Connecting Actions with Workflows

Create a workflow

->Workflows define the event that triggers actions

->Workflows define which actions to run

->Repositories can contain multiple workflows

Syntax:

name: [workflow name]

on: [triggers]

Add jobs and steps to a workflow

->Workflows must have at least one job

->Each job must have a unique identifier

->Job identifier must start with a letter or underscore

Syntax:

jobs:

job1:

name: [name of the job]

runs-on:

Some runners:

A screenshot of a computer

Description automatically generated

Steps

->Steps are tasks within a job

->Steps run as processes in the compute resource

->Steps can run commands or actions

Add actions to a workflow

uses: Execute an action in the operating system.

Where to find the action

A screenshot of a computer program

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Adding a command

run: Execute commands in the operating system’s shell

Bash: Default shell for Ubuntu, macOS

PowerShell: Default shell for WindowsA computer code with text and numbers

Description automatically generated with medium confidence

e.g.

name: first

on: push

jobs:

job1:

name: First job

runs-on: ubuntu-latest

steps:

- name: step one

uses: actions/checkout@v2

- name: step two

run: env | sort

job2:

name: Second job

runs-on: windows-latest

steps:

- name: Step one

uses: actions/checkout@v2

- name: Step two

run: "Get-ChildItem Env: | Sort-Object Name"

Adding dependencies.

->Normally, jobs run in parallel.

needs: identifies one or more jobs that must complete successfully before a job will run.

e.g.

jobs:

job1:

job2:

job3:

needs: [job1, job2]

A diagram of a job

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Conditionals

Ignore branches branches, branches-ignore

use tags tags, tags-ignore

Special characters ‘release/\*’

Syntax:

on:

[trigger]:

branches:

- develop

- master

[trigger]:

branches-ignore:

* develop

Workflows and Action Limitations

->Workflow concurrent is limited 20. In a single repo, you can run 20 workflows at the same time.

A table with text on it

Description automatically generated

->1000 API request per hour

->Actions cannot trigger other workflows

->Logs are limited to 64 KB.

->If you exceed limits, job queueing or failures.