**PRADEEPTHI K**

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**SUMMARY:**

* Results-driven Cloud and DevOps Engineer with 9 years of experience in Software Development Life Cycle (**SDLC**) in designing, deploying, and managing cloud-based infrastructures and implementing DevOps practices.
* Proficient in leveraging the full spectrum of **AWS** services to architect scalable, secure, and high-availability solutions.
* Adept at automating deployment pipelines, optimizing resource utilization, and fostering collaboration between development and operations teams.
* Known for delivering innovative and efficient solutions that enhance agility, reliability, and time-to-market.
* Proficient in architecting and deploying applications on AWS, utilizing services such as EC2, S3, RDS, VPC, Lambda, ECS, and more.
* Proficient in Administrating **Azure** IaaS/PaaS services like compute Azure Virtual Machines, Azure DevOps, SQL Databases, Storages, Azure Active Directory, Monitoring, Autoscaling, PowerShell Automation, Azure Search, DNS, and VPN.
* Hands-on experience in writing Azure Resource Manager (**ARM**) to deploy, update, and delete multiple resources in Azure and migrating the on-premises resources to Azure with Azure Site recovery (ASR) and Azure backups.
* Experienced in working on **DevOps/Agile** operations process and tools area (Code review, unit test automation, **Build and release** automation, Environment, Service, Incident, and Change Management).
* Extensive involvement **in Azure** Backup, Azure Policies, Azure Key Vault and Tagging.
* Skilled in designing fault-tolerant and highly available systems using load balancers, auto-scaling, and multi-region architectures.
* Experience in **Azure** Platform Development, Deployment Concepts, hosted Cloud Services, platform services and close interface with Windows Azure Multi-Factor Authentications.
* Strong grasp of DevOps methodologies and tools, including **CI/CD pipelines**, configuration management (e.g., Ansible), version control (e.g., Git), Infrastructure as Code (**Terraform**), and containerization (Docker, Kubernetes).
* Strong knowledge of source controller concepts like Branches, Merges, and Tags.
* Experience in **Python coding** to implement customized solutions as per project needs.
* Experience with infrastructure automation, using tools like **Jenkins, Ansible, and Kubernetes**, to enable seamless deployment and monitoring.
* Skilled in designing fault-tolerant and highly available systems using load balancers, auto-scaling, and multi-region architectures.
* In-depth understanding of security best practices, **IAM**, and encryption mechanisms to ensure data protection and compliance.
* Successfully employed **TDD** techniques in the creation of non-trivial systems, demonstrating the ability to handle intricate software architecture and functionality.
* Collaborated with cross-functional teams to enhance security posture, implementing IAM roles and security groups following industry best practices.
* Proficient in scripting (Python, Bash) for automation, resource provisioning, and orchestration tasks.
* Successfully reduced deployment time by 90% through the implementation of CI/CD pipelines using Jenkins, **Docker**, Amazon ECS, Ansible, and Kubernetes.
* Expertise in using **Prometheus** and **Grafana** for effective monitoring, alerting, and visualization of system and application metrics
* Strong analytical and troubleshooting skills for identifying and resolving infrastructure issues, optimizing performance, and ensuring stability.
* Effective communicator and team collaborator, adept at bridging the gap between development and operations teams to enhance workflow efficiency.

**SKILLS:**

* DevOps Tools: Ansible, Docker, Kubernetes, SonarQube, Maven, Jenkins, Terraform.
* Programming Languages: Java, Python
* Cloud Platforms: AWS, Azure
* Containerization: Docker, Kubernetes
* Databases: MySQL, MongoDB
* Version Control: Git, Bitbucket
* Monitoring: Datadog, Nagios, Prometheus, Grafana
* Scripting: Bash, PowerShell

**WORK EXPERIENCE:**

 Senior Cloud and DevOps Engineer

 Universal System Technologies (May 2023) – Present

* Managed DevOps and Infrastructure Teams supporting tools and infrastructure for developers.
* Worked in AWS cloud services such as EC2, auto-scaling, and VPC to build secure, highly scalable, and flexible systems that handled expected and unexpected load bursts.
* Launched Amazon EC2 Cloud Instances using Amazon Images (Linux/ Ubuntu) and configured launched instances with respect to specific applications.
* Worked with AWS services such as EC2, VPC, RDS, CloudWatch, CloudFront, Route53 etc.
* Involved in Configuring and Networking of Virtual Private Cloud (VPC).
* Collaborated with developers, solution architects, and project managers to design and deploy solutions using Azure's offerings, such as App Services, Function Apps, Data Lake, Azure SQL, and Azure Kubernetes Service.
* Implemented Automate the Environment provisioning Using Ansible& Docker.
* Built Continuous Integration environment Jenkins and Continuous delivery environment.
* Implemented and managed Jenkins DSL job to automate the new job creation.
* Excellent understanding and hand-on-expertise with creating new custom resources in Kubernetes and upgrading kube components without service outage.
* Created reproducible builds of the Kubernetes applications and managed Kubernetes manifest files and managed releases of Helm packages.
* Involved in setting up Kubernetes (k8s) for clustering & orchestrating Docker containers for running microservices by creating Pods.
* Worked with Docker and Kubernetes on multiple cloud providers, from helping developers build and containerize their application (CI/CD) to deploying either on the public or private cloud.
* Building Docker images and checking in to AWS ECR for Kubernetes deployment.
* Automated new job creation by implementing and managing Jenkins DSL.
* Created CloudWatch alerts for instances and used them in Autoscaling launch configurations.
* Automated Cloud infrastructure setup via Cloud formation, terraform.
* Wrote custom facts for metrics in Python.
* Implemented a new ELK cluster for enterprise logging and Maintained Elasticsearch, Logstash, and Kibana.

 Cloud and DevOps Engineer

 Digital Nirvana Information Systems (November 2016) – (May 2023)

* Architected and implemented a highly available and fault-tolerant infrastructure on AWS using services such as EC2, S3, RDS, and VPC, resulting in improved application uptime and reliability.
* Designed and managed CI/CD pipelines using Jenkins, Maven, Docker, and Kubernetes, reducing deployment time by 40% and enabling automated testing and continuous delivery.
* Utilized Terraform to define infrastructure as code, creating scalable and repeatable infrastructure deployments for development, testing, and production environments.
* Expert in **AZURE Cloud Services, AZURE Storage, AZURE Active Directory, AZURE Service Bus, AZURE AD tenants, AZURE Active Directory**, Microsoft Identity Manager (MIM), Forefront Identity Manager (FIM), **AZURE AD** Connect, Active Directory Federation Services (ADFS), Integrate on-premises Windows AD with AZURE AD Integrating on-premises identity with **AZURE Active Directory**.
* Planned and implemented the storage and data management solutions in **Microsoft Azure** (**SQL Azure, Azure files, Blob storage, Table storage, Queue storage, File storage**) and deployed **Azure SQL Server**.
* Integrated Ansible scripts to manage configuration and provisioning tasks, reducing manual effort and ensuring consistent deployments.
* Collaborated closely with development teams to ensure smooth integration of code changes, reducing deployment-related issues and enhancing cross-functional collaboration.
* Implemented security best practices on AWS, configuring **IAM** roles, security groups, and **VPC** settings to ensure a secure environment and compliance with industry standards.
* Building and managing AWS CI/CD pipelines using **AWS CodePipeline**, **AWS CodeCommit**, **AWS** **CodeBuild**, and **AWS CodeDeploy**, to automate and streamline software delivery processes on the AWS cloud platform.
* Assisted in maintaining and optimizing Azure resources, ensuring high availability and scalability.
* Created PowerShell and Python scripts to automate tasks, resulting in improved efficiency and reduced manual intervention.
* Integrated **TDD** practices into **CI/CD** pipelines to automate testing and ensure that code changes are thoroughly validated before deployment.
* Participated in the planning and execution of system integration projects, ensuring seamless migration to the cloud environment.
* Led the migration of legacy on-premises applications to **AWS** cloud, successfully reducing operational costs by 30% and improving scalability to handle variable workloads.
* Automated server provisioning and configuration management using Ansible, streamlining deployment processes and reducing manual intervention.
* Experience in using **ARM templates (JSON) to create Azure Services,** while ensuring no changes were made to the existing infrastructure
* Deployed **Azure** Iaas Virtual machines and cloud services into secure VNets and subnets using PowerShell.
* Worked with **Azure Monitoring** tools such as **Azure Log Analytics, Azure Network Watcher, and Azure Service Health** to diagnose and minimize service degradation.
* Managing AKS **(Azure Kubernetes Service**) policies, providing access to different **Azure Resources,** and developing and improving the workflows that govern access
* Developed maintained and provided the team with various **Azure DevOps-related** tools like deployment tools, staged virtual environments, and provisioning scripts.
* Worked in setting up **Azure Virtual Appliances** (VMs) to meet security requirements as software-based appliances functions(Firewall).
* Configured **ALB** (Application Load Balancer) to distribute traffic across application instances, achieving high availability and fault tolerance.
* Designed and implemented Kubernetes clusters using **Amazon EKS**, leveraging managed Kubernetes services to automate cluster management tasks and reduce operational overhead.
* Collaborated with development teams to containerize applications and create Docker images, enhancing portability and consistency across different environments.
* Automated Kubernetes deployment workflows using Helm charts, enabling quick and repeatable application deployments while managing configuration complexity.
* Implemented service discovery and load balancing using **Kubernetes Services**, improving application availability and distributing traffic across pods.
* Managed Kubernetes configuration files (YAML) for pods, services, deployments, and other resources, ensuring consistent and version-controlled infrastructure.
* Manage, and support source control and binary repository systems such as Bitbucket / Stash, Git, and **Gitlab**.
* Utilized Build Forge to promote builds that satisfactorily passed with 99% pass rate from the automated tests.
* Incorporated **AWS Lambda** functions for event-triggered tasks, improving operational efficiency and reducing manual interventions.
* Established monitoring and alerting using **CloudWatch**, enabling proactive identification of performance bottlenecks and infrastructure issues.
* Tracked and audited activities using **CloudTrail**, maintaining a robust security posture and compliance adherence.
* Able to set up role-based access control in **Grafana** to manage user permissions and restrict access to sensitive monitoring data.
* Experienced in connecting Grafana to Prometheus and other data sources to aggregate and display metrics, logs, and traces in a unified view.
* Skilled in defining alerting rules in **Prometheus** to proactively detect and respond to performance anomalies and system issues.
* Leveraged **SQS** for message queuing, ensuring reliable and asynchronous communication between components.
* Utilized Apache Spark to perform advanced analytics on large datasets, uncovering insights that aided in fraud detection and informed strategic decisions.
* Developed Spark-based data pipelines that facilitated the transformation, enrichment, and analysis of data, improving overall data quality.
* Provided advanced technical support, diagnosing, and resolving complex issues related to scripting, query languages, and data processing.
* Conducted regular performance analysis and optimization of cloud resources, resulting in optimized resource utilization and reduced infrastructure costs.
* Installing, configuring, and managing in **Ansible Centralized Server** and creating the **playbooks** to support various middleware application servers, and involved in configuring the **Ansible tower** as a configuration management tool to automate repetitive tasks.
* Automated configuration management and deployments using Ansible playbooks and **YAML** for resource declaration. And creating roles and updating Playbooks to provision servers by using **Ansible**.
* Assisting in the integration of the Systems and Development teams into early warning's ongoing evolution improvement, through tighter integration and collaboration.
* Recommend and implement changes to existing hardware and operating system infrastructure including patches, users, file systems, and kernel parameters.
* Acting as an escalation point to troubleshoot application and operating system problems and suggest possible performance tuning.
* Used Provisioning tool **Terraform** to build **AWS infrastructure**.
* Created reusable **Terraform modules** to standardize infrastructure components across projects.
* Managed state files and backends to ensure consistency and maintain infrastructure history.
* Diagnosed and resolved issues related to infrastructure provisioning, connectivity, and performance using Terraform debug and diagnostic features.
* Orchestrated complex workflows using Terraform built-in functions, conditionals, and loops to create dynamic infrastructure.
* Utilized Terraform to provision a wide range of cloud resources, including virtual machines, storage, networks, load balancers, and security groups.
* Scaled infrastructure dynamically using Terraform auto-scaling capabilities to accommodate varying workloads and traffic patterns.
* Supporting the CI/CD multibranch configuration pipeline (**Jenkins File**) for the frontend and backend **microservices deployments**.
* Worked on infrastructure with Docker containerization and maintaining **Docker Images** and containers.
* Developed Java dynamic project using RESTful web services and used Postman to deploy the application and used **MySQL** for the database.
* Working with database and application teams to gather requirements for new projects and expansion to existing applications.
* Collaborated in cross-functional agile teams to continuously improve DevOps practices, drive process efficiency, and foster a culture of collaboration and innovation.
* Mentored junior team members, providing guidance on AWS best practices, DevOps methodologies, and effective use of automation tools.

 Software Engineer

 UST India Pvt Ltd (August 2014) – (October 2016)

* Performing day-to-day system administration tasks such as user management, file system management, network configuration, and process monitoring.
* Managing and maintaining Linux-based servers, ensuring they are up-to-date, secure, and running efficiently.
* Keeping Linux systems up-to-date with security patches and updates to maintain system stability and security.
* Implemented and maintained server hardening procedures, including firewall configuration, regular patching, and user access controls, resulting in improved security posture.
* Diagnosed and resolved complex system issues, analyzed system logs, and utilized command-line tools to identify root causes and implement effective solutions.
* Automated routine tasks using Bash scripting, streamlining system administration processes and reducing manual intervention.
* Setting up monitoring tools like Nagios to track Linux system performance, analyze logs, and optimize resource utilization to improve system efficiency.
* Troubleshooting the issues reported by clients and internal teams.
* Automation of jobs using CRON Scheduler.
* Configuring and maintaining Network Services like SSH, FTP, and VPN.
* Conducted regular performance analysis and tuning, optimizing server resource utilization, and enhancing system responsiveness.
* Configured and maintained network services, including DNS, DHCP, and LDAP, to facilitate seamless communication and user authentication.
* Collaborated in cross-functional teams to plan and execute migration projects, including physical-to-virtual (P2V) migrations and cloud migrations.
* Provided technical support and guidance to junior team members, offering mentorship on Linux administration best practices and troubleshooting techniques.
* Stayed up-to-date with the latest Linux technologies, trends, and security vulnerabilities, implementing timely updates to maintain a secure and up-to-date environment.

**EDUCATION:**

Bachelor of Technology | Sri Venkateswara College of Engineering, India.