Faizankhan Pathan

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SUMMARY

I Comes with knowledge in AWS Cloud, Linux, Cloud Computing, and DevOps. Dedicated to staying up-to-date on the latest technologies and trends in the industry. Passionate about learning and applying new skills to solve challenging problems. Seeking to gain experience in DevOps and Cloud Computing.

EXPERIENCE

Student

Ethan's Tech **July 2023 - November 2023, Pune**

• AWS SAA-C03 Certification Preparation.
• Gaining the skills necessary to fulfil the role of AWS Certified Solutions Architect

PROJECTS

AWS-Cloud-Scalability-and-Web-Hosting-Solution

Ethans's Tech • https://github.com/Faizan-Pathan029/AWS-Cloud-Scalability-and-Web-Hosting-Solution

• Created a robust AWS cloud infrastructure that automates web hosting, scales resources as needed, and ensures high availability. The project involved multiple stages:
• Set up an S3 bucket and uploaded an `index.html` file.
• Implemented an AWS Lambda function to trigger notifications via an SNS topic whenever a new object is uploaded to the S3 bucket.
•Established a Virtual Private Cloud (VPC) with three public subnets.
• Auto Scaling Group and EC2 Instances:
•Created an Auto Scaling Group (ASG) to manage EC2 instances.
• Utilized user data scripts (UDS) to install an HTTP server on EC2 instances.
•Configured instances to retrieve the `index.html` file from the S3 bucket.
•Attached an AWS Elastic Load Balancer (ELB) to the Auto Scaling Group to distribute incoming traffic.
• Registered a domain from GoDaddy.
• Created a hosted zone in AWS Route 53 and updated DNS records.
• Changed GoDaddy's nameservers to AWS nameservers for routing traffic.
• Conducted various tests:
• Verified the domain URL serves content from two different EC2 instances.
• Terminated one EC2 instance and confirmed traffic only from one IP.
• Monitored Auto Scaling Group to verify the launch of a new instance after termination.
• Tested the domain URL again, confirming content from two different EC2 instances.
• Triggered scaling by increasing CPU utilization on one instance and monitored the launch of
• a third instance by the ASG.
• Tools and Technologies Used:
- AWS (S3, Lambda, VPC, EC2, ASG, ELB, Route53)
- GoDaddy Domain Registration
- AWS CloudWatch for Monitoring and Alarms

AWS Server Automation with API Gateway and EventBridge

Self

• In this project, I designed and implemented an AWS-based server automation solution using AWS API Gateway, AWS EventBridge, two EC2 instances, and AWS Lambda functions. The primary objective was to create a seamless and user-friendly system for starting and stopping EC2 instances on-demand while also scheduling these actions automatically.
• Workflow:
• AWS API Gateway Setup:
• Created an AWS HTTP API Gateway to provide a user-friendly interface for starting and stopping EC2 instances.
• Configured API endpoints to trigger Lambda functions based on user requests.
• Lambda Functions:
• Developed two AWS Lambda functions:
• StartInstanceLambda: Responsible for initiating the start of an EC2 instance.
• StopInstanceLambda: Responsible for initiating the stop of an EC2 instance.

• These Lambda functions are triggered by API Gateway endpoints and EventBridge rules.
• EC2 Instances:
• Provisioned two EC2 instances within the AWS environment.
• Utilized Python code within the Lambda functions to interact with these instances.
• AWS EventBridge Rules:
• Set up AWS EventBridge rules with cron expressions to schedule instance start and stop actions at specific times.
• Integrated these rules with the Lambda functions to trigger automated instance management.
• This experience demonstrates my proficiency in AWS services, Python programming, and server automation, showcasing my ability to design and implement effective solutions within the AWS cloud environment.

Seamless Data Processing Pipeline using Amazon S3, AWS Lambda, and Amazon SNS.

Ethans's Tech • https://github.com/Faizan-Pathan029/Lambda • August 2023 - August 2023
• I've successfully spearheaded a cutting-edge data processing project leveraging Amazon Web Services. Through the strategic integration of Amazon S3, AWS Lambda, and Amazon SNS, I've architected an impeccable data processing pipeline that has revolutionized our data handling capabilities.
• In this AWS endeavor, I've masterminded a seamlessly orchestrated data processing pipeline. Here's how it operates: Whenever a user uploads any file to our designated S3 bucket, an AWS Lambda function is instantaneously triggered into action, functioning like a diligent assistant poised to execute tasks with utmost efficiency.
• Empowered with a robust AWS IAM role, our Lambda function boasts comprehensive access to S3 resources, allowing it to effortlessly retrieve and process the uploaded objects without the slightest hiccup. This ensures a smooth and secure data processing workflow.
• Real-Time Notifications:
• Thanks to the formidable capabilities of Amazon SNS, as soon as the Lambda function concludes its mission, it promptly dispatches email notifications to the pertinent stakeholders, providing them with real-time updates on the process's completion. No more waiting in suspense; AWS ensures that everyone remains informed and in sync with the workflow.
• Key Highlights:
- Automated Excellence: Our data processing pipeline operates with unparalleled automation, eliminating manual intervention and streamlining our operations.
- Instantaneous Response: The Lambda function springs into action the moment an object is uploaded, guaranteeing swift and efficient processing.
- Ironclad Security: With a robust IAM role, our system maintains the highest standards of security while interacting with S3 resources.
- Real-Time Communication: Amazon SNS ensures that all relevant parties are immediately notified, fostering efficient collaboration.
- Seamless Scalability: Leveraging AWS services, our solution is not only hassle-free to manage but also readily scalable to meet evolving demands.
• In summary, my role in this project showcases my expertise in harnessing AWS services to create a dynamic, automated, and secure data processing pipeline, all while ensuring real-time communication and scalability. This achievement reflects my commitment to delivering innovative solutions that drive operational efficiency and enhance collaboration within organizations.

EDUCATION

Bachelor of Science in Computer Science

Minor in Computer Science • Savitribai Phule Pune University • Pune • 2023 • 3.552
• Class Representative (CR): Served as the Class Representative for my academic year in the third year, demonstrating leadership and organizational skills while facilitating communication between students and faculty.

HSC

New English School and Jr College • Shrirampur • 2020

SSC

Depaul English Medium High School • Shrirampur • 2018

CERTIFICATIONS

AWS Certified Solutions Architect - Associate

Amazon Web Services • 2023
• Comprehensive training in AWS cloud architecture principles, services, and best practices. Covered topics including EC2 instances, S3 storage, VPCs, security, and scalability. Prepared for and passed the AWS Certified Solutions Architect - Associate certification exam.

SKILLS

Technical Skills
• Basic knowledge on cloud computing and Service such as SaaS, IaaS, PaaS.
• Cloud Type: -Public, Private and Hybrid.
• knowledge on Amazon Web Services EC2, ELB, VPC, S3,VPC

• Basic knowledge on Amazon Web Services IAM, RDS, Route 53
• Create/Managing buckets on S3.
• Basic knowledge on AMI/Snapshots.
• Setup/Managing Linux Servers on Amazon (EC2, EBS, ELB and IAM).
• Build and release Ec2 instances Amazon Linux and Windows for POC, Development and Production environment.
• Setup and attached EBS volumes to Ec2 instances
• Setup and managed security groups, VPC' specific to environment.
• Created AMI images of critical EC2 instances as backup using AWS CLI and GUI
• Created AWS Cloud formation templates on creating IAM Roles & total architecture deployment end to end (Creation of EC2 instances & its infrastructure).
• Provide highly durable and available data by using S3 data store.
• Utilize Amazon Glacier for archiving data.
• Configured and managing security groups and VPC.
• Configured and managing ELBs.
• Configured and managing S3 storage.
• Hands on experience on VPC, Subnets, and Route tables etc.
• Infra-structure development on AWS using various services like EC2, S3, RDS, Route 53, Cloud Front, Cloud Watch, IAM, VPC etc.
• EC2 instances, Auto Scaling, Elastic Load Balance and AMIs
• Attaching or Detaching EBS volume to AWS EC2 instance.
• Configured Cloud watch alerts.
Launching and configuring of Amazon EC2 (AWS) Cloud Servers using AMI's (Linux) and configuring the servers for specified applications.
• Setup and launch Amazon Linux and RHEL and Windows ec2 instances, network interface with Elastic IP's.
• Configuring Network file system.