



EDGE X FOUNDRY™

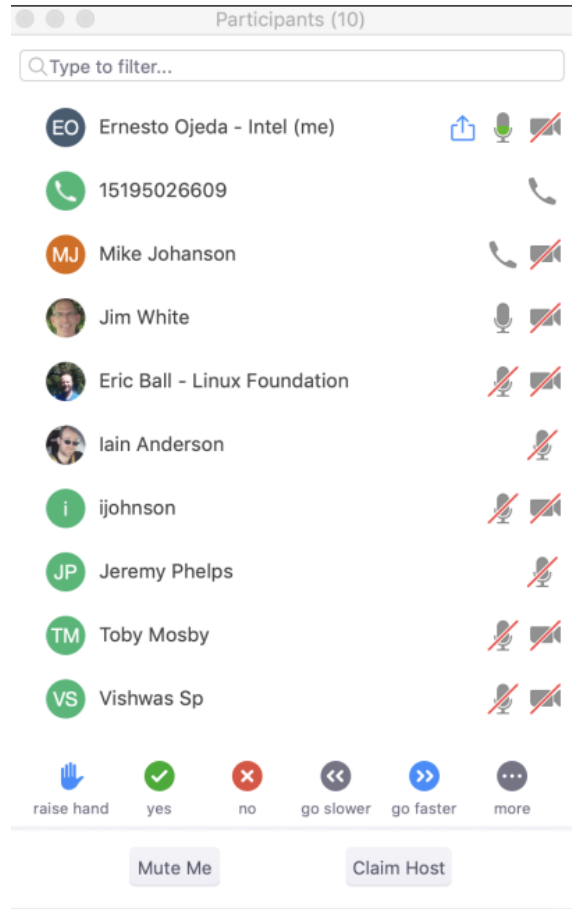
# DevOps Working Group

Thursday October 24, 2019

# Agenda

| Time   | Topic                                 | Owner   |
|--------|---------------------------------------|---------|
| 10 Min | DevOps WG Update (Fuji)               | Ernesto |
| 10 Min | Release Update / Code Freeze 10/23/19 | Lisa    |
| 10 Min | Snap issues                           | Ian     |
| 10 Min | Opens                                 |         |

# Attendees



A screenshot of a Zoom meeting interface showing a list of 10 participants. The window title is "Participants (10)". At the top is a search bar with the placeholder text "Type to filter...". Below the search bar is a list of participants, each with a profile picture, name, and status icons for video and audio. At the bottom of the list are several control icons: a hand for "raise hand", a green checkmark for "yes", a red X for "no", a double left arrow for "go slower", a double right arrow for "go faster", and a three-dot menu for "more". Below these icons are two buttons: "Mute Me" and "Claim Host".

| Name                         | Video | Audio |
|------------------------------|-------|-------|
| Ernesto Ojeda - Intel (me)   | On    | Off   |
| 15195026609                  | Off   | Off   |
| Mike Johanson                | Off   | Off   |
| Jim White                    | Off   | Off   |
| Eric Ball - Linux Foundation | Off   | Off   |
| Iain Anderson                | Off   | Off   |
| ijohnson                     | Off   | Off   |
| Jeremy Phelps                | Off   | Off   |
| Toby Mosby                   | Off   | Off   |
| Vishwas Sp                   | Off   | Off   |



# DevOps WG Update

## Code Freeze Status

TSC approved adding DevOps Core team members to all EdgeX Foundry repos – new [committers team](#)

## Advanced Snyk Reporting

Referral to Community Bridge Product Owner – Jacob Palmer  
Vulnerability Detection for all of the EdgeX repos

Reference: <https://jira.linuxfoundation.org/projects/SUPPORT/queues/custom/50/SUPPORT-648>

## Issues to Address

- Missing settings files on docker-edgex-consul and device-camera-go
  - There seems to be a process being ignored where LF is not setting up the settings in Jenkins when code is moved out of holding.
- Adding .dockerignore which excludes .git/ breaks snap builds
- Broken blackboxtests

# Backlog Review

EdgeX Foundry Project

Repositories 95 Packages People 66 Teams 96 Projects 11

DevOps WG Updated 1 hour ago

Filter cards

21 New Issues

- Swagger from Code new build automation  
ci-management#499 opened by Jamesgregg  
geneva phase 3
- Migrate docker-edgex-volume to pipeline jobs  
ci-management#490 opened by Iranjbar  
geneva phase 3
- Migrate device-virtual-go to pipeline jobs  
ci-management#489 opened by Iranjbar  
geneva phase 3
- Migrate device-grove-c to pipeline jobs  
ci-management#488 opened by Iranjbar  
geneva phase 3
- Migrate device-random to pipeline jobs  
ci-management#487 opened by Iranjbar  
geneva phase 3
- Migrate device-mqtt-go to pipeline jobs  
ci-management#486 opened by Iranjbar  
geneva phase 3
- Migrate device-modbus-go to pipeline jobs  
ci-management#485 opened by Iranjbar  
geneva phase 3

Automated as To do Manage

4 Release Backlog

- Delete repo - jenkins\_pipeline\_presentation (FUJI)  
edgex-global-pipelines#32 opened by Jamesgregg
- New build automation for device-bluetooth-c  
ci-management#470 opened by Jamesgregg  
blocked enhancement fuji
- New build automation needed for device-gps service  
ci-management#446 opened by Jamesgregg  
blocked enhancement fuji
- New build automation for device-opcu-c  
ci-management#481 opened by Jamesgregg  
blocked enhancement fuji

1 In Progress

- Github Org/Branch source plugin configuration  
ci-management#491 opened by Iranjbar  
geneva phase 1

6 QA/Code Review

- New build automation for device-camera-go  
ci-management#482 opened by Jamesgregg  
enhancement fuji
- JJB template for regression test  
ci-management#461 opened by vishwassp-hcl-intel  
hold
- New global pipelines for GoLang and Docker builds  
edgex-global-pipelines#60 opened by ernestoleda  
enhancement geneva
- Add JJB for device-bacnet-c  
ci-management#497 opened by Jamesgregg  
blocked hold
- New build automation for device-bacnet-c  
ci-management#451 opened by Jamesgregg  
enhancement fuji

Automated as In progress Manage

50 Done

- Add JJB template for docker-edgex-consul  
ci-management#501 opened by Jamesgregg  
enhancement fuji
- Add PR template for demo  
sample-service#16 opened by Jamesgregg  
good first issue
- Add Pull Request Template  
sample-service#17 opened by Jamesgregg  
good first issue
- Security WG reports issues with Sonar re:\*\*\*  
Duplicated Code. Help Needed to configure the profile to exclude based on patterns.  
<https://community.sonarsource.com/t/cde-duplication-increased-from-6-6-to-32-in-days-via-new-pr/14785/4>  
Added by Jamesgregg
- Nightly docker image docker-edgex-vault of version 1.1.0 not found  
ci-management#496 opened by jim-wang-intel  
bug fuji
- Fix #496 Bug where docker-edgex-

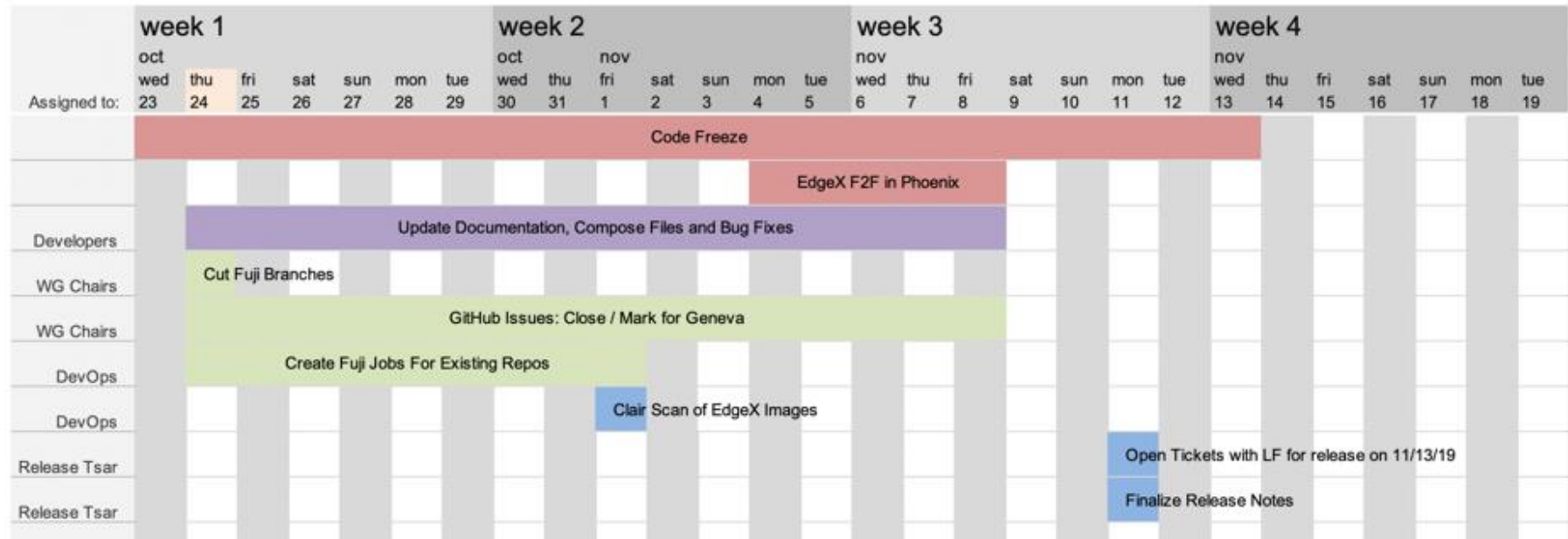
Automated as Done Manage

# Fuji Release

- Freeze: Oct 23rd (Wednesday)
- Release: Nov 13th (Wednesday)

## Fuji Release

Start Date: 10/23/19



# Fuji Release Plan – Next Steps

## Fuji Release Next Steps

- Wait for Michael Estrin and Tingyu to finish fixing bugs with blackbox-tests
  - Create the list of repos that will be branching
  - Update JJB to add Fuji branches in Jenkins
  - Create branches in repos
  - Update the VERSION files (freestyle jobs) and semver for the master branch
  - Validate we have all the docker images built and staged in the Nexus
- 
- Hold a working meeting Friday, Oct 25<sup>th</sup>, morning too divide up the work

# Meeting Minutes

- blackbox-testing security issue still in progress. may potentially delay the release by a few days. Jim White said he will keep Lisa apprised.
- device-camera-go is having issues with missing settings files and we are opening tickets.
- Ian Johnson snap issue... Looking for ideas to inform developers if there will be issues building the snaps. This is tricky because in order to know if there is an issue, he needs the whole snap job to run which can take over an hour. This is not the optimal solution. Someone suggested building snaps on all commits to master. Mike J suggested offline, increasing the number of times the daily snap job cron runs and then we would have a better idea as to when the span job fails throughout the day. JP mentioned a separation of code test/build and packaging and deploying. Long and short of it, Ian will create an issue in the backlog for DevOps to come up with a creative solution potentially with pipelines.





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# Geneva Planning

Scope Discussions

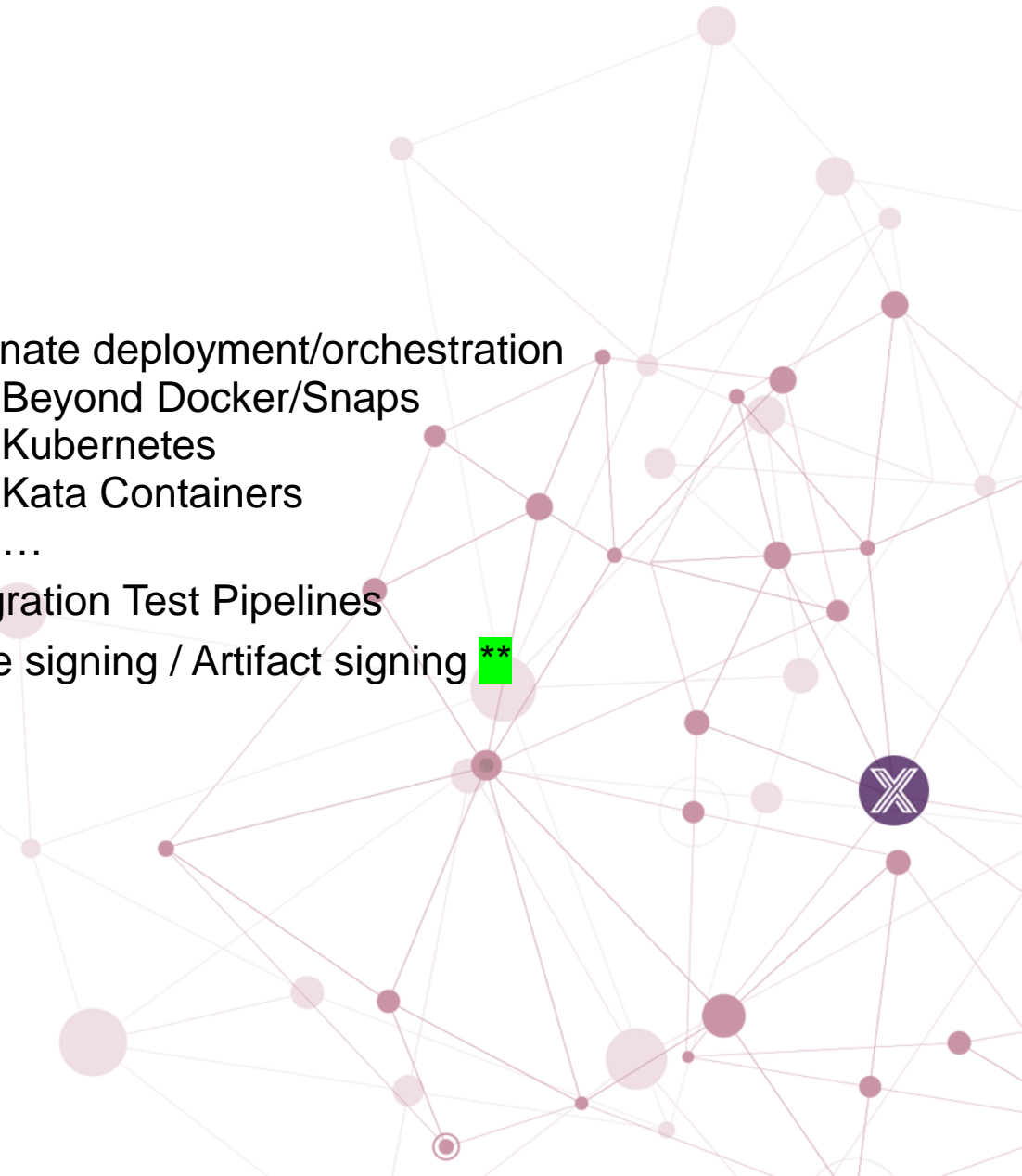
# Geneva – DevOps

## In

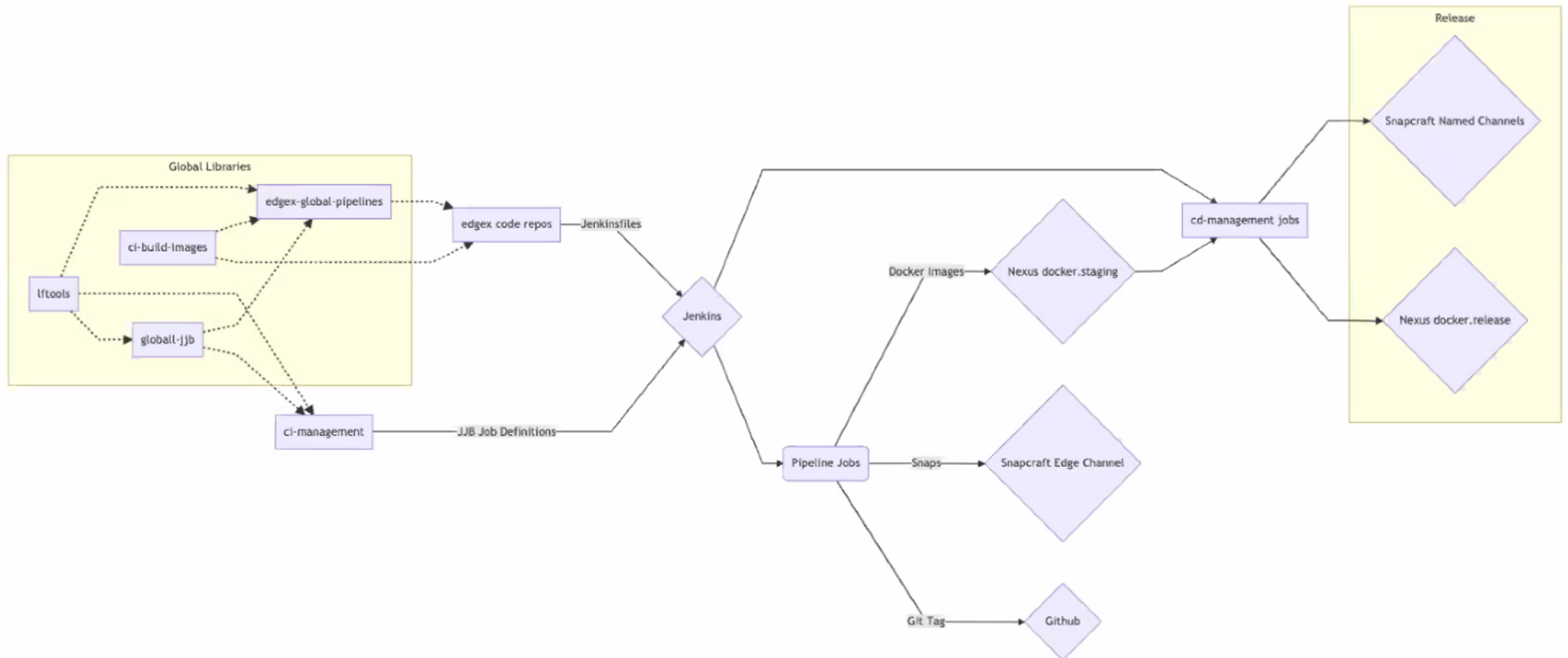
- Full Pipeline transformation for EdgeX services
  - Convert Jenkins JJB Freestyle jobs to Jenkins Pipelines
- Introduce GitHub Org Plugin
- Simplified Jenkinsfile
- Global Libraries to support Jenkins Pipeline transformation
- Add Unit testing to global-libraries (uncommitted) \*\*
- Snyk integration for edgex services
  - As part of Jenkins Pipeline conversion
- Slack integration with Jenkins pipelines
- 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  
Work in Progress  
Q3 2019

### Phase 1

- Research Spikes
- Plugin Setup and Configuration
  - Jenkinsfile
  - Jenkinsfile.sandbox

### Phase 2

- Jenkinsfile templates
- Implementation details get solidified
- Refactor existing pipelines to use new templates

### Phase 3

- Existing Job Migration

Full Transformation by Geneva Release - April 2020



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# Fuji Planning

Scope Discussions

# Fuji – DevOps

## In

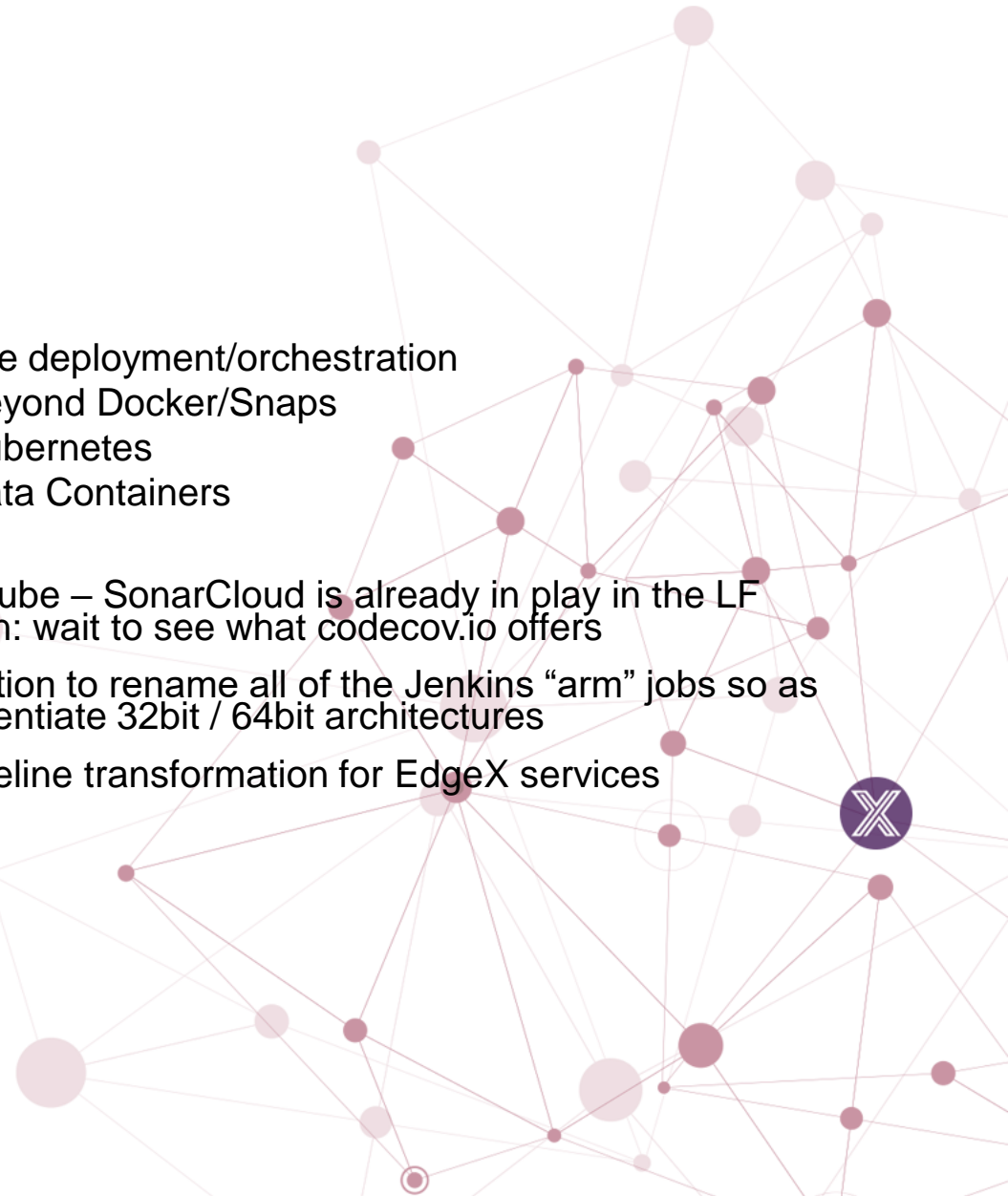
- Static code analysis tool identified and integrated into the EdgeX Jenkins Pipeline for Docker image scanning (Clair Server)

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



# 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)  |    |
| Add code and artifact signing with semantic versioning   |    |
| Conduct build performance optimizations by: <ul style="list-style-type: none"> <li>• Adding Pipelines for EdgeX Foundry base build images</li> <li>• Allow base build images to be managed locally within Nexus</li> <li>• Leverage PyPi Proxy for local pip dependencies</li> </ul> |    |
| Explore static code analysis like Checkmarx, Coverity, GuardRails, Synk, SonarQube   |  |
|  |   |

- 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



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