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7 Skills To Jumpstart Your Technical Career

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Principal Software Engineer
Splunk, a Cisco Company
@sallyky

Agenda

1. **Contributing to existing code**

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1. Contributing to existing code
2. **Software debugging**

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1. Contributing to existing code
2. Software debugging
3. **Scripting and software testing**

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4. **Version control**

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5. **Building code**

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6. **Continuous Integration/Continuous Delivery/Deployment**

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2. Software debugging
3. Scripting and software testing
4. Version control
5. Building code
6. Continuous Integration/Continuous delivery
7. **Linux and Containers**

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Story Time

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Story Time

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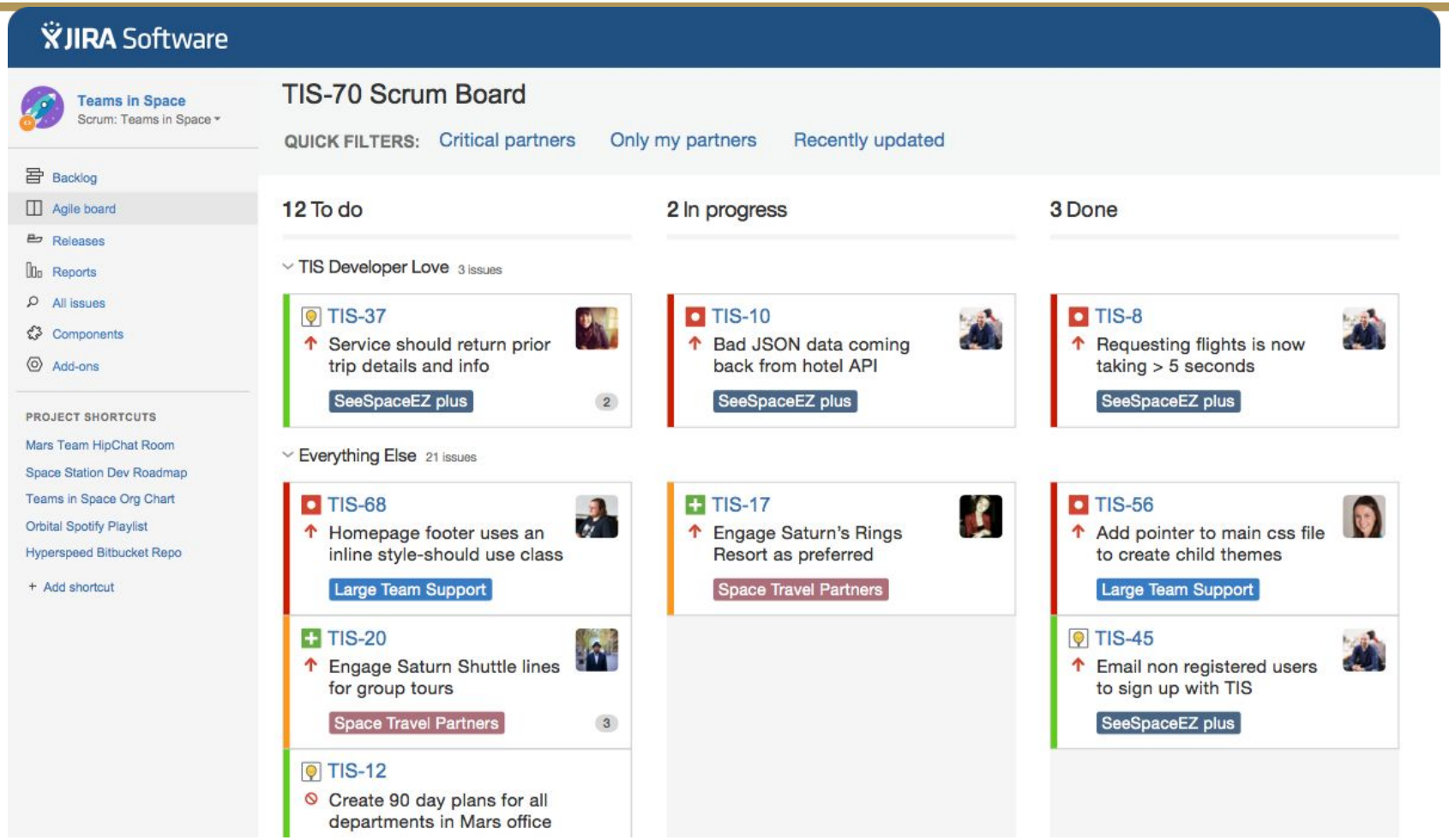
First Ticket



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Version Control

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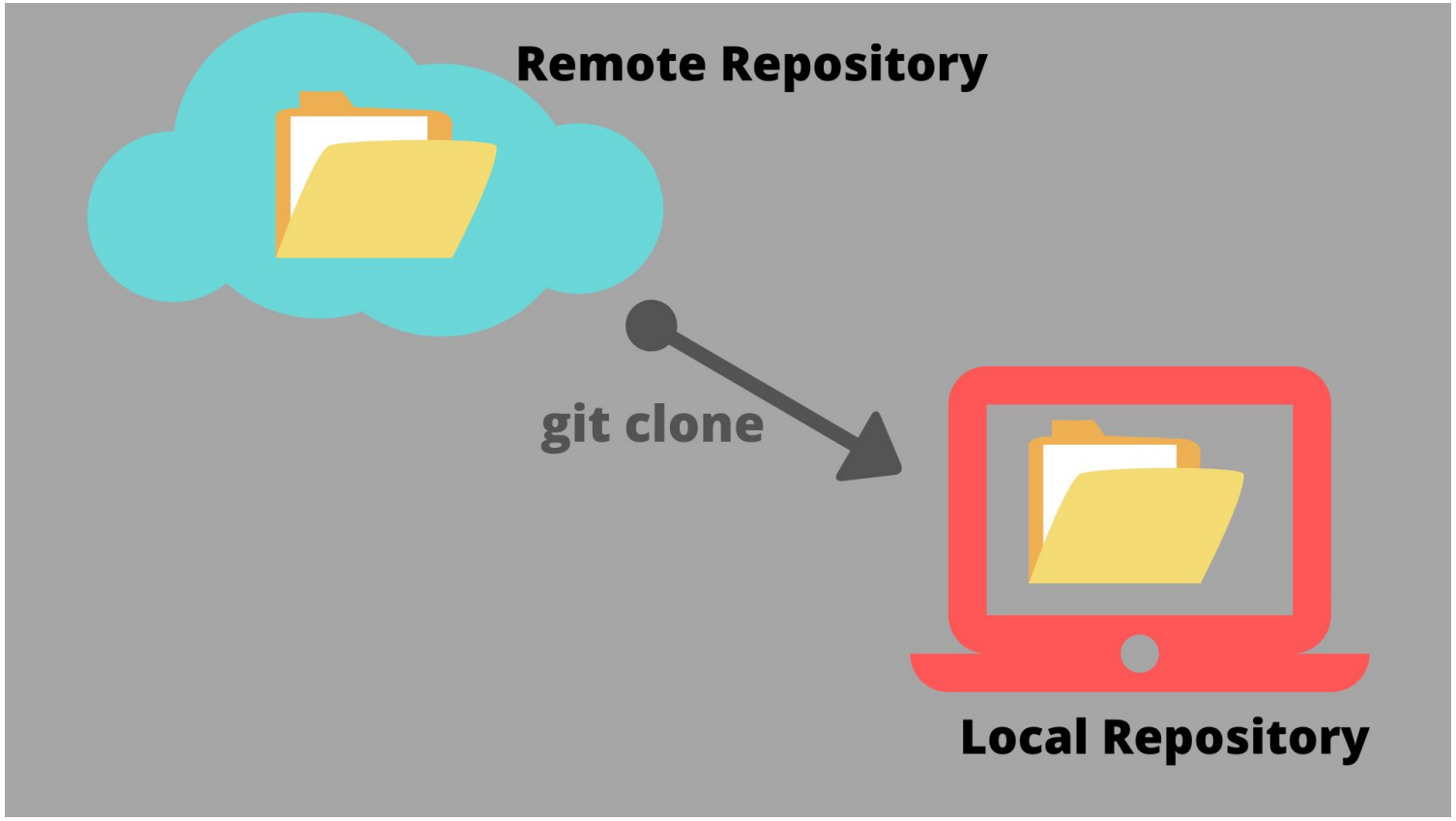
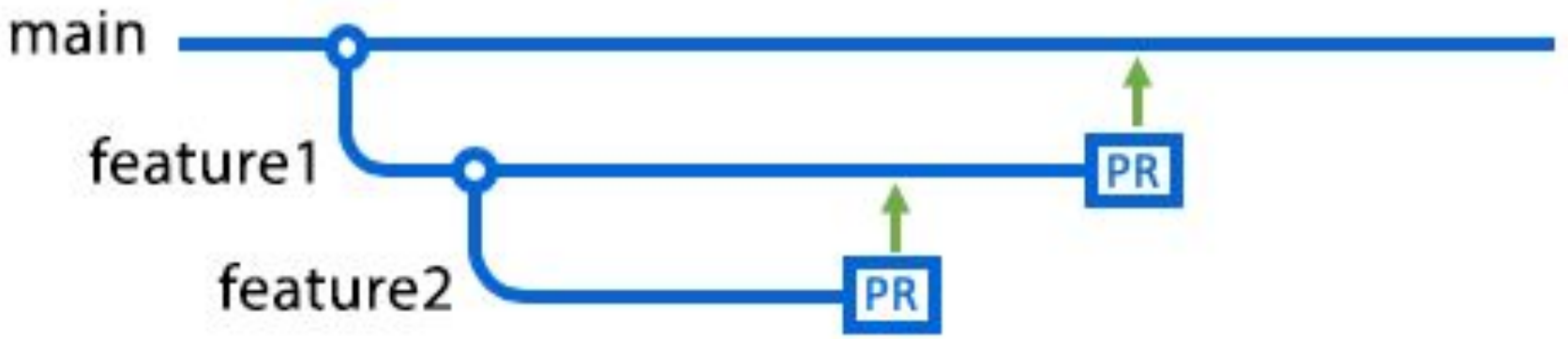


$ git clone git@github.com:myawesomecompany/awesomesource

Version Control



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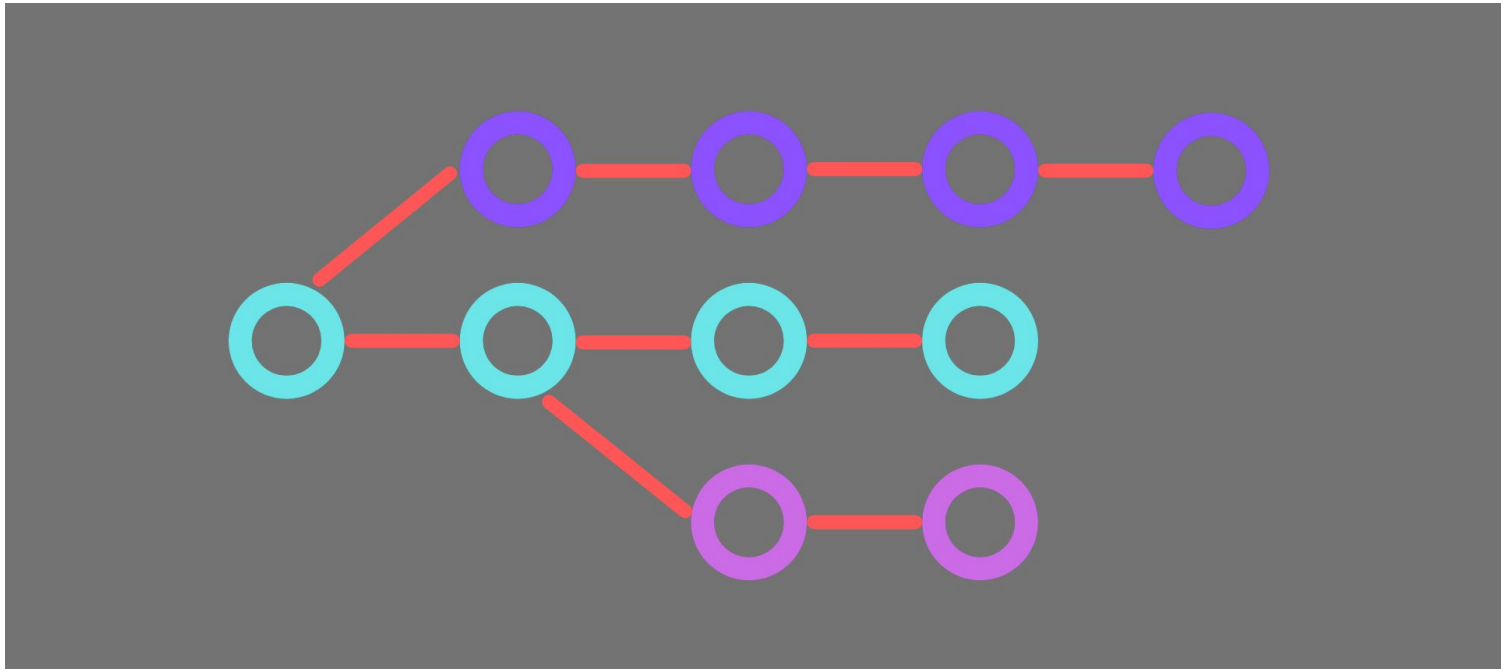

$ git checkout -b myFirstTicket

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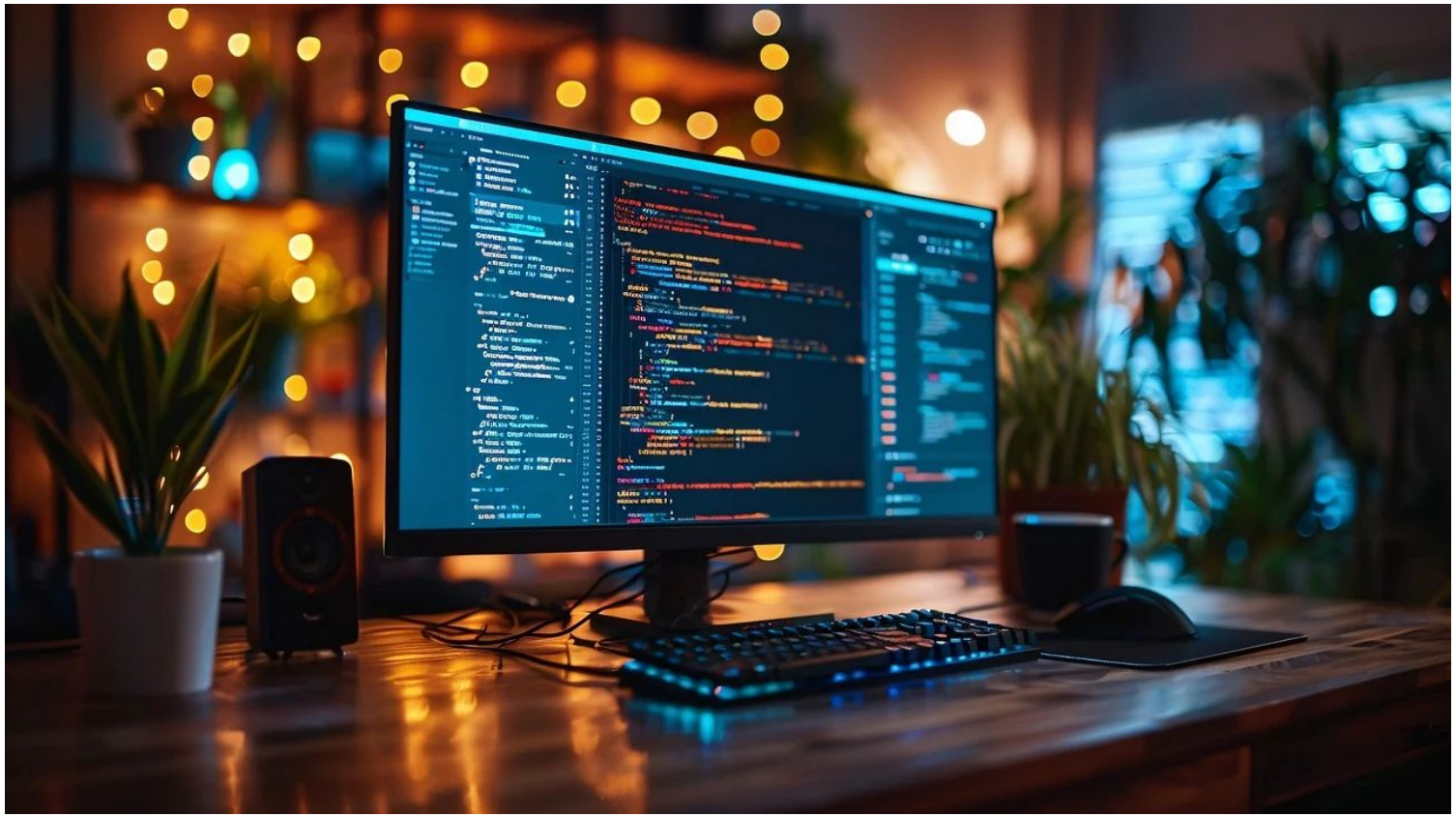
Contributing to Existing Code



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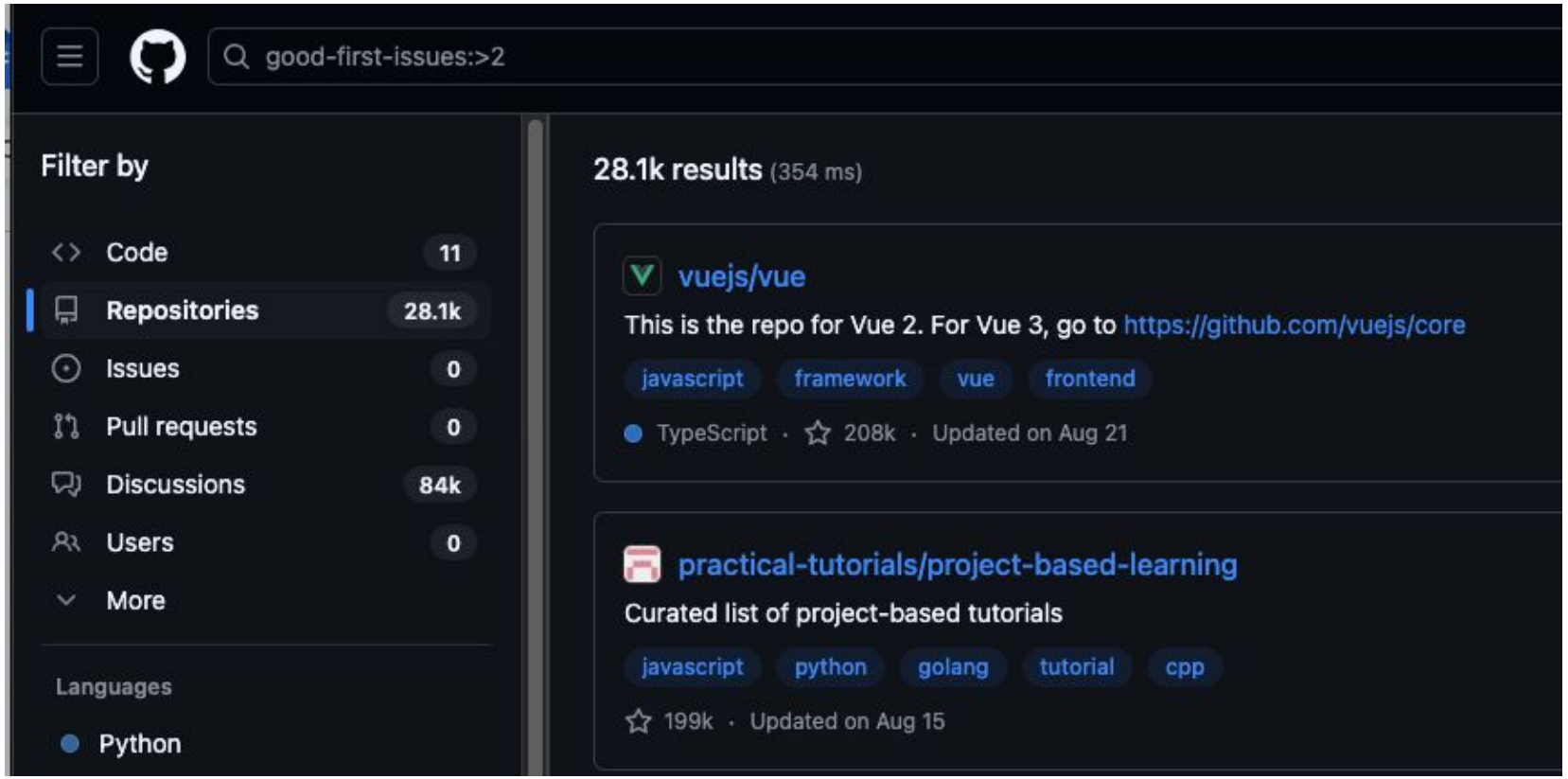
Contributing to Existing Code



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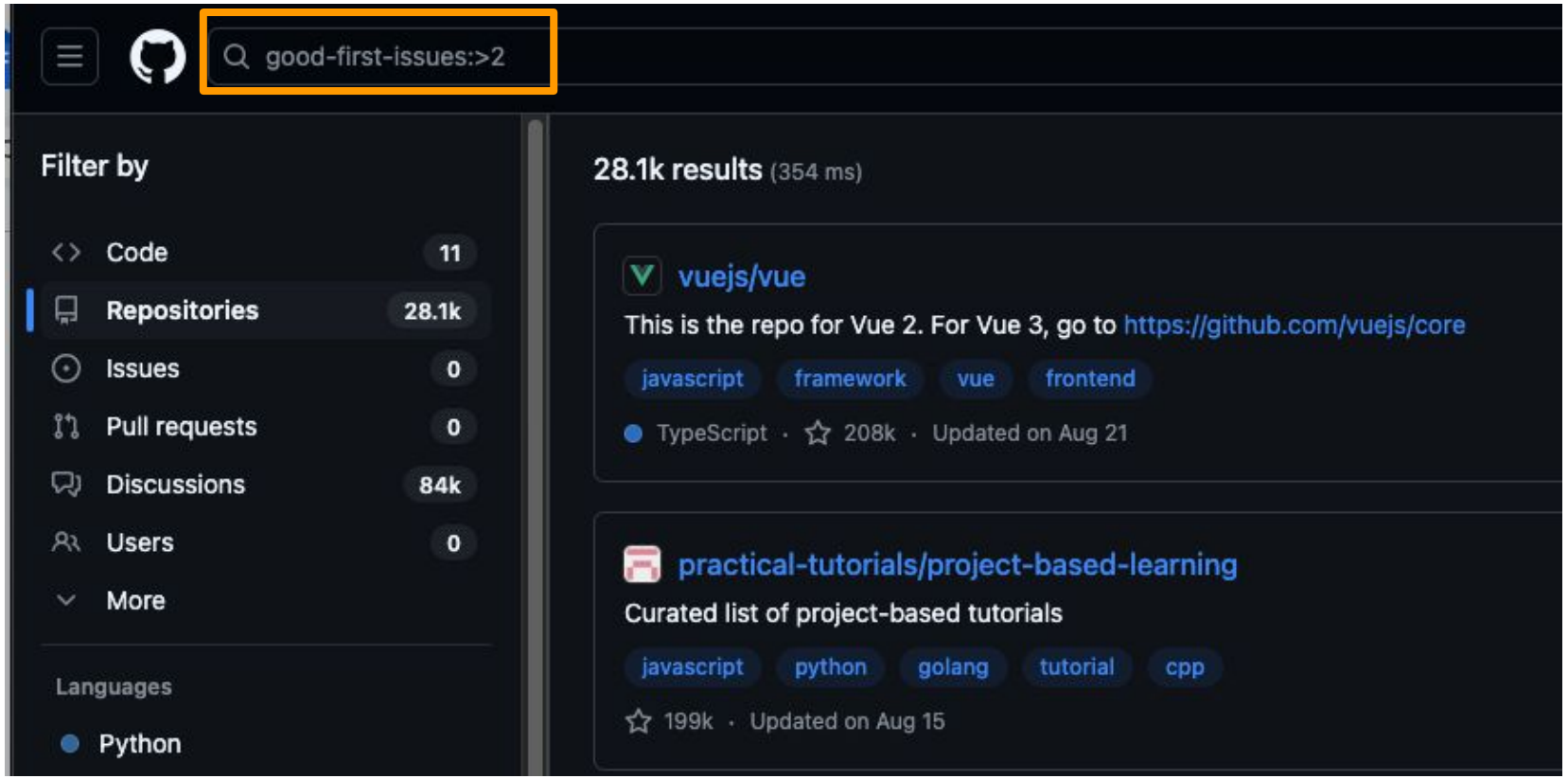

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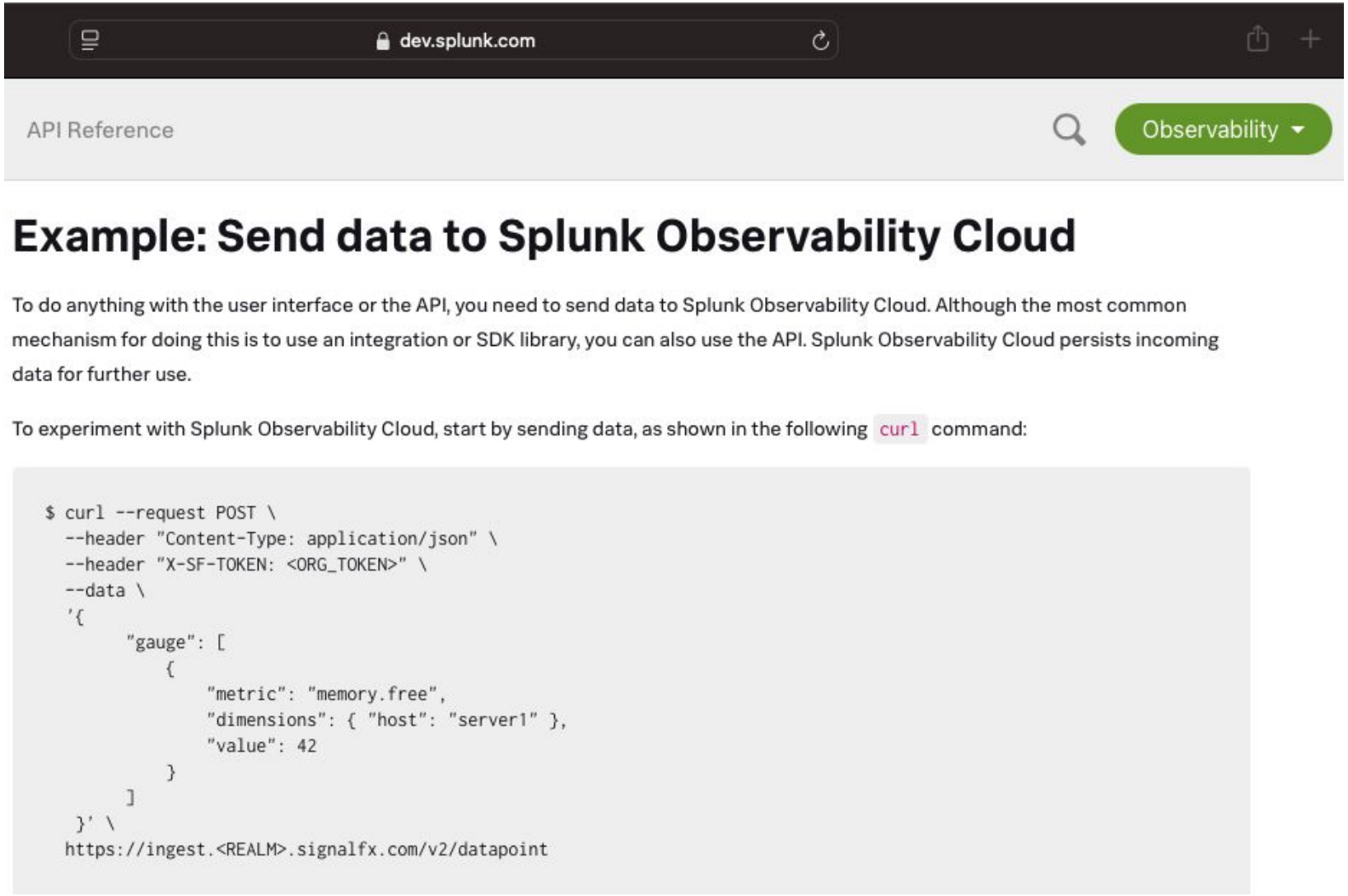

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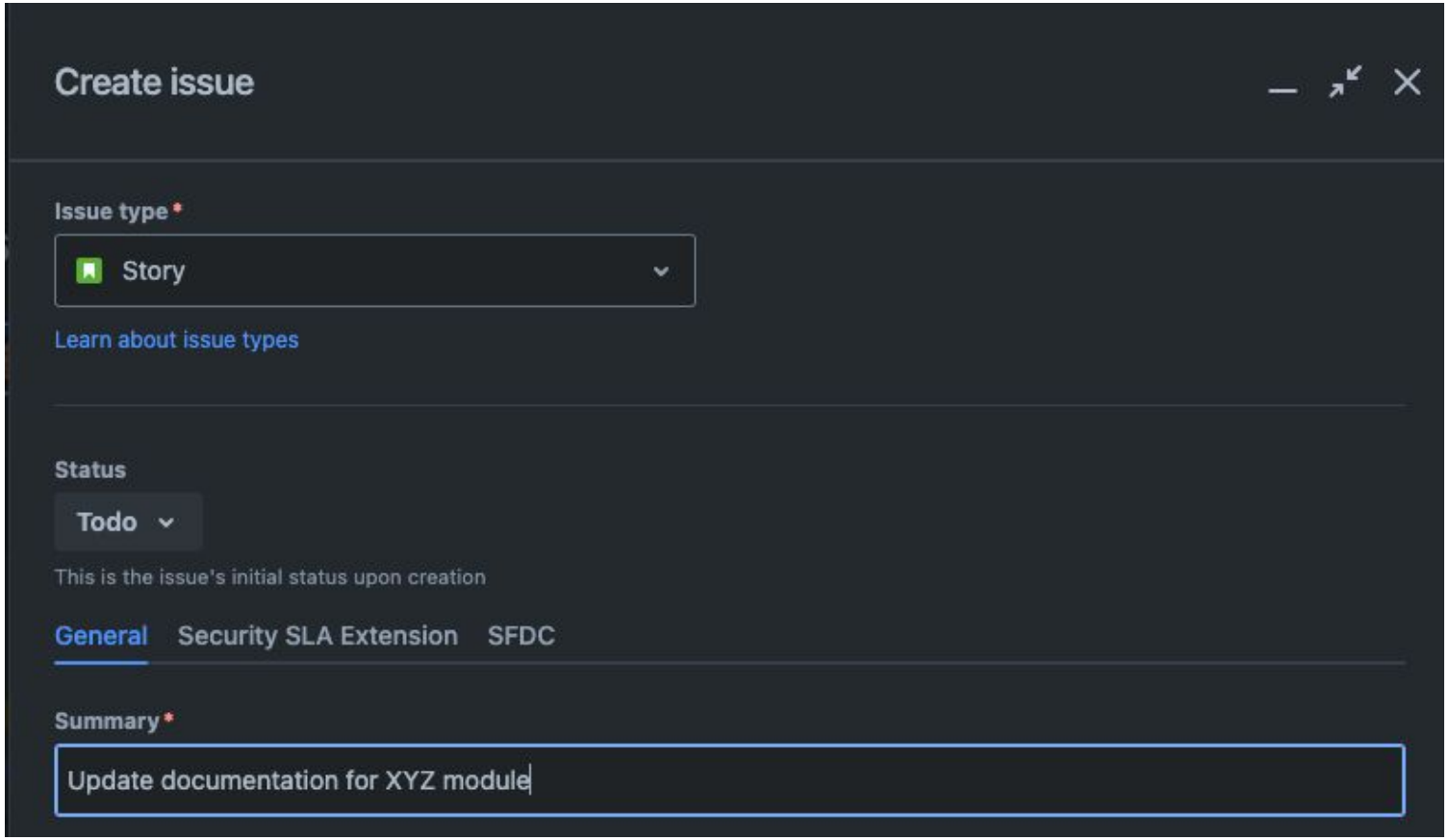
Contributing to Existing Code



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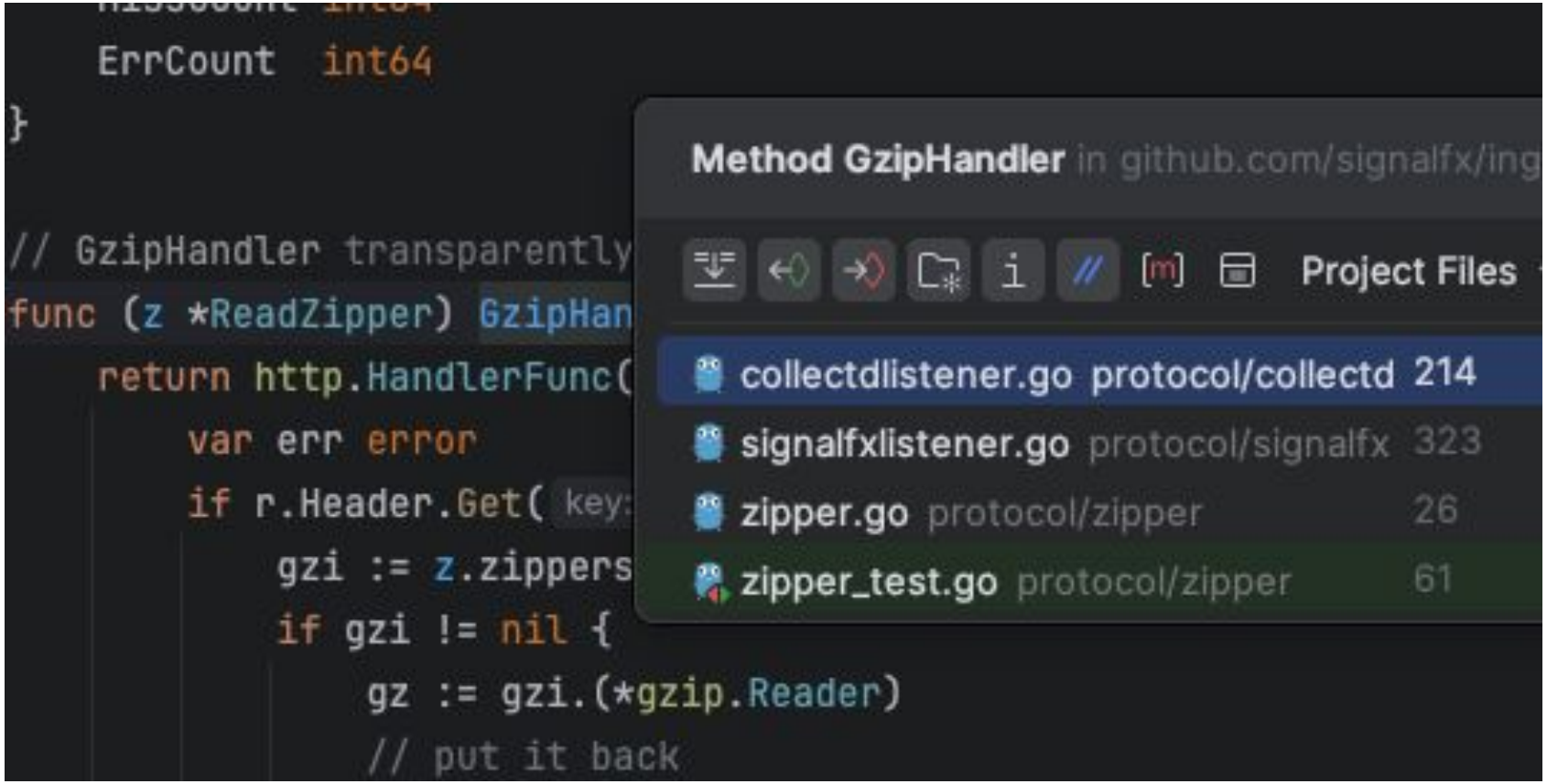
Contributing to Existing Code



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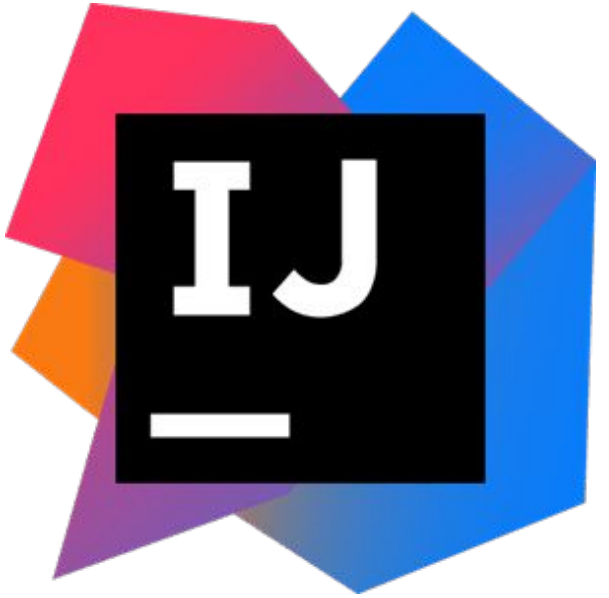
Building Code



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Building Code

Makefile

```
1   SHELL                = /bin/bash
2   BASE                 = $(CURDIR)
3   CP_RF                = cp -rf
4   GOLANGCI_LINT_VERSION = 1.49.0
5
6   # enable module support across all go commands.
7   export GO111MODULE = on
8
9   .SILENT: ;               # no need for @
10  .ONESHELL: ;             # recipes execute in same shell
11  .NOTPARALLEL: ;          # wait for this target to finish
12
13  # default is verification of sfxinternalgo which includes all services
14  .PHONY: verify
15  verify: install-tools lint test
```

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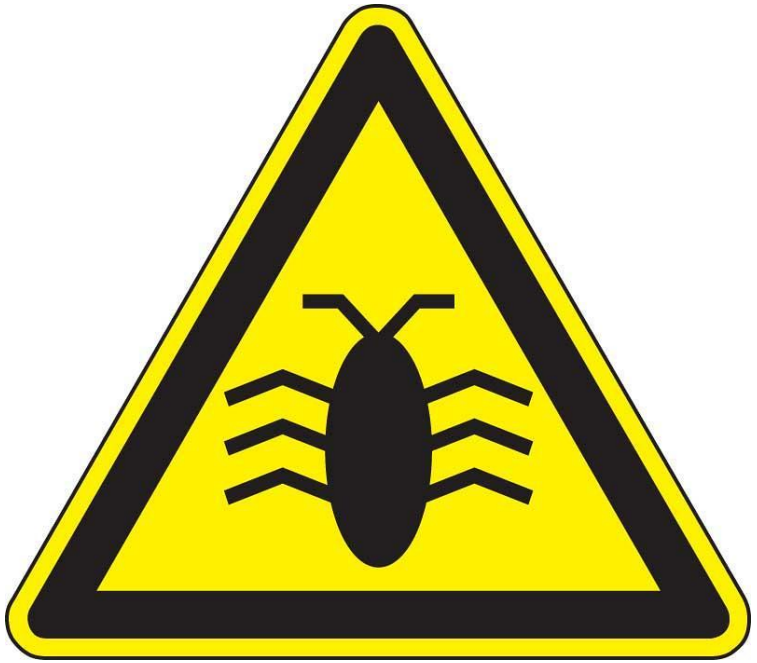
Software Debugging



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Software Debugging

```
if gzi != nil {
    z.Log.Log( keyvals...: "gzi is not nil") // <--------
    gz := gzi.(*gzip.Reader)
    // put it back
    defer z.zippers.Put(gz)
    err = gz.Reset(r.Body)
    if err == nil {
        defer log.IfErr(z.Log, gz.Close())
        // nasty? could construct another object but seems expensive
        r.Body = gz
        z.Log.Log( keyvals...: "Incrementing hit count") // <--------
        atomic.AddInt64(&z.HitCount, delta: 1)
```

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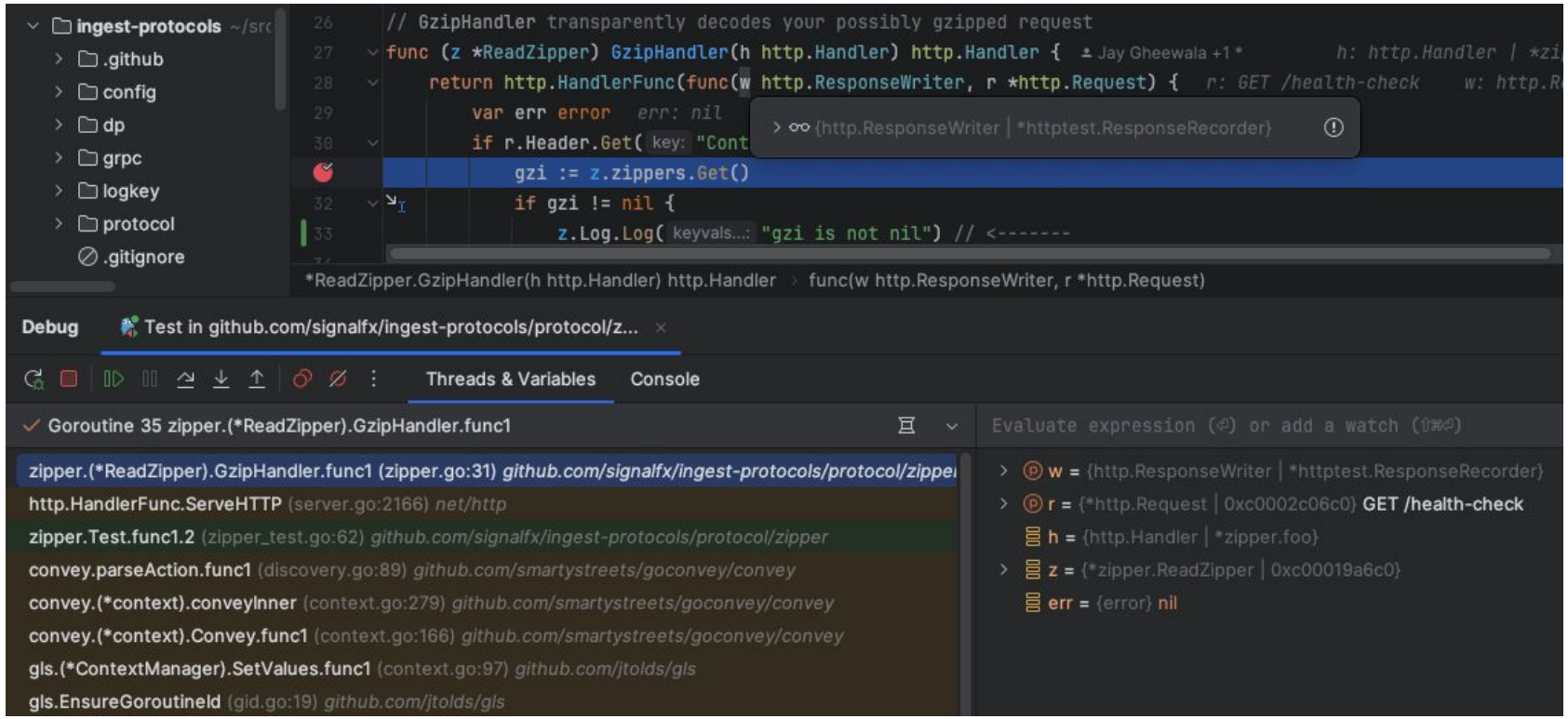
Software Debugging



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Scripting and Software Testing

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Scripting and Software Testing

```
func Test(t *testing.T) {
    Convey( items...: "Test zipper", t, func() {
        zippers := NewZipper()
        badZippers := newZipper(func(r io.Reader) (*gzip.Reader, error) {
            return new(gzip.Reader), errors.New( msg: "nope")
        })
        f := new(foo)
        zipped := new(bytes.Buffer)
        w := gzip.NewWriter(zipped)
        _, err := w.Write([]byte("OK"))
        So(err, ShouldBeNil)
        So(w.Close(), ShouldBeNil)
        tests := []struct {...}{
            { zipper: zippers,  name: "test non gzipped",  data: []byte("OK"),
```

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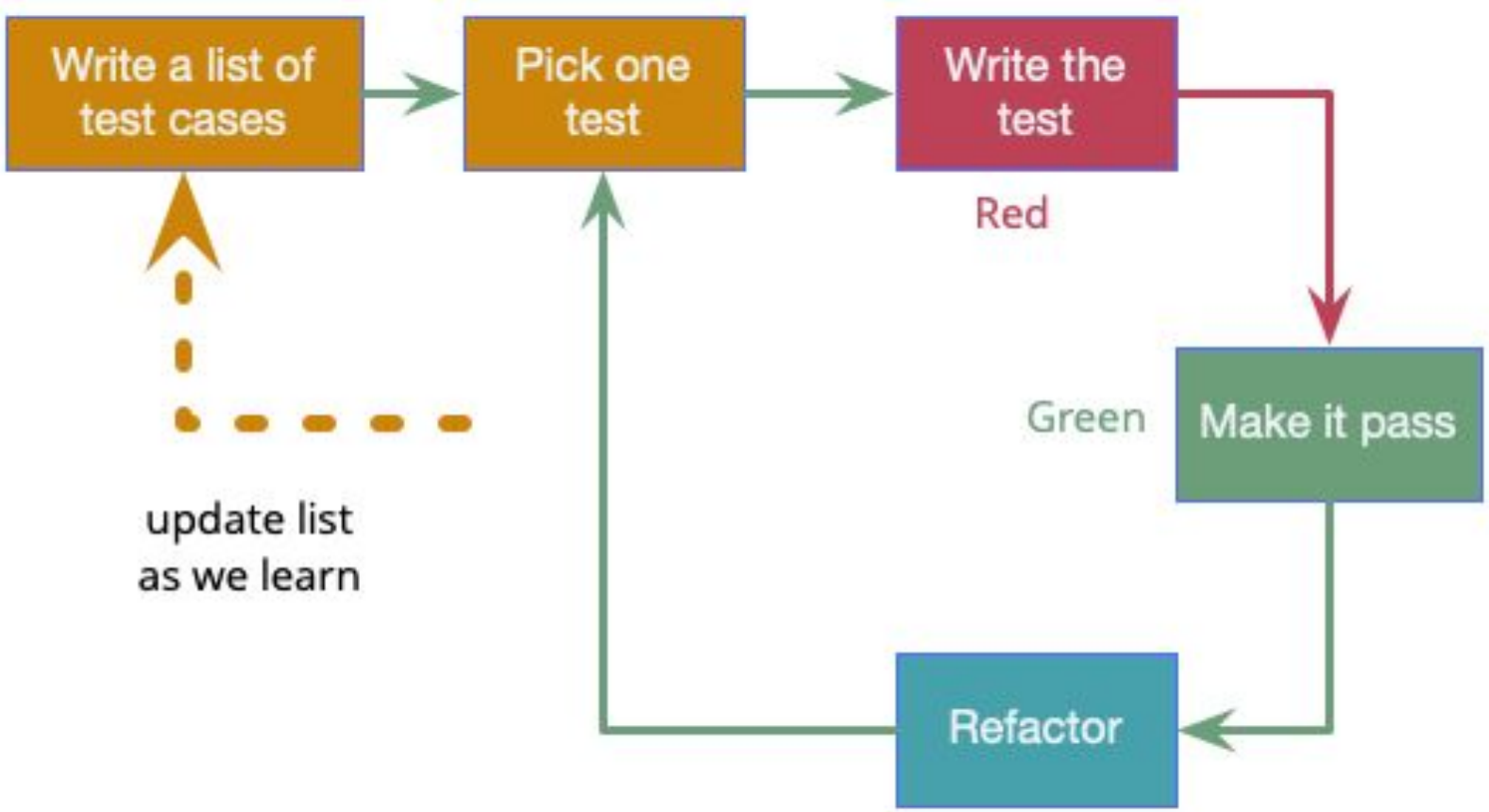
Scripting and Software Testing



Scripting and Software Testing

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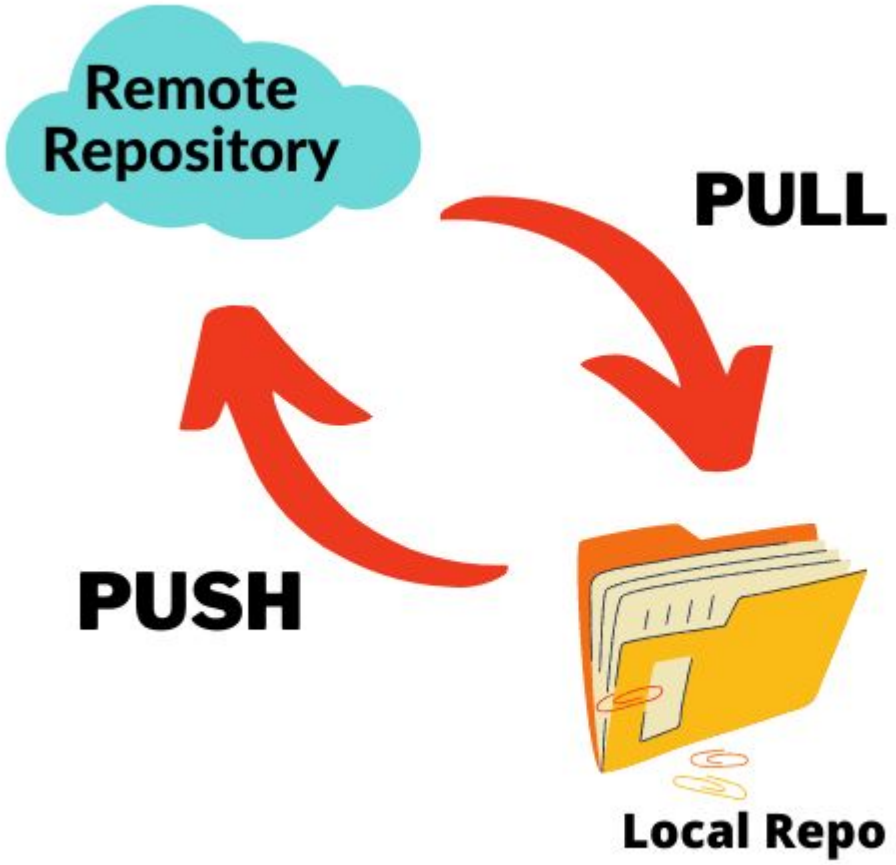
Version Control



$ git push –set-upstream origin myFirstTicket

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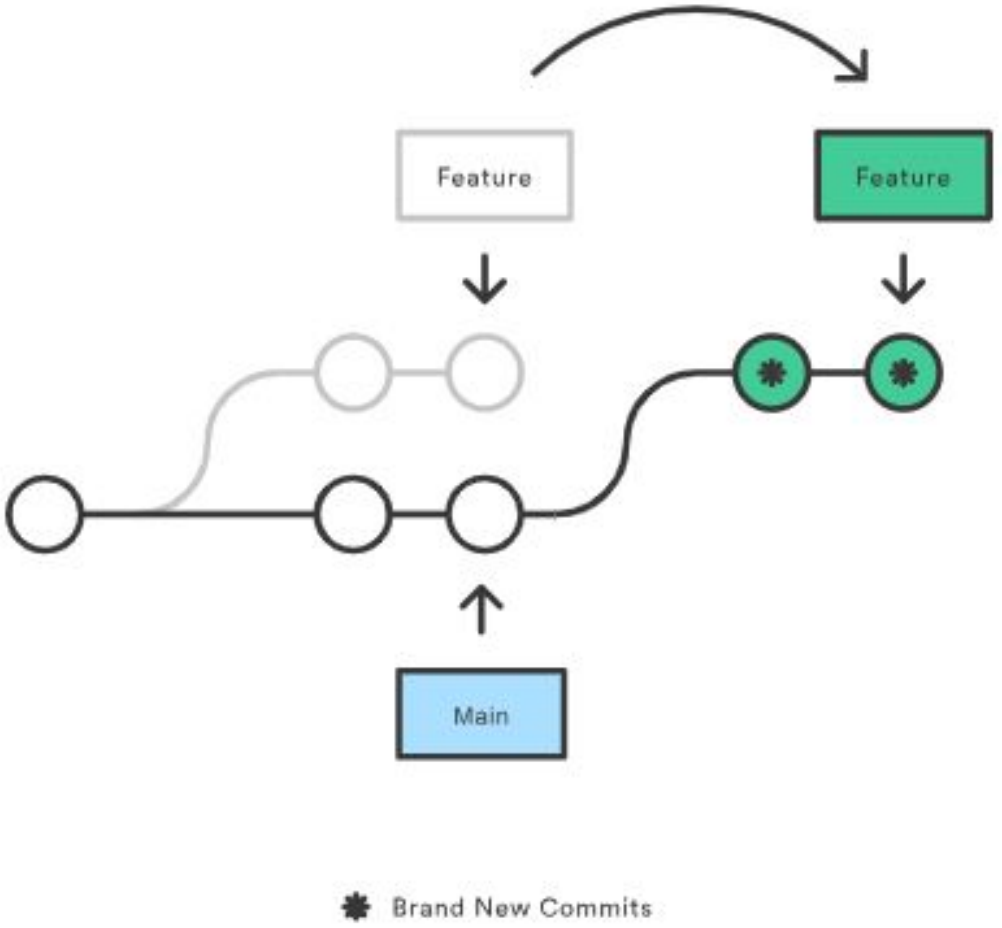
Version Control



$ git rebase main

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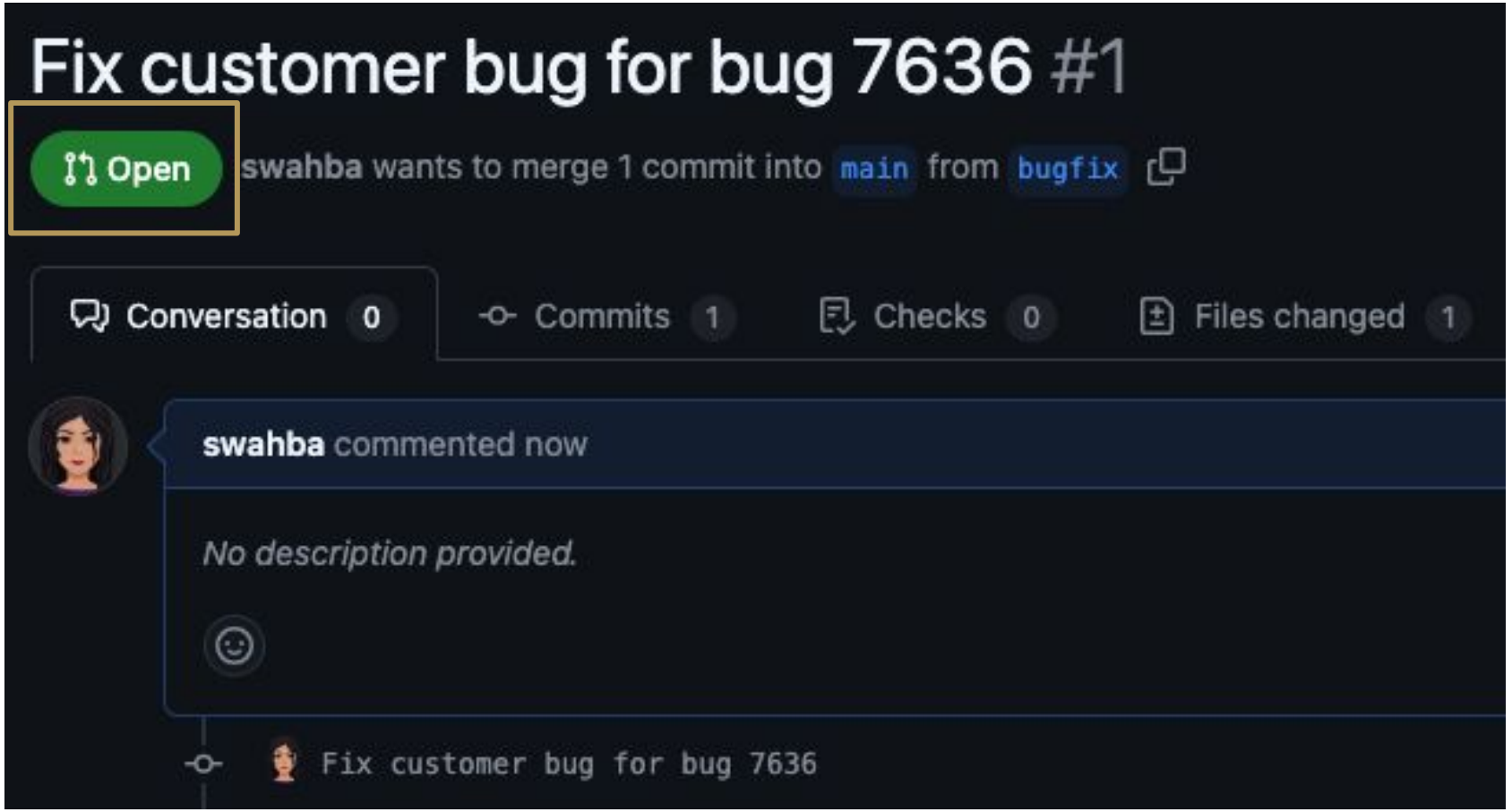

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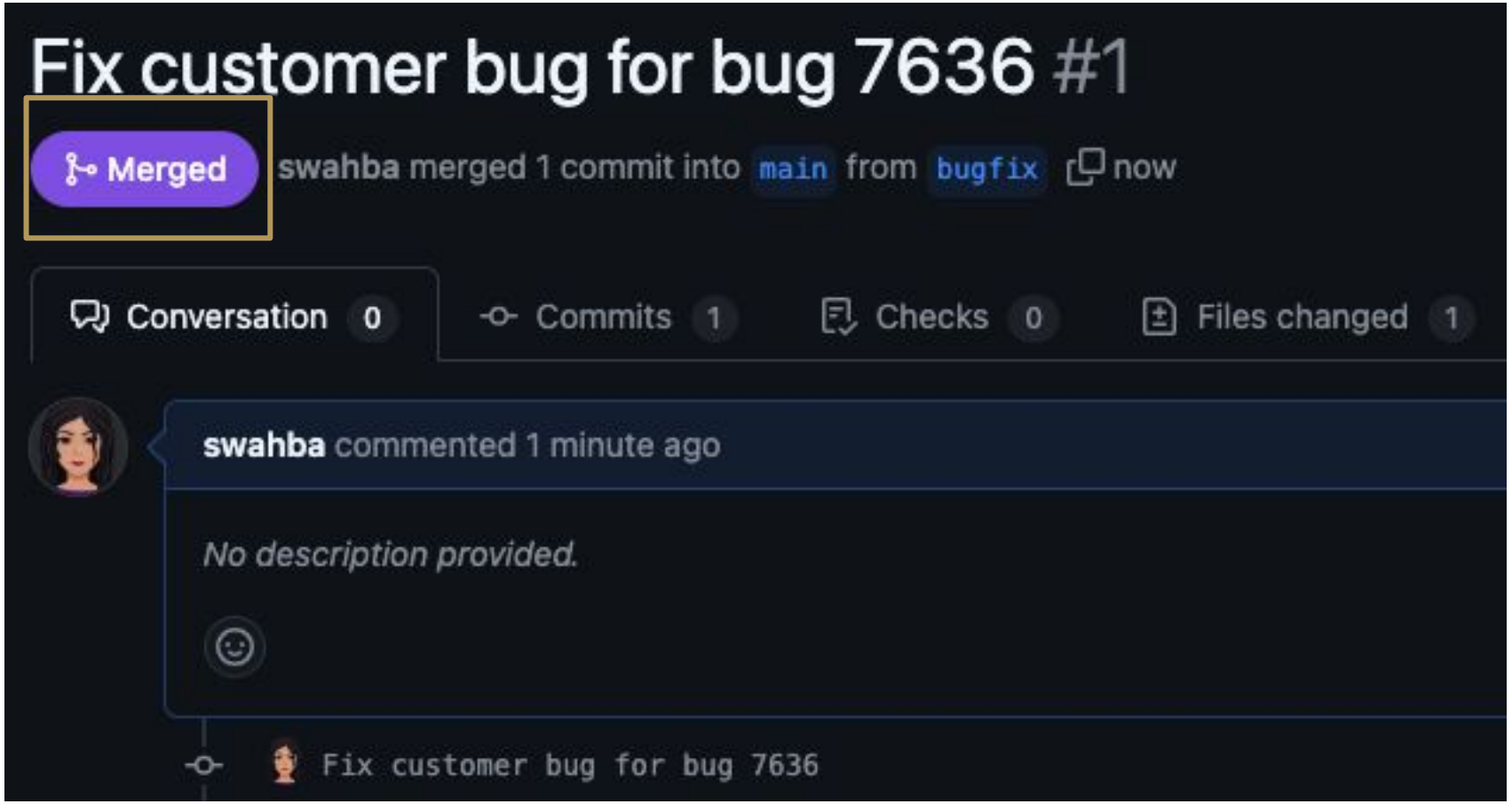

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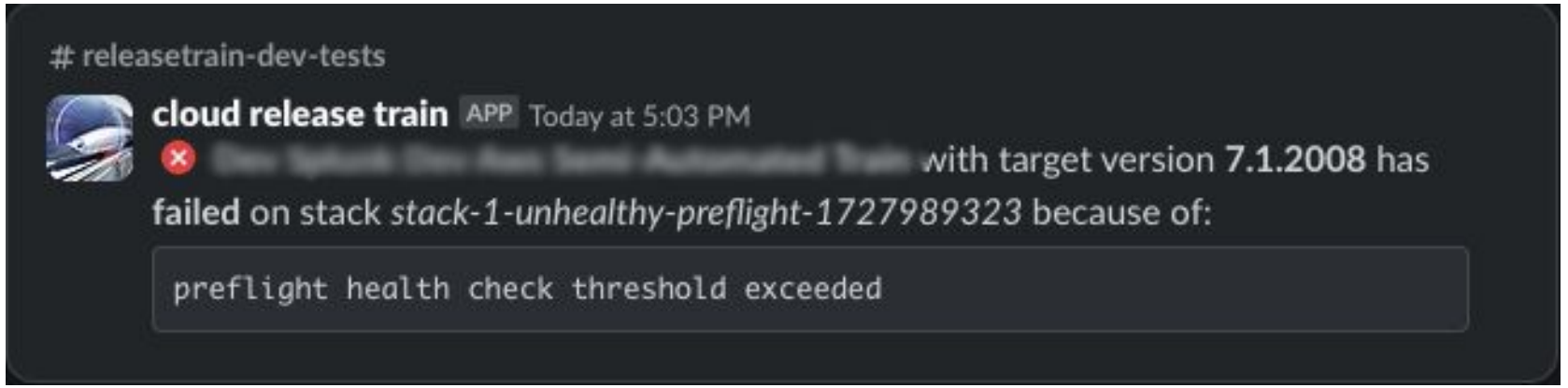
CI/CD



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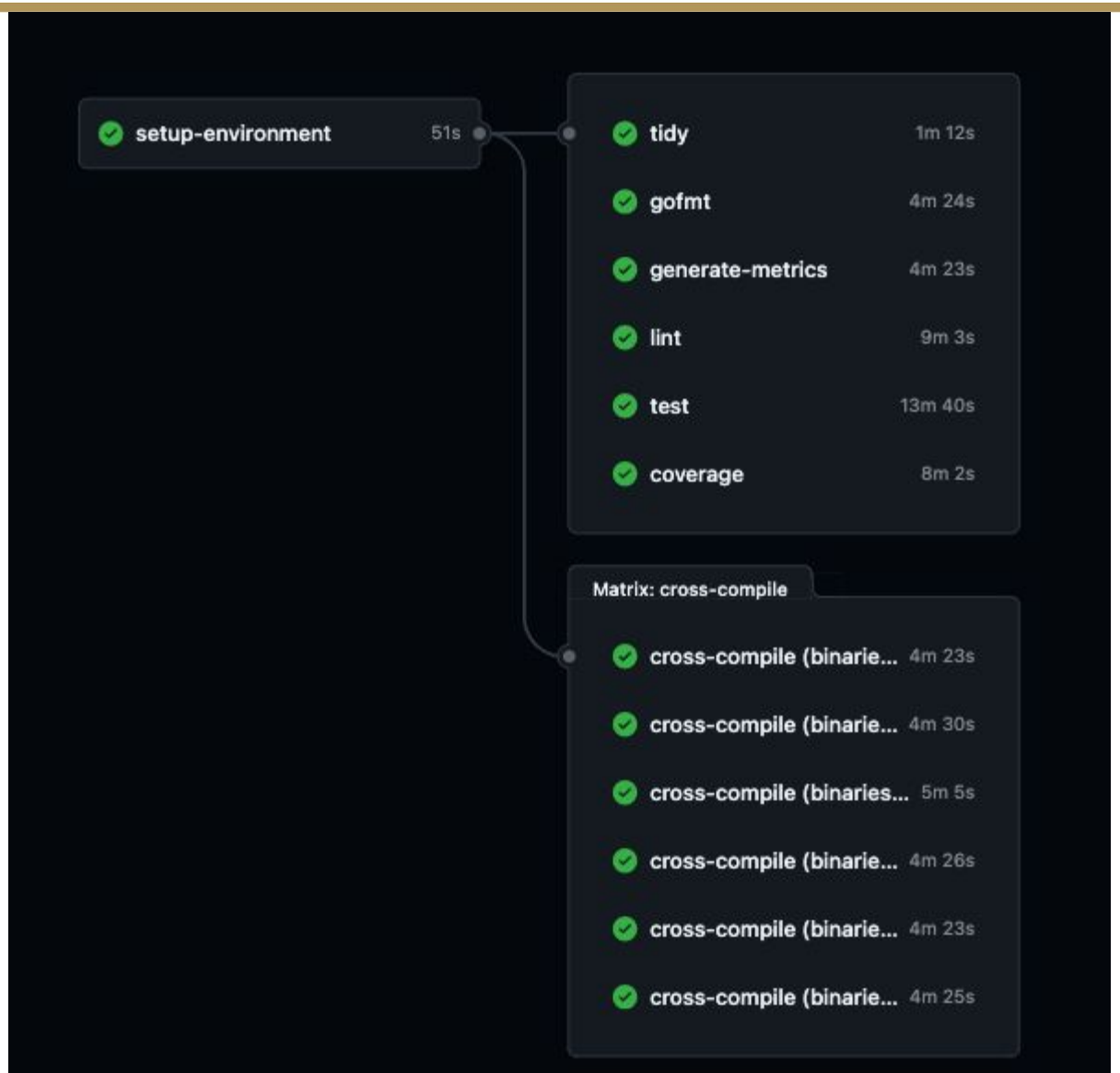

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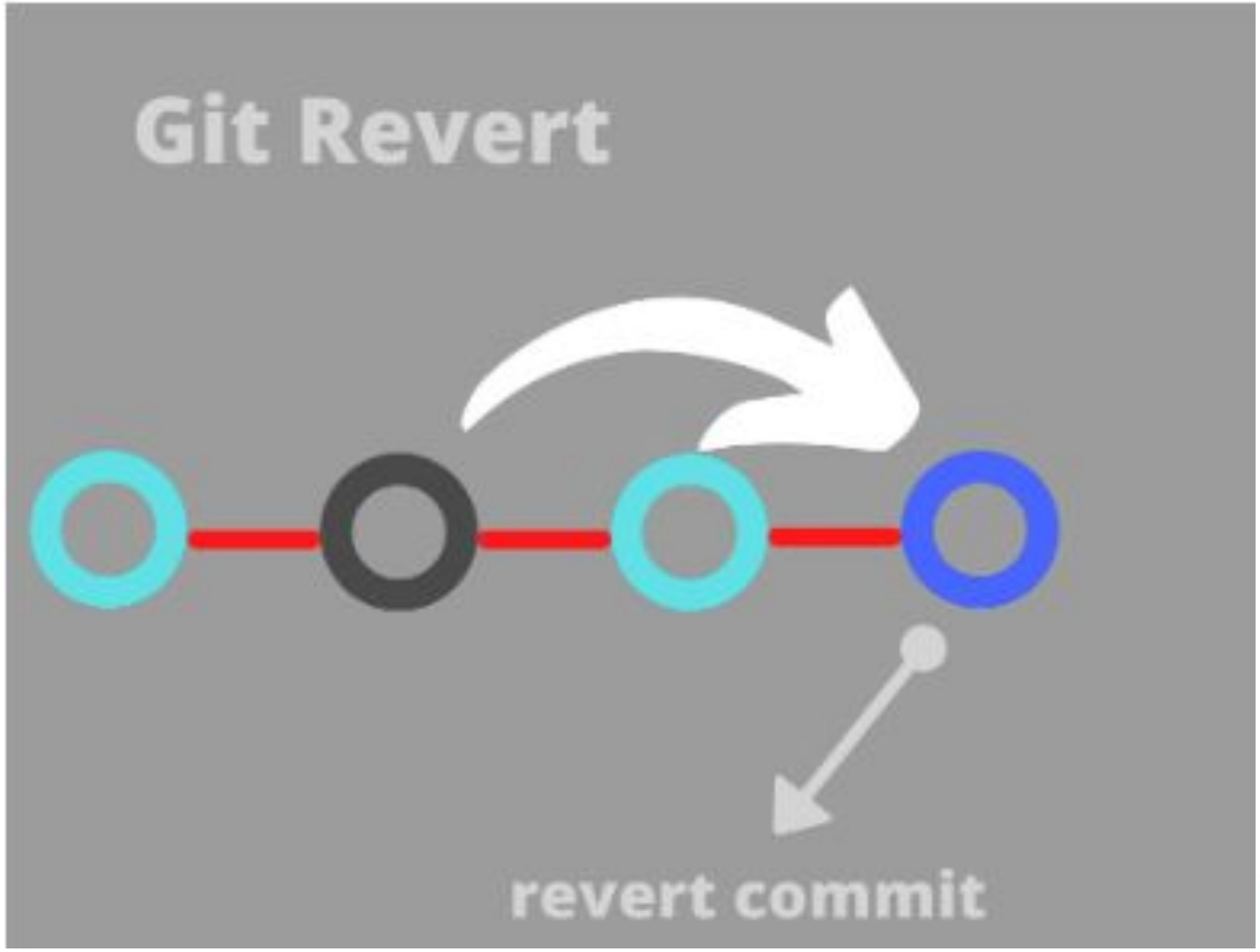

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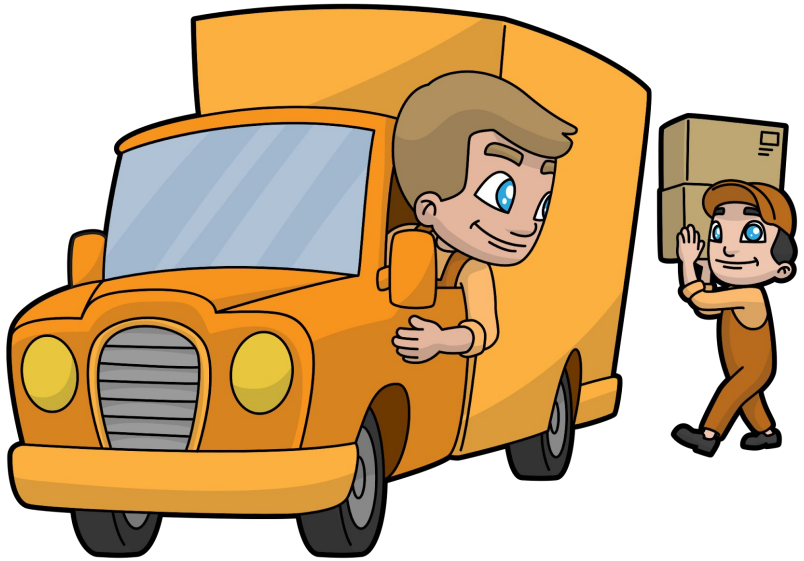

CI/CD

- Continuous integration is the practice of automatically and frequently integrating code changes to a shared source code repository.
- Continuous delivery refers to the integration, testing, and delivery of code changes.
- Continuous deployment automatically releases the updates into a production environment.

CI/CD

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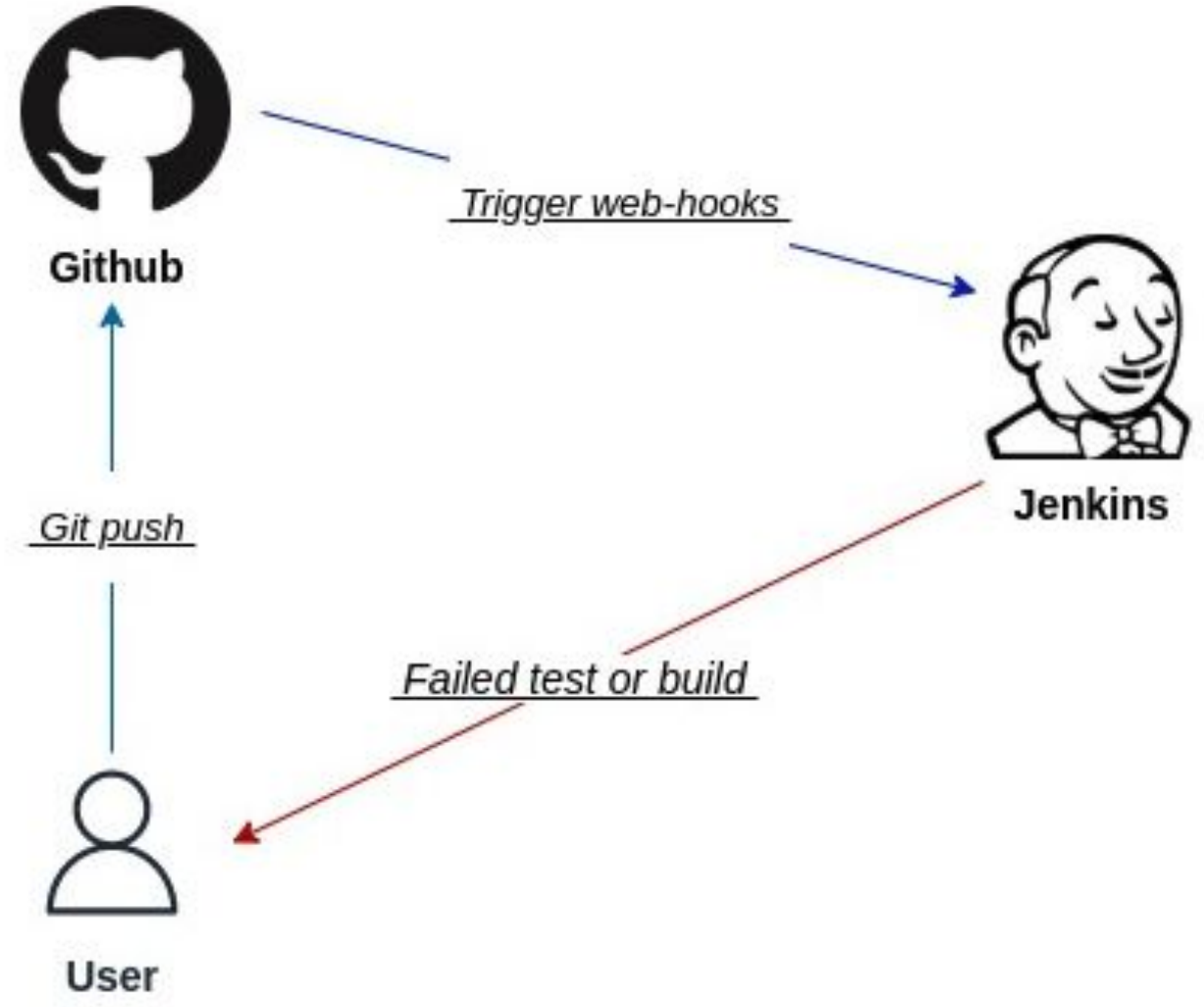
CI/CD



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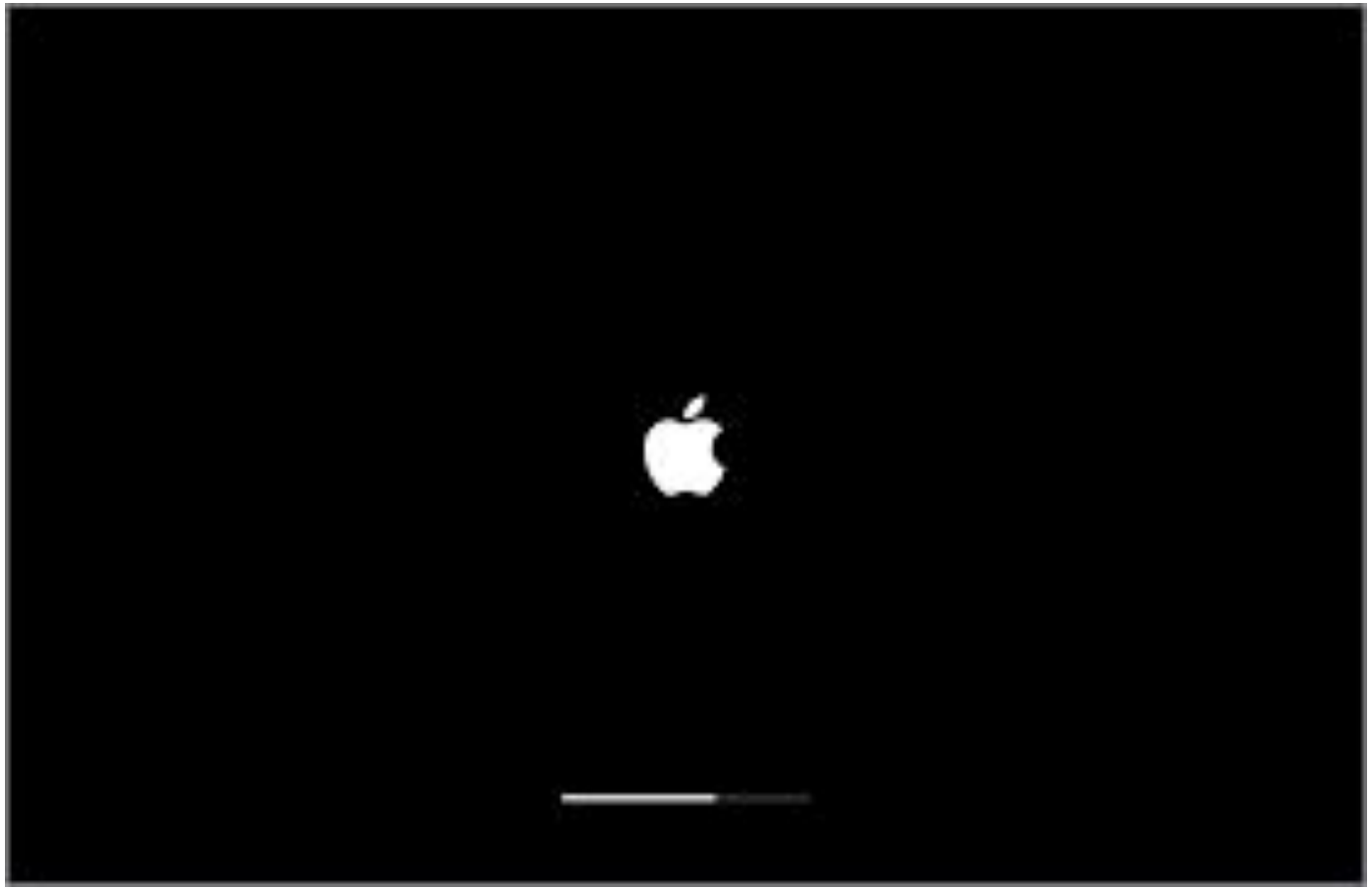
CI/CD



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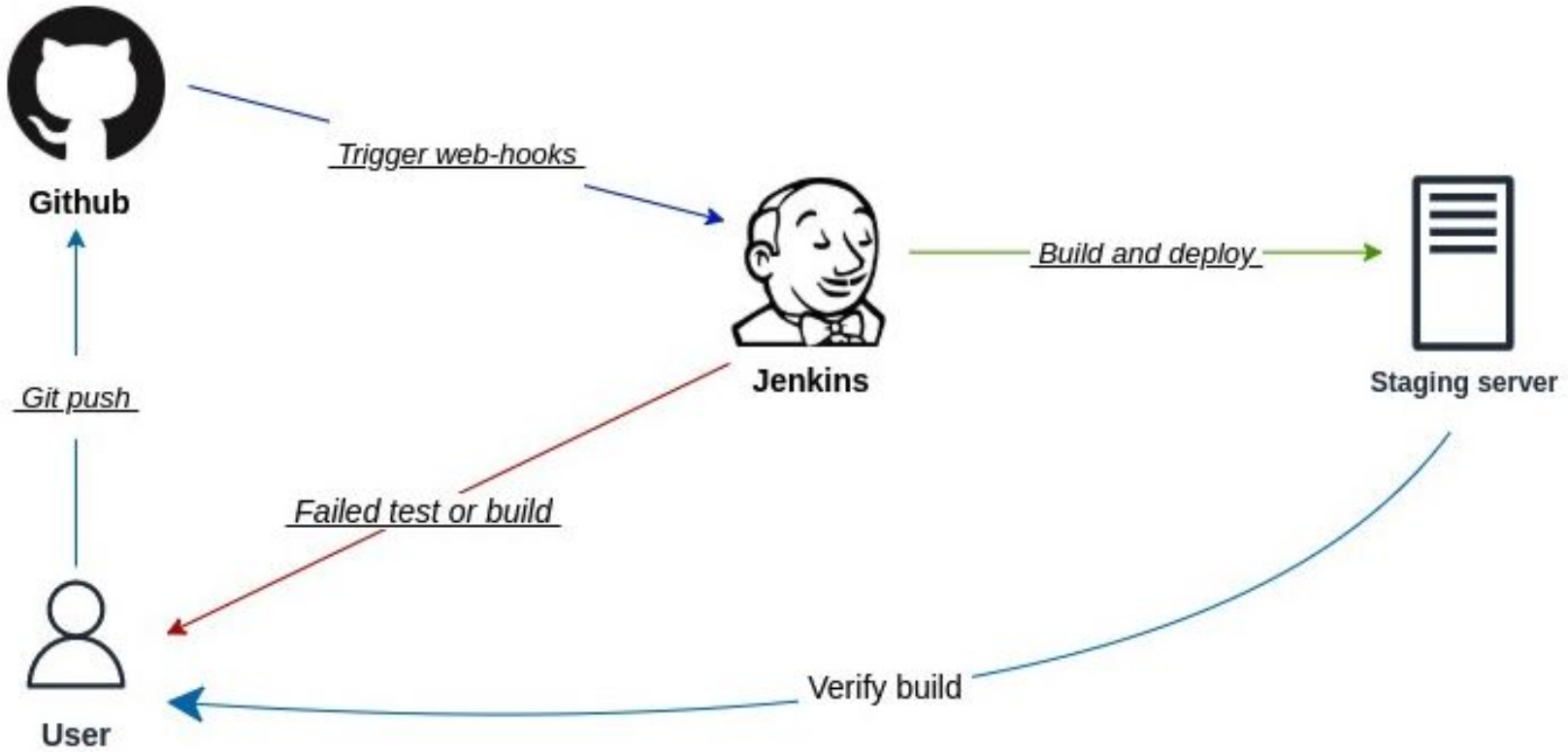

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Linux & Containers

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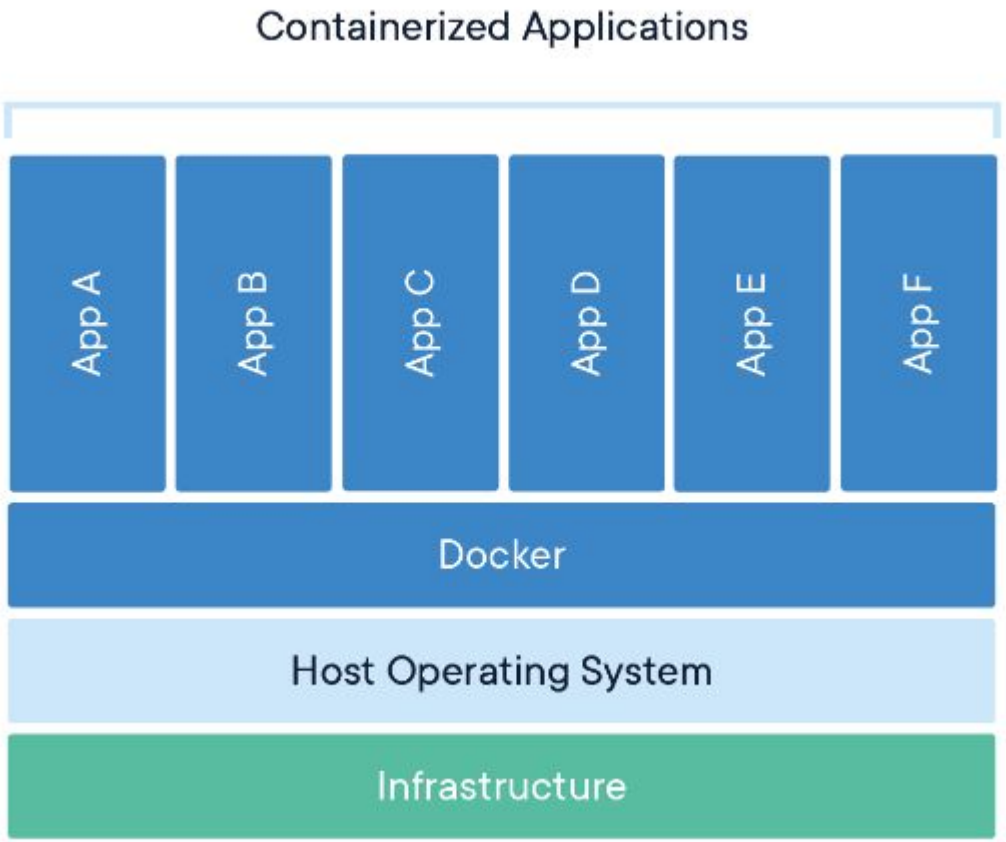
Linux & Containers



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Linux & Containers

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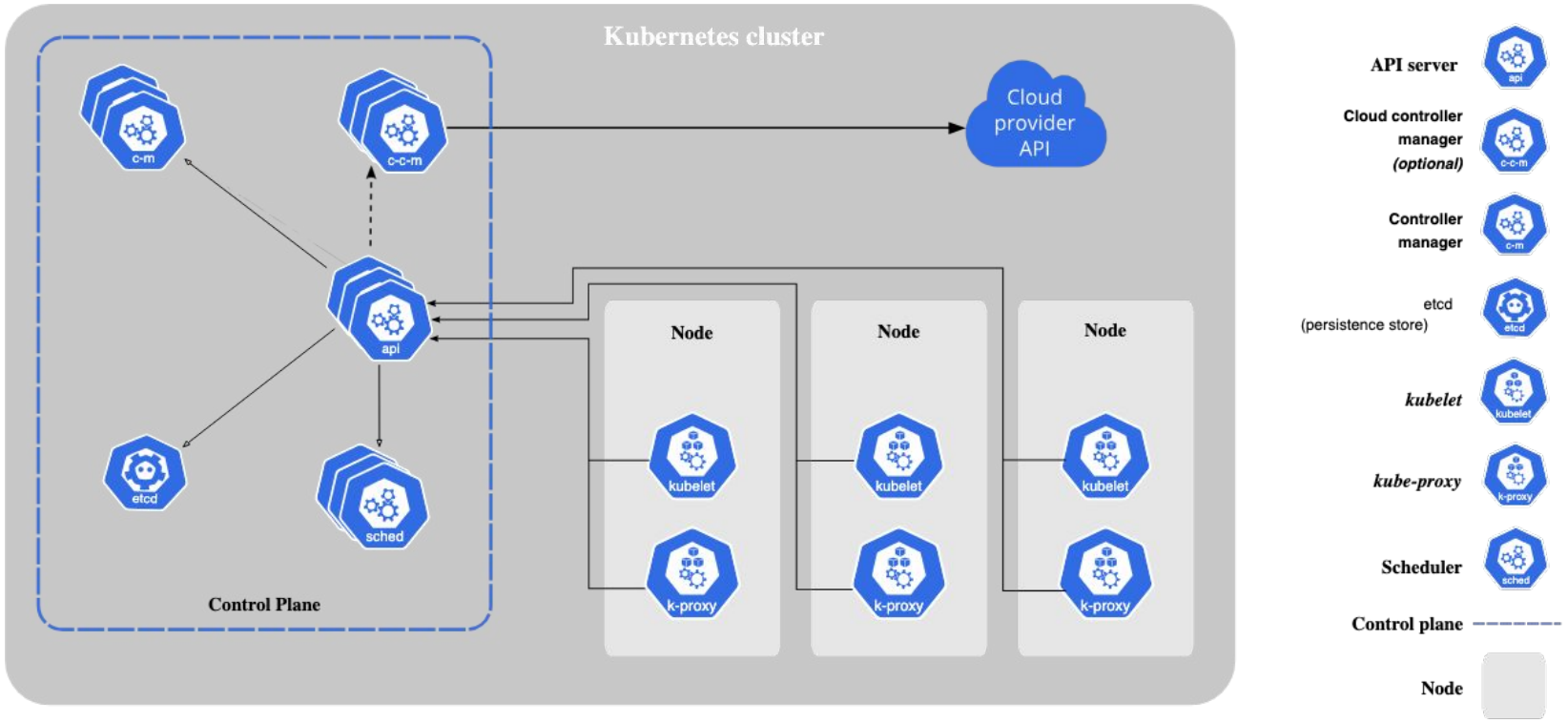
Linux & Containers



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Summary

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2. Software debugging
3. Scripting and software testing
4. Version control
5. Building code
6. Continuous Integration/Continuous delivery
7. Linux and Containers

Slides

The slides are available at:

https://github.com/swahba/conferencetalks

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Acknowledgements

Special thanks to my colleagues:

- Amneet Kaur
- Gail Carmichael
- Jessi Jullie

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Questions?

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Thank you!

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Image sources referenced in speaker notes.

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