

# Muhammad Adeel Shafi

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## Summary

DevOps Consultant with 5+ years of experience with expertise in Azure cloud services, hybrid cloud infrastructure, and the Elastic Stack. Proficient in tools including Git/GitHub, Docker, Terraform, Ansible, Kubernetes, Jenkins, Azure DevOps, and Elastic (Elasticsearch, Kibana, APM, Beats). Successfully deployed and managed complex Azure projects implementing IaC, serverless applications, CI/CD pipelines, and observability solutions. Skilled in optimizing elastic sharding, security, and integrating APM agents for application performance monitoring.

## Projects

### **Azure IaC Automation and Policy Enforcement using Terraform, Checkov, and Env0**

- Designed and implemented reusable Terraform modules (v3 and v4) for multiple Azure services including Key Vault, IAM, Private Endpoints, App Service Plans, Storage Accounts, Application Gateway, VNets, AKS, ACR, and VPN Gateway.
- Developed environment-specific deployments (Dev, nProd, and Prod) across workspaces managed through Env0 pipelines, ensuring consistent and secure provisioning.
- Implemented GitOps workflows integrating Terraform with Env0 for automated plan, validate, and apply stages using pull request approvals and secure secret management in Azure Key Vault.
- Configured Checkov policies to enforce compliance standards such as approved locations, minimum TLS version, and disabling public access for all Azure resources.
- Built a virtual Python test environment to validate Checkov policies before merging changes into the main branch, ensuring policy accuracy and preventing configuration drift.
- Developed automated test cases for each Azure service to validate module behavior and successful deployment into Azure subscriptions.
- Integrated remote state management via Azure Storage for workspace isolation and version control.
- Created detailed technical documentation for module usage, test procedures, and policy compliance validation.
- Conducted knowledge-sharing sessions with DevOps and security teams to promote best practices in IaC security and modularization.
- Enhanced pipeline efficiency by implementing caching and modular linting to reduce validation time and improve deployment throughput.

### **Azure-Cloud Infrastructure Automation with Terraform and GitLab CI/CD**

- Built modular Terraform code for Azure services including VNets, Subnets, NSGs, AI/ML Workspaces, Key Vaults, Storage Accounts, and App Services.
- Designed GitLab pipelines for automated plan, validate, and apply stages.
- Configured GitLab Runner in Azure for secure, in-region deployments.
- Managed cross-cloud integration between AWS and Azure with VPN connectivity.
- Integrated Terraform remote state management in Azure Storage.
- Created comprehensive documentation and conducted DevOps training.

### **Enterprise Elastic Cloud and Observability Platform Deployment in Air-Gapped Environment**

- Deployed Elastic Cloud Enterprise (ECE) on RHEL 8 servers ensuring security compliance.
- Deployed 9 VMs cluster for client observability with thousands of microservices and 24 applications.
- Integrated Elastic APM, Ingest Pipelines, and Kibana Dashboards for SLA tracking and monitoring.
- Implemented ILM policies for storage optimization and RBAC for access control.
- Implemented ingest pipelines, index templates and data transformation.
- Configured synthetic and uptime monitors.
- Configured Sql server, APM agents, minIO, and more integrations to get logs and metrics.
- Configured multiple spaces as per the client need and relevant permission of the env.
- Configured roles and added users to each as per the customized need of client.
- Configured Watcher alerts for performance and SLA monitoring.
- Deployed DR and Pre-Production environments with full observability stack validation.
- Tools: Elastic ECE, ELK Stack, Docker, ILM, Watcher, APM, RBAC, RHEL 8.

### **High-Availability Kubernetes Infrastructure Deployment for Banking Microservices**

- Designed production-grade Kubernetes clusters (3 master, 4 worker) with HAProxy and multiple master/worker nodes v1.32.0.
- Implemented domain routing, taints/tolerations, and microservices deployments. Validated scalability and high availability of application stack.
- Configured audit setting in cluster YAML files for logging.
- Tools: Kubernetes, HAProxy, Docker, Linux.

## CI/CD and Containerized Microservices Deployment

- Built Azure DevOps pipelines for Node.js and React.js microservices across environments.
- Used Docker and Helm for containerization and orchestration on AKS.
- Implemented CI/CD workflows ensuring faster, reliable deployments.
- Tools: Azure DevOps, AKS, Docker, Helm, Node.js, React.js.

## Serverless Microservices Deployment using AWS Lambda and DevOps Automation

- Designed and deployed a serverless microservices architecture leveraging AWS Lambda, API Gateway, and DynamoDB for scalable and event-driven workloads.
- Implemented CI/CD pipelines in AWS CodePipeline and CodeBuild for automated build, test, and deployment of microservices written in Python and Node.js.
- Integrated Terraform for Infrastructure as Code (IaC) to provision Lambda functions, IAM roles, API endpoints, and DynamoDB tables.
- Configured AWS CloudWatch for centralized logging, metrics, and automated alerts across all Lambda services.
- Implemented AWS X-Ray for distributed tracing to monitor latency and performance bottlenecks across microservices.
- Used AWS S3 and EventBridge for asynchronous communication and event-driven data workflows.
- Applied security best practices including least-privilege IAM policies, environment variable encryption, and VPC integration for Lambda functions.
- Built automated testing using Pytest and integrated validation stages in the CI/CD pipeline to ensure deployment reliability.
- Created documentation and knowledge-sharing sessions on serverless DevOps automation and observability in AWS.

## Experience

### DevOps Consultant | Systems Limited | May 2022 – Present

- Azure IaC Automation: Designed and implemented reusable Terraform modules (v3/v4) for Azure services including VNets, Key Vaults, Private Endpoints, Storage Accounts, and Function Apps.
- Policy Enforcement: Integrated Checkov with Terraform pipelines to enforce security and compliance policies (e.g., approved locations, TLS, no public access).
- Pipeline Automation: Built and managed Env0 and GitLab CI/CD pipelines for automated plan, validate, and apply workflows across Dev, nProd, and Prod environments.

- **Infrastructure Security:** Implemented GitOps workflows with approval-based deployment, secret management via Azure Key Vault, and workspace isolation with remote state in Azure Storage.
- **Elastic Cloud Deployment:** Deployed Elastic Cloud Enterprise (ECE) and ELK Stack in an air-gapped environment with full observability (APM, ILM, Watcher, RBAC, synthetic monitoring).
- **Observability Platform:** Designed ingest pipelines, index templates, and role-based Kibana spaces for SLA monitoring and performance analytics across 24+ applications.
- **Kubernetes & Microservices:** Built high-availability Kubernetes clusters (3 masters, 4 workers) with HAProxy, implemented routing, taints/tolerations, and application deployments.
- **CI/CD & Containers:** Developed Azure DevOps pipelines for Node.js and React.js microservices, using Docker and Helm for containerized deployments on AKS.
- **Cross-Cloud Integration:** Managed Azure–AWS VPN connectivity and network configurations for hybrid workloads.
- **Documentation & Knowledge Sharing:** Authored detailed technical documentation and led internal DevOps enablement sessions on IaC, observability, and compliance best practices.

### **Senior Consultant | Jazz (formerly Mobilink) | Jan 2010 – May 2022**

- Managed high-availability data center networks with Terraform automation.
- Integrated network observability with on-prem monitoring platforms and managed workloads on on-prem environments.
- Configured CRON jobs for backup of alerts generated over 1000+ routers and saved into cold storage.
- Configured CI/CD pipelines for on-prem NETCOOL server to cater logs of Ericsson routers and switches.
- Configured data transformation pipelines to plot raw alerts data into NETCOOL dashboard view.

### **Education**

- MS in Computer Engineering | University of Engineering and Technology | 2017 – 2020
- BS in Electrical Engineering | University of Central Punjab | 2011 – 2015

## Certifications

- Oracle Cloud Infrastructure 2025 Certified DevOps Professional
- Oracle Cloud Infrastructure 2025 Certified Foundations Associate
- Oracle Cloud Infrastructure 2025 Certified Migration architect Professional

## Skills

- **Cloud:** Azure, AWS, OCI
- **Infrastructure as Code:** Terraform (v3/v4), Env0, ARM Templates, Ansible
- **CI/CD:** GitLab CI/CD, Azure DevOps, Jenkins, GitOps, Pipeline Automation
- **Configuration Management:** Ansible, YAML, Helm, HCL
- **Security & Compliance:** Checkov, RBAC, Key Vault, TLS Enforcement, Policy as Code, Secrets Management, SAST/DAST Integration
- **Containerization & Orchestration:** Kubernetes (HA Clusters), Docker, Helm, AKS, ACR, HAProxy
- **Monitoring & Observability:** Elastic Cloud Enterprise (ECE), ELK Stack, Kibana, APM, Watcher, ILM, Prometheus, Grafana, Synthetic Monitoring
- **Scripting & Programming:** Python, Bash, PowerShell, JSON
- **Version Control & Collaboration:** Git, GitHub, GitLab, Branching Strategy, Code Reviews, Documentation
- **Networking:** VPN Gateway, Application Gateway, Load Balancers, Private Endpoints, VNet Peering
- **Automation & Testing:** Unit Testing, Checkov Policy Testing, Linting, Automated Validation, Pre-merge Testing
- **DevOps Tools & Platforms:** Env0, Docker Compose, Azure CLI, Kubectl, Terraform Cloud
- **Operating Systems:** Linux (RHEL, Ubuntu, CentOS), Windows Server