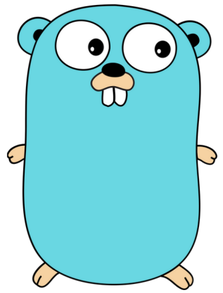
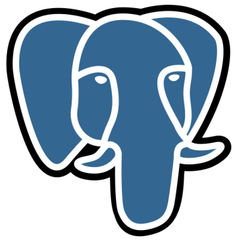




TECH SCHOOL

Github Action Go + Postgres

BACKEND MASTER CLASS
LECTURE 10

Github Action

Travis

Actions

GitHub

Jenkins

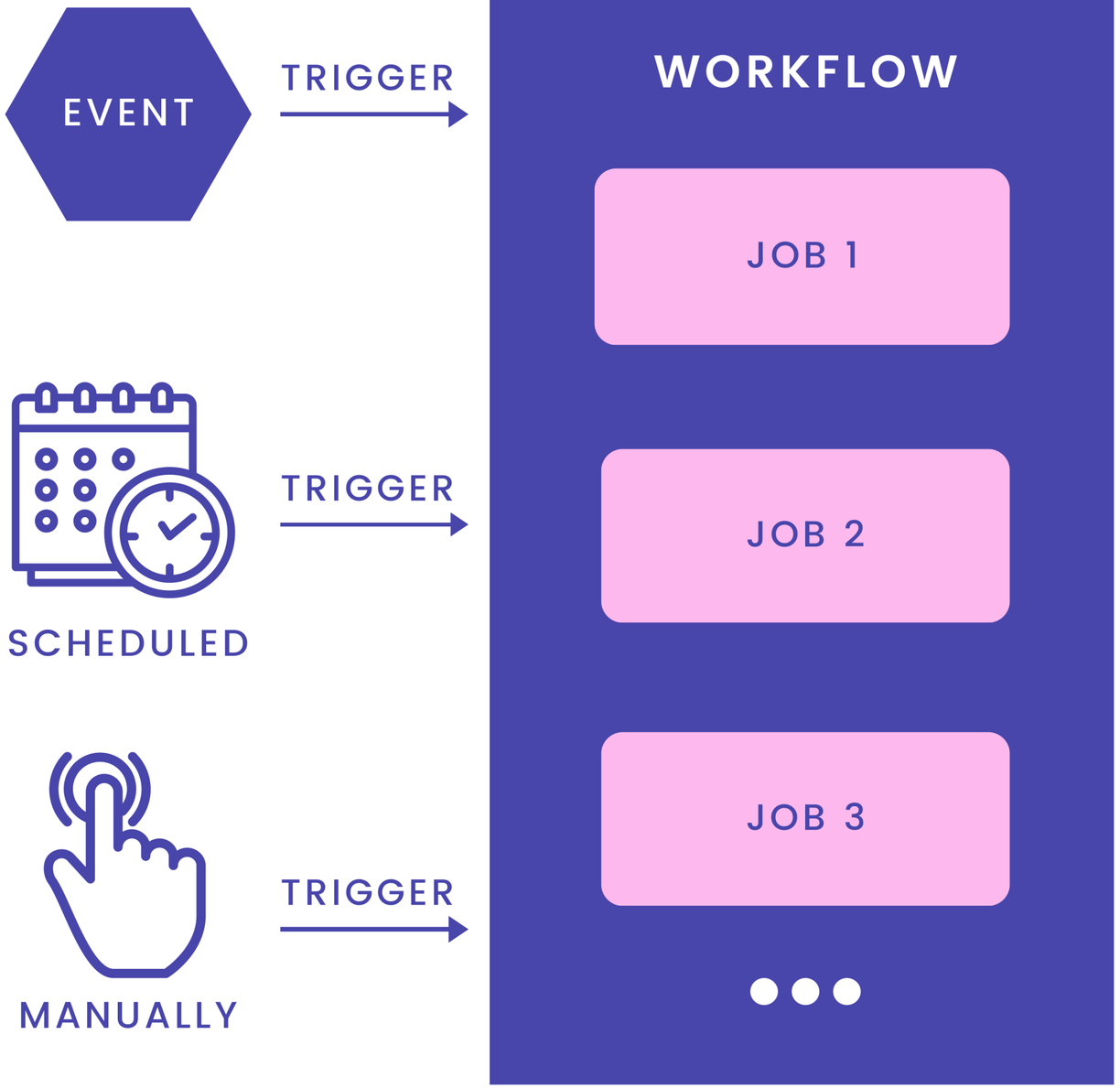
CircleCI

Workflow

- IS AN AUTOMATED PROCEDURE
- MADE UP OF 1+ JOBS
- TRIGGERED BY EVENTS, SCHEDULED, OR MANUALLY
- ADD .YML FILE TO REPOSITORY

.github > workflows > ! ci.yml

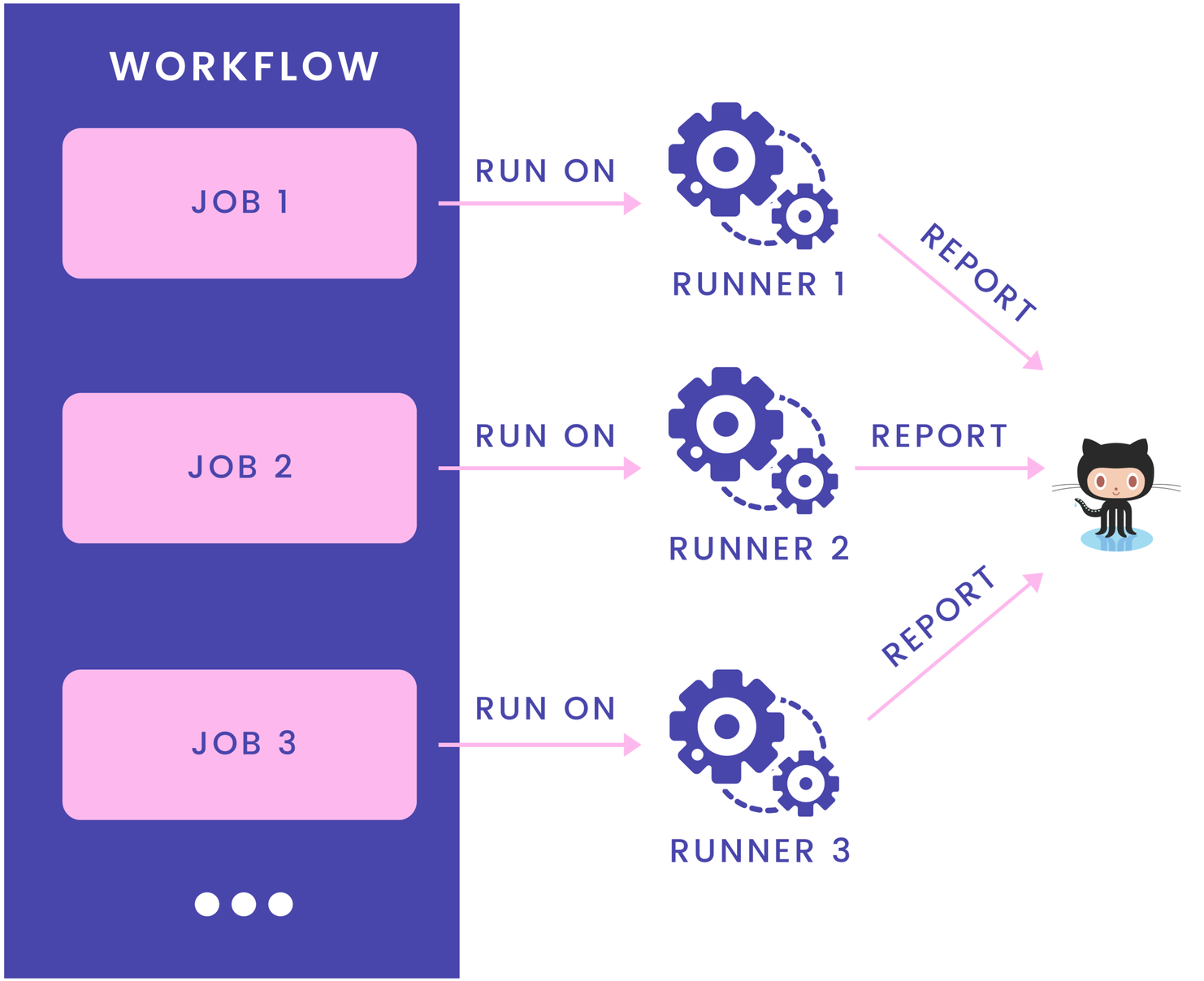
```yaml
name: build-and-test

on:
  push:
    branches: [ master ]
  schedule:
    - cron:  '*/15 * * * *'

jobs:
  build:
    runs-on: ubuntu-latest
```



Runner

- IS A SERVER TO RUN THE JOBS
- RUN 1 JOB AT A TIME
- GITHUB HOSTED OR SELF HOSTED
- REPORT PROGRESS, LOGS & RESULT TO GITHUB

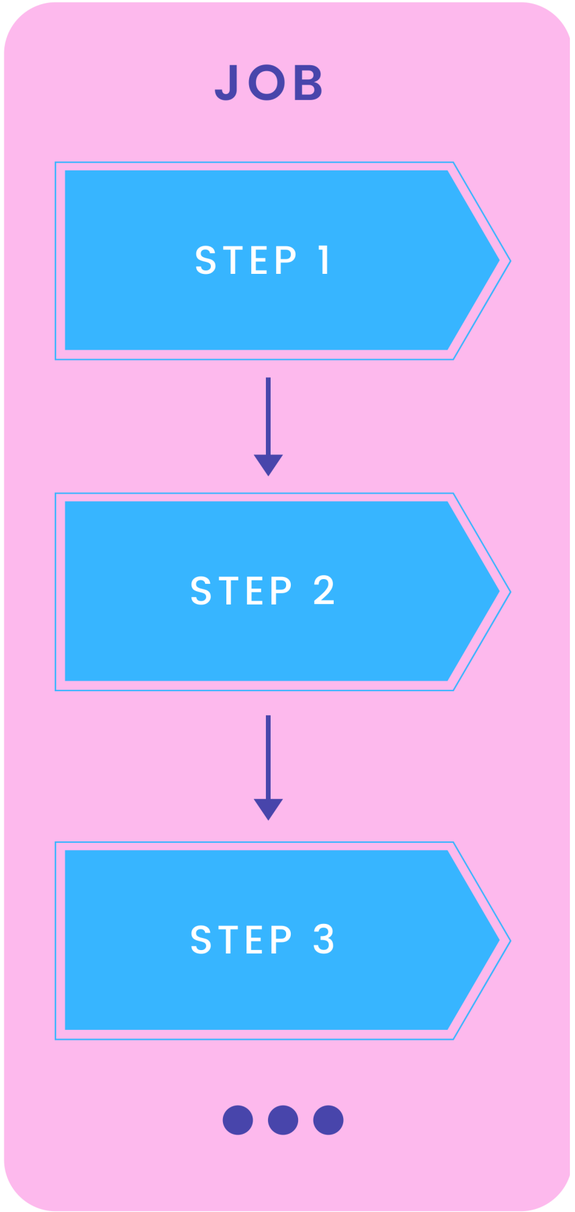
```yaml
jobs:
  build:
    runs-on: ubuntu-latest
    steps:
      - name: Check out code
        uses: actions/checkout@v2
      - name: Build server
        run: ./build_server.sh
  test:
    needs: build
    runs-on: ubuntu-latest
    steps:
      - run: ./test_server.sh
```

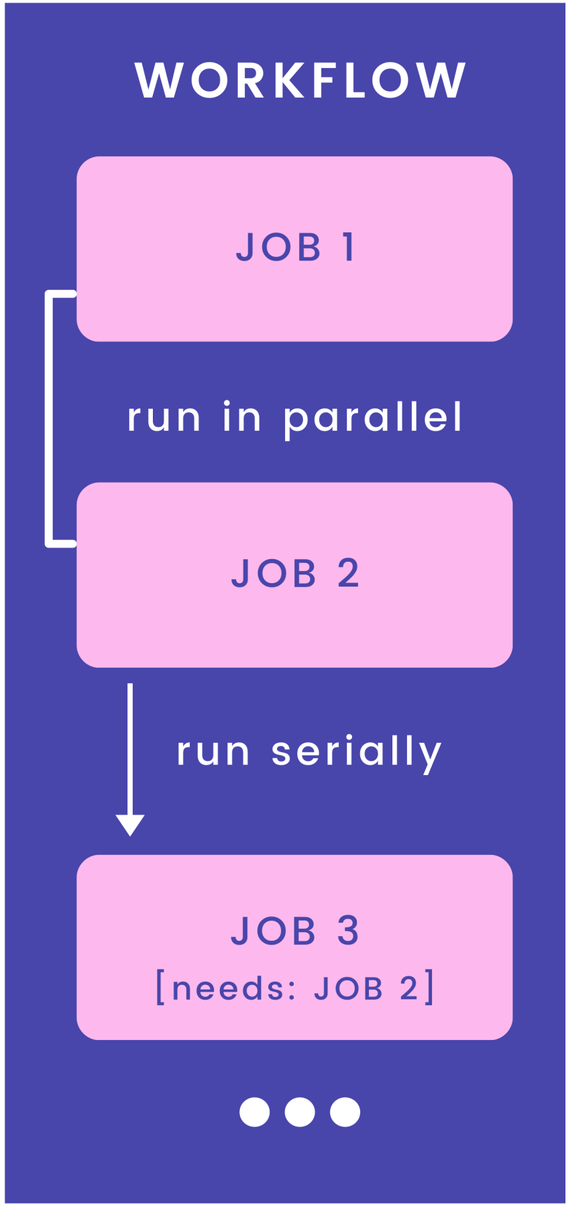


Job

- IS A SET OF STEPS EXECUTE ON THE SAME RUNNER
- NORMAL JOBS RUN IN PARALLEL
- DEPENDENT JOBS RUN SERIALLY

```yaml
jobs:
  build:
    runs-on: ubuntu-latest
    steps:
      - name: Check out code
        uses: actions/checkout@v2
      - name: Build server
        run: ./build_server.sh
  test:
    needs: build
    runs-on: ubuntu-latest
    steps:
      - run: ./test_server.sh
```





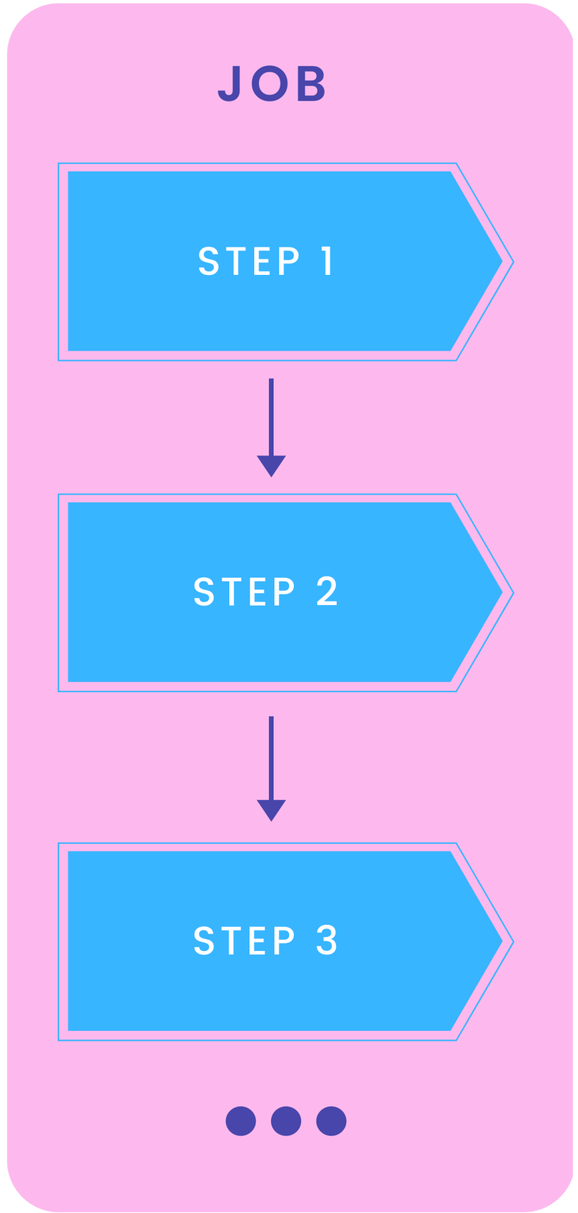
Step

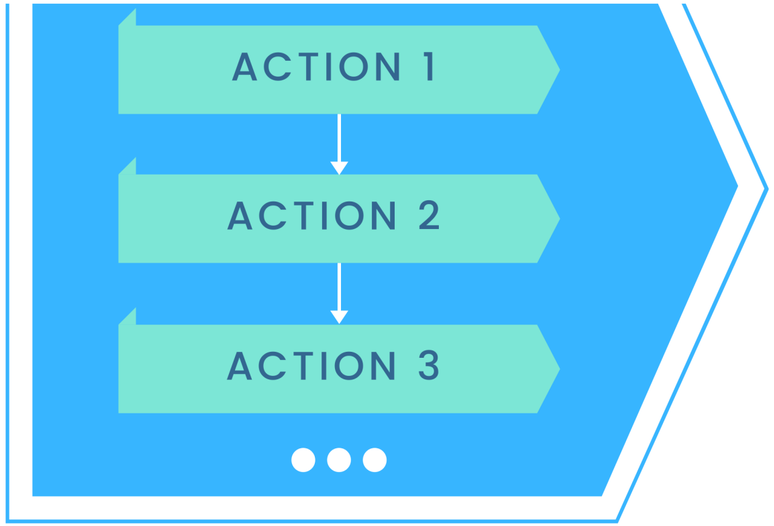
- IS AN INDIVIDUAL TASK
- RUN SERIALLY WITHIN A JOB
- CONTAIN 1+ ACTIONS

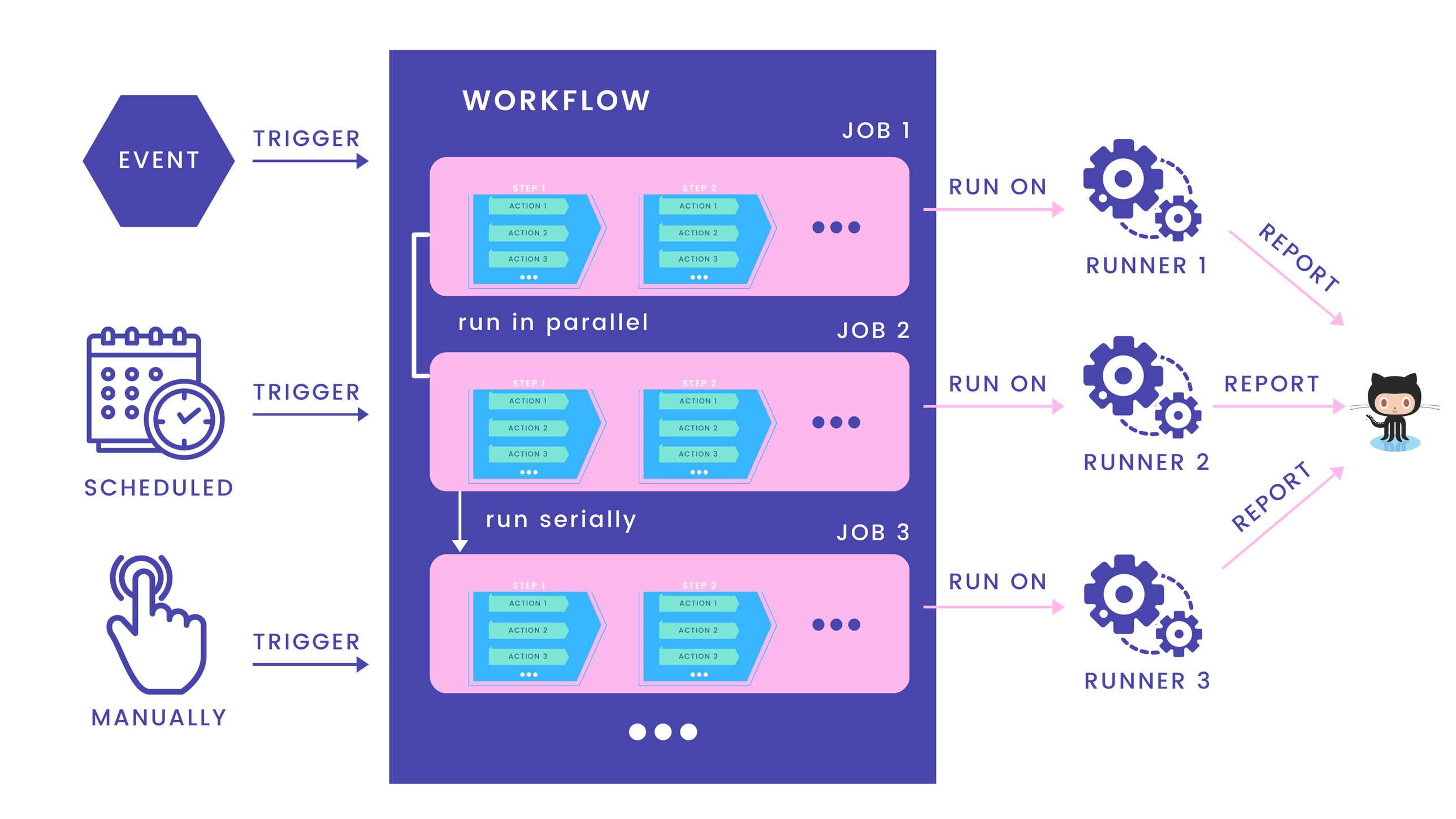
Action

- IS A STANDALONE COMMAND
- RUN SERIALLY WITHIN A STEP
- CAN BE REUSED

```
 9   jobs:
10     build:
11       runs-on: ubuntu-latest
12       steps:
13         - name: Check out code
14           uses: actions/checkout@v2
15         - name: Build server
16           run: ./build_server.sh
```






EVENT
TRIGGER
SCHEDULED
TRIGGER
MANUALLY
TRIGGER
WORKFLOW
JOB 1
STEP 1
ACTION 1
ACTION 2
ACTION 3
STEP 2
ACTION 1
ACTION 2
ACTION 3
run in parallel
JOB 2
STEP 1
ACTION 1
ACTION 2
ACTION 3
STEP 2
ACTION 1
ACTION 2
ACTION 3
run serially
JOB 3
STEP 1
ACTION 1
ACTION 2
ACTION 3
STEP 2
ACTION 1
ACTION 2
ACTION 3
RUN ON
RUN ON
RUN ON
RUNNER 1
RUNNER 2
RUNNER 3
REPORT
REPORT
REPORT