DevOps Working Group

Thursday November 21, 2019

Agenda

Time	Topic	Owner
15 Min	DevOps Updates	Emilio
5 Min	Backlog Review (Kanban Board / Issues)	All
20 Min	Fuji Retrospective	All
10 Min	Opens	

Attendees

DevOps WG Update

- **Geneva**

- Recap of the Jenkins Transformation to Pipelines Training - Thank you Ernesto!

- Fuji Release finalized by Lisa / EdgeX Foundry Release Czar - Thank you Lisa!
  - Status of push of public Docker Hub images
  - Clair scan post Fuji completed (against images in nexus staging)
    - https://jenkins.edgexfoundry.org/sandbox/view/All/job/fuji-clair-audit-scan/lastSuccessfulBuild/artifact/clair-reports/

- Configure Snyk with the latest tagged public Docker Hub images WIP (James)

- CommunityBridge - Advanced Snyk Reporting
  - New Contact from LF identified with James to follow up

DevOps WG Update

- Nexus Upgrade to address build issues and new GOPROXY cache functionality to address Go Module dependency caching
    - Based off this documentation, we would like to setup a new Go repository for Go modules: https://help.sonatype.com/repomanager3/formats/go-repositories
    - We hope this addresses ARM build failures

- PR Templates for ci-management
    - Example: https://github.com/edgexfoundry/sample-service/blob/master/.github/pull_request_template.md

```
# Type of change? <!-- [x] all the boxes that apply -->

- [ ] Bug fix
- [ ] New feature
- [ ] Enhancement
- [ ] Breaking change (breaks backward compatibility)

# Description, Context, Motivation <!-- Please help us reviewing your PR -->


...


**Checklist:**


- [ ] The code follows the code style and conventions of this project
- [ ] The change requires a change to the documentation
- [ ] I have updated the documentation accordingly
```

DevOps WG Update

- Git commit message enforcement.
    - Coming out of the EdgeX Geneva F2F, DevOps agreed to take on a SPIKE to look at tooling / automation that would be helpful for the project in terms of Commit Messages (enforce standard format that aligns to conventional commit standard or agreed upon format as per EdgeX written guidance)
    - 3 examples:
        - https://itnext.io/enforcing-commit-templates-8cf3dbfe2510
            - Example of pre-commit bash scripts.
        - https://git-scm.com/book/en/v2/Customizing-Git-An-Example-Git-Enforced-Policy
            - Examples of client-side and server-side ruby scripts
        - https://dev.to/prahladyeri/how-to-enforce-conventional-commit-messages-using-git-hooks-2bmk
            - Pre-commit custom python script placed in the .git/hooks directory and committed to the repo

EdgeX Foundry Project

🔒 DevOps WG
Updated 2 hours ago

Filter cards

4 Icebox ＋ ⋯

Snap builds should use unbuffer for better output logging
ci-management#369 opened by anonymouse64

edgeXSemver leaves command to caller but doesn't allow specifying the version/image to use
edgex-global-pipelines#15 opened by dweomer
`bug`

Update snapcraft inside docker to use new setup from snapcraft
ci-management#449 opened by anonymouse64
`enhancement`
⚑ Geneva

Make stage-snap jobs more smart about pushing metadata
ci-management#475 opened by anonymouse64
`enhancement`
⚑ Geneva

6 New Issues ＋ ⋯

New build automation for device-bluetooth-c
ci-management#470 opened by jamesrgregg
`blocked` `enhancement` `geneva`

New build automation for device-opcua-c
ci-management#481 opened by jamesrgregg
`blocked` `enhancement` `geneva`

New build automation needed for device-gps service
ci-management#446 opened by jamesrgregg
`blocked` `enhancement` `geneva`

Create a pipeline job that will run the tests for edgex-global-pipelines
edgex-global-pipelines#58 opened by lranjbar
`geneva` `phase 1`

Write unit tests for edgex-global-pipelines
edgex-global-pipelines#57 opened by lranjbar
`geneva` `phase 1`

Set up codecov for edgex-global-pipelines
edgex-global-pipelines#56 opened by lranjbar
`geneva` `phase 1`

24 Release Backlog ＋ ⋯

SPIKE - Identify a tool / plugin (bot) to check PR / Issue status
edgex-global-pipelines#62 opened by jamesrgregg
`geneva` `spike`

SPIKE - Identify a tool / plugin to enforce use of "conventional commit" messages
edgex-global-pipelines#61 opened by jamesrgregg
`geneva` `spike`

Build Automation for Open Horizons
edgex-global-pipelines#63 opened by jamesrgregg
`enhancement` `geneva`

SPIKE: How will we do Unit Testing of Pipeline code.
edgex-global-pipelines#41 opened by jamesrgregg
`enhancement` `geneva` `phase 1`
⚑ Geneva

SPIKE: How will we automate full delivery (release management) of a Jenkins Pipeline
edgex-global-pipelines#42 opened by jamesrgregg
`enhancement` `geneva` `phase 1`
⚑ Geneva

Validate and fix any incompatibilities with the Github branch source plugin
ci-build-images#79 opened by lranjbar
`geneva` `phase 1`

Update edgeXInfraShipLogs() PR detection
edgex-global-pipelines#48 opened by lranjbar
`geneva` `phase 1`

2 In Progress ＋ ⋯

Github Org/Branch source plugin configuration
ci-management#491 opened by lranjbar
`geneva` `phase 1`
🔥 Fuji

Root cause analysis of the ARM failures for blackbox-testing - Infrastructure failures
ci-management#520 opened by lranjbar
`blocked`

2 QA/Code Review ＋ ⋯

New build automation for device-bacnet-c
ci-management#451 opened by jamesrgregg
`enhancement` `fuji`
🔥 Fuji

New global pipelines for GoLang and Docker builds
2 of 2
edgex-global-pipelines#60 opened by ernestojeda
`enhancement` `geneva`
👁 Changes approved

63 Done ＋ ⋯

Update VERSION to master for Nexus images
edgex-go#2153 opened by lranjbar
`geneva`
👁 Changes approved

Update docker tag to match branch name
docker-edgex-consul#11 opened by lranjbar
`fuji` `geneva`
👁 Changes approved

Update Postman image for ARM CI (Fuji)
blackbox-testing#329 opened by lranjbar
`bug` `fuji`

Rename newman image in Nexus 3
ci-build-images#82 opened by lranjbar
`bug` `fuji`
👁 Changes approved

Delete repo - jenkins_pipeline_presentation (FUJI)
edgex-global-pipelines#32 opened by jamesrgregg

JJB template for regression test
ci-management#461 opened by vishwassp-hcl-intel
`hold`
👁 Changes requested

Add JJB for device-bacnet-c
ci-management#497 opened by jamesrgregg
`blocked` `hold`

Automated as To do — Manage
Automated as In progress — Manage
Automated as Done — Manage

Fuji Retrospective

https://github.com/orgs/edgexfoundry/projects/33

Meeting Minutes

Jim - DevOps triage to root cause ARM build failures occurring in blackbox-testing. The Test QA/Security team to provide DevOps team with a repeatable process to reproduce the errors. We decided to put DevOps troubleshooting task (owned by Vishwas) on hold until they provide us with the process.

Eric – Add GOPROXY environment variable, set value to the Nexus3 repo. Eric has been testing this successfully. Essentially, what needs to be done is to add the environment variable into the respective Go jobs. Eric will submit PR to ci-management.
GOPROXY=https://nexus3.edgexfoundry.org/repository/go-proxy/

Mike – PR Template topic is a current agenda item in the Architecture WG. Mike is working with James to formalize the core set of template items across all services (repos). Discussion item is on Architecture WG sometime in December (per Jim). AR – to send Jim reminder to include 'Git commit message enforcement' as part of the 'PR Template' agenda item in the Architecture WG.

Geneva Planning

Scope Discussions

Geneva – DevOps

In

- Full Pipeline transformation for EdgeX services
  - Convert Jenkins JJB Freestyle jobs to Jenkins Pipelines
- Introduce GitHub Org Plugin
- Simplified Jenkinsfile
- Global Libraries to support Jenkins Pipeline transformation
- Add Unit testing to global-libraries (uncommitted) **
- Snyk integration for edgex services
  - As part of Jenkins Pipeline conversion
- Slack integration with Jenkins pipelines (stretch goal)
- Nexus Cleanup / Lifecycle Policy

Out

- Alternate deployment/orchestration
  - Beyond Docker/Snaps
  - Kubernetes
  - Kata Containers
  - …
- Integration Test Pipelines
- Code signing / Artifact signing **
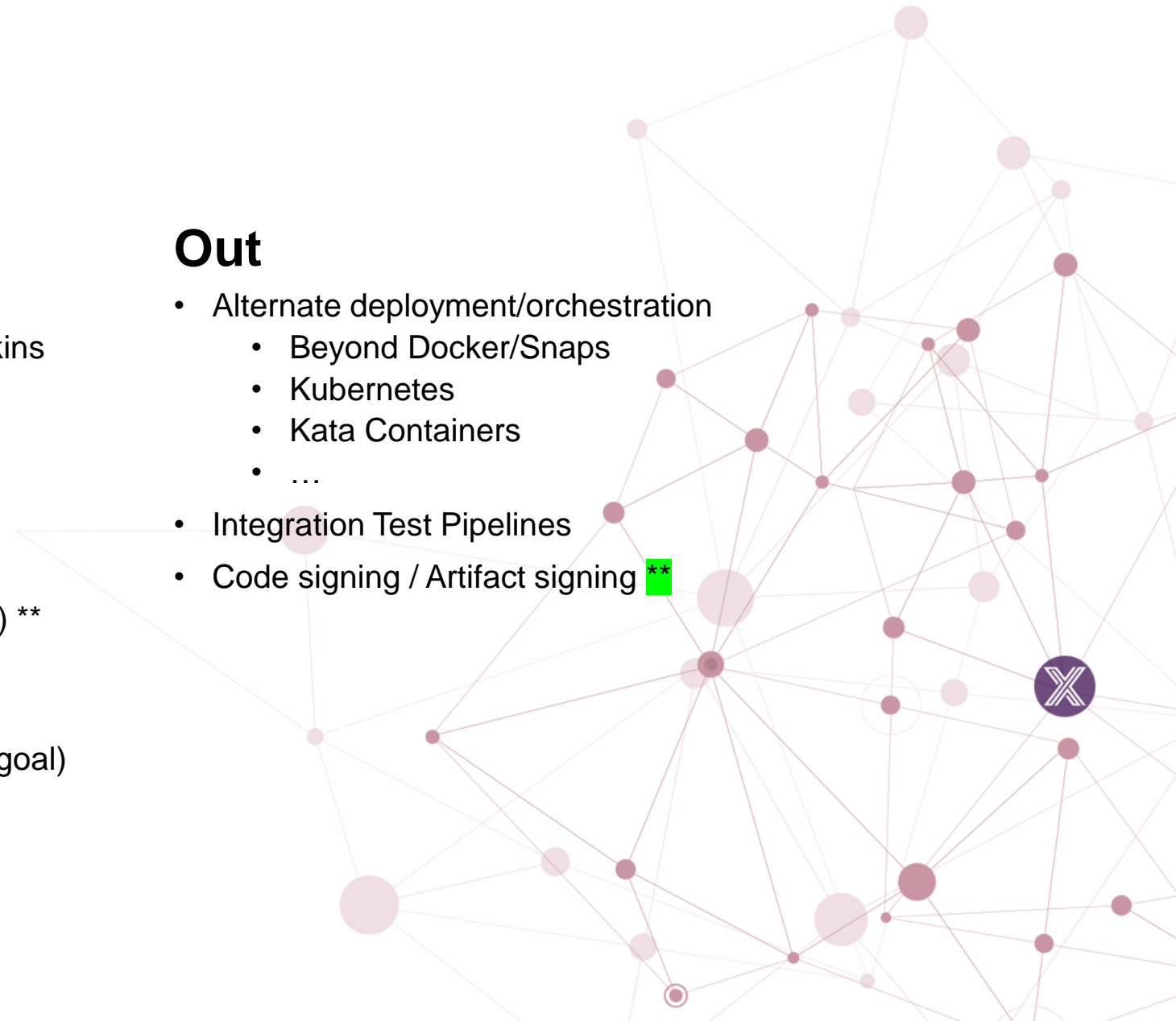
Geneva Transformation: Architecture
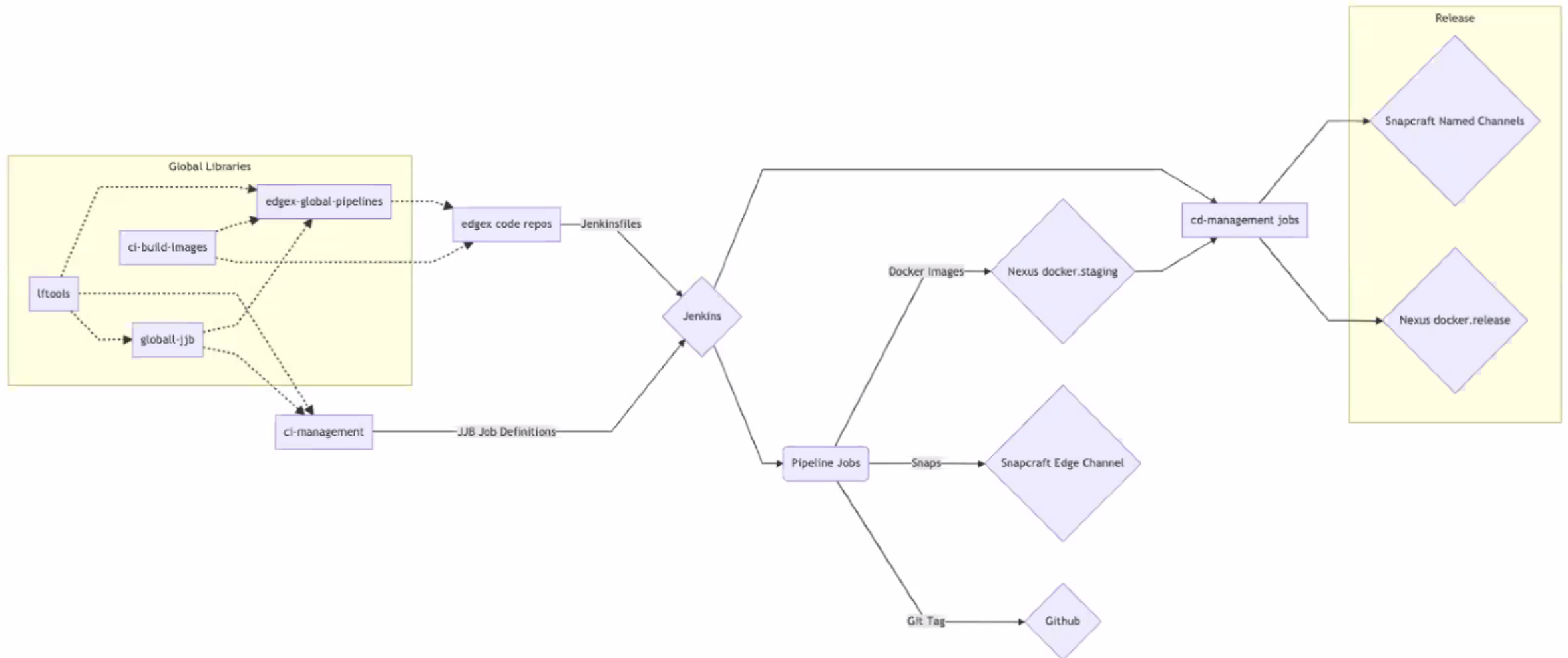
How long does it take? Is this all Geneva scope?

Geneva Transformation

Phase 1	Phase 2	Phase 3
• Research Spikes • Plugin Setup and Configuration • Jenkinsfile • Jenkinsfile.sandbox	• Jenkinsfile templates • Implementation details get solidified • Refactor existing pipelines to use new templates	• Existing Job Migration

Phase 1
Work in Progress
Q3 2019

Full Transformation by Geneva Release - April 2020

Fuji Planning

Scope Discussions

edgexfoundry.org | @edgexfoundry

Fuji Release

- Freeze: Oct 23rd (Wednesday)
- Release: Nov 15th (Friday)

Start Date: 10/23/19 (with extension)

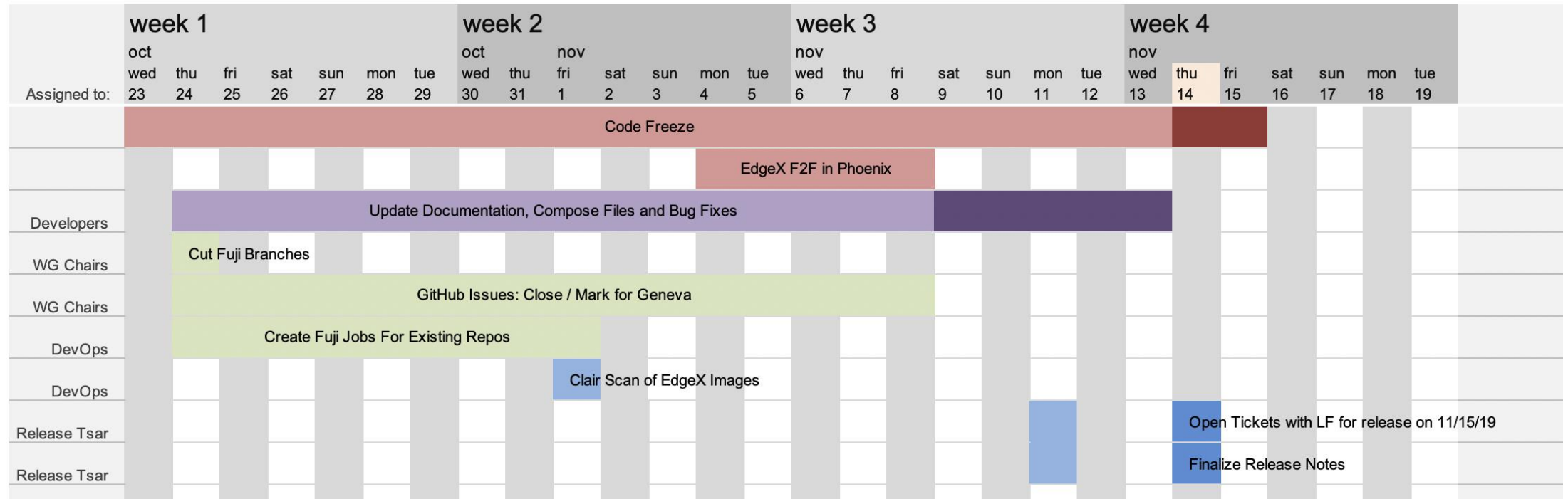| Assigned to:	week 1 oct wed 23	thu 24	fri 25	sat 26	sun 27	mon 28	tue 29	week 2 oct wed 30	thu 31	nov fri 1	sat 2	sun 3	mon 4	tue 5	week 3 nov wed 6	thu 7	fri 8	sat 9	sun 10	mon 11	tue 12	week 4 nov wed 13	thu 14	fri 15	sat 16	sun 17	mon 18	tue 19
	Code Freeze																											
															EdgeX F2F in Phoenix													
Developers	Update Documentation, Compose Files and Bug Fixes																											
WG Chairs	Cut Fuji Branches																											
WG Chairs	GitHub Issues: Close / Mark for Geneva																											
DevOps	Create Fuji Jobs For Existing Repos																											
DevOps									Clair Scan of EdgeX Images																		
Release Tsar																							Open Tickets with LF for release on 11/15/19					
Release Tsar																							Finalize Release Notes					

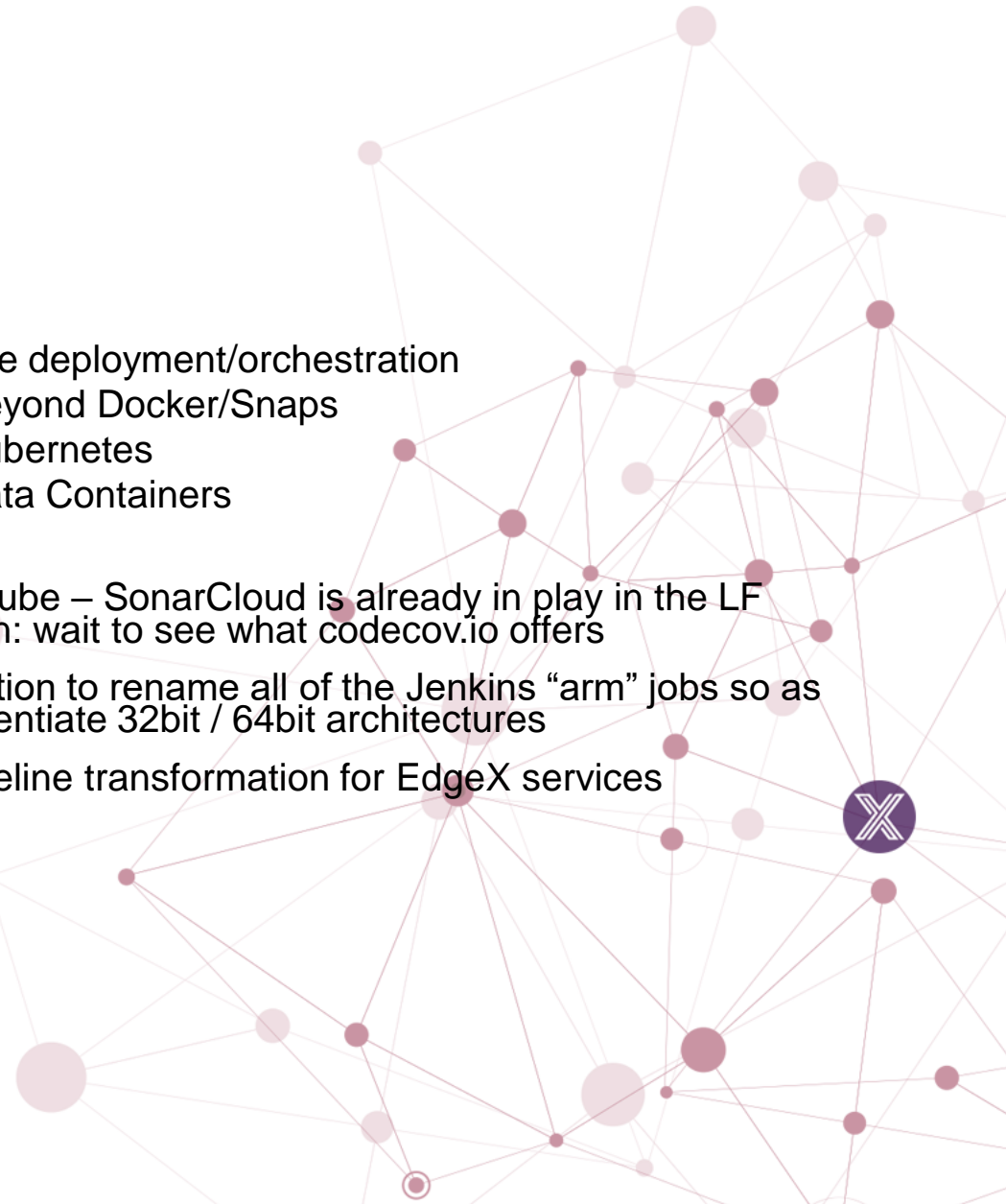edgexfoundry.org | @edgexfoundry

Fuji – DevOps

In

- Static code analysis tool identified and integrated into the EdgeX Jenkins Pipeline for Docker image scanning (Clair Server)

Explore SAST for true static code analysis to include additional tooling such as Fortify / Coverity

- Code and artifact signing with semantic versioning
- Fix Documentation – edgex-go
  - Create a new repo for edgex-docs
- Build Performance Optimizations
  - Pipelines for EdgeX Foundry base build images
  - Basebuild images managed locally within Nexus
  - Leverage PyPi Proxy for local pip dependencies
  - ARM builds – optimization leveraging different high CPU build nodes / OS (ARM Team)

Out

- Alternate deployment/orchestration
  - Beyond Docker/Snaps
  - Kubernetes
  - Kata Containers
  - …
- SonarQube – SonarCloud is already in play in the LF Decision: wait to see what codecov.io offers
- Suggestion to rename all of the Jenkins "arm" jobs so as to differentiate 32bit / 64bit architectures
- Full Pipeline transformation for EdgeX services

EDGE X FOUNDRY™

EdgeX DevOps Commitments (Fuji)

Scope of Work	
Add static artifact analysis into the EdgeX Jenkins Pipeline (analysis of Docker /runtime artifacts, not the source code)	🚦 (green)
Add code and artifact signing with semantic versioning	🚦 (green)
Conduct build performance optimizations by: • Adding Pipelines for EdgeX Foundry base build images • Allow base build images to be managed locally within Nexus • Leverage PyPi Proxy for local pip dependencies	🚦 (green)
Explore static code analysis like Checkmarx, Coverity, GuardRails, Synk, SonarQube	🚦 (yellow)

- Clair Server landing no longer at risk for Fuji
  - LF committed to implement on AWS and fund with expected completion next week
- gitsemver along with lftools used for artifact signing and semantic versioning
- Jenkins build performance optimizations for base build images completed
- All base build images will now be stored in Nexus (Snapshot):10003
- PyPi enabled as part of Edinburgh scope
- Initial review of GuardRails showed that the product was identifying issues which were not applicable for microservices architecture

Past / Future Agenda Topics

WW36	
WW37	