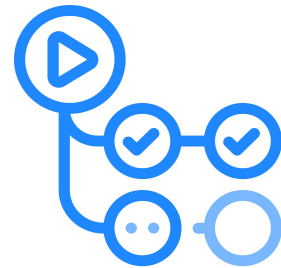
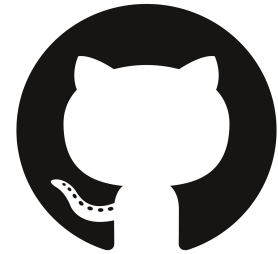


Using GitHub Actions with GerritHub

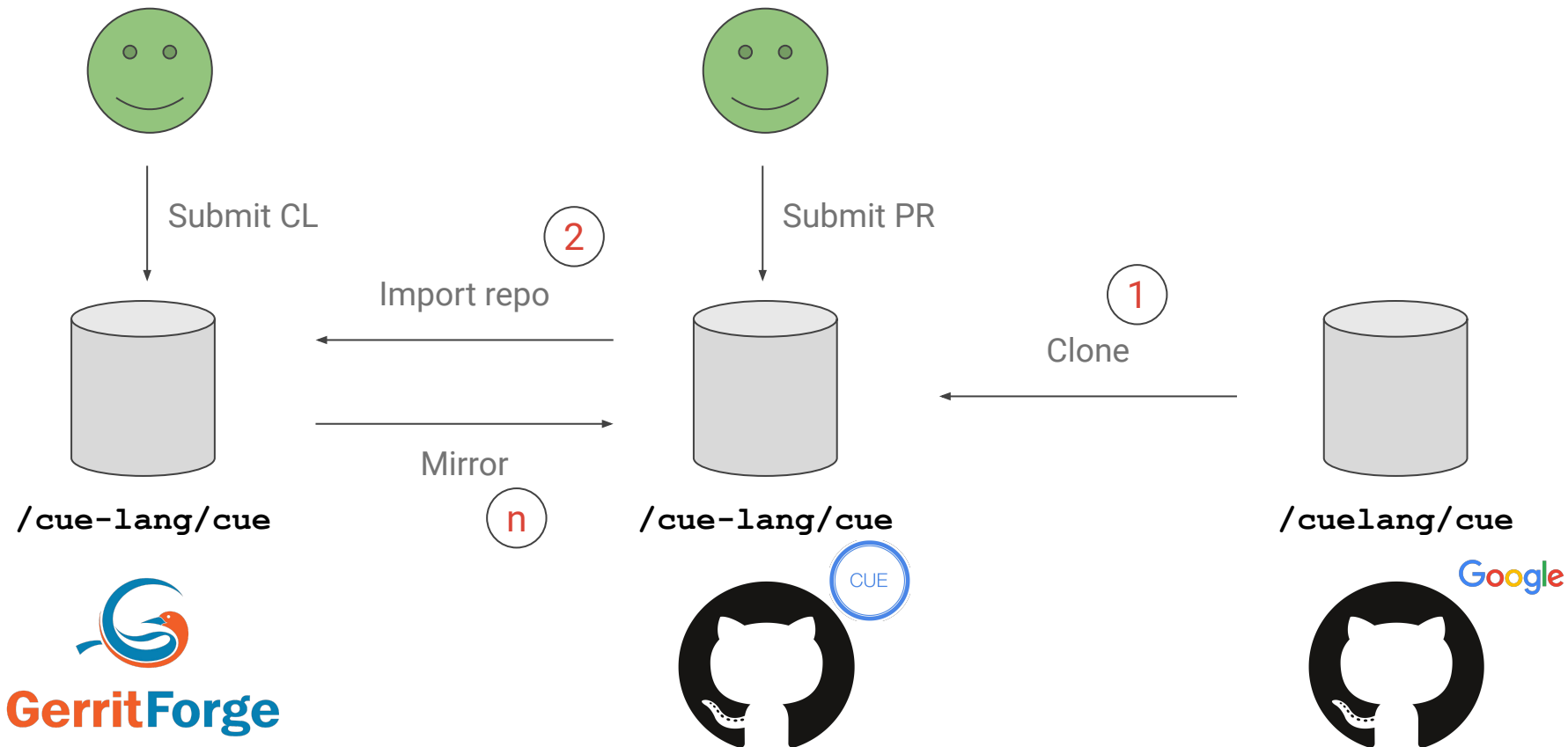
Paul Jolly - CUE Project
@_myitcv



Why GerritHub?

- CUE project originally hosted in Google Gerrit instance
- Mirrored to GitHub
- Clean fork in June 2021
- Wanted to keep Gerrit as source of truth

Basic architecture

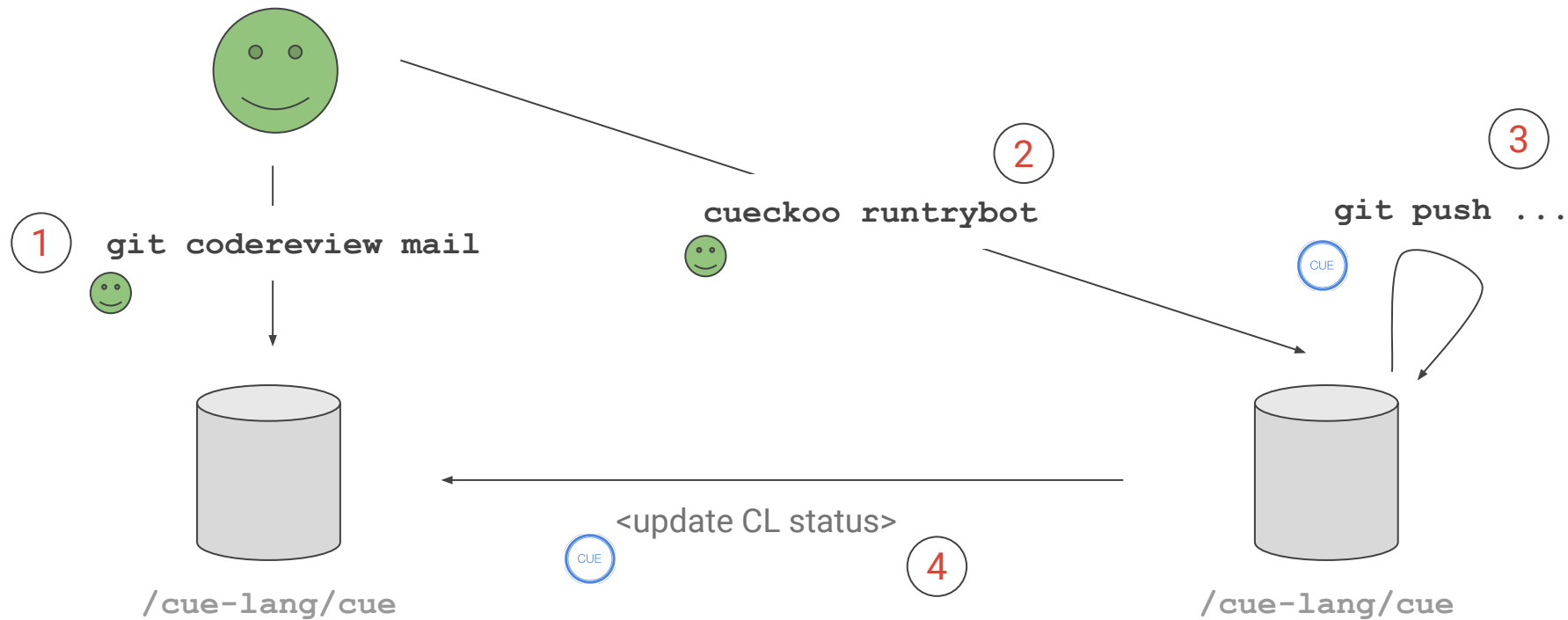


Why GitHub (Actions)?

- GitHub widely used and understood
- Familiarity with majority of users and contributors
- Actions probably the best multi-platform CI for open source

Demo

Basic CI Sequence Diagram



GitHub actions workflow sequence

 cueckoo runtrybot



 <repository_dispatch>




 repository_dispatch.yml

 git push ...



 <push (branch)>



 test.yml
go test ./...
curl gerrithub.io/..

Demo Progress

Considerations

- Security
 - Bot account used for initial import
 - Use bot account for all CI work post-trigger
- Ease of maintenance
 - CUE to specify workflows
 - Restrict logic to GitHub Actions workflows (not `cueckoo` client)

What is CUE?

- Open source language
- Rich set of APIs and tooling
- Define, generate, and validate all kinds of data:
 - Configuration
 - APIs
 - Database schemas
 - Code
 - ...

GitHub Action Workflow Definition



`github-workflow.json`



`cue import`

`github-workflow.cue`



`workflows.cue`



`cue vet`

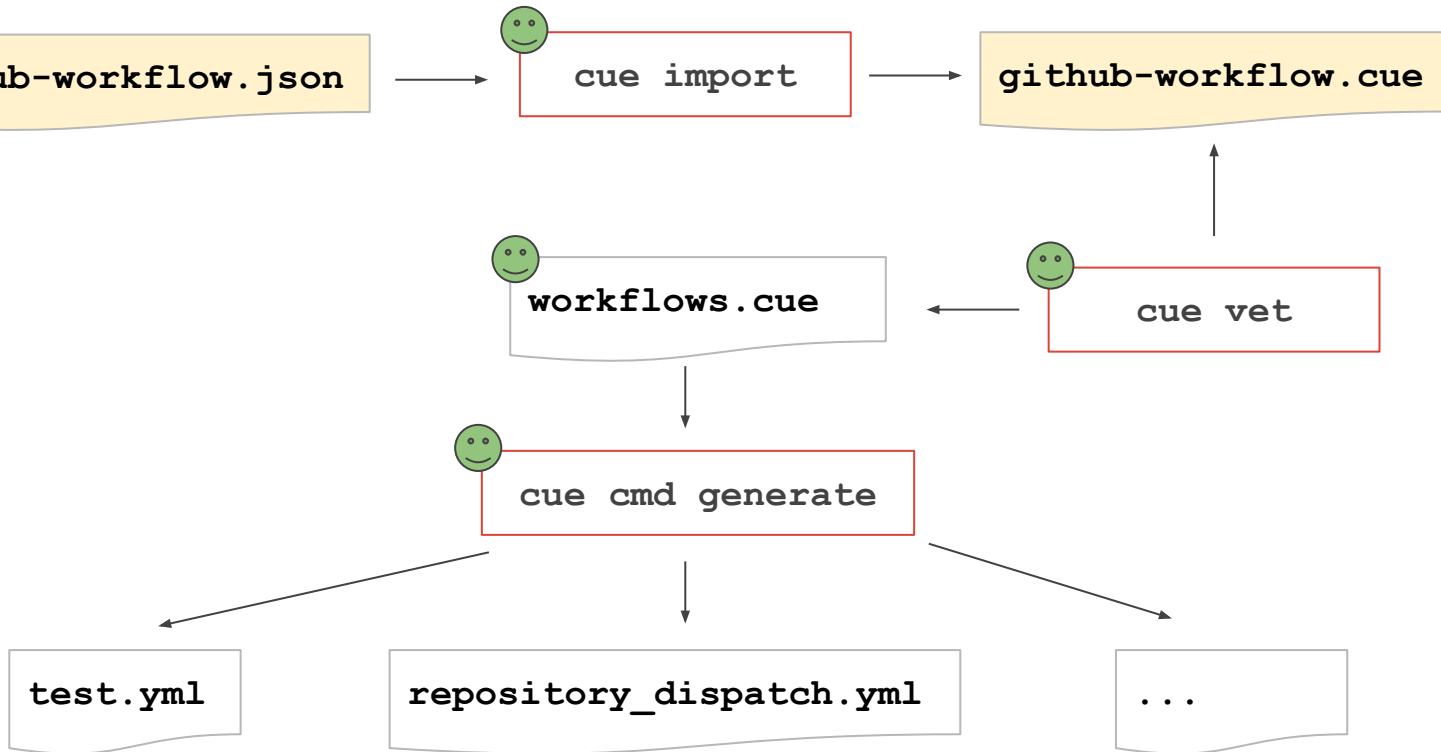


`cue cmd generate`

`test.yml`

`repository_dispatch.yml`

`...`



Summary

- GerritHub as source-of-truth for open source projects
- GitHub Actions integration
- CUE as a source-of-truth for workflow simplifies workflow specification *and maintenance*

CUE Project

<https://cuelang.org/>

GerritHub CUE Repo

<https://review.gerrithub.io/admin/repos/cue-lang/cue>

GitHub CUE Repo

<https://github.com/cue-lang/cue>

`workflows.cue` (source of truth for GitHub Actions workflows)

<https://github.com/cue-lang/cue/blob/master/internal/ci/workflows.cue>