**Akanksha Reddy**A blue hexagon with white text

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***Professional Summary***

An experienced IT professional with 10+ years of practical experience in cloud technology platforms such as AWS, Microsoft Azure, and GCP across the entire Software Development Life Cycle. Possessing advanced proficiency in CI/CD practices and release management, with specialized skills in tools like Maven, Jenkins, Kubernetes, Docker, Gitlab, Ansible, and Terraform.

* Experience in AWS platform and its features including IAM, EC2, EBS, VPC, RDS, Cloud Watch, Cloud Trail, Cloud Formation AWS Configuration, Autoscaling, CloudFront, S3, SQS, SNS, Lambda and Route53 .
* Worked on architecture creation off various components of AWS by using different services such as EC2, EBS, VPC,RDS, ELB, S3, cloud watch, simple notification service (SNS), simple query service(SQS) call more cloud formation, IAM, dynamo DB, ECS and EKS.
* Experienced with Terraform key features such as Infrastructure as code, Execution plans, Resource Graphs, Change Automation. Collaborate in the automation of AWS infrastructure via Terraform and JENKINS -services configuration via Chef Cookbooks.
* Implemented a 'server less' architecture using API Gateway, Lambda, and DynamoDB and deployed AWS Lambda code from Amazon S3 buckets. Created a Lambda Deployment function, and configured it to receive events from your S3 bucket
* Extensively used to develop strategy in various DevOps tools like SUBVERSION, GIT, GITHUB, MAVEN, JENKINS, DOCKER, KUBERNETES, NAGIOS Along with implementing them in cloud environments like AWS.
* Experienced in using larger environments ANSIBLE for the use of configuration management and ensure scalability across multiple Linux environments.
* Experienced in Using ANT and PYTHON scripts to automate the Build and Deployment process.
* Configured JENKINS as a CI engine to build and promote applications to QA, UAT and Staging to LINUX environments.
* Hands on with PUPPET Manifest files to deploy automated tasks to many servers at once.
* Extensive use of build and automation tools like ANT and MAVEN for building the project and deploying the artifacts which were generated from the source code in the process.
* Extensive experience in containerizing applications using Docker, creating Docker images, managing containers, and optimizing deployments with Docker Compose and Kubernetes for seamless application scalability and portability.
* Proficient in monitoring applications running on Azure using Azure Monitor, Application Insights, and Log Analytics, ensuring performance optimization, proactive troubleshooting, and real-time alerting for enhanced system reliability and availability.
* Developed PYTHON script that allows access tokens of artifactory to send images from DOCKER registry.
* Experience using NAGIOS monitoring system and different Bug Tracking Tools like Remedy, Jira, ServiceNow and Clear Quest. Designed, deployed, and coordinated with different teams to enhance ELK platform and took ownership of new technologies.
* Used Docker and Kubernetes as the build, test, and deployment runtime environments for the CI/CD system
* Knowledge of testing frameworks like JUNIT and SELENIUM as well as defect management solutions like REMEDY, JIRA, and SERVICE NOW. Monitoring using ANSIBLE Playbooks and has integrated ANSIBLE with JENKINS.
* Configured, Managed Monitoring Tools such as NAGIOS, SPLUNK for Resource Monitoring, Network Monitoring, Log Trace Monitoring.
* Experienced in writing Shell Scripts in Bash and Corn tab in LINUX to automate the tasks.
* Good understanding of the principles and best practices of Software Configuration Management (SCM) in Agile, scrum, and Waterfall methodologies.

***Technical skills***

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| **Operating Systems** | Windows, UNIX, Ubuntu, Redhat/CentOS Linux. |
| **Clouds** | AWS, Azure, GCP |
| **CM Tools** | Chef, Puppet, Ansible |
| **Automation Tools** | Jenkins, Bamboo |
| **Build Tools** | ANT, MAVEN |
| **Continuous Deployment** | Artifactory, Nexus, Jboss |
| **Version Control Tools** | Subversion, Git, TFS, Bit Bucket |
| **Monitoring Tools** | Nagios, Splunk and cloud watch |
| **Virtualization** | Vagrant, Docker, ESXi, Kubernetes, Virtual Box and VMware. |
| **Scripting** | Shell, Bash, Perl, Ruby and Python. |
| **Container Management Tools** | Docker, Kubernetes, Mesos, Aws ECS |
| **Operating Systems** | Cent OS, Ubuntu, RHEL and Windows. |
| **Programming languages** | C++, Python, XML, HTML, Shell Scripting, YAML, Ruby and PowerShell |
| **Web/Application Servers** | Web logic, Web sphere, Apache Tomcat, Nginx |
| **Databases** | My SQL, MS SQL, Oracle, PostgreSQL, DynamoDB, Cassandra |
| **Bug Tracking Tools** | JIRA, Remedy, HP Quality Center, Bugzilla |

***Certifications:*** AWS Certification Solution Architect.

***Professional Experience:***

***Client: PharmaCord Aug 2022 – Present***

***Role: Senior AWS Cloud Engineer Jeffersonville, IN***

***Responsibilities:***

* Architected and deployed serverless solutions using AWS Lambda and API Gateway, maximizing scalability, reducing operational overhead, and optimizing resource utilization for event-driven workloads.
* Provisioned and managed cloud infrastructure using Infrastructure as Code (IaC) tools like Terraform and AWS CDK, enabling consistent, repeatable, and scalable deployments across environments.
* Orchestrated and deployed containerized workloads with AWS Fargate and Amazon EKS, achieving efficient scaling, fault tolerance, and streamlined application delivery.
* Implemented centralized logging and distributed tracing solutions with AWS CloudWatch Logs and AWS X-Ray, delivering real-time observability, root cause analysis, and performance diagnostics.
* Designed and executed advanced CI/CD pipelines incorporating canary deployments, A/B testing, and automated rollback mechanisms, ensuring safe and rapid delivery of application updates.
* Developed and maintained high-performance backend services and APIs using Python frameworks such as Django and Flask, ensuring application scalability, reliability, and maintainability.
* Built scalable ETL pipelines leveraging Pandas, NumPy, and Dask, enabling efficient extraction, transformation, and loading of large datasets for data-driven applications and analytics.
* Automated operational and administrative tasks using Python scripting, with libraries like Paramiko, Fabric, and PyAutoGUI, improving efficiency, consistency, and reducing manual intervention.
* Designed automated incident detection and remediation workflows utilizing AWS Step Functions and Lambda, reducing time to resolution and enhancing system resilience.
* Provisioned and managed Amazon EC2 instances to host web applications, databases, and microservices, optimizing for performance, cost-efficiency, and availability.
* Utilized key EC2 features including Elastic Block Store (EBS) for durable storage, Security Groups for access control, and IAM roles for fine-grained security and permissions management.
* Configured AWS CloudFront with geo-restriction, signed URLs, and signed cookies to enforce content access controls based on user location and authentication.
* Engaged with AWS and cloud service providers (CSPs) to monitor platform developments, participate in roadmap discussions, and incorporate evolving best practices into cloud strategy.
* Drove cloud cost optimization initiatives using AWS Cost Explorer and Reserved Instances, identifying opportunities to reduce spend while maintaining service quality.
* Enhanced database scalability and performance by implementing read replicas and utilizing Aurora features such as Serverless, Global Database, and Multi-Master for high availability.
* Established infrastructure security standards and ensured compliance using AWS Security Hub and AWS Config, identifying vulnerabilities and enforcing policy-driven governance.
* Deployed applications using blue-green deployment strategies, minimizing downtime and enabling instant rollback to stable environments during release cycles.
* Engineered secure and scalable network topologies through AWS Transit Gateway and VPC peering, supporting seamless communication across distributed systems and accounts.
* Conducted proactive performance tuning and optimization of cloud infrastructure, maintaining high system uptime, responsiveness, and cost-effectiveness.
* Designed and implemented disaster recovery frameworks using AWS Backup and cross-region replication, ensuring robust data protection and business continuity.
* Configured AWS S3 buckets with versioning, lifecycle policies, and cross-region replication, maintaining high data durability, retention, and geographic resilience.
* Architected and deployed multi-tier cloud environments using AWS CloudFormation, standardizing the provisioning of network, compute, and storage resources via reusable templates.
* Implemented dynamic Auto Scaling policies based on custom CloudWatch metrics, automatically adjusting compute capacity to match real-time demand and optimize operational costs.
* Developed event-driven architecture patterns using Amazon EventBridge, automating responses to system events and orchestrating reactive workflows across services.
* Executed seamless migrations of legacy systems to AWS using AWS Server Migration Service (SMS), reducing downtime, risk, and manual effort during transition.
* Integrated GitHub repositories with AWS CodePipeline, automating code compilation, testing, and deployment to accelerate delivery and ensure CI/CD best practices.
* Designed and enforced cross-account IAM roles and policies, enabling secure and auditable resource sharing while upholding the principle of least privilege.

***Environment*:** AWS Lambda, Amazon API Gateway, AWS CloudWatch Logs, AWS X-Ray, AWS Glue, Amazon Kinesis, AWS Fargate, Amazon Elastic Kubernetes Service (Amazon EKS), AWS CloudFormation, Amazon EventBridge (formerly CloudWatch Events), AWS Step Functions, Amazon EC2 (Elastic Compute Cloud), Amazon Elastic Block Store (EBS), Amazon Virtual Private Cloud (VPC), Amazon CloudFront, AWS IAM (Identity and Access Management), AWS Security Hub, AWS Config, AWS Auto Scaling, AWS S3 (Simple Storage Service), AWS Backup, AWS Transit Gateway

***Client: Dell July 2019 – Aug 2022***

***Title: Senior AWS Cloud Engineer Austin, TX***

***Responsibilities:***

* Designed and deployed highly available, cloud-native architectures leveraging core AWS services, ensuring scalability, fault tolerance, and operational efficiency across enterprise workloads.
* Utilized microservices architecture within AWS to modularize applications, enabling independent scaling, faster deployments, and improved system maintainability.
* Engineered end-to-end CI/CD pipelines using AWS CodePipeline, automating software builds, tests, and deployments for streamlined release management.
* Containerized and orchestrated applications using Docker and Kubernetes, ensuring efficient resource utilization, portability, and high availability within the AWS ecosystem.
* Adopted GitOps methodologies for deployment automation and version control, enhancing consistency and reliability of configurations across AWS environments.
* Conducted comprehensive cloud security assessments and implemented AWS security best practices to mitigate risks and protect infrastructure from emerging threats.
* Designed and implemented hybrid cloud architectures, integrating on-premises systems with AWS services to support seamless data migration and workload portability.
* Leveraged AWS Lambda for building scalable, event-driven serverless applications, reducing infrastructure costs and operational overhead.
* Implemented Infrastructure as Code (IaC) best practices using Terraform and AWS CloudFormation, enabling automated, repeatable, and auditable provisioning processes.
* Built robust RESTful APIs using Python, employing frameworks like FastAPI to deliver high-performance, low-latency integration services between internal systems and third-party platforms.
* Developed dynamic data visualization dashboards using Matplotlib, Seaborn, Plotly, and Dash, driving actionable insights through interactive analytics tools.
* Automated data collection pipelines for market intelligence, leveraging Python libraries such as BeautifulSoup, Scrapy, and Selenium for large-scale web scraping and analysis.
* Collaborated with cybersecurity teams to design and implement automated incident detection and response workflows, improving cloud security posture and reducing mean time to resolution (MTTR).
* Automated the generation of infrastructure documentation, ensuring up-to-date and easily accessible records of AWS deployments and configurations.
* Led the development of multi-cloud strategies, using AWS alongside other CSPs to avoid vendor lock-in, enhance disaster recovery capabilities, and improve service availability.
* Established continuous compliance monitoring frameworks, using AWS-native tools to enforce security standards and regulatory requirements across the cloud environment.
* Architected serverless data processing pipelines on AWS for real-time analytics and event-driven insights, enabling responsive decision-making.
* Performed architecture evaluations and performance tuning sessions, optimizing AWS resource utilization to align with business and technical goals.
* Extended CI/CD capabilities through the development of custom integrations and plugins, enhancing deployment workflows within AWS DevOps toolchains.
* Implemented comprehensive automated testing strategies within CI/CD pipelines, improving application reliability, performance, and code quality.
* Drove cost optimization initiatives through usage of AWS Cost Explorer, detailed tagging strategies, and reserved capacity planning, reducing unnecessary cloud expenditures.
* Conducted continuous cloud performance optimization, ensuring efficient use of compute, storage, and network resources in dynamic AWS environments.
* Implemented infrastructure automation practices, significantly reducing manual errors and increasing deployment velocity using tools such as Terraform and CloudFormation.
* Led the migration of legacy applications to AWS, ensuring minimal disruption and improved resource utilization through phased cutovers and testing strategies.
* Integrated Amazon S3 as a primary solution for durable, scalable object storage, supporting backups, analytics, and static content delivery.
* Configured AWS Elastic Beanstalk environments for rapid deployment and management of web applications, enabling auto-scaling and high fault tolerance.
* Enforced strict security controls using AWS IAM, designing fine-grained roles and policies to ensure least privilege access across environments.
* Utilized Amazon RDS for provisioning fully managed relational databases, ensuring performance, availability, and automated backups for mission-critical applications.
* Led implementation of Amazon Redshift as a centralized data warehouse, enabling scalable business intelligence and advanced analytical capabilities.
* Designed and tested disaster recovery solutions using AWS Backup and AWS Elastic Disaster Recovery, ensuring minimal data loss and rapid recovery during outages.
* Stayed current with AWS innovations and industry best practices, continuously integrating emerging technologies and methodologies to enhance cloud architecture and operations.

***Environment*:** AWS CodePipeline, AWS Lambda, AWS CloudFormation, Amazon S3, AWS Elastic Beanstalk, AWS Identity and Access Management (IAM), Amazon RDS, Amazon Redshift, AWS Backup, AWS Disaster Recovery

***Client: Fidelity Jan 2018 – June 2019***

***Title: AWS Cloud Engineer Charlotte, NC***

***Responsibilities:***

* Managed a complex hybrid cloud environment across on-premises infrastructure and AWS, ensuring seamless integration, high availability, and operational consistency.
* Architected event-driven solutions leveraging AWS Lambda, enabling real-time responsiveness and reduced infrastructure overhead through serverless computing.
* Automated infrastructure provisioning and configuration management using AWS Systems Manager, Ansible playbooks, and custom workflows to improve deployment speed and consistency.
* Implemented GitOps workflows for infrastructure and application management, utilizing AWS CodeCommit and AWS CodePipeline to enable declarative, version-controlled deployments.
* Streamlined the CI/CD process with AWS CodePipeline, automating build, test, and deployment stages to accelerate software delivery and reduce human error.
* Designed robust disaster recovery and backup strategies using AWS Backup and AWS Elastic Disaster Recovery, ensuring data resilience and minimal downtime during outages.
* Performed in-depth security assessments and enforced compliance policies using AWS Security Hub, reducing risk exposure and aligning with regulatory frameworks.
* Led cloud migration initiatives via AWS Migration Hub, facilitating seamless transitions of mission-critical workloads to the cloud with minimal disruption.
* Developed automated testing frameworks using Python’s unittest, pytest, and nose2, enabling continuous integration and maintaining high code quality standards.
* Interfaced with SQL and NoSQL databases in Python using SQLAlchemy, PyMySQL, and PyMongo, enabling robust data access, transformation, and manipulation.
* Engineered custom Python automation scripts to batch-process large datasets and streamline operational workflows, significantly improving team productivity.
* Implemented multi-region redundancy and failover using Amazon Route 53, AWS Multi-AZ deployments, and Auto Scaling, ensuring fault tolerance and business continuity.
* Executed cloud cost optimization strategies with AWS Cost Explorer, identifying underutilized resources and improving cost efficiency through rightsizing and reserved instance planning.
* Built custom monitoring dashboards using Amazon CloudWatch and AWS X-Ray, providing deep insights into application performance, latency, and service health.
* Automated critical data backups and disaster recovery processes with AWS Backup and Elastic Disaster Recovery, ensuring rapid recovery and minimizing data loss.
* Tuned and optimized performance of Amazon RDS instances, enhancing database throughput, query response times, and overall efficiency for transactional workloads.
* Established fine-grained access control through AWS IAM policies and role-based access controls (RBAC), upholding the principle of least privilege and tightening security.
* Created and maintained detailed operational runbooks using AWS Systems Manager, facilitating standardized, rapid incident response and system recovery.
* Implemented continuous compliance and configuration monitoring using AWS Config and Security Hub, ensuring ongoing adherence to internal and external regulatory standards.
* Conducted proactive capacity planning and forecasting using Amazon CloudWatch metrics and alarms, preparing infrastructure for growth while avoiding performance bottlenecks.
* Designed high-availability architectures for mission-critical services using Elastic Load Balancers (ALB/NLB), Amazon Route 53, and multi-AZ deployment strategies.
* Centralized log aggregation and analysis using Amazon CloudWatch Logs and Amazon OpenSearch Service (formerly Elasticsearch) to enable real-time alerting, auditing, and troubleshooting.
* Architected scalable storage solutions with Amazon S3, supporting use cases like static web hosting, data archiving, and file distribution with built-in lifecycle management.
* Integrated S3 event notifications with AWS Lambda, automating serverless data processing workflows that respond to object creation, updates, or deletions in real time.
* Implemented S3 lifecycle policies for automated tiering and cost optimization, transitioning data to Glacier and Glacier Deep Archive based on retention policies.
* Containerized applications using Amazon ECS and EKS, orchestrating scalable, fault-tolerant microservices for production deployments in AWS.

***Environment*:** AWS Lambda, AWS Systems Manager, AWS CodeCommit, AWS CodePipeline, AWS Backup, AWS Disaster Recovery, AWS Security Hub, AWS Migration Hub, Amazon Route 53, AWS Multi-AZ deployments, AWS Cost Explorer, Amazon CloudWatch, AWS X-Ray, Amazon RDS, AWS Identity and Access Management (IAM), AWS Elastic Load Balancer, Amazon Elasticsearch Service, Amazon S3, Amazon Elastic Kubernetes Service (EKS), Amazon Elastic Container Service (ECS)

***Client: American Airlines Oct 2016 – Dec 2017***

***Title: AWS Cloud Infrastructure Atlanta, GA***

***Responsibilities:***

* Led the migration from on-premises infrastructure to a fully cloud-native environment on AWS, ensuring seamless application transitions, improved scalability, and reduced operational overhead.
* Architected scalable and fault-tolerant cloud solutions utilizing core AWS services such as EC2, S3, RDS, and Lambda to support high-performance workloads.
* Developed event-driven, serverless applications using AWS Lambda, authoring functions in Python, Node.js, and Java, and enabling rapid, cost-efficient execution in response to both native AWS events and custom triggers.
* Managed a microservices architecture by integrating Lambda with API Gateway, S3, DynamoDB, and SQS, promoting loosely coupled services and asynchronous communication across distributed systems.
* Implemented fully automated CI/CD pipelines using AWS CodePipeline and CodeBuild, streamlining the build, test, and deploy process for Lambda functions and reducing time-to-market for feature releases.
* Integrated observability tools such as Amazon CloudWatch and the ELK stack (Elasticsearch, Logstash, Kibana) to provide comprehensive, real-time monitoring and logging across distributed systems.
* Conducted regular security audits and vulnerability assessments, enforcing industry-standard compliance measures and proactively mitigating risks across the cloud infrastructure.
* Built high-performance, non-blocking web applications using Python’s asynchronous libraries such as asyncio and aiohttp, enabling efficient handling of concurrent operations.
* Developed CI/CD pipelines with Python-based scripting using tools like Jenkins, GitLab CI, and GitHub Actions, automating critical stages of software delivery across multiple environments.
* Created complex financial models and quantitative algorithms in Python, leveraging Pandas and NumPy to analyze large datasets and support strategic decision-making through data-driven insights.
* Participated in capacity planning and cost optimization efforts, fine-tuning AWS resource allocation and leveraging usage reports to ensure efficient budget utilization.
* Deployed and maintained highly available AWS infrastructure using Auto Scaling Groups, Elastic Load Balancers (ALB/NLB), and Amazon Route 53, achieving high uptime and service reliability.
* Designed comprehensive disaster recovery strategies using AWS Backup, Elastic Disaster Recovery, and cross-region replication, protecting critical data and minimizing operational disruptions.
* Automated infrastructure provisioning and configuration using AWS CloudFormation and AWS Systems Manager, significantly reducing manual processes and deployment times.
* Performed root cause analysis of production issues using AWS X-Ray and CloudTrail, identifying bottlenecks and implementing preventive measures that improved system stability.
* Implemented robust data security measures, including encryption at rest and in transit with AWS KMS and SSL/TLS, ensuring compliance with security regulations and safeguarding sensitive information.
* Provided mentorship and technical leadership, guiding junior engineers on AWS best practices, architecture patterns, and performance optimization techniques to build a skilled and self-sufficient team.
* Authored detailed technical documentation of AWS architectures, processes, and standards, supporting knowledge transfer and accelerating onboarding for new team members.
* Troubleshoot complex AWS infrastructure issues in collaboration with support and customer-facing teams, resolving incidents quickly and maintaining service-level expectations.
* Actively engaged in the AWS ecosystem, attending conferences, webinars, and user group events, staying current on platform advancements and contributing insights back to the team.

***Environment*:** EC2 (Elastic Compute Cloud), S3 (Simple Storage Service), RDS (Relational Database Service), Lambda, API Gateway, DynamoDB, SQS (Simple Queue Service), CodePipeline, CodeBuild, CloudWatch, ELK stack (Elasticsearch, Logstash, Kibana), AWS Backup, AWS Disaster Recovery, Auto Scaling Groups, Elastic Load Balancing, Route 53, AWS CloudFormation, AWS Systems Manager, AWS X-Ray, CloudTrail, AWS Key Management Service (KMS)

***Company: Tavant Sept 2013– Oct 2016***

***Title: System Administrator Bengaluru, India***

***Responsibilities:***

* System Administrator/Integrator role in a large team responsible for maintaining of Linux operating systems such as RHEL, CentOS, Ubuntu. Responsible for Day-to-day systems administration tasks in Solaris, Red hat Linux and AIX servers.
* Setting up and maintaining RHEL, SUSE, Solaris, and Cento’s servers for new and ongoing projects using standalone and network installation methods.
* Develops and maintains Linux Kernels (CentOS and RHEL), application servers – JBoss, Tomcat and Apache, Scripting-Shell scripting, Infrastructure automation.
* Managed system storage requirements, access controls and permissions.
* Make sure the backup of the whole infrastructure is taken everyday before starting of the day
* Worked on LDAP Server and SSL Certificates, two web security technologies. worked on assigning static routes and host names, as well as configuring the network interface and TCP/IP.
* Design, configuration, administration, and development of various open source apps and LAMP (Linux Apache MySQL PHP)-based architecture.
* Managing system processes and scheduling processes with the cron utility
* Learning the new industry technologies and best practices that are used in DevOps environments and recommending newly available technologies to the team.
* Responsible for managing different environments like development stage and production by checking if the resources are configured correctly in all the environments.
* Documenting the steps of the infrastructure that is already existing and participating in on-call rotation along with handling basic production issues.
* Installed, Configured, Managed Monitoring Tools such as Nagios for Resource Monitoring/Network Monitoring/Log Trace Monitoring

***Environment***: System Administration, Linux (RHEL, CentOS, Ubuntu, SUSE, Solaris, AIX), Red Hat Linux, Infrastructure Maintenance, System Storage Management, Backup and Recovery, LDAP, SSL Certificates, Network Configuration, TCP/IP, Open Source Applications, LAMP Stack, JBoss, Tomcat, Apache, Shell Scripting, Infrastructure Automation, Cron Jobs, DevOps Best Practices, Environment Management (Development, Staging, Production), Documentation, On-Call Support, Monitoring Tools (Nagios), Resource Monitoring, Network Monitoring, Log Trace Monitoring