**Shane Singh**

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Highly motivated IT professional with over 4 years of experience as a Cloud Engineer / Devops Engineer. Extensive experience in troubleshooting, monitoring, and designing highly available infrastructure in both on-premises and AWS environments. I am eager to find a position in the industry where I can continue to expand my knowledge and skills, and contribute to the success of the organization.

**EDUCATION**

**Hudson County Community College Jersey City, NJ**

**Associates in Computer Science May 2020**

**SKILLS**

* **Cloud:** AWS, Azure
* **Automation Tool**: Python, Ansible, Terraform
* **CI/CD Pipeline Tools:** Github, Gitlab, Jenkins, Harness, Bitbucket Concourse Pipeline
* **Scripting:** Bash. Python
* **Database:** RDS, DynamoDB, MySQL, PostgreSQL
* **Network:** TCP, IP, UDP, Tcpdump, Traceroute, Netstat, Dig, DNS, DHCP, VLAN, NIC Bonding
* **Cloud Computing Services:** AKS, EKS, IAM, ROUTE53, RDS, VPC, EC2, ETC

**PROFESSIONAL EXPERIENCE**

**Fiserv Inc Berkeley Heights, NJ Container Platform Engineer 2023-Present**

* Orchestrated Azure infrastructure as code using Terraform to provision and manage AKS clusters, ensuring consistency and reproducibility across environments.
* Managed and configured ArgoCD applications and repositories, automating synchronization between Git repositories and Kubernetes clusters, enabling efficient application delivery.
* Orchestrated continuous deployment pipelines using ArgoCD, ensuring automated GitOps-driven deployments of Kubernetes applications, enhancing reliability and consistency.
* Implemented Kubernetes best practices on AKS, including pod security policies, network policies, and RBAC, enhancing cluster security and governance.
* Designed and developed Azure Resource Manager (ARM) templates to define infrastructure as code (IaC) for provisioning and managing Azure resources, enabling automated and repeatable deployments.
* Designed and authored Helm charts for packaging and deploying complex Kubernetes applications, streamlining the deployment process and ensuring consistency across environments.
* Integrated Terraform with Azure DevOps or other CI/CD tools for streamlined AKS deployments, enabling infrastructure changes as code within the software delivery pipeline.
* Automated the deployment and scaling of applications on PCF using Cloud Foundry CLI and BOSH, reducing manual effort and improving operational efficiency.
* Implemented Terraform state management strategies using remote backends such as Amazon S3 or Azure Blob Storage, enabling collaboration and version-controlled infrastructure state storage.
* Implemented and authored Helm charts for packaging and deploying complex Kubernetes applications, streamlining the deployment process and ensuring consistency across environments.
* Deployed Calico Network Policies to isolate and secure workloads in multi-tenant AKS clusters, enforcing least privilege access controls and improving overall network security posture.
* Managed and enforced multi-cluster network policies with Calico Cloud’s centralized control plane, ensuring consistent security and compliance across multiple AKS environments.
* Configured Moogsoft Event Management to process and prioritize incidents from AKS, integrating with Azure’s Log Analytics and Prometheus, enhancing visibility across the cloud infrastructure.
* Designed and implemented complex CI/CD pipelines using Jenkins, Tekton, and OpenShift Pipelines, integrating security and compliance checks with automated deployments across multiple OCP clusters.
* Automated infrastructure provisioning and application deployment using OpenShift templates, Helm charts, and Ansible playbooks, reducing deployment times and minimizing manual intervention.
* Configured and managed OpenShift Service Mesh for secure service-to-service communication, observability, and traffic management across microservices architectures.
* Configured OpenShift GitOps (ArgoCD) for declarative management of Kubernetes resources, enabling version control and automated synchronization of cluster states across environments.
* Integrated Dynatrace monitoring dashboards with Moogsoft’s event management platform to provide unified observability and actionable insights for AKS environments.
* Deployed and configured Portworx PX-Store for persistent, cloud-native storage in Azure Kubernetes Service (AKS), ensuring high availability and fault tolerance across multi-node clusters.
* Architected and implemented Portworx Enterprise on AKS, providing dynamic provisioning of persistent volumes (PV) and enabling containerized applications to scale seamlessly with zero downtime.
* Automated the deployment of Portworx on AKS using Helm charts and Terraform, reducing setup time and improving the consistency of infrastructure provisioning.
* Optimized OCP cluster performance through advanced tuning of Kubernetes scheduler policies, resource quotas, and custom node labels to ensure optimal workload distribution and resource utilization.
* Engineered Splunk with Kubernetes clusters using Splunk's Kubernetes Objects, enabling real-time monitoring and log analysis of containerized workloads and infrastructure components.
* Developed Kustomize transformers and plugins to automate the injection of environment-specific configurations, such as security contexts and resource quotas, into OpenShift manifests.
* Orchestrated Ingress controllers such as NGINX Ingress Controller or Traefik to manage and route incoming traffic to Kubernetes services, optimizing traffic distribution and application availability.
* Configured Azure security solutions such as Azure Sentinel, Azure Security Center, and Azure Key Vault to implement threat detection, security monitoring, and encryption at scale, ensuring comprehensive protection of Azure resources and data.
* Configured Portworx storage classes and volume profiles using Kubernetes Custom Resource Definitions (CRDs) or Portworx Storage Class Controller, allowing fine-grained control over storage policies and performance characteristics.
* Integrated Dynatrace with Kubernetes monitoring and observability stack using Helm charts, including Prometheus, Grafana, and Fluentd, to aggregate and visualize application performance data alongside infrastructure metrics.
* Developed and implemented custom aliases for Kubernetes (K8s) command-line operations, streamlining complex commands and enhancing workflow efficiency for DevOps teams.

**Bloomberg New York, NY Devops Engineer Aug 2020-June 2023**

* Developed Python scripts using Boto3 to automate AWS resources creation and management.
* Integrated Terraform with Azure DevOps or other CI/CD tools for streamlined AKS deployments, enabling infrastructure changes as code within the software delivery pipeline.
* Supported the migration of on-premises databases to Amazon RDS, participating in data transfer and ensuring data integrity throughout the process.
* Worked with various Ansible modules in playbooks, including file, copy, service, and shell command.
* Designed and deployed Kubernetes clusters on AKS, optimizing configurations for efficient resource utilization and performance.
* Configured AWS Security Hub to centralize security alerts and automate compliance checks, improving visibility and response times across multiple accounts.
* Leveraged AWS Secrets Manager to securely store and manage sensitive information such as database credentials and API keys.
* Configured multi-factor authentication (MFA) for IAM users and roles, strengthening account security against unauthorized access.
* Implemented CI/CD pipelines with tools like AWS CodePipeline and CodeBuild for seamless deployment of containerized applications on Amazon EKS
* Automated namespace provisioning and lifecycle management using tools like Helm, Terraform, and custom Kubernetes operators, reducing manual overhead and improving scalability.
* Integrated Ansible with configuration management tools such as Chef and Puppet to automate the deployment and configuration of middleware components (Apache, Nginx, Tomcat) in hybrid cloud environments.
* Integrated Bash scripts with configuration management tools (Ansible, Puppet) to automate the deployment and configuration of infrastructure components across multiple servers and environments.
* Integrated Terraform with Kubernetes API to dynamically provision and manage namespaces, deployments, services, and other Kubernetes resources, enabling Infrastructure as Code (IaC) practices.
* Automated application deployment and configuration using Ansible playbooks and roles, enabling consistent and reliable deployment workflows across development, testing, and production environments.
* Designed Docker image repositories and registries with features like access control, replication, and artifact retention policies, using solutions such as Docker Trusted Registry, Harbor, or Nexus Repository to manage Docker image lifecycle and distribution.
* Integrated Dockerfile-based builds with GitOps practices, utilizing GitOps tooling like Argo CD to automate image promotion and deployment across multiple Kubernetes clusters and environments.
* Configured and maintained EKS clusters, ensuring high availability, scalability, and reliability of containerized applications
* Designed and implemented AWS Organizations to centralize account management, enabling streamlined governance, cost tracking, and resource sharing across multiple accounts.
* Developed and enforced organizational units (OUs) and Service Control Policies (SCPs) to ensure compliance and security across all AWS accounts within the organization.
* Utilized Auto Scaling Groups (ASG) for horizontal and vertical scaling based on traffic and CPU utilization variations
* Integrated Terraform with CI/CD pipelines, such as Jenkins and GitLab CI/CD, enabling automated and reliable infrastructure deployments with version-controlled configurations.
* Integrated Splunk with AWS services such as CloudTrail, CloudWatch, and VPC Flow Logs for comprehensive visibility and real-time alerting.
* Integrated Harness with version control systems such as Git/GitHub) and other DevOps tools, ensuring seamless code integration and deployment.
* Developed Terraform modules for automating the deployment of scalable and fault-tolerant architectures on AWS, ensuring consistent and repeatable infrastructure configurations
* Architected Ansible playbooks and roles for automated provisioning and configuration management of complex multi-tier applications in hybrid cloud environments
* Orchestrated large-scale infrastructure deployments using Ansible Tower, enabling centralized control, scheduling, and delegation of automation tasks across teams.
* Automated CI/CD workflows with Helm charts and GitOps practices, integrating Helm releases into CI pipelines (e.g., Jenkins, GitLab CI/CD) to automate application testing and deployment to Kubernetes clusters.
* Managed version control using Git and GitHub, maintaining repositories for codebase management, branching, merging, and collaboration within distributed teams
* Generating Docker images through the use of Dockerfiles, deleting images, and managing Docker volumes.
* Created and ran containers with Docker Compose to support multi-tier applications.
* Manage Terraform state files by using remote backends such S3 and DynamoDB.

**Bloomberg New York, NY Devops Engineer Internship July 2020- Aug 2020**

* Created IAM Roles to facilitate cross-account access, communication, and permissions between S3, EC2, EKS and to provide applications secure access to AWS resources.
* Configured VPC with a public and private subnet using security groups, NACL and a custom route table to facilitate and oversee internal, S3, and other internet-facing traffic.
* Operated and maintained various S3 storages for backup, as well as implemented policies for S3 buckets.
* Managed AWS infrastructure and leveraged the Database Migration Service (DMS) to migrate on-premises projects to the AWS Cloud, resulting in cost reductions and enhanced high availability.
* Implemented Infrastructure as Code (IaC) principles using AWS CloudFormation, automating the deployment and management of AWS resources
* Configuring CloudWatch alerts with threshold limits for CPU, IO, RAM, and Latency to detect high utilization of EC2 instances for performance monitoring purposes.
* Involved in supporting Linux and Windows cloud instances on AWS, experienced in Elastic IP, Security Groups, and Virtual Private Cloud in AWS.
* Creating and managing different classes of S3 buckets for file storage, implementing a lifecycle policy to transition storage classes for infrequently accessed data, and reducing costs.
* Managed DNS and traffic routing for web applications using Amazon Route 53.
* Configured AWS Backup service for creating and managing backups of data and applications.
* Contributed to a team project involving the deployment of serverless applications using AWS Lambda and API Gateway, learning about scalable and cost-effective solutions
* Integrated GuardDuty with AWS CloudWatch Events and AWS Lambda to automate incident response and remediation workflows, enabling automated threat response actions such as instance isolation, security group updates, or IAM policy modifications.