

Roshaan Zahid

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DevOps and Cloud Computing engineer with over 3 years of hands-on experience across Azure and Google Cloud Platform, with a focus on Azure DevOps automation. Expertise spans Kubernetes, Docker, Monitoring and Alerts, Storage Services, and Virtual Machines, with a strong emphasis on infrastructure as code using Terraform. Proficient in designing and automating complex CI/CD pipelines with YAML, PowerShell, and other build automation tools, targeting deployments across Windows, Mac, and Linux environments. Skilled in containerization, building Docker images for Kubernetes, and implementing scalable, automated cloud solutions to optimize performance, reliability, and business outcomes. Known for effectively managing concurrent projects in a dynamic, project-based setting, training junior resources, and driving seamless handovers to enable team growth.

Highlights

- Experienced in a project-based environment, adept at concurrently managing multiple projects, each with distinct requirements, while training and guiding dedicated junior resources, ensuring successful project handover and team development.
- Established complex CI/CD pipelines in Azure DevOps, orchestrating multi-environment deployments across Azure and GCP, including automated code signing, secure secrets management, and branching strategies to streamline the deployment process for web, API, and desktop applications.
- Proficiently configured pipelines and deployment processes for Windows, Linux, and macOS applications, leveraging Azure and GCP services, with consistent attention to security compliance, using PowerShell, Bash, and ServiceNow integration for incident handling.
- Applied industry best practices for infrastructure security across Azure and GCP, configuring IAM roles, Service Principals, Managed Identities, and using tools like HashiCorp Vault and Azure Key Vault for secure credential management, data protection, and access control.

- Built and managed containerized applications for both Azure Kubernetes Service (AKS) and Google Kubernetes Engine (GKE), utilizing Docker, Helm, and YAML configuration files to create scalable and compliant deployments. Implemented automated image vulnerability scanning and remediation workflows to ensure security standards.
- Developed serverless functions and automation scripts using Python on GCP Cloud Functions and PowerShell for Azure pipelines, enhancing efficiency in infrastructure management, resource monitoring, and deployment lifecycle processes.
- Created extensive project documentation covering system requirements, SOPs, deployment guides, and training manuals. Actively coordinated with QA, development, and operations teams for seamless knowledge transfer and efficient incident response.
- Configured proactive monitoring through Log-Based Metrics and alerting policies in GCP and Azure, setting up comprehensive dashboards to visualize application performance and system health, aiding in fast response and troubleshooting across Dev, QA, UAT, and Production environments.
- Played a key role in mentoring junior engineers, training them on DevOps practices, CI/CD automation, containerization, and best practices in cloud infrastructure, resulting in successful project handovers and continuity.
- Worked extensively with RESTful APIs, using tools like Postman and Apigee for functional and performance testing of web and API applications. Developed and validated complex testing suites in C# .NET with Playwright for seamless integration into CI/CD workflows.
- Defined and implemented best practices for GitOps, including robust branching and versioning strategies, PR-based code reviews, and promotion workflows to optimize code deployment for simultaneous, multi-environment release cycles.

Technical Skills

DevOps	Terraform, Azure Bicep, Git, GitHub, Kubernetes, Docker, Azure CI/CD, Jira
Cloud Platforms	GCP, Azure
Scripting Languages	Bash, PowerShell
Databases	MySQL Server, MySQL
Operating Systems	Linux (RHEL, Cent OS, Ubuntu) and Windows
Methodologies	Agile, Scrum
Programming Languages	Python, C# .NET, JavaScript, Php
Frameworks	Laravel (php)

Experience

05/2024 to Today

Azure Infrastructure Engineer

DevOps | Infrastructure Engineer

MetaSol Pk, Rawalpindi, Pakistan

- Planned and designed infrastructure deployment in Azure based on application requirements, writing Terraform code to provision resources. Configured a Service Principal with necessary permissions and set up an infrastructure deployment pipeline for automated Azure deployment.
- Configured **Azure API Management (APIM)** and **Function Apps** for APIs and backend services, along with **Azure Front Door** to expose the APIM developer portal and API gateway via custom domains managed within **Azure DNS**.
- Conducted multiple proof-of-concept implementations for APIM in Azure to assess suitable tiers for both production and non-production environments based on various use cases.
- Developed **Bicep** code to set up Virtual Networks, Subnets, Network Security Groups, Network Watchers, Flow Logs, and Storage Accounts for logging within a Hub-and-Spoke model. This configuration was deployed to Azure through a CI/CD pipeline up to production.
- Created reusable **Bicep modules** for commonly used resources, enabling other teams within the organization to streamline infrastructure deployment.
- Supported policy management, monitoring, alerts, and backups to maintain compliance and enhance resource reliability within Azure.
- Designed and implemented **network architecture**, including Virtual Networks (VNETs), Subnets, Network Security Groups (NSGs), and VNet Peering, to establish secure connectivity Azure services using **Bicep** code.
- Configured **Azure Policies** using **Bicep**, creating policy definitions, initiatives, and assignments, and managing policy exemptions in collaboration with the infrastructure team for effective governance and organization.

Azure Cloud Engineer

Cloud & Infrastructure Engineer

MetaSol Pk, Rawalpindi, Pakistan

- Collaborated closely with U.S.-based developers to understand their infrastructure needs based on application requirements. Planned and presented the **infrastructure** setup in **Azure**, engaging with the infrastructure team to finalize the approach.
- Developed custom **Terraform modules** in a **centralized repository** to automate the tech stack deployment as requested by developers. This setup consolidated the Terraform configuration for necessary resources, enabling **consistent, reusable deployments** across all environments (development, staging, and production).
- Established a **branching strategy** for the Terraform modules repository, allowing infrastructure team members to work concurrently without impacting the primary modules used for production deployments.
- Configured deployments to non-production and production environments by creating separate repositories and **YAML pipelines**, using **Terraform** to pull from the centralized modules repository and ensuring **consistent resource deployment** across all environments.
- Implemented monitoring and alerting using **Azure Monitor** and **Log Analytics** to ensure proactive management of all deployed services.
- Provisioned **Azure infrastructure components** such as Cosmos DB, Synapse, Virtual Machine Scale Sets, Load Balancers, Event Hub Namespaces, Function Apps, Container Apps, Virtual Networks, Subnets, Elastic Search, and Application Gateway using Terraform, managing the configurations across non-production and production environments.
- Centralized **Terraform state management** in **Azure Storage Account** containers, enabling shared state management. Integrated existing resources into Terraform state and code using the **import** functionality.
- Diagnosed and resolved issues within the Terraform deployment pipeline and Terraform state management to ensure smooth and reliable infrastructure deployment.
- Trained a junior team member on project tools, technologies, and processes, successfully transitioning project responsibilities to them as I took on projects focused more extensively on infrastructure.

01/2023 to 06/2023

Infrastructure Engineer

DevOps | Infrastructure Engineer

MetaSol Pk, Rawalpindi, Pakistan

- Managed source code for web and backend applications in **GitHub Enterprise**, establishing **repositories**, **branches**, and **branch policies** across multiple applications.
- Designed and implemented **CI/CD pipelines** using **GitHub Actions** to build and deploy React and Go-based applications as artifacts on Azure App Service.
- Developed and maintained code repositories for **Terraform**, configuring **Github Action pipelines** to provision Azure resources such as Azure App Service for web applications, Azure Kubernetes Service (AKS) for backend applications, and Azure Container Registry for image storage.
- Configured automated **build pipelines** and **Dockerfiles** to trigger on code pushes to specific branches, packaging Go backend code into **container images** and pushing them to **Azure Container Registry**.
- Created **HELM** manifests in **YAML** within GitHub Enterprise repositories and configured GitHub Actions to deploy **containerized** web and backend applications to **AKS**, with integration to **Cosmos DB** for data storage.
- Managed **secrets** securely within GitHub Actions pipeline **repository secrets** for safe storage and controlled access.
- Established secure connections between resources using **Private Endpoints**.
- Produced comprehensive **infrastructure diagrams** and **detailed documentation** for complex components.
- Utilized **Jira** for task management and team collaboration.
- Provided ongoing project support through to its completion.

12/2022 to 02/2024

DevOps | Configuration Manager

Azure DevOps Engineer

MetaSol Pk, Rawalpindi, Pakistan

- Converted legacy **Classic Editor** pipelines into **YAML Pipelines**. Documented and followed branching and deployment strategies for application

deployment and configured Release pipelines accordingly. Managed the release cycle for around 10 web applications developed in C# .NET

- Worked with **Git** repositories. Created and managed Git repositories for storing application code. **Created Pull Requests** to promote changes to Git repository branches. Participated in Code Reviews
- Worked with **Postman** to test and use **REST API endpoints** and **Apigee endpoints**.
- Produced and maintained **documentation** such as system requirements, processes, designs, resource inventories, plans and manuals.
- Managed all the code repositories in **Azure Repos** for all the applications across the organization including all the **branches, branching strategies, branch policies** and how they would be promoted into higher order branches. Determined how the code would be promoted from lower to higher order branches and followed the **Pull Request** approach.
- Followed **git ops** strategies for managing and organizing code across different branches for multiple concurrent **releases**.
- Configured **Build pipelines** for compiling web, api and database application code written in **C# .NET** using **MSBuild/VSBUILD** using **Classic Editor** as well as within the **YAML** in Azure. This was setup such that the pipelines export build artifacts which contained .exe and .dll files.
- Setup **Release pipelines** for deploying compiled artifacts from build pipelines into **IIS** configured on Azure based **VMs**. Wrote multiple application-specific **powershell scripts** that ran within the release pipeline to support the application deployment. This also included extracting secrets and configurations from Azure DevOps portal **variable groups** and substituting their values into the appsettings and sharedsettings files.
- Managed the configuration of **IIS** on the Azure VMs across all deployment environments both manually and by creating automated **powershell scripts**. This involved management operations such as starting/stopping the IIS, installing required features/removing unused features, setting up new app pools on IIS and starting/stopping them etc.
- Managed deployments of applications to environments such as DEV, QA, UAT, Pre-Production and **Production** based on the deployment cycle.
- Created and maintained deployment and **procedure documentation** for all deployments.
- Setup **code analysis** and **code coverage** results for all applications in the build pipelines such that the results are published into the **sonarqube** dashboard to maintain code quality. Managed and resolved all issues related to **sonarqube** code coverage and analysis within the build pipeline.
- Worked in 14 day sprints, planned sprints and took part in refinements.
- **Migrated** all the build and release pipelines that were previously created in **classic editor** to **YAML** based pipelines. Also setup **branching strategies** for

both build and release pipelines and determined the branches from where the pipelines will be executed.

- Coordinated with the application developers on a daily basis to configure build/release pipelines and for fixing pipeline and application related issues related issues with the deployed application.
- Contributed as the Configuration manager in the configuration of CI/CD pipelines with Azure DevOps using Classic Editor as well as the YAML, Maintaining the application on the server agents, ensuring he deployments to achieve the desired objectives, facilitating in the troubleshooting of the exception regardless what kind of severity they have. Most importantly, I ensured that the pathway being used to be the best reliable approach for the whole process from development to the deployment.
- Trained junior team members on the workings of the project including the project tools and technologies, and successfully transitioned project responsibilities to a junior resource as I took on additional responsibilities.

01/2024 to Today

QA Automation Engineer

Automation Engineer

MetaSol Pk, Rawalpindi, Pakistan

- Developed automated test scripts in C# using Playwright to validate functionality, performance, and reliability of web and API applications.
- Used Playwright with C# to test the organization's web portal, supporting various user roles and permissions.
- Created maintainable test scripts leveraging Playwright's browser automation APIs and built-in features.
- Debugged test failures, analyzed results, and provided reports to the development team for issue resolution.
- Performed Functional, Regression, Smoke, and End-to-End testing on internal and customer-facing applications.
- Refactored test scripts and conducted code reviews to ensure adherence to best practices.
- Validated database records by performing API testing in Postman using GET, POST, PUT, and DELETE methods, verifying status codes and JSON responses.
- Collaborated with QA and development teams to identify automation opportunities and improve testing efficiency.
- Developed both manual and automated scripts for functional, regression, and performance testing.

- Used Jira to track story progress, manage defects, and maintain the Agile process.
- Implemented API testing in Postman with GET, POST, PUT, PATCH, and DELETE methods.
- Applied the Page Object Model (POM) design pattern in C# .NET to improve test script maintainability and reusability.
- Created page objects to encapsulate web elements and functionality within Playwright test automation frameworks.
- Designed page classes to interact with web elements, perform actions, and verify page states, ensuring modular and readable code.
- Used inheritance and abstraction to organize page objects for easier maintenance.
- Conducted sanity testing in Production to ensure successful deployment.
- Actively participated in backlog grooming and sprint planning to ensure requirements followed SMART guidelines.
- Provided daily status updates to tech leads and managers to report progress and issues.
- Now in the process of training a junior team member on tools, languages, and processes, preparing them to take over the project.

03/2022 to 12/2022

DevOps Engineer | Azure

DevOps Engineer

MetaSol Pk, Rawalpindi, Pakistan

- Worked with **Git Repositories** in **Azure Repos** to store web, desktop and MAC application code. Setup branches as part of a well-defined branching strategy and merged code from lower to higher order branches based on the release cycle.
- Setup **Build (CI) pipelines** to compile the web and desktop applications written in C# .NET into executable files (exe, dll) and setup the directory structures for the published artifacts based on release specifications for packaging and delivery. Also setup build pipelines for MAC applications.
- Setup **Release (CD) pipelines** that picked the published artifacts from the build pipelines, setup the correct structure based on client requirements and published them to an FTP server.
- Troubleshooted and debugged issues with build pipelines if changes to the code base caused the build pipelines to fail.

- Managed secure storage of credentials for accessing secure applications within the **Library** as variables and **Secure Files** that can later be used in the pipelines for secure automated access.
- Setup **Secure Signing** mechanisms in the Build Pipelines to sign the build pipeline artifacts using the organization's proprietary signing application. Setup **Powershell/Bash** scripts in the pipelines that published the artifacts to the secure sign application based on the required format and then re-downloaded then after successful signing.
- Worked on researching new initiatives and coordinated with external team members to gather details as required by the client.

10/2021 to 12/2022

IT Analyst Programmer | GCP

Platform Operations

MetaSol Pk, Rawalpindi, Pakistan

- Developed a POC to apply Patch Deployment Jobs for GCP VMs using Cloud Functions (Python) and GCP APIs (Asset Inventory, OS Config) to update VMs. Stored data in BigQuery for reporting in Data Studio.
- Created BigQuery views to filter and extract meaningful data for reporting.
- Managed container deployment using YAML and PowerShell scripts, leveraging Helm to deploy images from GCP Artifact Registry to GKE across multiple environments.
- Automated image deployment in GKE via Azure CI/CD pipeline, extracting SHA256 digest from Docker images for security compliance.
- Deployed and managed applications on GKE as StatefulSets and Deployments using Helm, troubleshooting logs to resolve issues.
- Documented functional requirements and test cases for GKE MID Server, performing manual testing and reporting results.
- Monitored deployments in GCP/GKE, troubleshooting and resolving issues to ensure successful deployment.
- Used Terraform and modules to create GCP projects, including Artifact Registry, and managed resources within the team.
- Built and deployed Docker containers to GKE, using prebuilt and custom containers with YAML configurations.
- Designed, developed, and maintained custom system software and supported hardware systems for client infrastructure.

- Managed secrets using HashiCorp Vault, integrating it with GCP for secure storage of service account secrets.
- Tested APIs with Postman, performing CRUD operations to ensure functionality and uptime of APIGEE endpoints.
- Produced and maintained system documentation, including requirements, designs, plans, and manuals.
- Provided 24/7 on-call support, managing incidents and rerouting tickets using ServiceNow.
- Utilized Terraform for resource provisioning in GCP, managing service accounts, artifact registries, and other resources.
- Configured log-based metrics and alerting policies in GCP to monitor critical resources and set up dashboards for tracking.
- Used ServiceNow CMDB to manage GCP resource inventory and automated vulnerability management processes.
- Trained junior team members on tools and technologies, transitioning project responsibilities as needed.

Projects

Web Applications

- Developed front-end Web Applications using front-end technologies such as HTML, CSS, Java Script, Bootstrap/Tailwind.
- Developed backends for Web Applications using mainly Php and later moved to using Laravel.
- Worked with various international clients as a freelancer on Fiver to develop web applications based on their needs.
- Developed a dynamic Inventory Management System to manage stock of office supplies with Laravel. Also developed backend API endpoints.
- Developed a Job Posting web application to connect potential applicants to employers.

Desktop Applications

- Developed desktop applications while applying Advanced Object-Oriented Programming Concepts (C++ and Java)
- Created a dynamic grade and CGPA calculation system.
- Worked with commonly used data structures.
- Worked on creating management systems with SQL DB integration.

Languages

English, IELTS – 8 Band

Urdu, Native

Education

Google Cloud Fundamentals: Core Infrastructure

Coursera

<https://coursera.org/verify/TR35UYGMBLUP>

Getting Started with Google Kubernetes Engine

Coursera

<https://coursera.org/verify/L9SXTAQD9GXT>

Bachelor in Computer Science – 2022 (3.4 CGPA)

National University of Modern Languages, Islamabad

ICS – 2018 (80%)

F.G Sir Syed College, The Mall, Islamabad

Matriculation - 2016 (89%)

F.G Sir Syed School, Rawalpindi