

# CAPSTONE PROJECT

Highly Scalable and Available Infrastructure on AWS

# Who I am:

Samuel Tadrissi

“If you can think it, you can automate it!”

-- Coach Michael



# The Project

## Agenda

1. Goal
2. Tools
3. Steps
4. Future improvements



# The Project

Welcome to your Journey to Cloud

Complexity made Simple

**A Wild Journey**

Let me introduce myself:

Hello, I am Samuel Tadrissi, Cloud Architect and IT enthusiast. I design, implement, and manage cloud-based solutions and infrastructure for organizations. I specialize in infrastructure automation, ensuring seamless and efficient deployment of cloud resources.

With a strong foundation in cloud the platform AWS, I am dedicated to creating scalable, secure, and cost-effective cloud architectures. I am skilled in leveraging Infrastructure as Code (IaC) tools like Terraform and CloudFormation, which enable me to automate the provisioning and management of cloud infrastructure.

“Quality means doing it right, not faster.”

Continuous learning is the essence of my work, fueling my Cloud Consulting, Cloud Engineering, Cloud Architecting, AI calculations, strategic communications or any other aspect.

Let's create something remarkable together in the cloud!

[More About Me](#) [Portfolio](#) [CV](#) [Certificates](#)

Imprint

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**Curriculum Vitae**

In IT – like in every other aspect of life – you can never know everything. I try to learn something new every day. But just learning is not enough. Only with applying knowledge it can be consolidated.

Part 3 of my last learning – AWS Cloud Computing – was my **Captone Project**. A project representing the benefits of Cloud Check it out!

[GitHub](#)

**LEARNING**  
**ALWAYS**

Jul 19:34

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**aws certified Cloud Practitioner FOUNDATIONAL Graduate**

I took the exam for the Certified Cloud Practitioner in June 2024. As part of a cohort I attended a Cloud Computing Bootcamp at neuefische GmbH. Already after two thirds of the time and after an intense journey through many diverse Amazon Web Services we took the exam all together and past.

The AWS re/start program provides a comprehensive foundation in AWS Cloud concepts, including key services, security, pricing, and architecture. Ideal for those new to cloud computing, it equips participants with essential AWS skills and knowledge, significantly enhancing their career prospects in the cloud industry.

**aws RE / START Graduate**

The neuefische Cloud Computing Bootcamp I attended organized its curriculum in cooperation with AWS. The re/start program is designed to kickstart your career in tech specializing in AWS Cloud.

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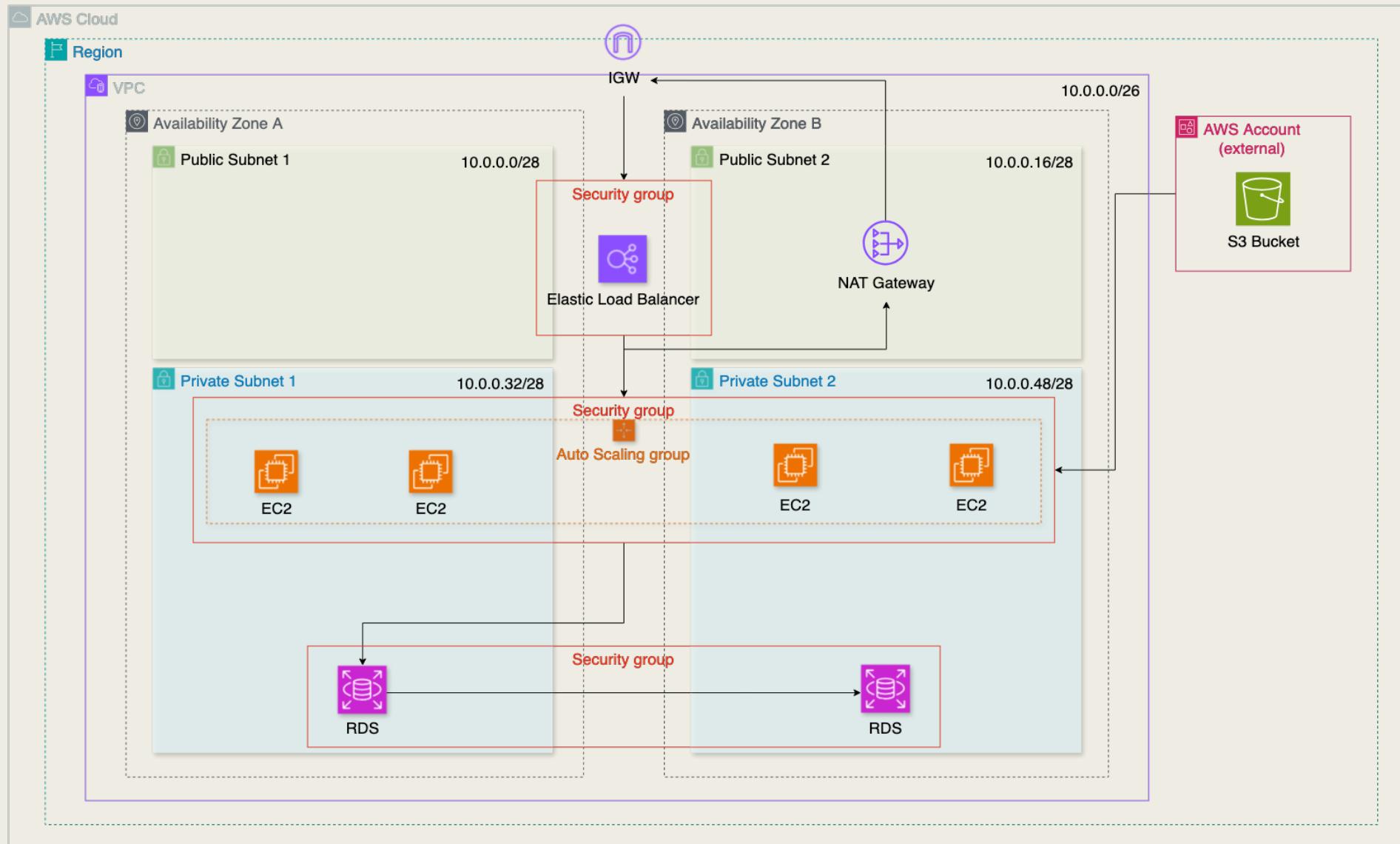
**neue fische School and Pool for Digital Talent Graduate**

The neuefische Cloud Computing Bootcamp was a great experience. I learned so much. We went through all the IT basics – networking, security, linux, databases and python – and spent tremendous amount of hours with hands on practice.

The main focus was on AWS. Designing infrastructure, creating migration plans and general cloud concepts for different use cases kept us busy.

Always considering best practices for security, availability, scalability and resilience we created and troubleshooted infrastructure as Code using terraform or CloudFormation

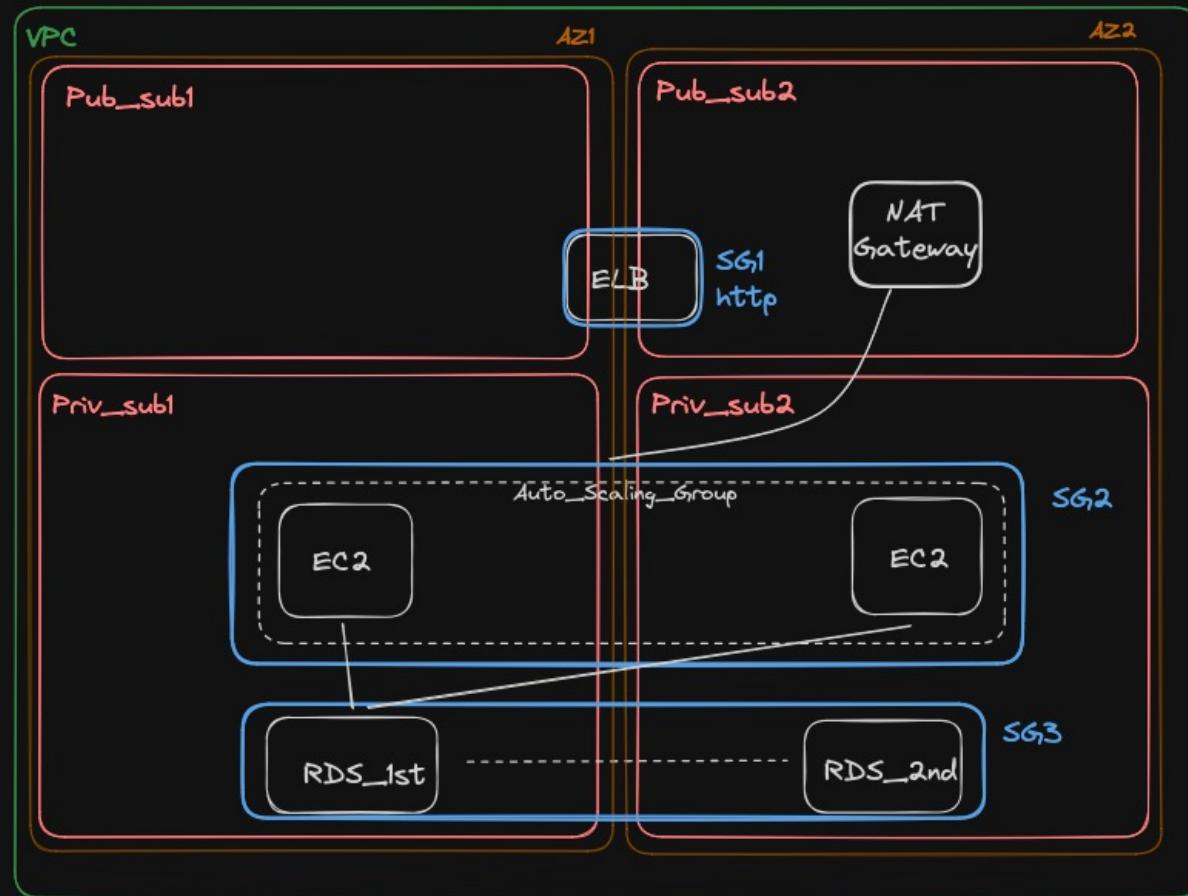
Our Coach made it his goal to introduce us to as many industry methods and standards as possible including teaching us most actively used tools in software development.



Tools:



# GOAL



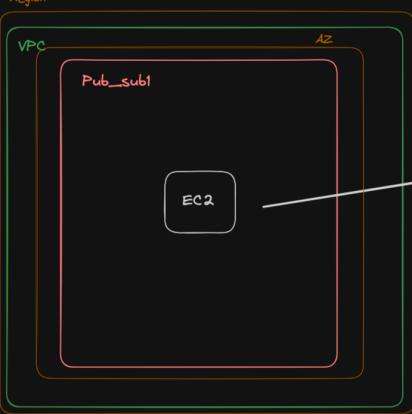
http: inbound: only from SG1  
outbound: to NAT  
ssh: only from SG4

mysql: only from SG2

# Step 1

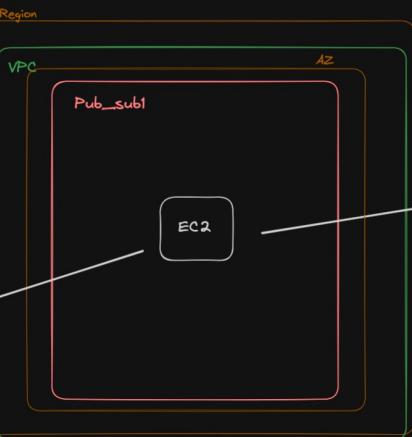


# Step 2



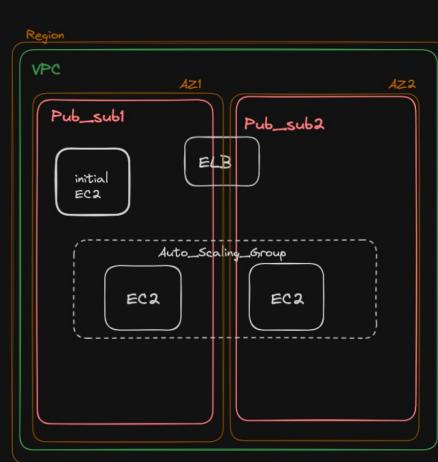
Create Website  
and local Database

# Step 3

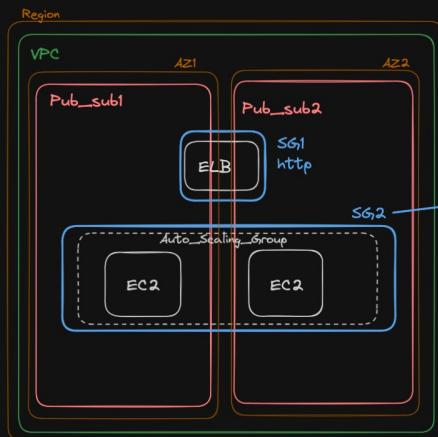


automate wordpress  
deployment from s3

# Step 4

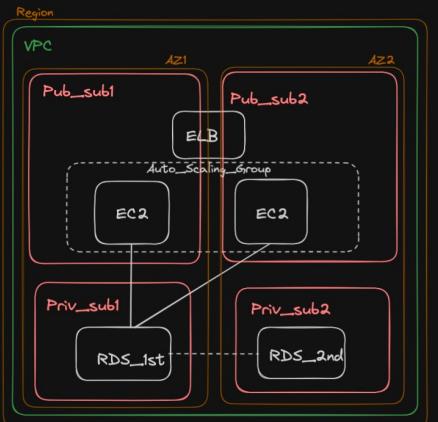


# Step 5



http: only from SG1  
ssh: only from myIP

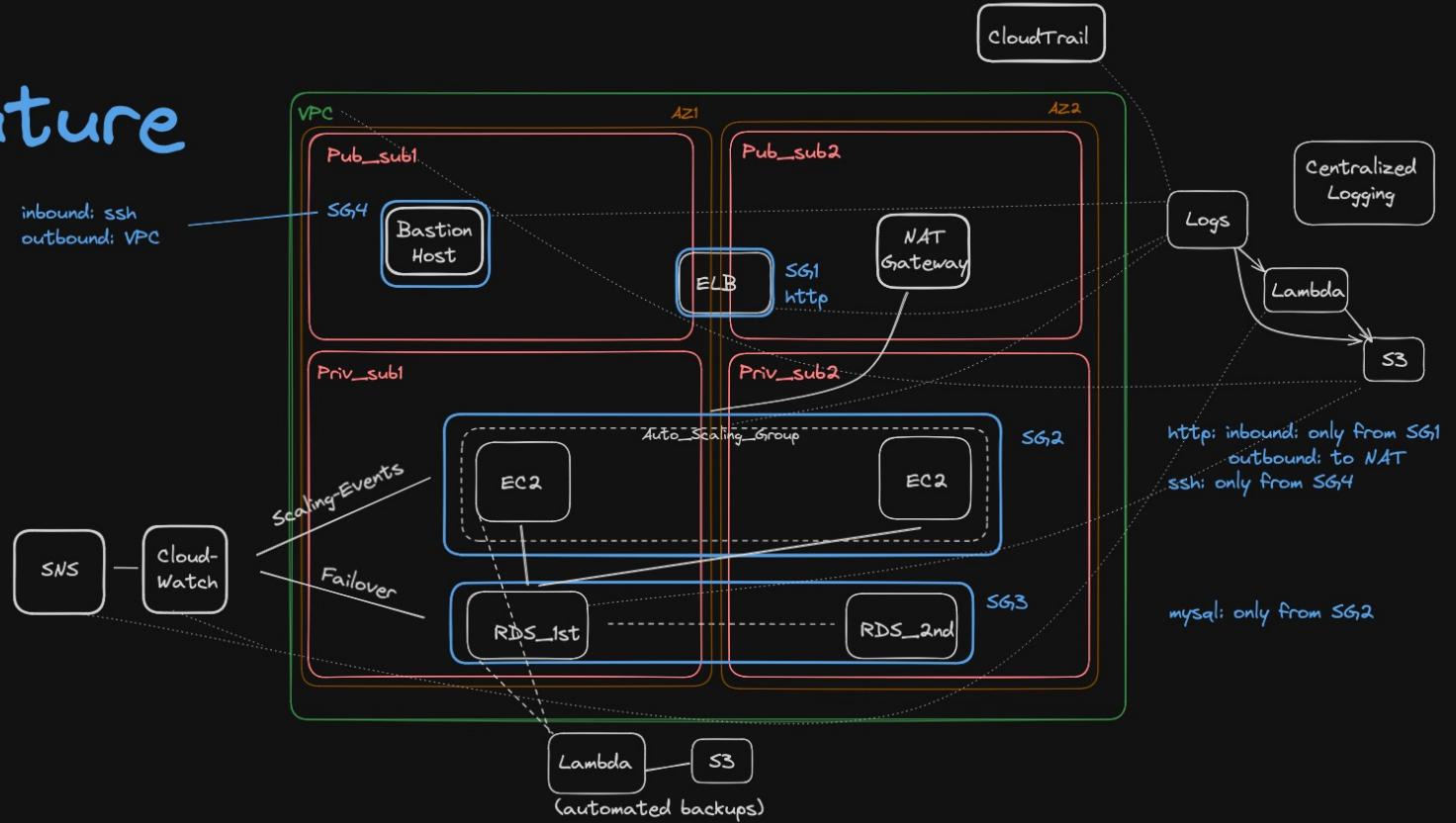
# Step 6



# Future improvements

- Performance
- Security
- Backup & Recovery
- New Services and Tools

## Future



# Cost Estimation

## Assumed Conditions:

- 3 Page Views per Visit
- 100 Visits per Month
- 10 S3 Requests per Month
- average Web Page Size  $\approx$  75KB

## Costs for 3 a year contract (on demand):

monthly

53,80 \$ – 62,27 \$

## Usage:

- all Services – 24/7
- Data processed monthly by
  - *ELB*  $\approx$  0.0215
  - *NAT*  $\approx$  0.0215
  - *S3*  $\approx$  1GB

yearly

645,58 \$ – 747,19 \$

# Thank You for your time and attention...



Project-Repo:

[github.com/xsam951/capstone\\_deham14](https://github.com/xsam951/capstone_deham14)



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