



HM Courts &
Tribunals Service

AKS migration workshop

Platform engineering team



Agenda



Morning 10-12pm

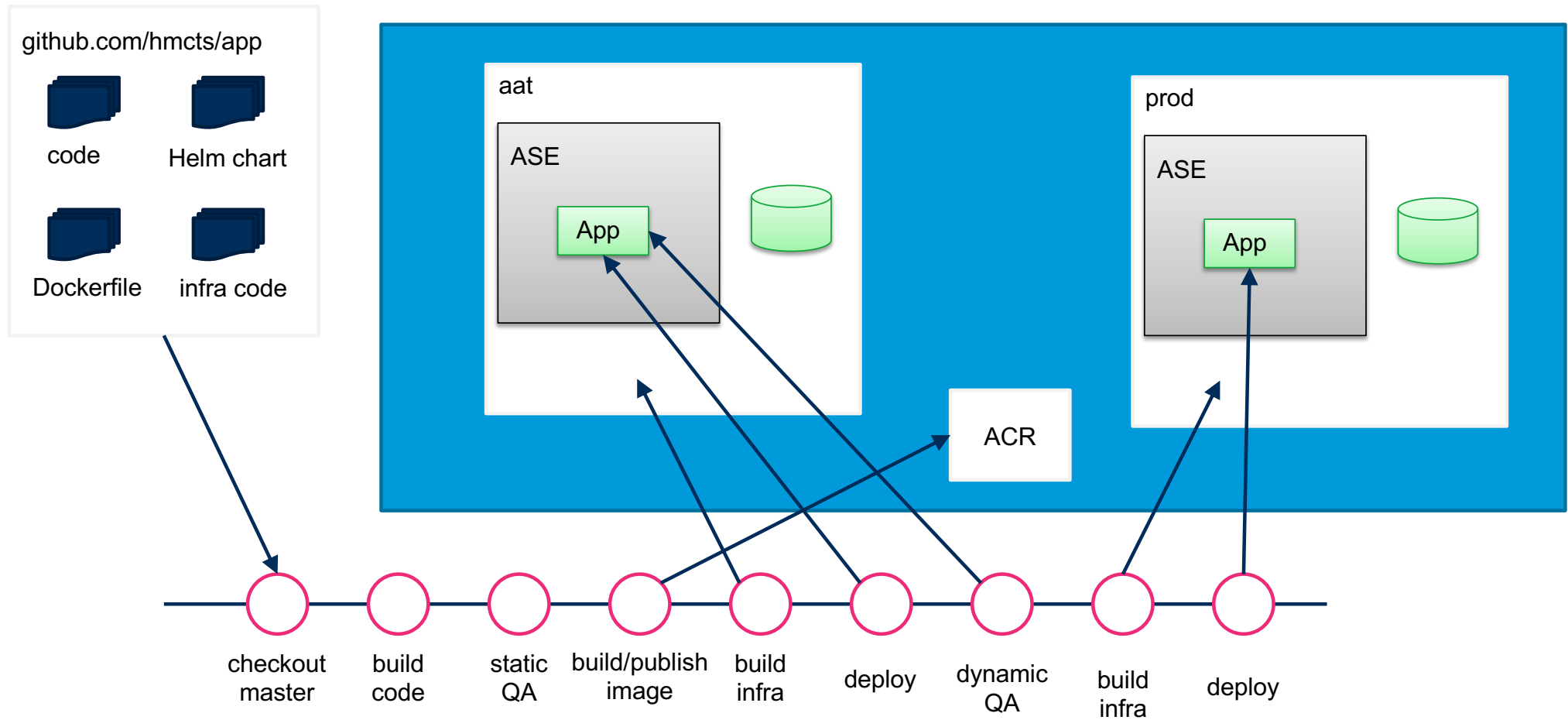
1. Ice-breaker (10min)
2. Set expectation and goal (5min)
3. Create MI (45min)
 - op-resource-groups
 - object id to module key-vault
4. Sanity check Helm charts (10min)
5. What is Flux/gitops (15min)
6. Enable AKS staging deployment (20min)
 - ensure values.aat.template.yaml

Lunch break 12-1pm

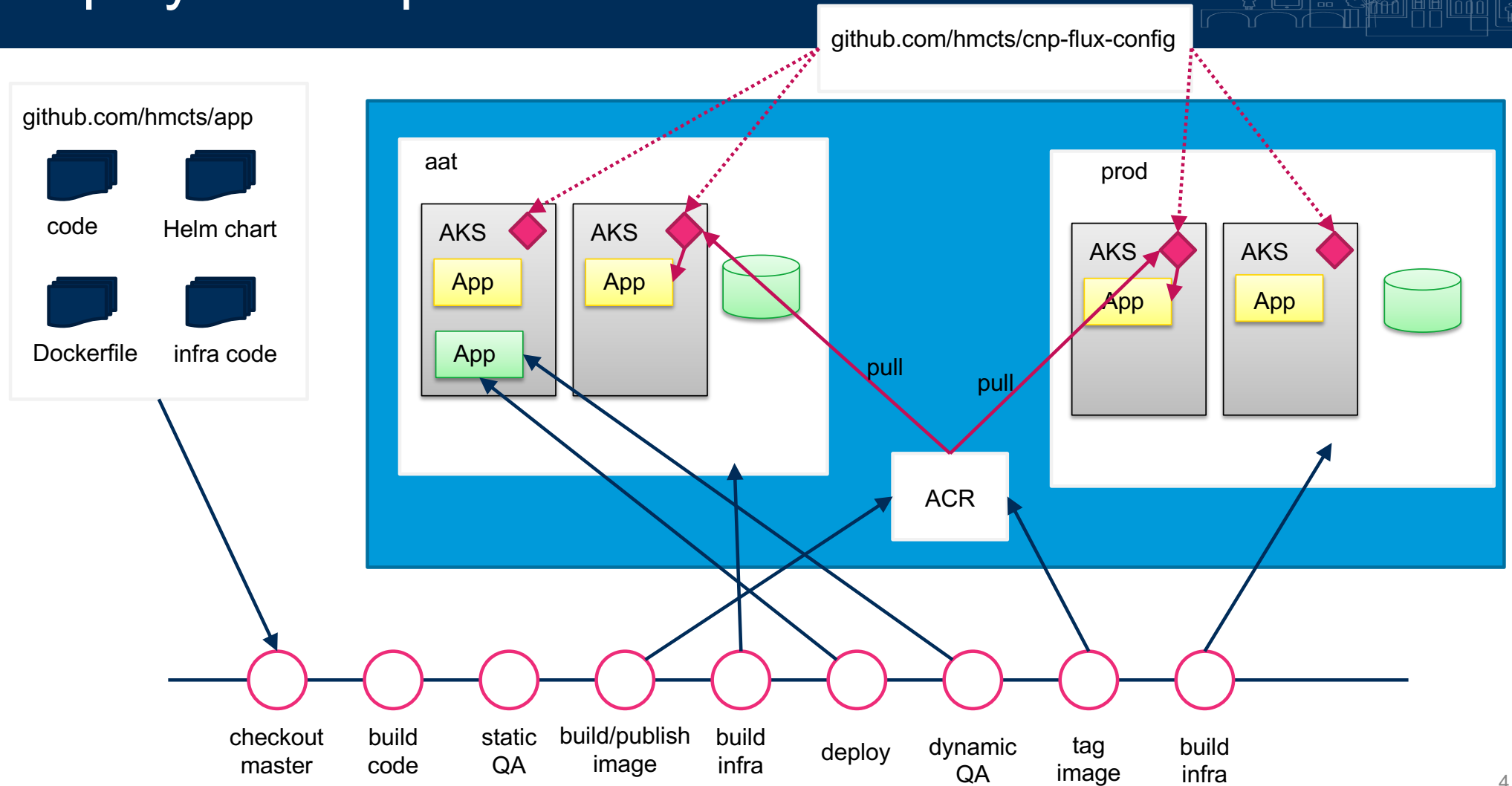
Afternoon 1-4pm

1. Flux config (60min)
 - MI + namespace
 - Helm release
2. Green build on master (75min)
 - Check AAT/Perftest is working
 - NeuVector: Check baseline CVEs and Demo
3. Post-session (15min)
 - how to get to prod
 - where to get help
 - questions

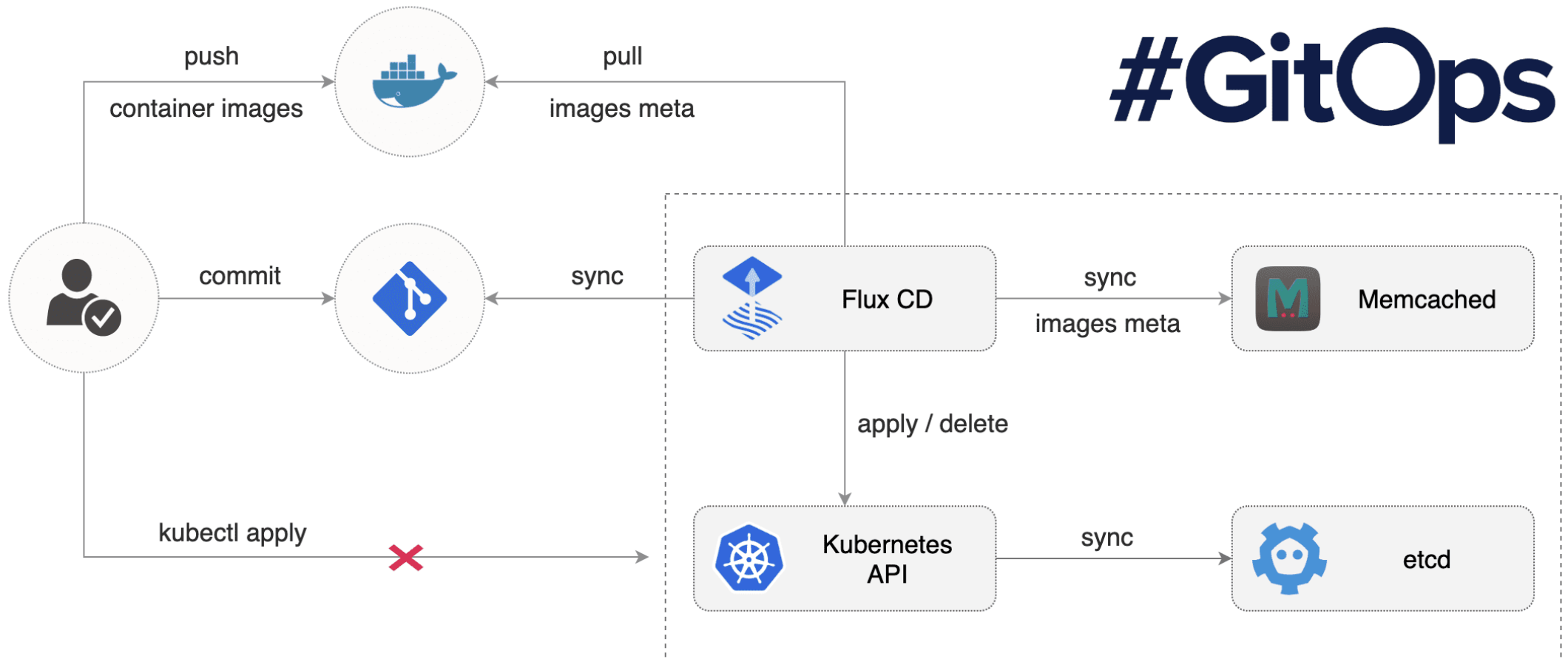
Deployment Pipeline - Current



Deployment Pipeline - AKS



#GitOps



GitOps



- no learning curve for new developers
 - just use git as normal
- self service
 - no dependency on central ops team
- audited
- built in quality gate with pull request review
- repeatable
- all releases defined in Git
 - environment re-build / DR extremely quick

Monitoring



aat-00-aks APP 2:15 PM

containers with unready status: [plum-recipe-backend-staging-java]

cnp/plum-recipe-backend-staging-java-7d54dd6746-l66zw: ContainersNotReady

containers with unready status: [plum-recipe-backend-staging-java]



aat-00-aks APP 2:35 PM

Pod is ready

cnp/plum-recipe-backend-staging-java-7d54dd6746-l66zw: Pod is ready

Pod is ready



aat-01-aks APP 10:39 AM

Applied flux changes to cluster

Event: Sync: bc322cc, <cluster>:namespace/cnp, admin:helmrelease/flux,
cnp:azureidentity/cnp

Commits:

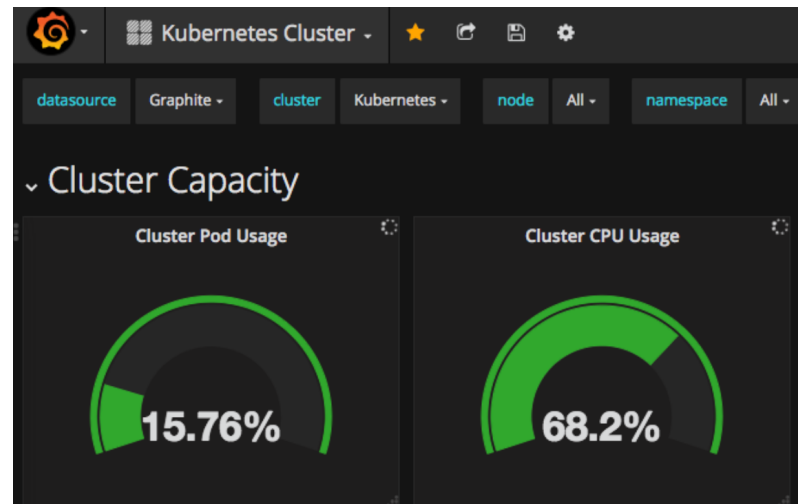
* **bc322cc**: Adding CNP MI (#292)

Resources updated:

* cnp:azureidentity/cnp

* <cluster>:namespace/cnp

* admin:helmrelease/flux



Flux / Helm definition



```
---
apiVersion: flux.weave.works/v1beta1
kind: HelmRelease
metadata:
  name: draft-store-service
  namespace: rpe
  annotations:
    flux.weave.works/automated: "true"
    flux.weave.works/tag.java: glob:prod-*
spec:
  releaseName: draft-store-service
  chart:
    repository: https://hmcts.azurecr.io/helm/v1/repo/
    name: draft-store-service
    version: 1.0.3
  values:
    java:
      image: hmcts.azurecr.io/hmcts/draft-store-service:prod-cda19f30
```

```
java:
  image: hmcts.azurecr.io/hmcts/draft-store-service:prod-cda19f30
  ingressHost: draft-store-service.service.core-compute-ithc.internal
  aadIdentityName: rpe
  environment:
    DRAFT_STORE_DB_CONN_OPTIONS: ?sslmode=require
    DRAFT_STORE_DB_HOST: rpe-draft-store-ithc.postgres.database.azure.com
    DRAFT_STORE_DB_NAME: draftstore
    DRAFT_STORE_DB_PORT: '5432'
    DRAFT_STORE_DB_USER_NAME: draftstore@rpe-draft-store-ithc
    RUN_DB_MIGRATION_ON_STARTUP: 'false'
    IDAM_URL: https://idam-api.ithc.platform.hmcts.net
    S2S_URL: http://rpe-service-auth-provider-ithc.service.core-compute-ithc.internal
    SPRING_APPLICATION_NAME: "HMCTS Draft Store AKS"
  keyVaults:
    "draft-store":
      resourceGroup: draft-store-service
      secrets:
        - service-POSTGRES-PASS
```


Random things to know



- AKS will run in separate Azure subscription to other infrastructure
- Application config in separate repo (cnp-flux-config)
- Potential minor changes to microservice Helm charts
- Multiple clusters running in each environment (currently same region)
- ASE staging slot functionality replicated for AAT
- Access to clusters is read-only