

# AWS FOR BEGINNER

Automated Deployment to AWS with Github Action



# INTRODUCTION



**Software Engineer at Haraj**

May 2021 - present



**Tech Lead at Lion Parcel**

Oct 2020 - April 2021

**Software Engineer at Swift**

Jun 2020 - Oct 2020

**Software Engineer at Sorabel/Salestock**

Dec 2018 - May 2020



**PENS — D4 T. Informatika**

Aug 2014 - Sep 2018



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Muhammad Iskandar Dzulqornain

has successfully completed the AWS Certification  
requirements and has achieved their:

**AWS Certified Solutions Architect - Associate**

**Issue Date**

Feb 10, 2022

**Expiration Date**

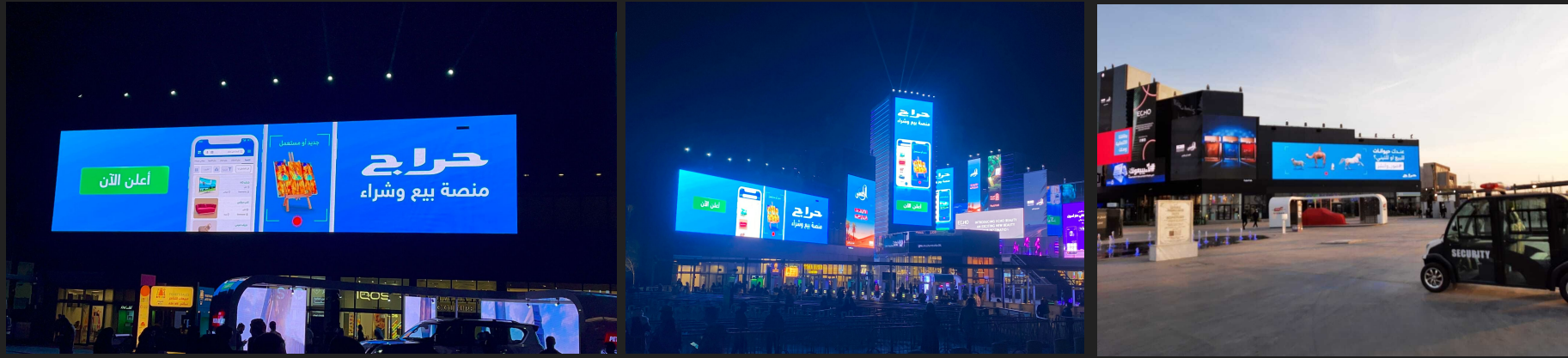
Feb 10, 2025

AWS Training and Certification

Validation Number E044CB3LMMQE1LSX

Validate at: <https://aws.amazon.com/verification>

haraj.com



Haraj is the **leading company in E-Commerce** in Saudi Arabia. It started focusing on Cars, then, moved to Real estates and ended up being the 1-stop shop for all classifieds in Saudi Arabia. Haraj receives over half a million daily visitors; and growing.

Behind the simple design, Haraj applies **the world's latest technologies** which makes it a great environment for developers to learn and for the future entrepreneurs to build a strong bases before getting into the market.

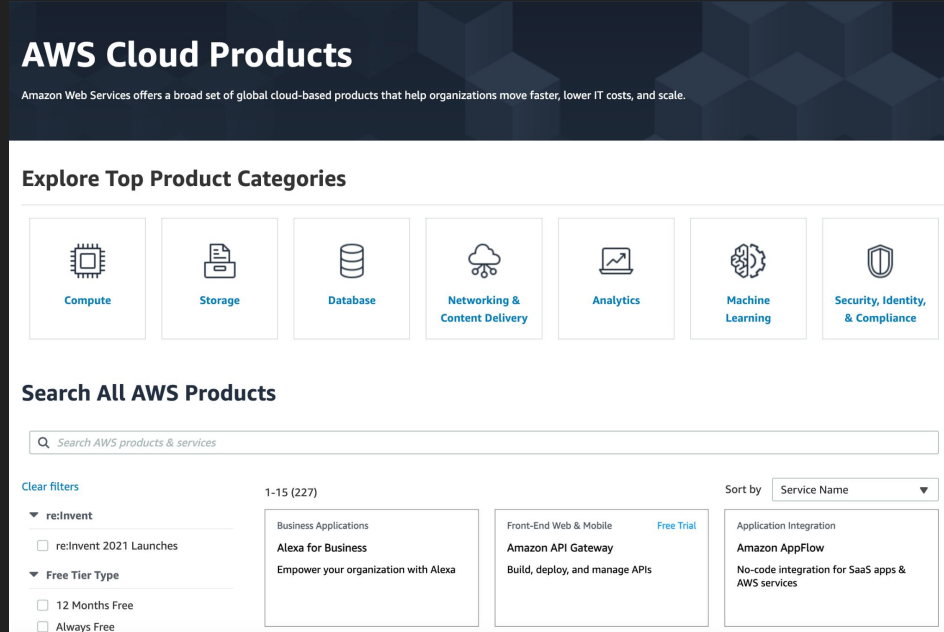
# AWS in Haraj

- We heavily rely on AWS
- Some AWS Products we use for examples
  - AWS RDS MySQL
  - DynamoDB
  - AWS SQS
  - Lambda - Serverless
  - ECS Fargate
  - AWS rekognition
  - And many more...



# AWS Cloud Products

- AWS offers a broad set of global cloud-based products including compute, storage, databases, analytics, networking, mobile, developer tools, management tools, IoT, security, and enterprise applications: on-demand, available in seconds, with pay-as-you-go pricing. From data warehousing to deployment tools, directories to content delivery, etc.
- Over 200 AWS services are available.



The screenshot shows the AWS Cloud Products landing page. At the top, the heading "AWS Cloud Products" is displayed in white on a dark blue background. Below it, a sub-header states: "Amazon Web Services offers a broad set of global cloud-based products that help organizations move faster, lower IT costs, and scale." The main content area is titled "Explore Top Product Categories" and features seven icons representing different product categories: Compute (microchip), Storage (floppy disk), Database (cylinder), Networking & Content Delivery (cloud with arrows), Analytics (line graph), Machine Learning (brain with gears), and Security, Identity, & Compliance (shield). Below this is a "Search All AWS Products" section with a search bar. Under the search bar, there are filters for "Clear filters" and "re:Invent" (with a checkbox for "re:Invent 2021 Launches"). There are also checkboxes for "Free Tier Type" (12 Months Free, Always Free). The results are sorted by "Service Name" and show 1-15 (227) items. The first three results are: "Business Applications" (Alexa for Business), "Front-End Web & Mobile" (Amazon API Gateway), and "Application Integration" (Amazon AppFlow).

## AWS Cloud Products

Amazon Web Services offers a broad set of global cloud-based products that help organizations move faster, lower IT costs, and scale.

### Explore Top Product Categories

- Compute
- Storage
- Database
- Networking & Content Delivery
- Analytics
- Machine Learning
- Security, Identity, & Compliance

### Search All AWS Products

Search AWS products & services

Clear filters

1-15 (227)

Sort by Service Name

- re:Invent
  - ☐ re:Invent 2021 Launches
- Free Tier Type
  - ☐ 12 Months Free
  - ☐ Always Free

Business Applications

Alexa for Business

Empower your organization with Alexa

Front-End Web & Mobile

Amazon API Gateway

Build, deploy, and manage APIs

Application Integration

Amazon AppFlow

No-code integration for SaaS apps & AWS services

<https://aws.amazon.com/products>



# Top10 Most Used AWS Services



Amazon  
Cloudfront



Amazon  
SNS



Amazon  
RDS



Amazon  
Auto  
Scaling



Amazon  
S3



Amazon  
EC2



Amazon  
Beanstalk



Amazon  
Lambda



Amazon  
VPC



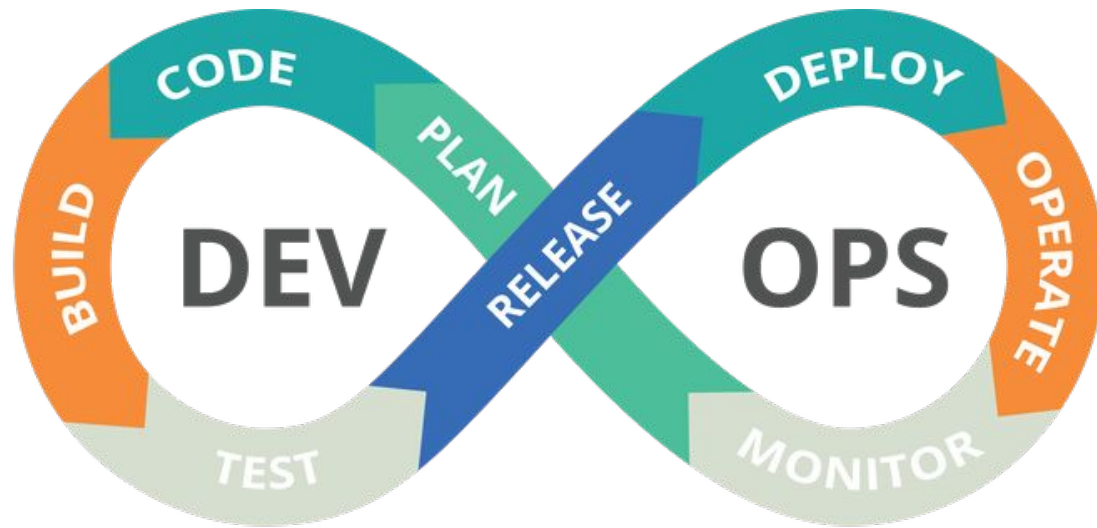
Amazon  
IAM

What is Deployment?

Why do we need deployment to be automated?

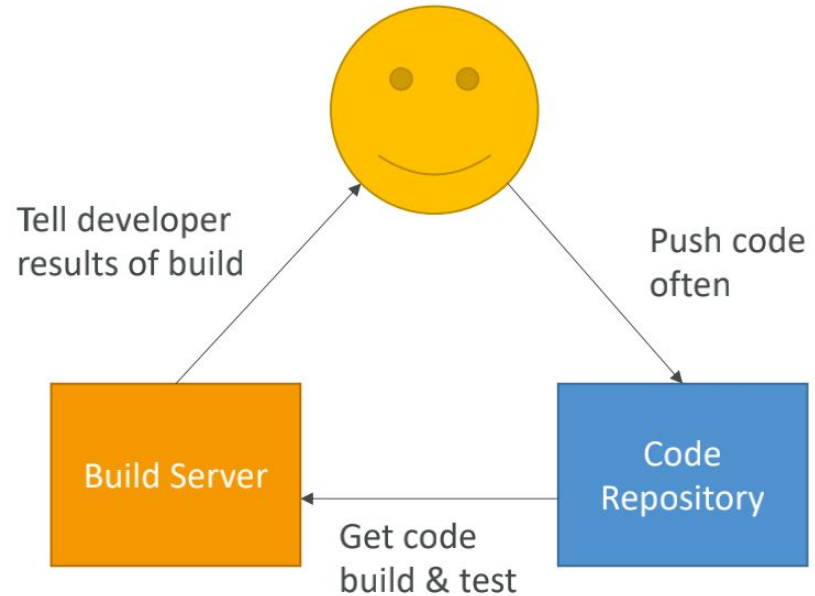
What is Github Actions?





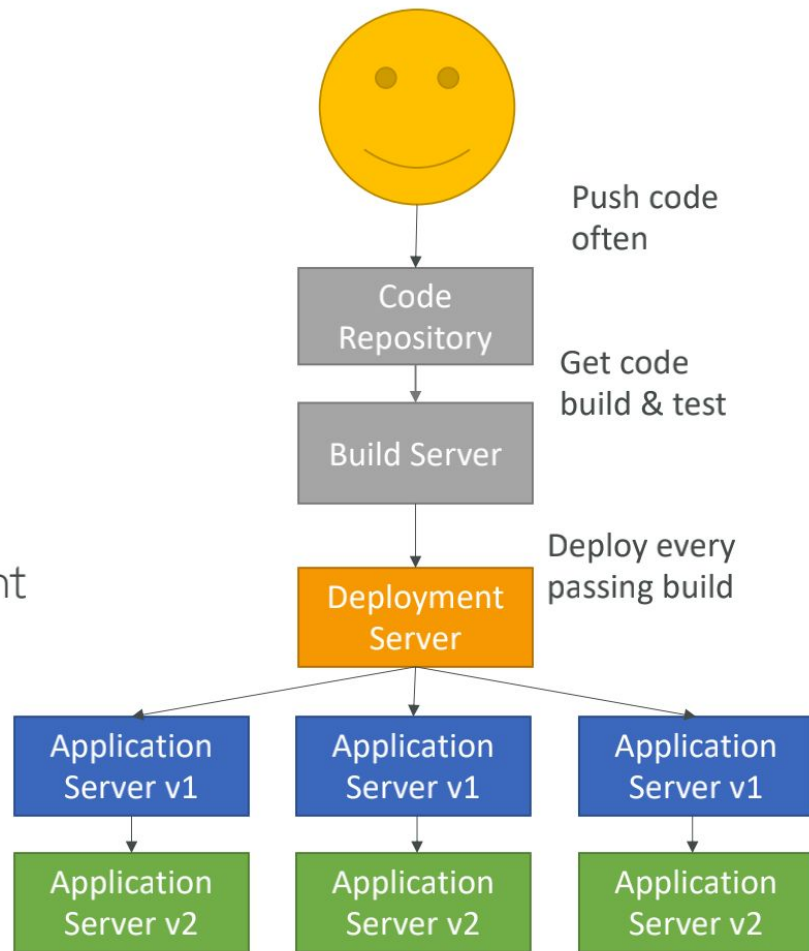
# Continuous Integration

- Developers push the code to a code repository often (GitHub / CodeCommit / Bitbucket / etc...)
  - A testing / build server checks the code as soon as it's pushed (CodeBuild / Jenkins CI / etc...)
  - The developer gets feedback about the tests and checks that have passed / failed
- 
- Find bugs early, fix bugs
  - Deliver faster as the code is tested
  - Deploy often
  - Happier developers, as they're unblocked



# Continuous Delivery

- Ensure that the software can be released reliably whenever needed.
- Ensures deployments happen often and are quick
- Shift away from “one release every 3 months” to “5 releases a day”
- That usually means automated deployment
  - CodeDeploy
  - Jenkins CD
  - Spinnaker
  - Etc...

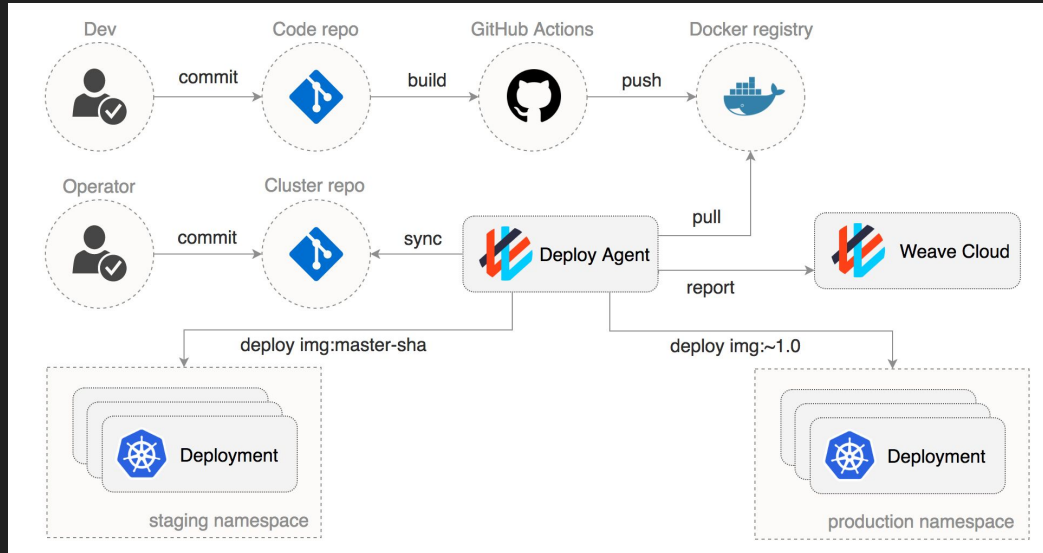


# What is Cloudformation?

- Infrastructure as code
  - No resources are manually created, which is excellent for control
  - The code can be version controlled for example using git
  - Changes to the infrastructure are reviewed through code
- Cost
  - Each resources within the stack is tagged with an identifier so you can easily see how much a stack costs you
  - You can estimate the costs of your resources using the CloudFormation template
  - Savings strategy: In Dev, you could automation deletion of templates at 5 PM and recreated at 8 AM, safely
- Productivity
  - Ability to destroy and re-create an infrastructure on the cloud on the fly
  - Automated generation of Diagram for your templates!
  - Declarative programming (no need to figure out ordering and orchestration)
- Separation of concern: create many stacks for many apps, and many layers. Ex:
  - VPC stacks
  - Network stacks
  - App stacks

# What is Github Action?

GitHub Actions is a continuous integration and continuous delivery (CI/CD) platform that allows you to automate your build, test, and deployment pipeline. You can create workflows that build and test every pull request to your repository, or deploy merged pull requests to production.



It's DEMO TIME

# Explanation Details - Cloudformation Template

Demo

# Explanation Details - Github Action Template

Demo



Question & Discussion Time 🕶️

# INTERMEZZO (1/3)

# AWS Data Center Now in INDONESIA 🔥

KOMPAS.com NEWS TREN HEALTH FOOD NEW EDUKASI PARAPUAN NEW MONEY UMMK NEW TEKNO LIFESTYLE HOMEY NEW PROPERTI BOLA TRAVEL OTOMOTIF SAINS HYPE


BAGIKAN:     AWS Resmikan Data Center di Indonesia, Investasi hingga Rp 71 Triliun

## AWS Resmikan Data Center di Indonesia, Investasi hingga Rp 71 Triliun

Kompas.com - 15/12/2021, 12:41 WIB

BAGIKAN:     Komentar

 Designed for developers. Built for businesses. [Try for free](#)

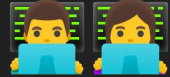
 Lihat Foto

 Mau Jadi Sultan, Modal Gratisan? Cukup Registrasi dan KYC Sekarang! [DOWNLOAD SEKARANG](#)  

Ilustrasi data center (Shutterstock)

<https://tekno.kompas.com/read/2021/12/15/12410077/aws-resmikan-data-center-di-indonesia-investasi-hingga-rp-71-triliun>

# Hundreds of Indonesian People work at Amazon



The screenshot shows the Amazon Facebook profile page. At the top is a banner with the Amazon logo, a '2021 TOP COMPANIES #1 in the U.S.' badge, and the text 'Come build the future with us' alongside illustrations of a car, a factory, and a person. Below the banner is the Amazon logo and the name 'Amazon'. The location is 'Internet · Seattle, WA' and the follower count is '24,399,329 followers'. A section shows 'Aris & 44 other connections work here · 1,275,481 employees'. There are buttons for '+ Follow', 'Visit website', and 'More'. A navigation bar includes 'Home', 'About', 'Posts', 'Jobs', 'Life', 'People' (which is selected), 'Events', and 'Videos'. The 'People' section shows '556 employees' and a search bar with the text 'Search employees by title, keyword or school'. At the bottom, there is a filter for 'Indonesia' with a close button and a 'Clear all' link.

**Amazon**  
Internet · Seattle, WA · 24,399,329 followers

Aris & 44 other connections work here · 1,275,481 employees

+ Follow Visit website More

Home About Posts Jobs Life **People** Events Videos

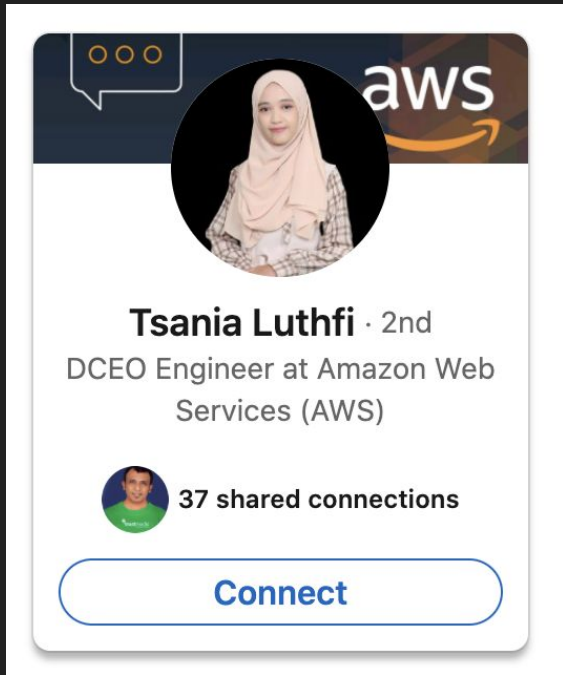
**556 employees**

Search employees by title, keyword or school

Indonesia X Clear all

# INTERMEZZO (3/3)

I found 1 from PENS



# References

- [Stephane Maarek Course](#)
- <https://aws.amazon.com>
- <https://github.com/features/actions>

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THANK  
YOU