Go2Group
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GO2GROUP

Tools tools tools!

WHARRGARBL
WHARRGARBL
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Programmatic Pipeline Creation - How to Bootstrap Cloud-Native Pipelines

Basic setup

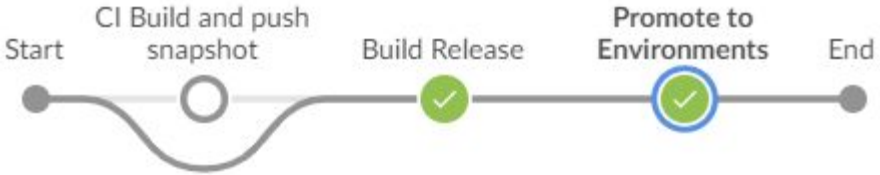
- Make your own repos
- Make your own pipelines
- Run some stuff!
- Make more stuff

All fine and good

Meta-setup!

- Fork Metafresh
- Make meta-pipeline
- Alter manifest repo
- See stuff get made!

Tweak Git, get stuff



Inspired by Jenkins X quickstarts

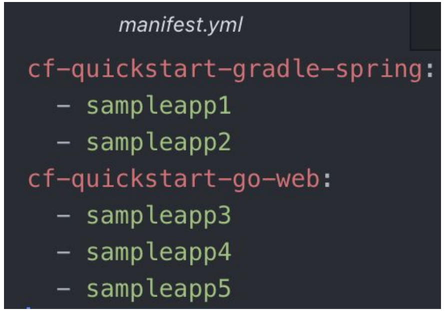
- What are quickstarts and why do they matter?
  - Build re-usable foundation apps for bootstrapping new projects faster
- jx create quickstart -> enter some variables
  - https://github.com/jenkins-x-quickstarts/spring-boot-http-gradle
- Jenkins X is powerful but complicated. Quickstart concept is easy

GitHub repos & API

- Need to create repositories somehow via automation
- http://github-api.kohsuke.org - that name sounds familiar!
  - GitHub github = new GitHubBuilder().withOAuthToken(githubToken).build()
  - GHRepository repo = github.createRepository(name, "API created user repo", "", true)
- OAuth token can be fetched in a variety of ways
- Almost every bit of GitHub automated via sensible classes!

Automated Git - GrGit

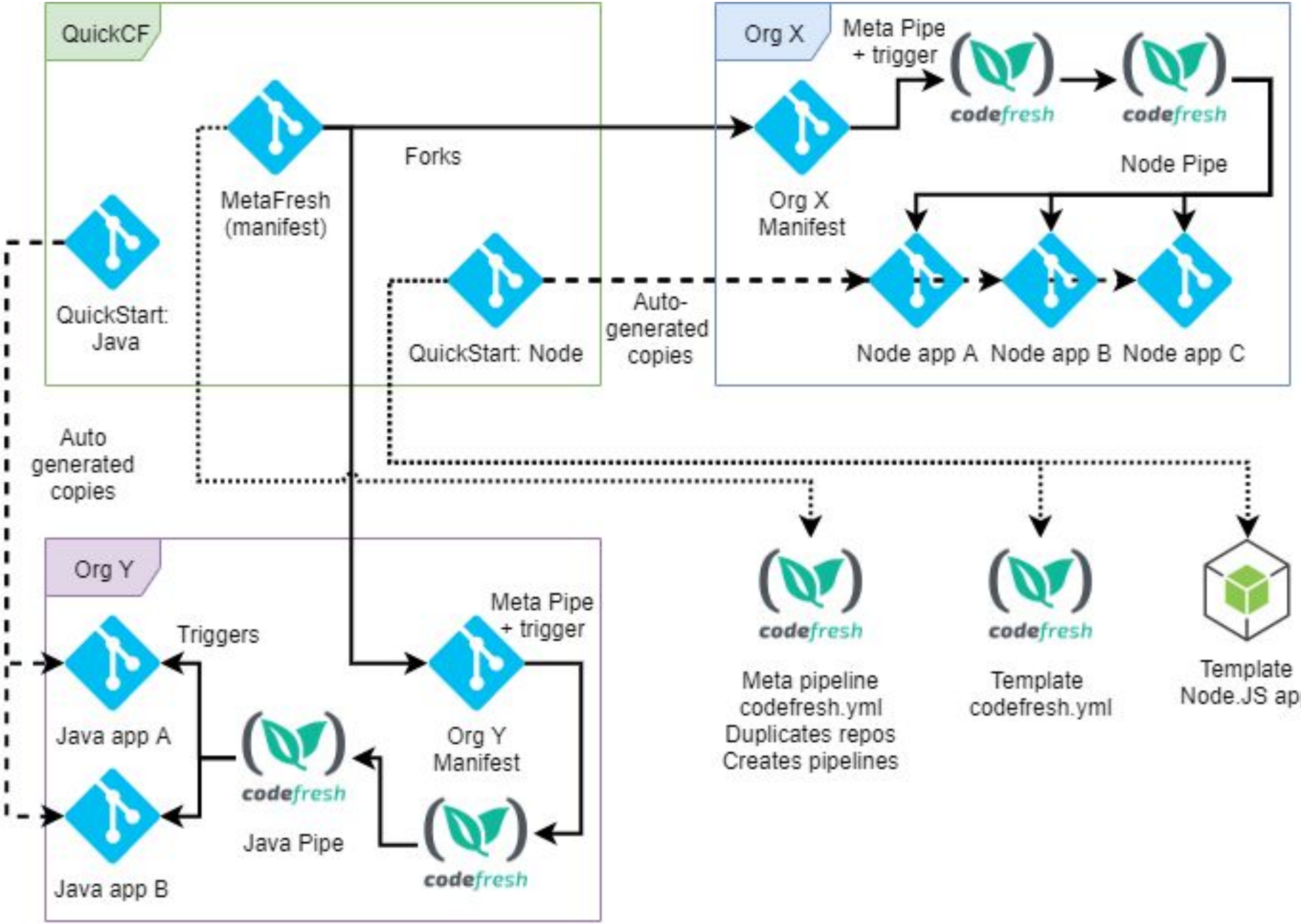
- Have repos, need to fill them with stuff!
- Have used GrGit extensively before, Groovy wrapper around JGit
  - http://ajoberstar.org/grgit/index.html
  - Also actual GroovyWrapper, to run Groovy
- Was able to simply reuse existing utility inside a pipeline
  - def myGitRepo = Grgit.open(dir: quickstartName)
  - myGitRepo.push(remote: quickstartRemote)

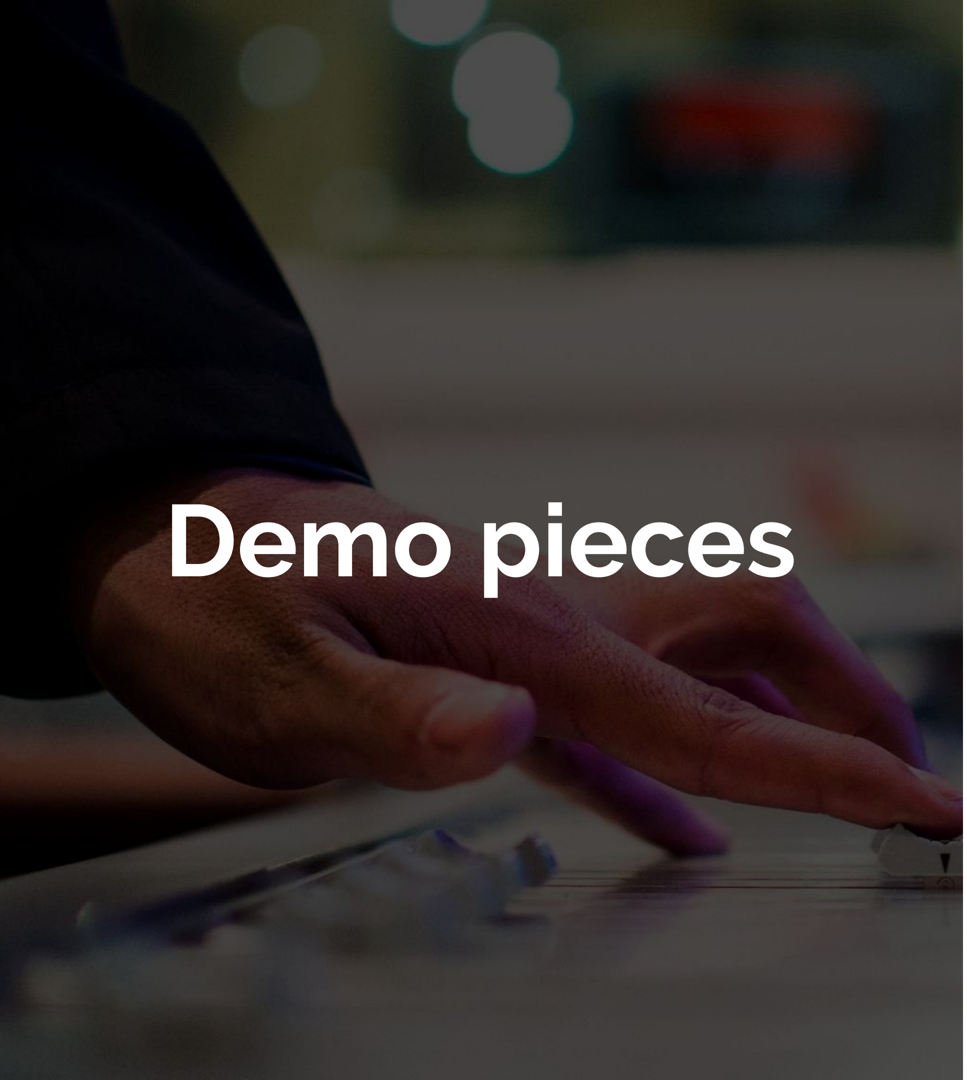


```
cf-quickstart-gradle-spring:
  - sampleapp1
  - sampleapp2
cf-quickstart-go-web:
  - sampleapp3
  - sampleapp4
  - sampleapp5
```

Codefresh pipes & API

- https://codefresh.io - easy! Nice UI, Docker, love that debug mode! :-)
- Want to read and act on a simple manifest to spin up repos and pipelines
- Can use its API to do magic! Token built in, just run commands
- export GRGIT_USER=`./codefresh get contexts --type git.github $1 --decrypt -o json | ./jq-linux64 -r ".spec.data.auth.password"`
- ./groovyw preparerepos.groovy


QuickCF
MetaFresh (manifest)
Forks
QuickStart: Java
QuickStart: Node
Auto-generated copies
Org X
Meta Pipe + trigger
codefresh
codefresh
Node Pipe
Org X Manifest
Node app A
Node app B
Node app C
Auto generated copies
Org Y
Triggers
Meta Pipe + trigger
Java app A
Java app B
codefresh
Java Pipe
Org Y Manifest
codefresh
codefresh
Meta pipeline codefresh.yml Duplicates repos Creates pipelines
codefresh
Template codefresh.yml
Template Node.JS app



Demo pieces

- MetaFresh pipeline
  - Breakpoint!
- https://github.com/go2group/metafresh
- https://github.com/go2group/cf-quickstart-go-web
- https://github.com/go2group/cf-quickstart-gradle-spring
- https://github.com/go2group/sampleapp1

Call to action
What next?

What do people want? Would anybody use this or like to know more?

Easy: Add the rest of the CF sample apps as quickstarts

Moderate: Add more quickstarts? Update over time? Org specific quickstarts?

Subjective: More toggles and config in the manifest?

Customize the new sample app repo more as part of spinning it off?