-tenancy and reliability for our meter traffic.
- Coordinate/assist developers with establishing and applying appropriate branching, labeling/naming conventions using Git source control.

Grow Mobile Technology 01/07/2020 – 30/11/2020
DevOps Consultant

- Designed and edited blueprints for IT infrastructure and networking architecture according to management's demands.
- Monitored existing infrastructure and architectural frameworks for performance using tools such as CloudWatch and Elastic Cloud.
- Maintenance and configuration of user accounts for dev, QA and production servers and roles for EC2, RDS, S3, CloudWatch, EBS resources to communicate with each other using IAM.
- Built VPCs from scratch, creating private and public subnets, creating security groups and network access lists, configuring internet gateways, OpenVPN, created AMI, user access management/role based access/ multi factor authentication and API access.
- Recommended and managed transmission protection requirements for all env(systems, apps, containers) such as VPC peering best practices, SSL cert management, key pairs.
- Identified key areas for improved and cost effective cloud architecture.
- Configured NACL and security groups, limiting malicious attacks from blacklisted range IP addresses.
- Configured auto-scaling for EC2 instances running production systems to be able to handle customer workload.
- Designed and created alarms, notifications and trigger events based on the AWS resource utilization threshold.

Cellulant Corporation Limited 04/01/2016 – 31/05/2020
SysAdmin/Operations Engineer

- Increased team productivity and automated repetitive tasks by using ansible playbooks, bash and python scripts which were managed by execution management tools accessed via GUIs.
- Established automated server generation routines, optimizing system performance, installing upgrades/patches, establishing system monitoring and maintaining security protocols.
- Utilized Kubernetes for the runtime environment of the CI/CD system to build, test and deploy.
- Used Gitlab CI pipelines to drive all microservices builds out to the Docker registry and then deployed to Kubernetes, Created Pods and managed using Kubernetes
- Managed about 40 Linux Servers for 24/7 critical uptime business products in a distributed and highly available cloud infrastructure..
- Our team acted as an escalation point for troubleshooting advanced applications issues; consistently earned 100% issue-resolution scores by providing excellent service to internal and external customers.
- Installed and configured Newrelic and Monit to constantly monitor application performance, memory usage, and servers' status.

- Maintained both Gitlab and SVN repositories for the company's application code and configuration.
- Wrote custom monitoring and integrated monitoring methods into deployment processes to develop self-healing solutions.
- Created systemd/init scripts to manage and run our daemonized services on Centos and RedHat servers.
- Reduced time of provisioning aws services such as ec2, vpc, security groups etc, by incorporating re-usable infrastructure-as-code with the use of terraform.
- Worked with developers to ensure new environments both met their requirements and conformed to industry-standard best practices.
- Designed, improved and maintained automated deployment pipelines using Jenkins server and GitlabCI by using shared libraries and templatized yaml files respectively.
- Collected and maintained a complete inventory of all systems. Identify and retire unused systems to recycle resources and reduce maintenance costs.
- Increased TPS for payments traffic from 20 to almost 200 and QPS to about 500K achieving scalability and high availability by load-balancing between database clusters.
- Established a remote coding development environment by using docker and bash scripts.
- Implemented RESTful services for USSD and mobile money integrations to fulfil transactional flow between banks, merchants. and mobile network operators in different markets.
- Reduced TAT by 50% by implementing distributed caching, stream processing using RabbitMQ for message queueing and Redis for caching on applications that were only reliant on databases during processing.
- Played a significant role in designing, architecting our infrastructure for our critical messaging services from a monolithic setup to a service-oriented architecture utilizing microservice development with Spring Boot framework which were running in Docker containers by utilizing both EKS and ECS on AWS which vastly improved overall performance for the influx of requests..
- Improved our agile workflow approach by using process improvement tasks such as Jira, slack notification, Trello and GitlabAPI services..

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EDUCATION

Emobilis Mobile Training Academy ***May 2014 – August 2014***

- Mobile Software Development and Entrepreneurship Program.

Kenyatta University ***May 2010 – December 2014***

- Bachelor of Science (Computer Science)

Computer Pride, Nairobi ***February 2010 – May 2010***

- A+ Certification in Essentials and Electives of computer hardware and software

HOBBIES

Photography, Swimming, Travelling, Music, Networking, Gadgets and Technology.

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