Solai Rajan

AWS Cloud Engineer

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IT professional with over 5 years of experience, including 2 years in network support and 3 years specializing in cloud technologies. Skilled in AWS, Terraform, Python and GitLab, with a strong foundation in cloud architecture, infrastructure automation and CI/CD. Passionate about optimizing cloud solutions to enhance operational efficiency and drive business agility.

RELEVANT WORK EXPERIENCE

HTC Global Services, Chennai   2022 FEB– Present

AWS Cloud Engineer

Mainframe to AWS Modernization

Client: State Farm

- Developed a high-availability API on AWS as part of a modernization project transitioning from mainframe to AWS, utilizing API Gateway (private endpoint) to integrate a private Lambda and DynamoDB for backend operations.
- Implemented disaster recovery (DR) across two regions, deploying API Gateway, Lambda functions, and load balancers in each region and using DynamoDB Global Tables for cross-region data replication.
- Configured Route 53 failover routing with a multi-region load balancer setup and health checks for seamless traffic redirection to healthy endpoints in the event of failure.
- Automated API health monitoring with EventBridge-triggered Lambda functions, which conducted health checks via DynamoDB scans and activated CloudWatch alarms based on API responses.
- Streamlined DR failover process by integrating Route 53 health checks with CloudWatch alarms, ensuring minimal downtime and consistent API availability for end-users.
- Created AWS resources using reusable Terraform modules designed for modular consumption, incorporating custom templates for specific services, all stored in GitLab to ensure accessibility across projects
- Leveraged a GitLab CI/CD pipeline integrated with Scalr for Terraform state management, utilized Terratest for automated infrastructure code validation, and implemented security compliance checks using Sync Scan and LabLooter, alongside a Pytest stage for unit testing Python code deployed in AWS Lambda functions.

Data migration of DB2 to Dynamodb

- Executed end-to-end data migration from DB2 to DynamoDB, leveraging AWS Transfer Service, S3, Glue, and VPC Endpoint for secure operations.
- Configured AWS Transfer Service with VPC Endpoint to enable private, efficient data transfers to S3.
- Performed ETL with AWS Glue to transform and prepare DB2 data for seamless integration with DynamoDB.
- Enhanced data security and integrity throughout the migration, ensuring compliance with best practices.
- Optimized DynamoDB setup post-migration, enabling fast, reliable data access for application needs.
- Deployed all AWS resources using modular Terraform code, creating reusable modules and templates stored in GitLab for easy cross-project use. The GitLab pipeline utilized Scalr for Terraform state file handling and incorporated Terratest for code validation.
- Integrated continuous security checks with Sync Scan and LabLooter in the pipeline stages, and added a Pytest stage to validate the Python code used in AWS Glue

API Lambda Development Project

- Developed Python code for AWS Lambda functions to support API operations, structuring code into modular files to streamline execution and ensure only necessary code runs.
- Implemented robust input validation and comprehensive exception handling, adhering to best practices and standardized naming conventions to improve code readability and maintainability.
- Optimized Lambda performance by minimizing execution time and memory usage, ensuring efficient resource utilization.
- Designed and implemented unit tests with Pytest to validate code functionality, improving reliability and enabling continuous integration with automated testing in the pipeline.
- Created High-Level Design (HLD), Low-Level Design (LLD), and component specification documents to detail the architecture, design considerations, and component specifics, enhancing project clarity and support for future development

Atos cloud to AWS Migration:

Client: Philips DA

- Collaborated on migrating a .NET application and SQL Server database from Atos cloud to AWS.
- Analyzed infrastructure and defined migration requirements with the team.
- Configured AWS services, including EC2 for application hosting and RDS for SQL Server.
- Installed necessary software and dependencies, ensuring compatibility.
- Supported testing to validate functionality and performance post-migration.
- Delivered solutions tailored to stakeholder needs, addressing migration challenges

Accenture, Chennai   2020 MAR – 2021 OCT
Network Infrastructure Design

Client: TDC

- Utilized the INCA tool to strategically design fiber cable placements across Denmark.
- Developed accurate network maps by referencing legacy copper cable layouts, transitioning the design from copper to modern fiber infrastructure.
- Ensured optimized internet infrastructure to support advanced connectivity needs by leveraging geographic data and existing network schematics.

EDUCATION

K.C.S Kasi Nadar College Of Arts & Science, Chennai, **2019** Bachelor of Science — Computer Science

SKILLS AND CERTIFICATION

Technical Skills: AWS, Azure, Terraform, Gitlab, Python, Pytest, CICD.

Certification: AWS Certified Solutions Architect – Associate, Microsoft Certified: Azure Fundamentals

Languages: English, Tamil.

DECLARATION

I hereby declare that the details and information given above are complete and true to the best of my knowledge