



Gardener

- Test Machinery

Why a new testing environment

Where we are coming from:

- Mostly bash
 - Bad error handling
- Split test execution environments
 - No common output
- Duplicated fundamental functions (create a shoot)
 - No reuse
- Hard to maintain
- Hard to keep track
- Hard to write and integrate new tests

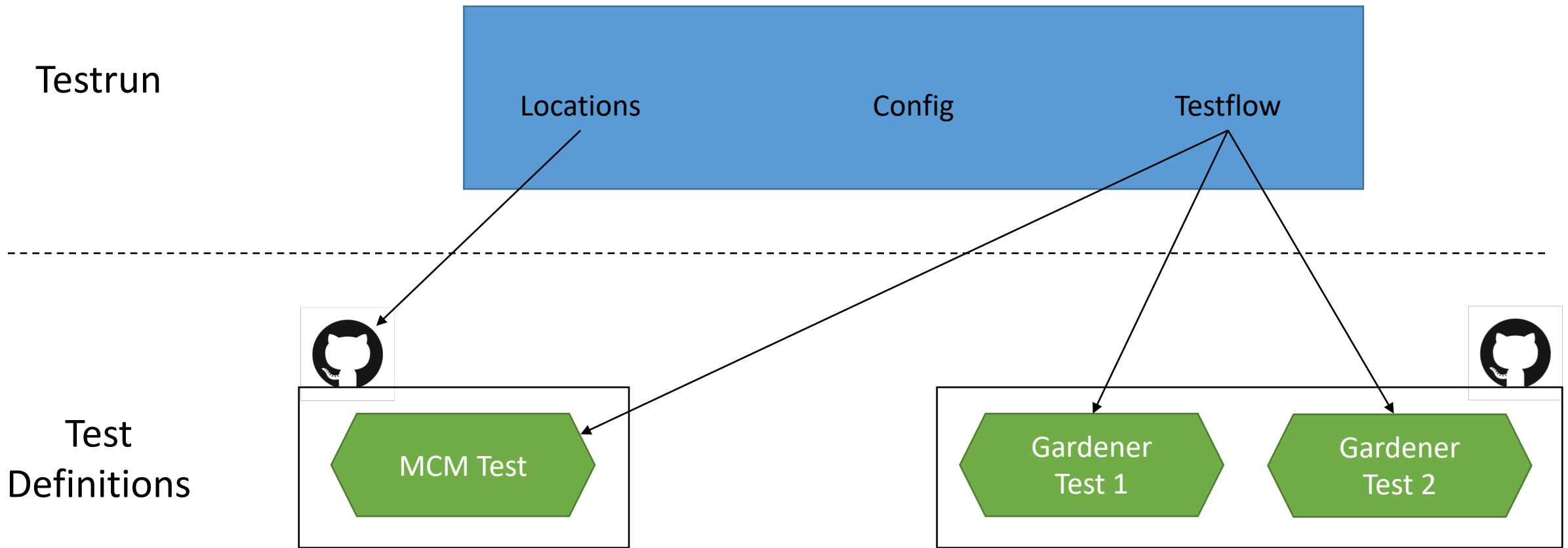


We want ...

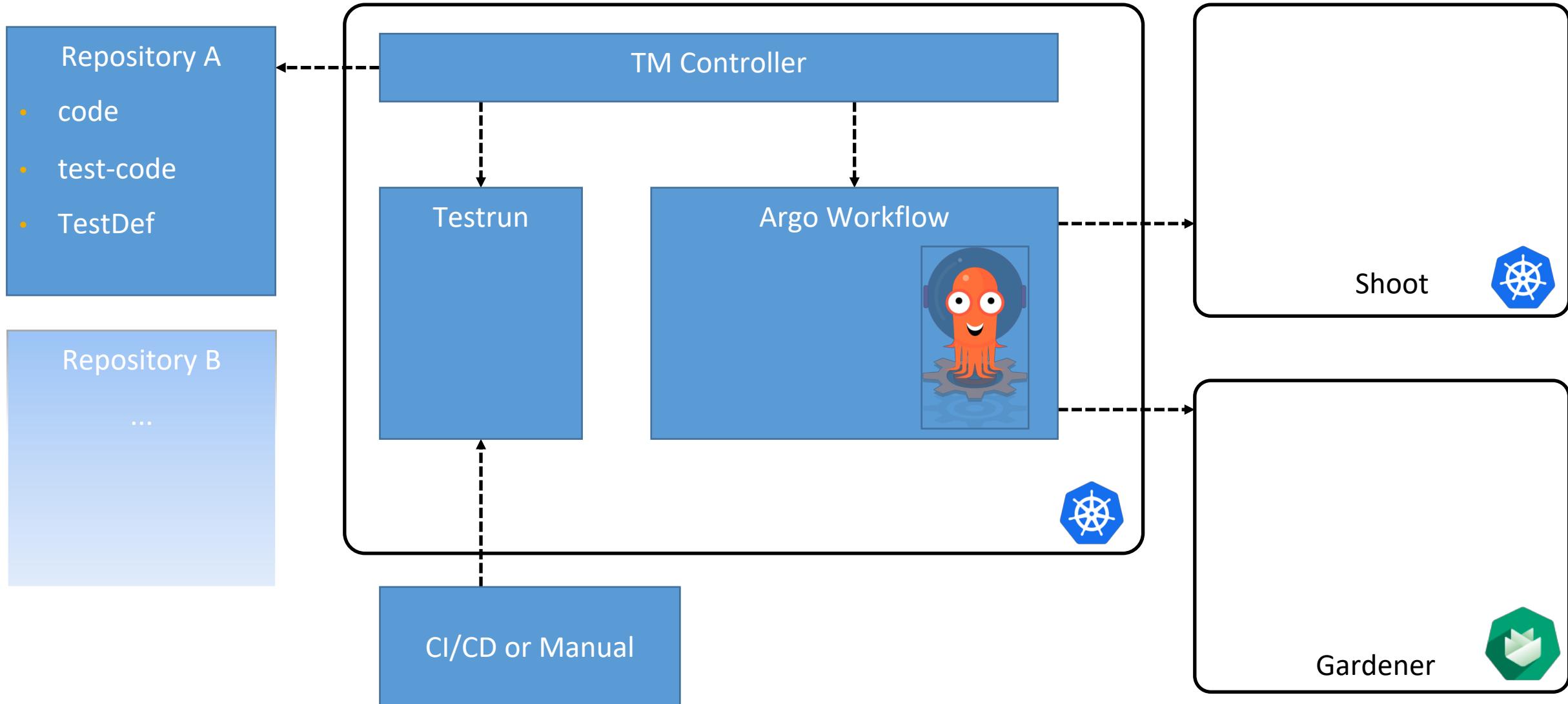
- Easy addition of new integration tests
- Allow reuse (create a shoot, delete a shoot)
- Saving costs
- Tests to reside near the code they're testing
- Central execution
 - Common output
 - Central Reporting
- Not replace CI/CD

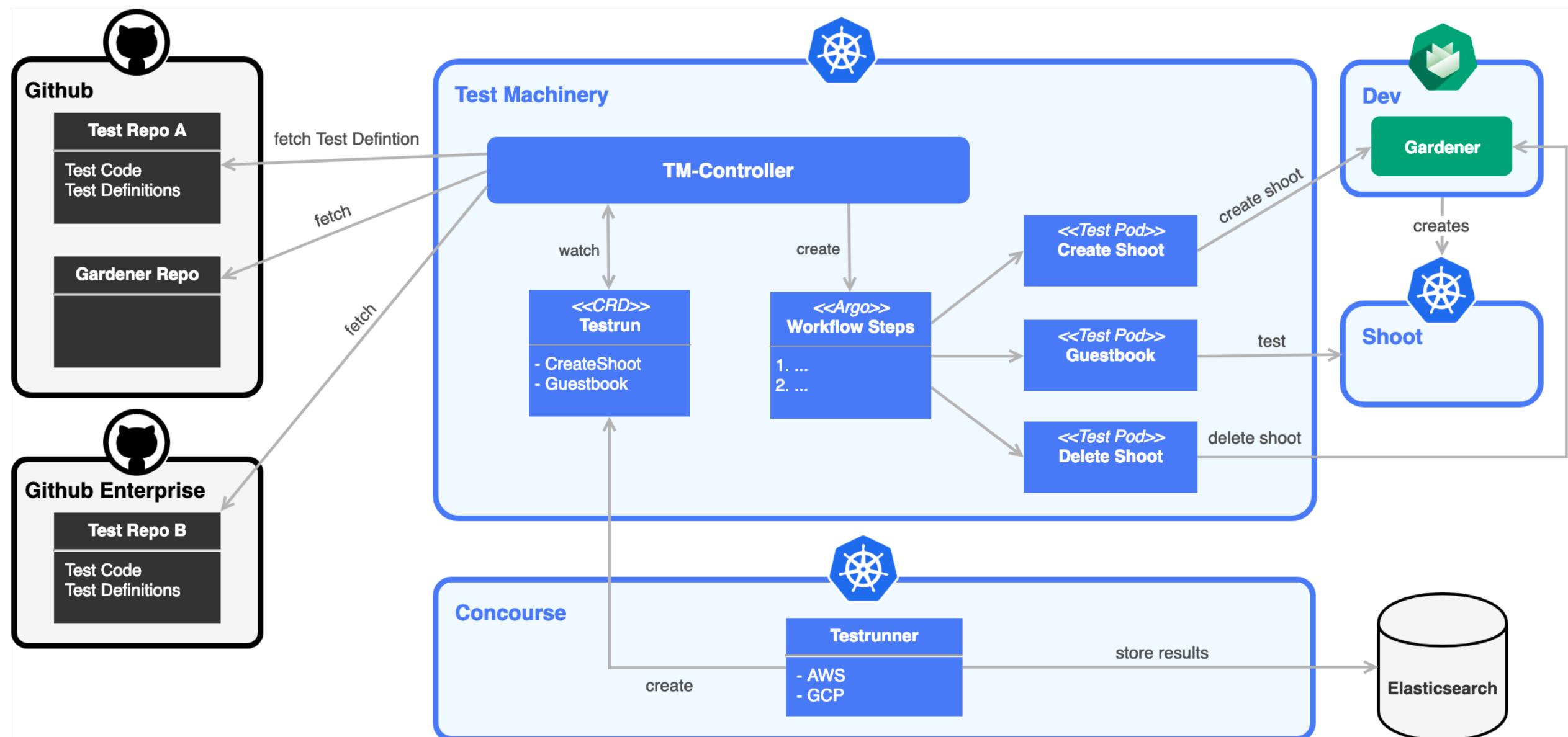


Test Machinery - Concept



Test Machinery – Big Picture





Resources

```
1 kind: TestDefinition
2 metadata:
3   name: testdef-name
4 spec:
5   owner: gardener@example.com
6
7   labels: ["default"] # optional
8   behavior: ["serial"]
9
10  command: [bash, -c]
11  args: ["test.sh"]
12  image: golang:1.11.2 # optional
```

```
1 apiVersion: testmachinery.sapcloud.io/v1beta1
2 kind: Testrun
3 metadata:
4   generateName: integration-
5   namespace: default
6 spec:
7   testLocations:
8     - type: git
9       repo: https://github.com/gardener/gardener.git
10      revision: 0.17.3
11
12   # Global config
13   config:
14     - name: EXAMPLE_ENV
15       value: "example-123"
16       type: env
17
18   testFlow:
19     - - name: create-shoot
20       - - label: default
21       - - name: delete-shoot
22
23   onExit:
24     - - name: delete-shoot
25       - - condition: error
```

Integrate your own test

1. Create a repository with tests on GitHub
2. Create a TestDefinition
3. Add your repo as location in a Testrun

```
1 kind: TestDefinition
2 metadata:
3   name: testdef-name
4 spec:
5   owner: gardener@example.com
6
7   labels: ["default"] # optional;
8   behavior: ["serial"]
9
10  command: [bash, -c]
11  args: ["test.sh"]
12  image: golang:1.11.2 # optional
```

```
6   spec:
7     testLocations:
8       - type: git
9         repo: https://github.com/gardener/gardener.git
10        revision: 0.17.3
11
```

Demo



WORKFLOW DETAILS

Workflows / dev-cronpkikn-wf

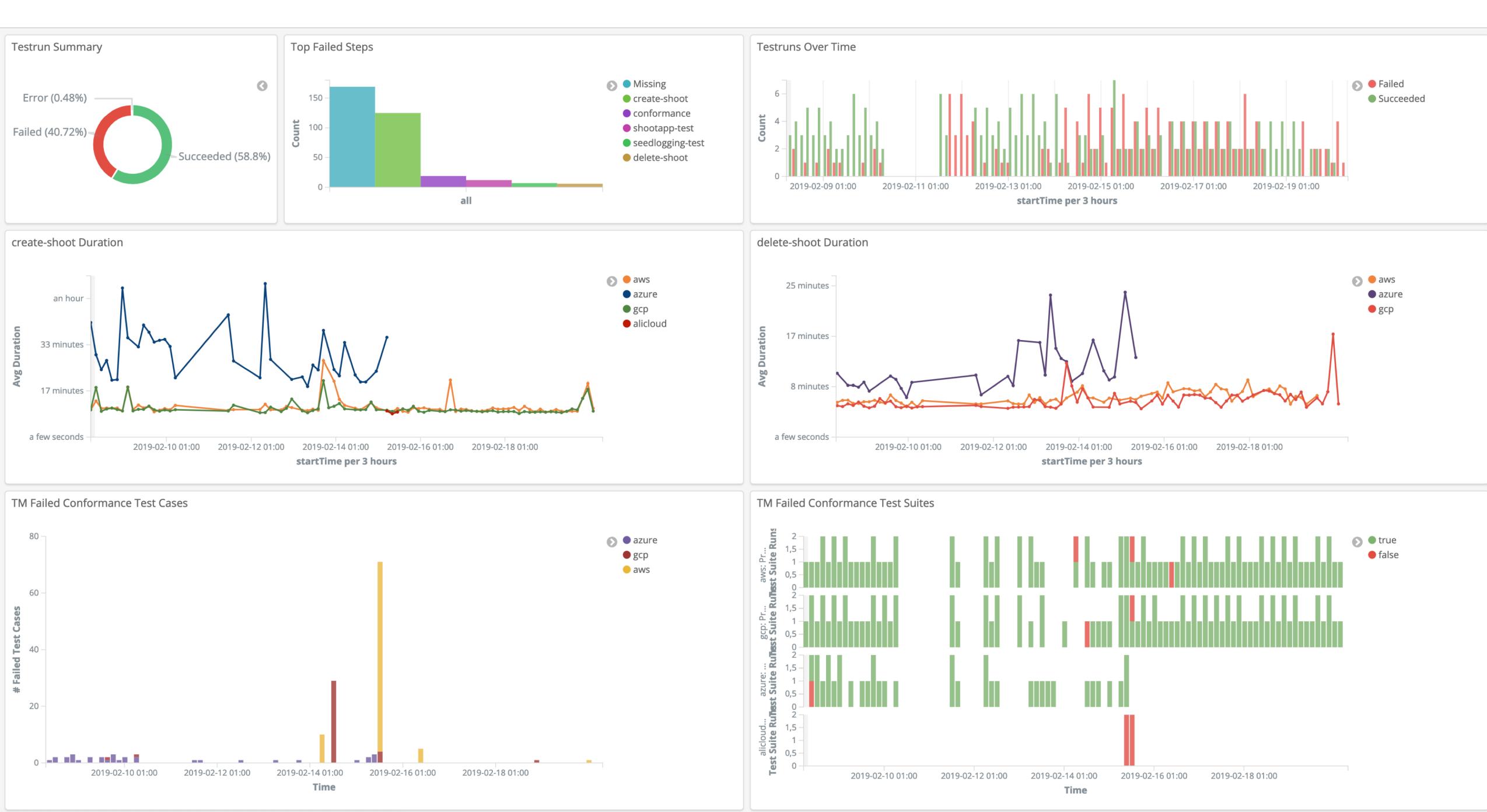


SUMMARY

CONTAINERS

ARTIFACTS

ExportArtifact	dev-cronpkikn-wf.co...	/tmp/tm/export	2019-02-20T10:17:...
main-logs	dev-cronpkikn-wf.co...		2019-02-20T10:17:...



Roadmap

- Automatic Gardener Deployment for testing (e.g. PR)
- Public Test Machinery
- Public Reporting
- More tests

Further Information

Repository:

<https://github.com/gardener/test-infra>

Get Started:

<https://github.com/gardener/test-infra/blob/master/docs/GetStarted.md>

Design Draft:

<https://github.com/gardener/test-infra/blob/master/docs/DesignDraft.md>

QA