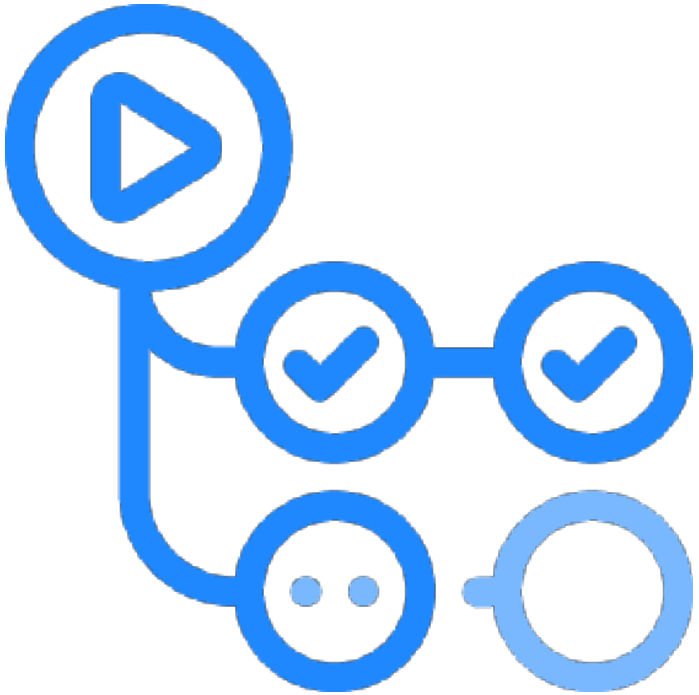
GitHub Actions



Hector Fabio Jimenez Saldarriaga

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👨‍💻🥷☁️🐍

About 🥷☁️

My name is Hector Fabio Jimenez Saldarriaga, but you can call me H or Hector, I proudly work for GoDaddy Inc as Site Reliability Engineer/ DevOps for the Cloud Foundations/ Cloud Platform.

- Code in Python/Javascript languages
- Harry Potter and F1 Fanboy
- Use Unix, Gnu/Linux Enviroments

You can check more info here :

https://devops.com.co/about

Job Opportunities at

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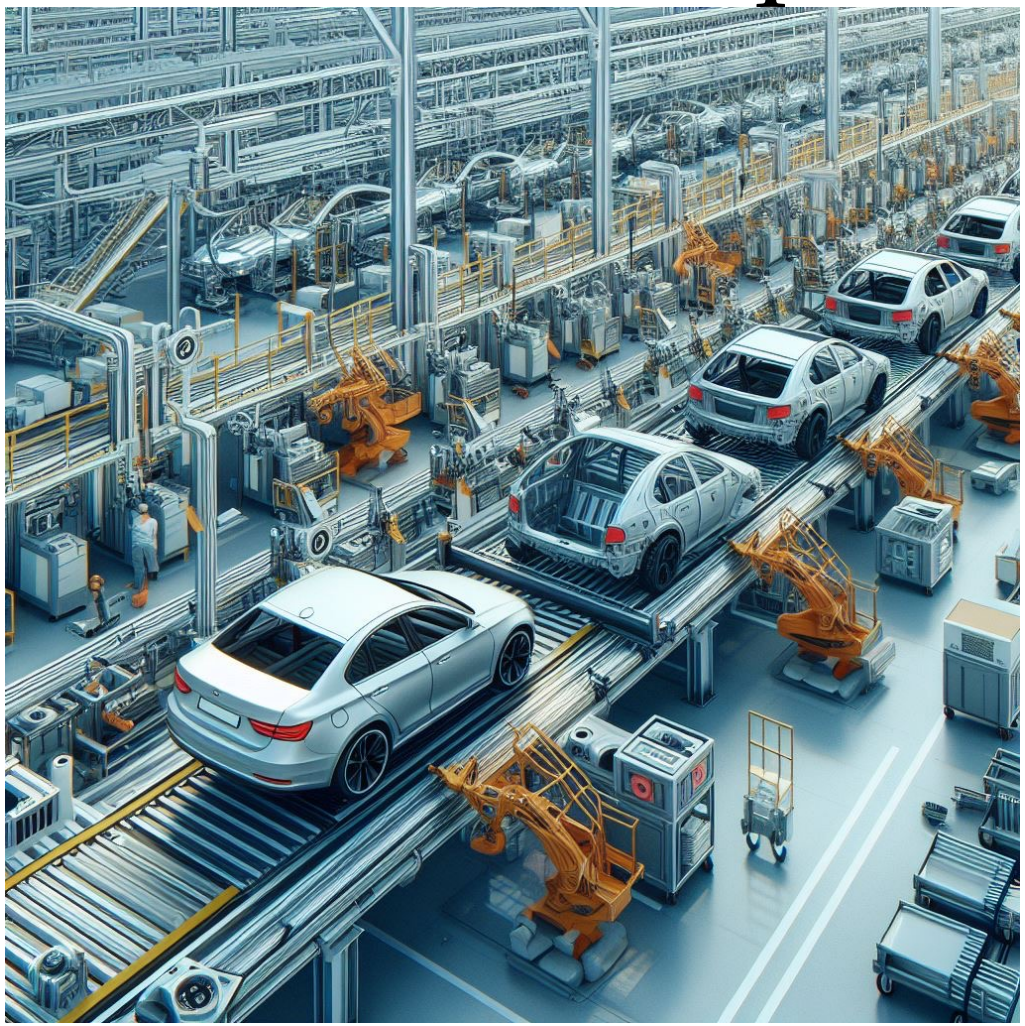
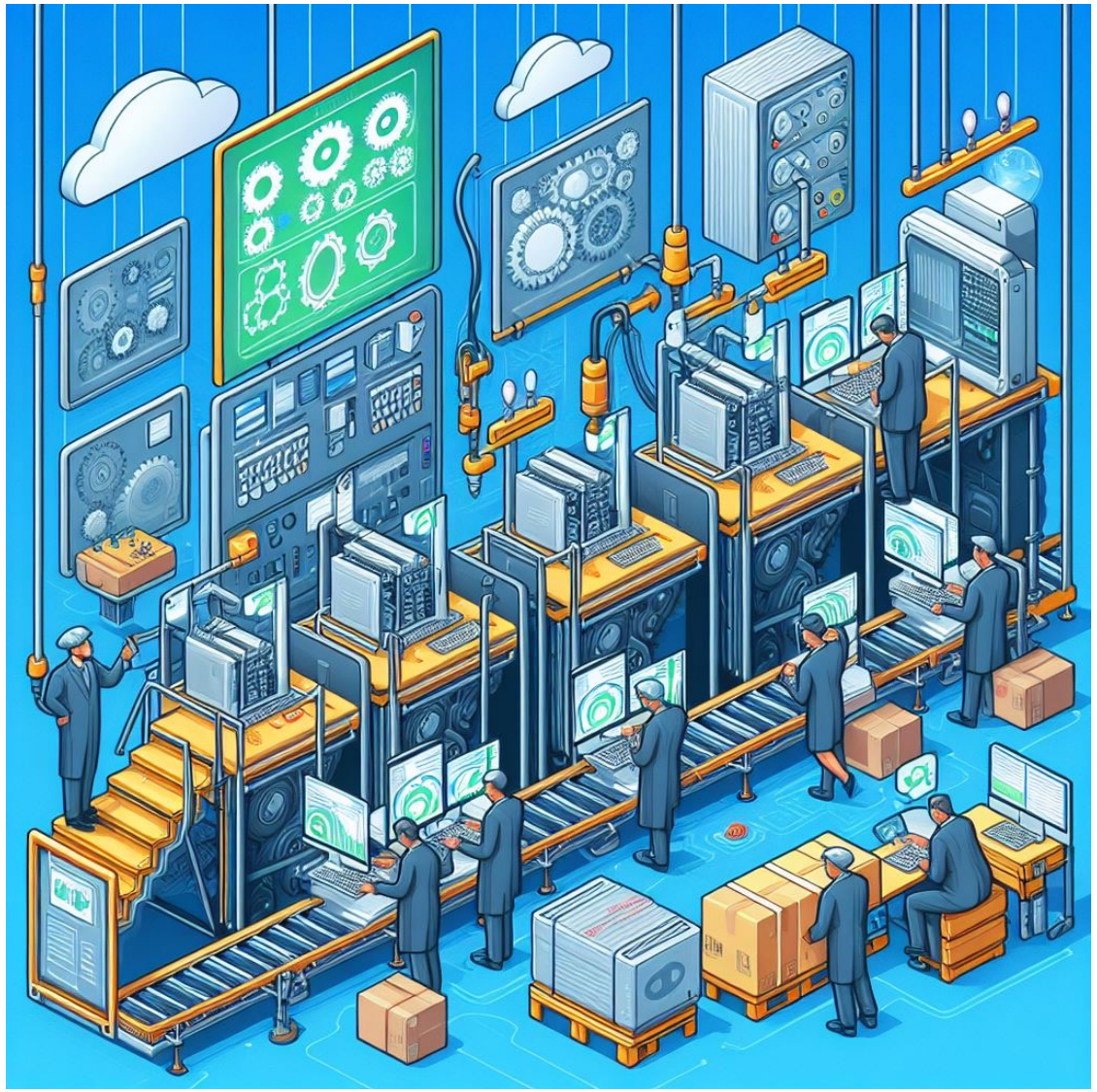
📖Content

- Introduction to CI/CD Pipelines
- GitHub Actions Overview
- Setting up GitHub Actions
- GitHub Actions in Action
- Conclusion
- Q&A

Introduction to CI/CD Pipelines



Introduction to CI/CD Pipelines



Introduction to CI/CD Pipelines

- 🔄**Continuos Integration**:

Practice of frequently merging code done by developers through the day with automated test to detect any problem.

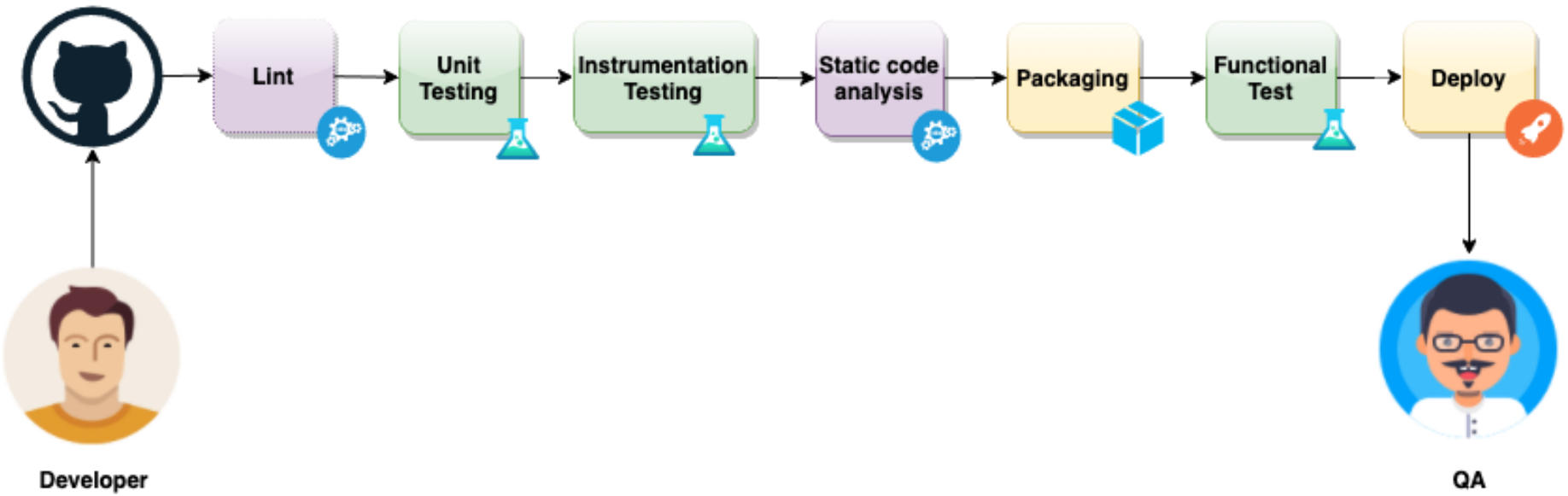
- 📦**Continuos Delivery:**

Practice of continuosly maintain code in a deployable state, always be ready to deploy.

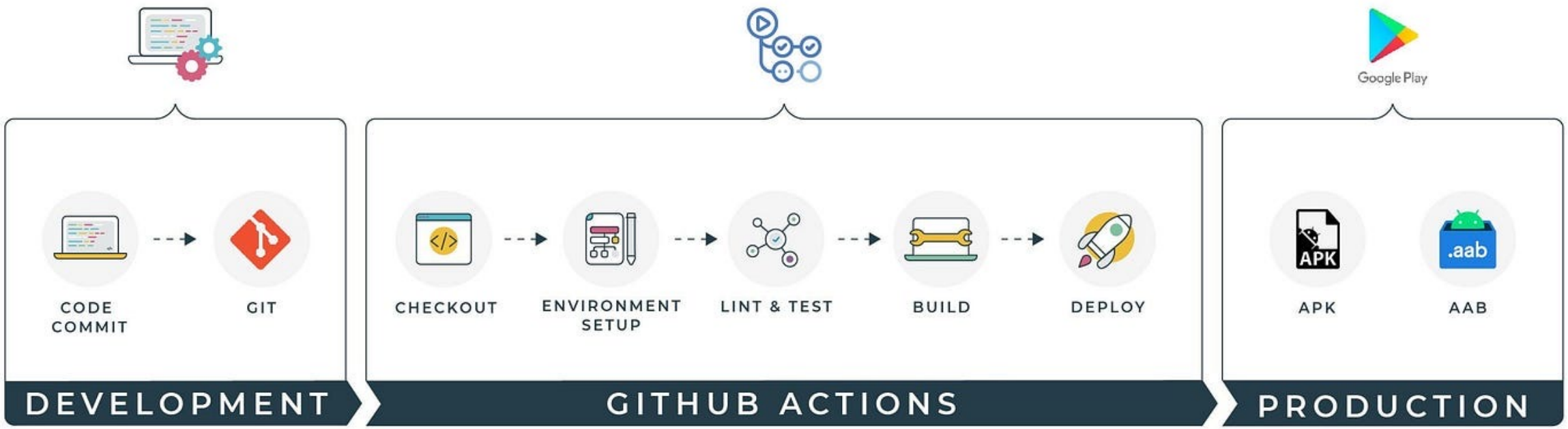
- 🚀**Continuos Deployment:**

Practice of deploy small code changes to the environments

Introduction to CI/CD Pipelines



Introduction to CI/CD Pipelines



GitHub Actions Overview

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.

Plan	Storage	Minutes (per month)
GitHub Free	500 MB	2,000
GitHub Pro	1 GB	3,000
GitHub Free for organizations	500 MB	2,000
GitHub Team	2 GB	3,000
GitHub Enterprise Cloud	50 GB	50,000

GitHub Actions Overview

Store and
Manage Source
Code Changes

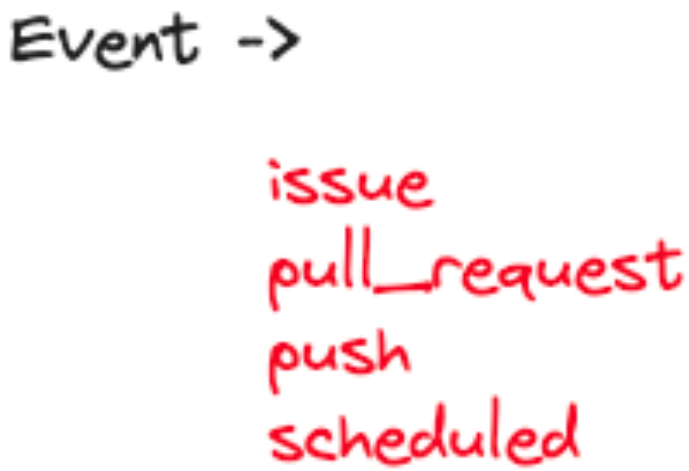
Repository

GitHub Actions Overview

Event

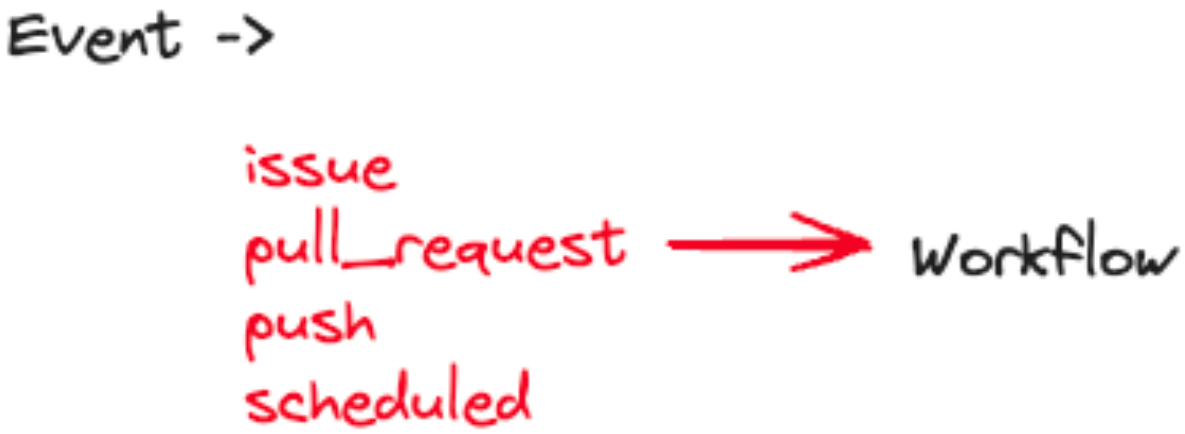
Repository

GitHub Actions Overview



* Check references in [3]

GitHub Actions Overview



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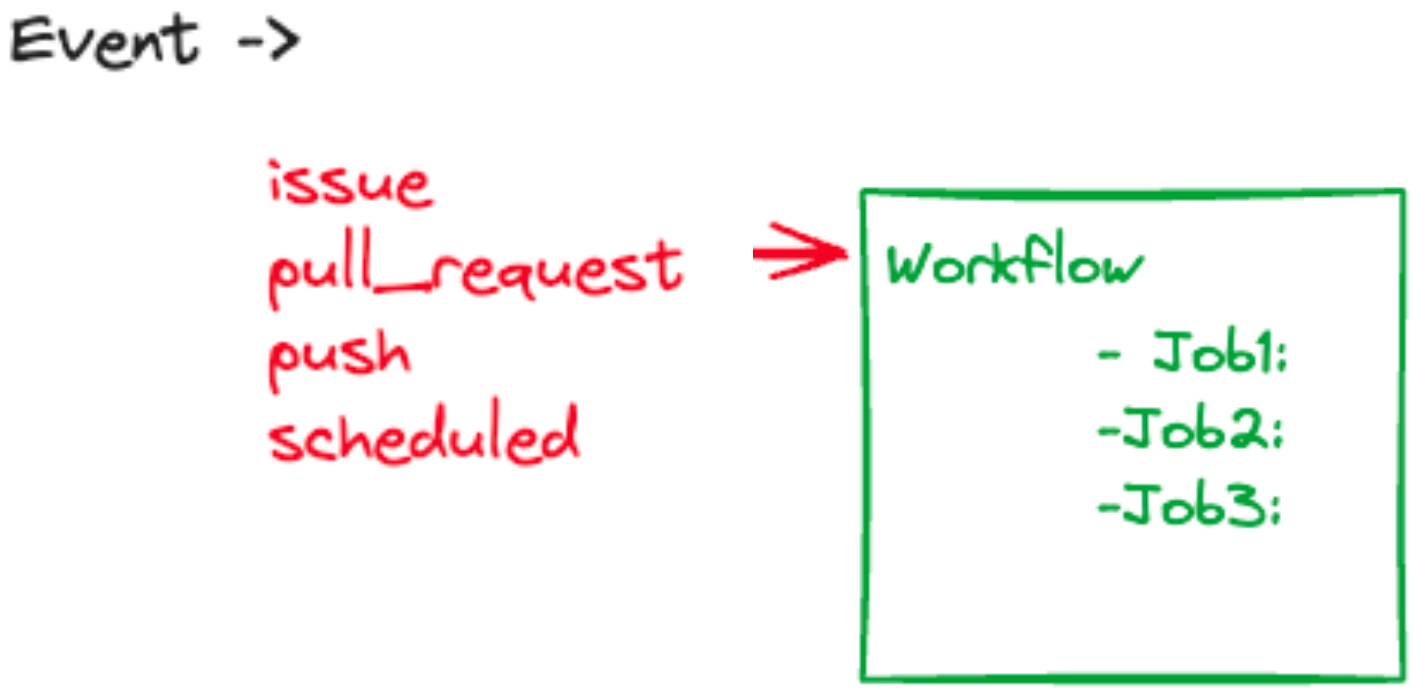
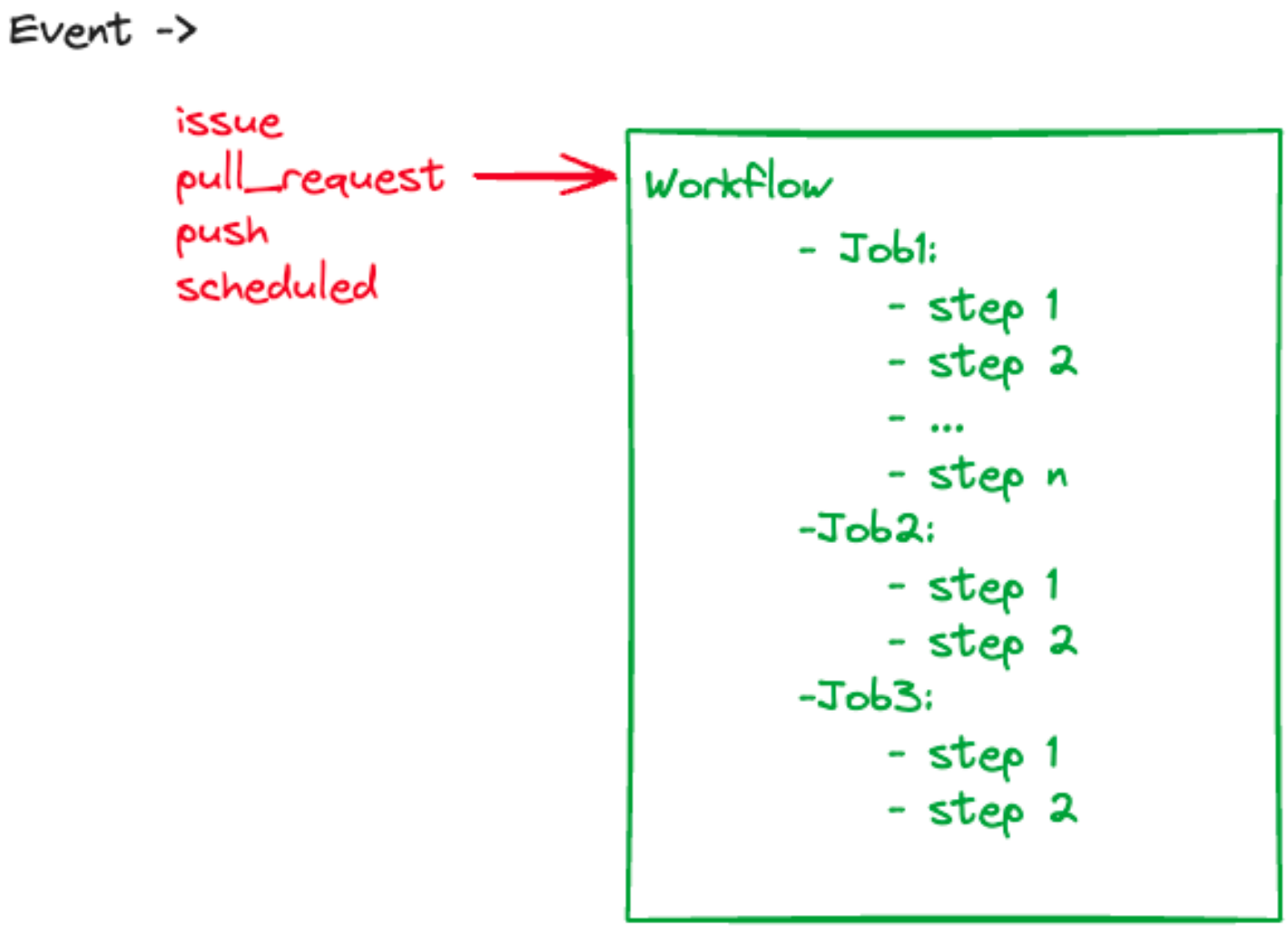
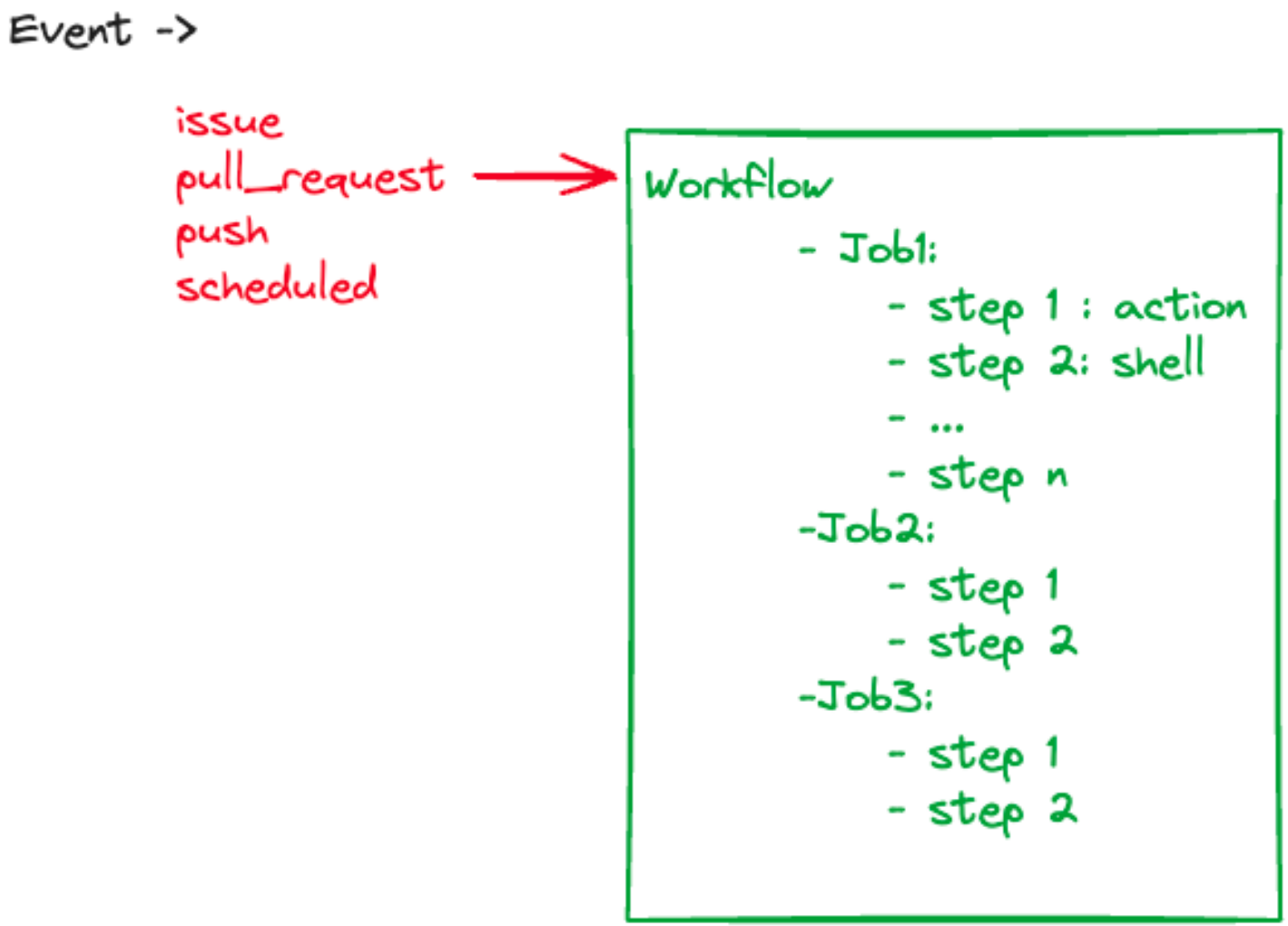
GitHub Actions Overview



GitHub Actions Overview

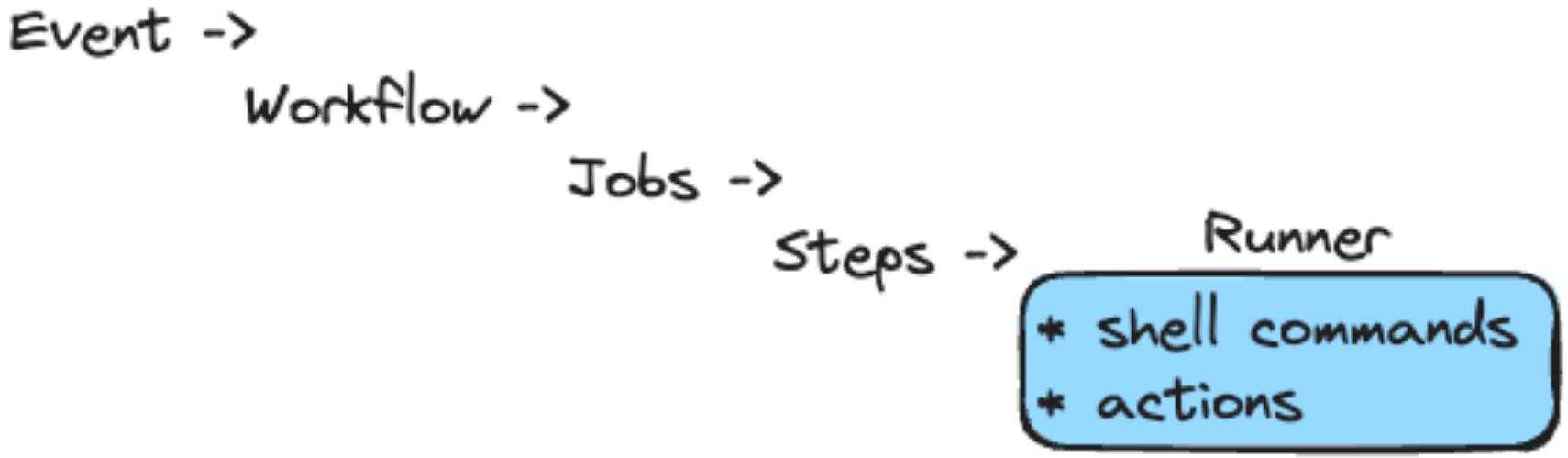


GitHub Actions Overview



GitHub Actions Overview

In summary:



GitHub Actions Overview 

Github actions should be written in **YAML** format and looks similar to the following:

Setting up GitHub Actions

```yaml
name: Learn Github Actions PTT
run-name: Learn Github Actions PTT ${{ github.run_id }}

on:
    pull_request:
        branches:
            - main
    workflow_dispatch:

env:
    GITHUB_TOKEN: ${{ secrets.GITHUB_TOKEN }}
    python-version: 3.12

jobs:
    build:
        runs-on: ubuntu-latest
        steps:
            # Clone and checkout the repository
            - name: Checkout
              uses: actions/checkout@v4

            #Install Python
            - name: Set up Python
              uses: actions/setup-python@v2
              with:
                  python-version: {{ env.python-version }}

            - name: Install dependencies
              run: |
                  python -m pip install --upgrade pip
                  pip install -r requirements.txt

            - name: Run tests
              run: |
                  echo "✴Running Build..."
                  echo
```

Event

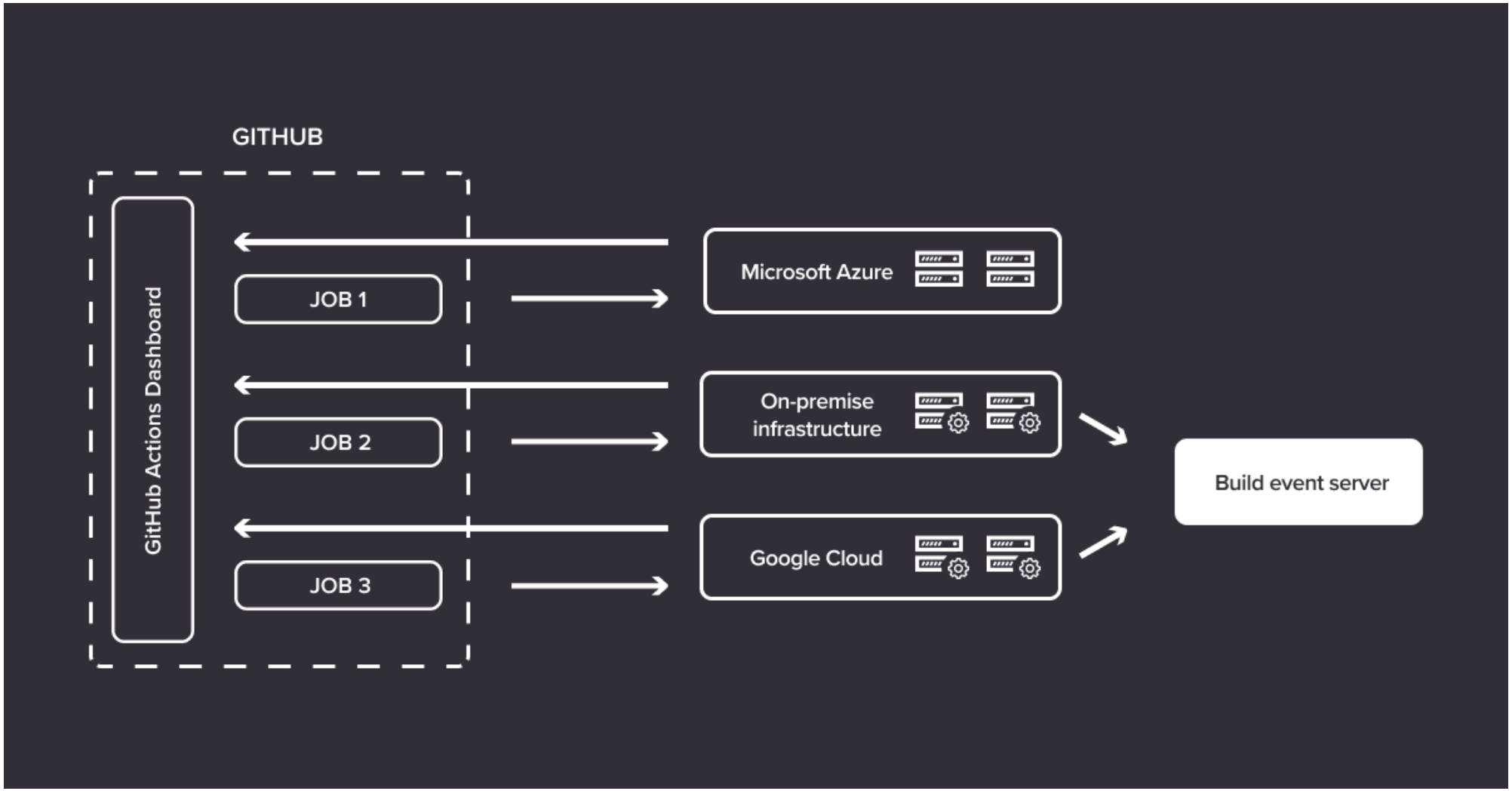
Job

Steps

Actions/Steps

.github/workflows

GitHub Actions Overview: Architecture



GitHub Actions in Action

DEMO 🎬🍿

Conclusions

- GHA **simplifies** and automates the CI/CD process ⚙️, saving time and effort for development teams. By automating repetitive tasks such as building, testing, and deploying code, developers can focus more on writing code and less on managing infrastructure.

- As GHA is tightly integrated with GitHub services, APIs, automation is complete across all the developer Experience.

- GHA benefits from **a vibrant** 🎉 **community** of developers who contribute to the ecosystem by creating and sharing reusable actions. This extensive library of actions covers a wide range of use cases

Q&A

References

[1] https://docs.github.com/en/actions/learn-github-actions/understanding-github-actions

[2] https://docs.github.com/en/actions/using-workflows/events-that-trigger-workflows

[3] htps://docs.github.com/en/actions/using-workflows/events-that-trigger-workflows

[4] https://docs.github.com/actions

[5] https://github.com/actions/starter-workflows

[6] https://github.com/marketplace