



EDGE X FOUNDRY™

DevOps Working Group

Thursday October 31, 2019
























Agenda

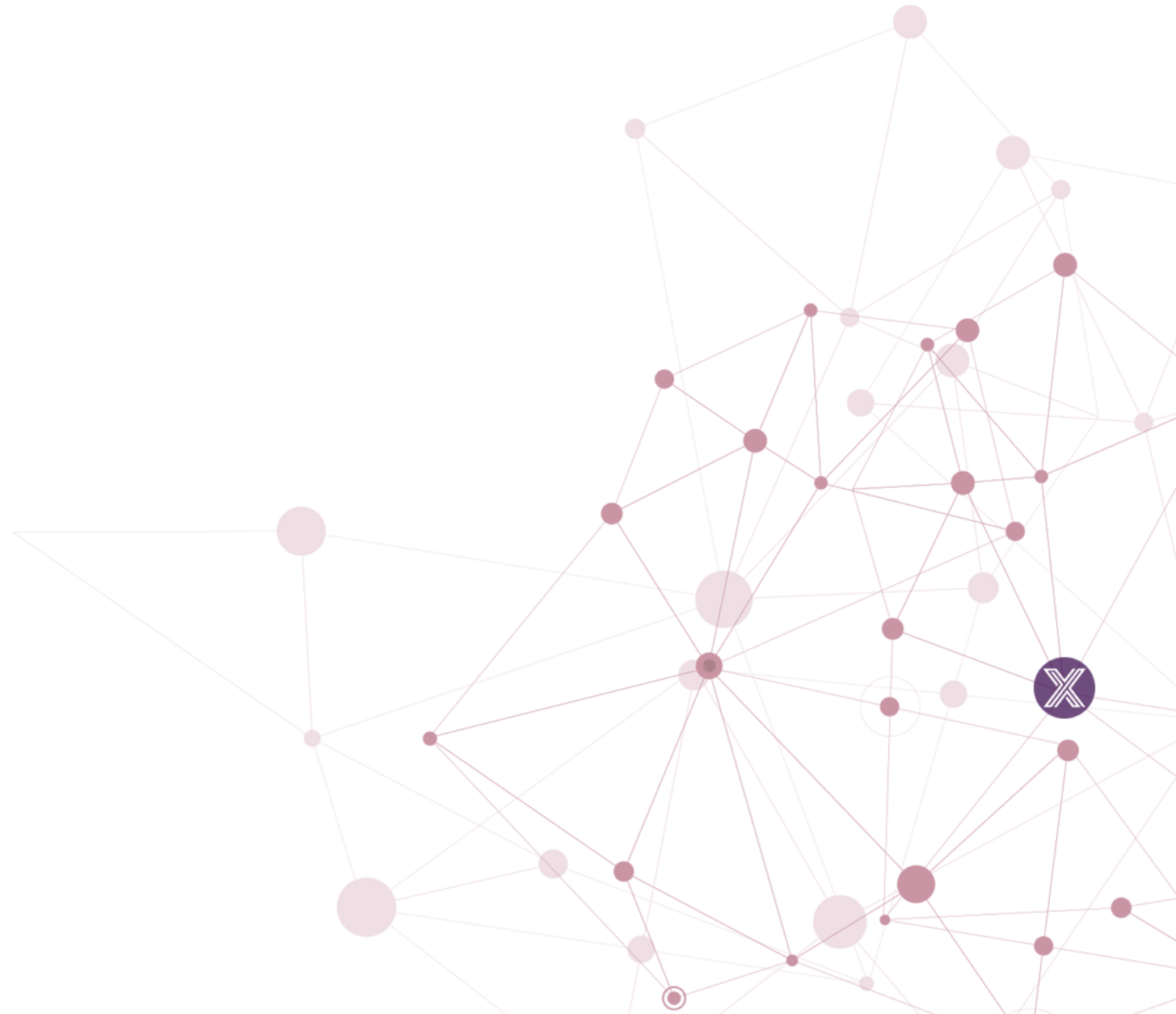
Time	Topic	Owner
10 Min	DevOps WG Update (Fuji)	James
10 Min	Release Update / Code Freeze / Release Plan	Lisa
10 Min	Snap issues – continued discussion (Geneva scope)	James
10 Min	Opens	

Attendees

Participants (11)

Find a participant

JG	James Gregg (Intel) (Me)	  
LR	Lisa Rashidi-Ranjbar	 
CH	Colin Hutchinson	 
ER	Emilio Reyes (Intel)	 
	Eric Ball - Linux Foundation	 
EO	Ernesto Ojeda - Intel	 
LG	Lenny Goodell (Intel)	 
M	Mike (Intel)	 
VS	Vishwas Sp	 
W	Walt (Intel)	 
ER	Emilio Reyes (Intel)	



DevOps WG Update

- **Code Freeze / Prep for Fuji Release**

- updated JJB templates
- created Fuji branch where needed
 - need to set branch protections on Fuji branch - DONE
- created new view to show status on Fuji stage builds
- created tracker to assess manual scope of work that requires additional automation

- **Geneva F2F Training Prep - Jenkins Transformation to Pipelines**

- **CommunityBridge - Advanced Snyk Reporting** - No Update

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>

Need to remove the edgex-go listing from Community Bridge because it's not configured the way we would want it.

Backlog Review

EdgeX Foundry Project

Repositories 95 Packages People 67 Teams 96 Projects 11

DevOps WG Updated 3 hours ago

Filter card

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 iranibar
geneva phase 3
- Migrate device-virtual-go to pipeline jobs
ci-management#489 opened by iranibar
geneva phase 3
- Migrate device-grove-c to pipeline jobs
ci-management#488 opened by iranibar
geneva phase 3
- Migrate device-random to pipeline jobs
ci-management#487 opened by iranibar
geneva phase 3
- Migrate device-mqtt-go to pipeline jobs
ci-management#486 opened by iranibar
geneva phase 3
- Migrate device-modbus-go to pipeline jobs
ci-management#485 opened by iranibar
geneva phase 3
- Migrate edgex-go to pipeline jobs

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-a-c
ci-management#481 opened by jamesgregg
blocked enhancement fuji

1 In Progress

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

3 QA/Code Review

- JJB template for regression test
ci-management#461 opened by vishwasp-hcl-intel
hold
- New build automation for device-bacnet-c
ci-management#451 opened by jamesgregg
enhancement fuji
- New global pipelines for GoLang and Docker builds
2 of 2
edgex-global-pipelines#60 opened by ernestoeda
enhancement geneva

Automated as In progress Manage

57 Done

- Add JJB for de
ci-management
blocked hold
- Review required
- Update JJBs fo
ci-management
fuji
- Changes approve
- Update JJB for blackbox-tests
ci-management
fuji
- Review required
- Update JJB ter
ci-management
jamesgregg
fuji
- Changes approve
- New aut camera-go
ci-management
enhancement

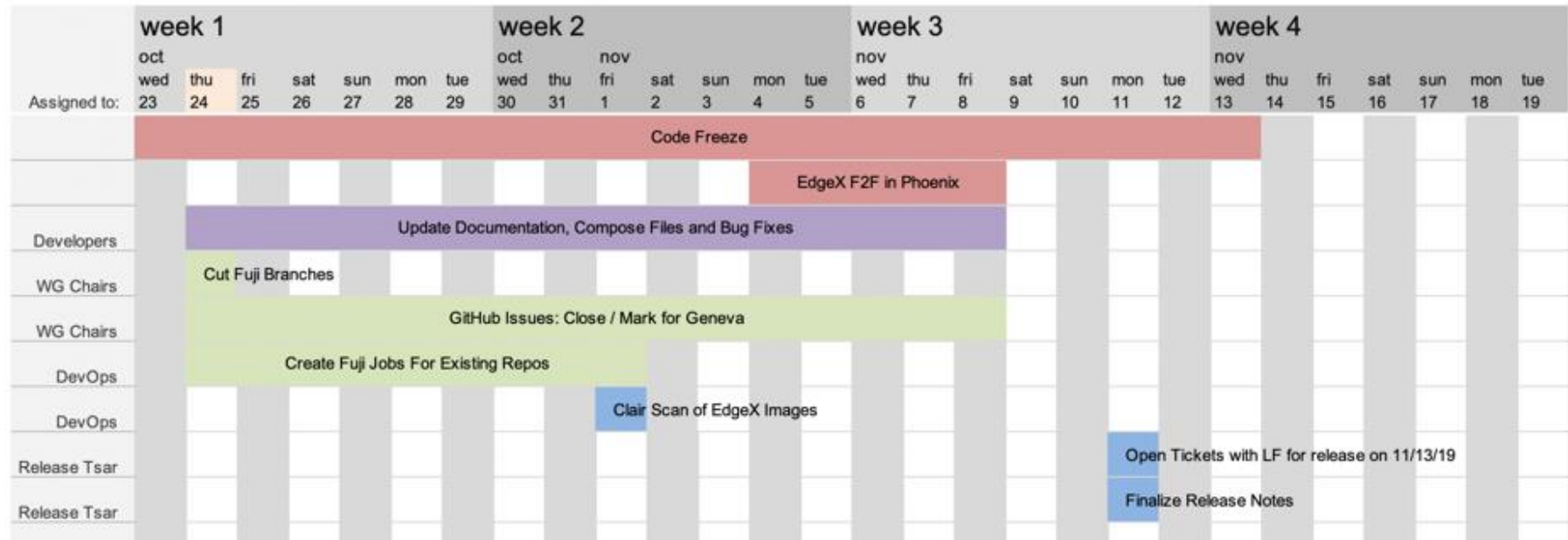
Automated as Done

Fuji Release

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

Fuji Release

Start Date: 10/23/19



Meeting Minutes

Fuji release on track

- Next steps fix all the bugs and close all issues
- Clair scan and report back to SIR team

Snap build issues

- Snap builds are taking a lot of time to build
 - Broken builds – unknown root cause
 - Rebuilding Ubuntu image on the fly for every build
-
- **Help Needed from Canonical (community) to address building with new Pipelines for Snaps**
 - Architecture Discussion for F2F next week
 - Suggestion to build snaps separately with their own dedicated Pipelines
 - Optimize the builds to existing binary from Nexus on build to master

The background features a detailed 3D rendering of a snake's skeleton, showing the skull, spine, and ribs. A network of red dots connected by thin lines is overlaid on the skeleton. A circular logo with a white 'X' on a dark purple background is positioned near the top center. The text 'EDGE X FOUNDRY™' is displayed in a white rectangular box across the middle of the image.

EDGE X FOUNDRY™

Geneva Planning

Scope Discussions

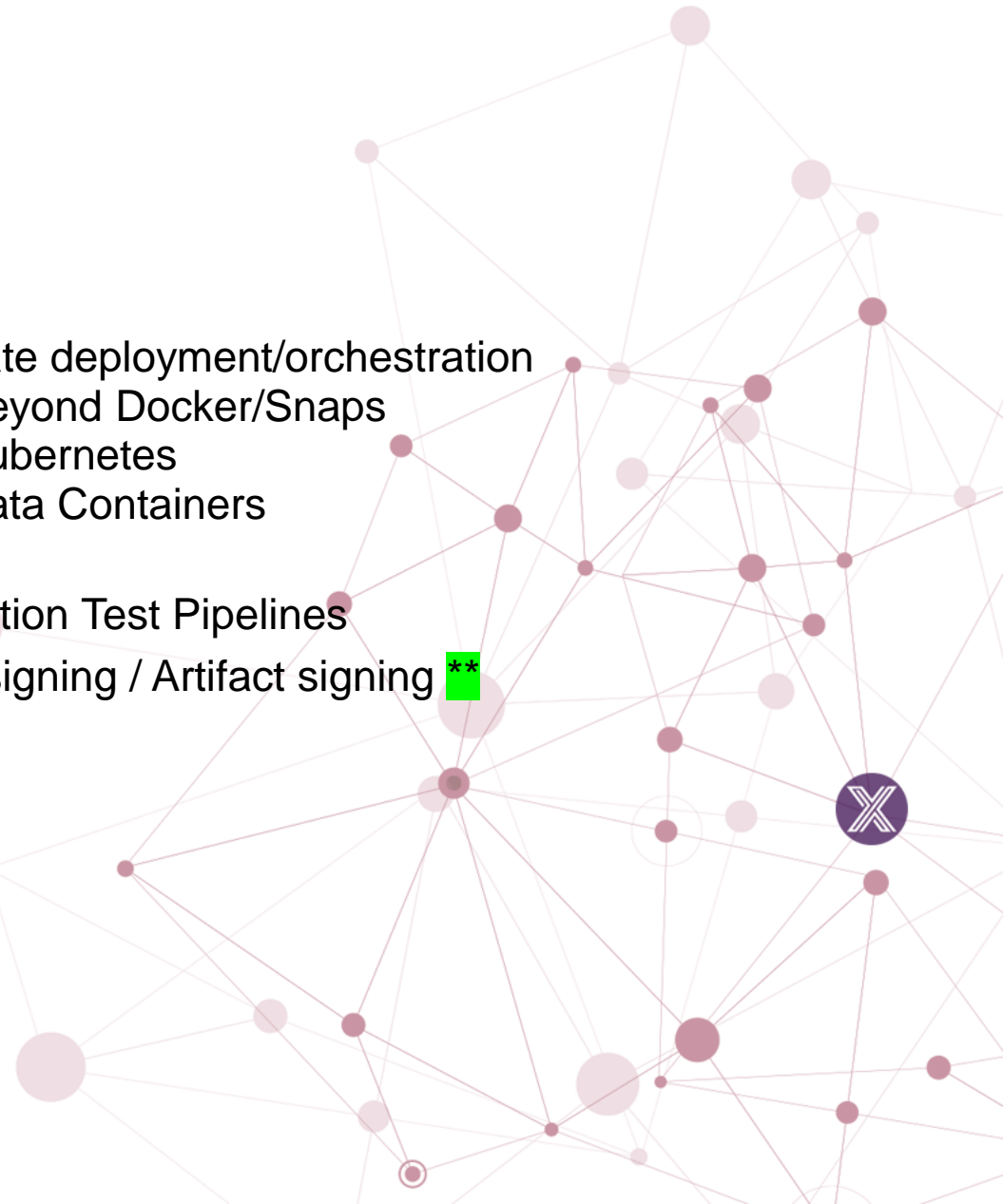
Geneva – DevOps

In

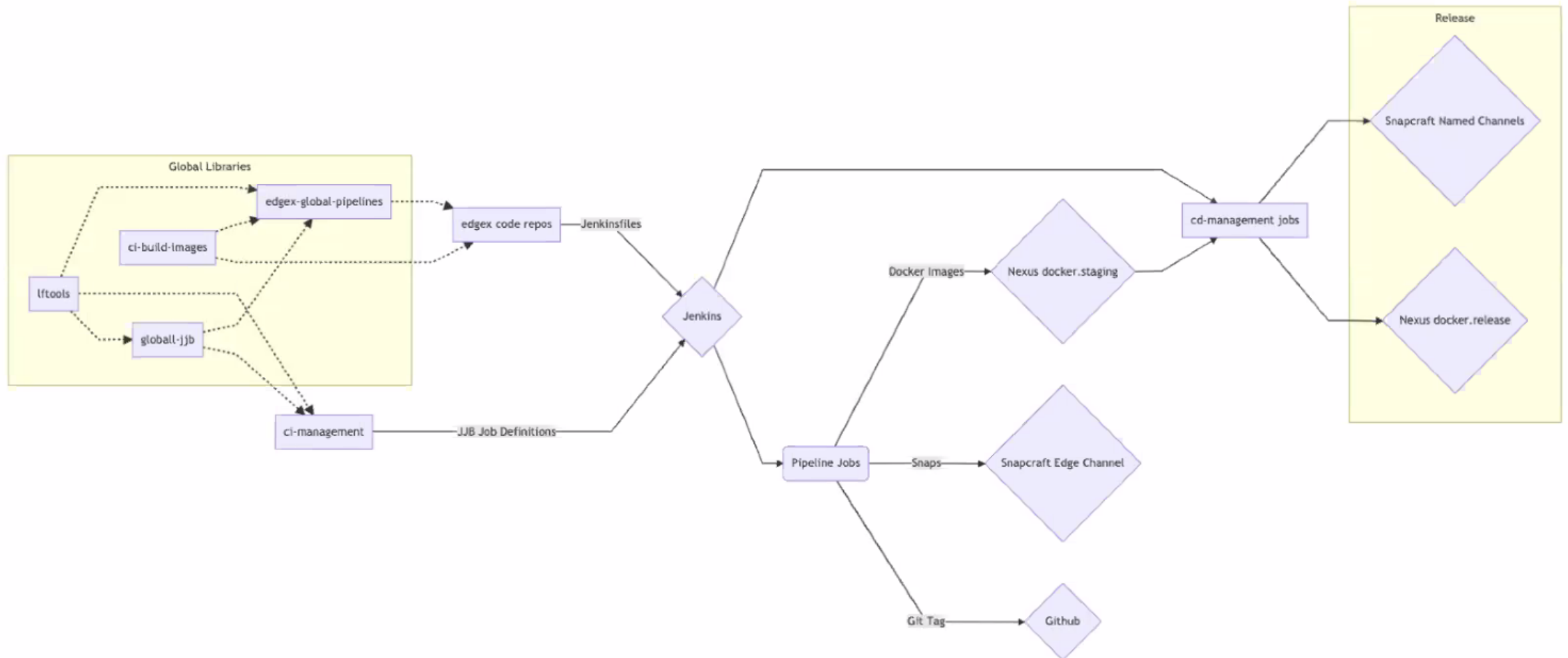
- Full Pipeline transformation for EdgeX services
 - Convert Jenkins JJB Freestyle jobs to Jenkins Pipelines
- Introduce GitHub Org Plugin
- Simplified Jenkinsfile
- Global Libraries to support Jenkins Pipeline transformation
- Add Unit testing to global-libraries (uncommitted) **
- Snyk integration 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



EDGE X FOUNDRY™

Fuji Planning

Scope Discussions

Fuji – DevOps

In

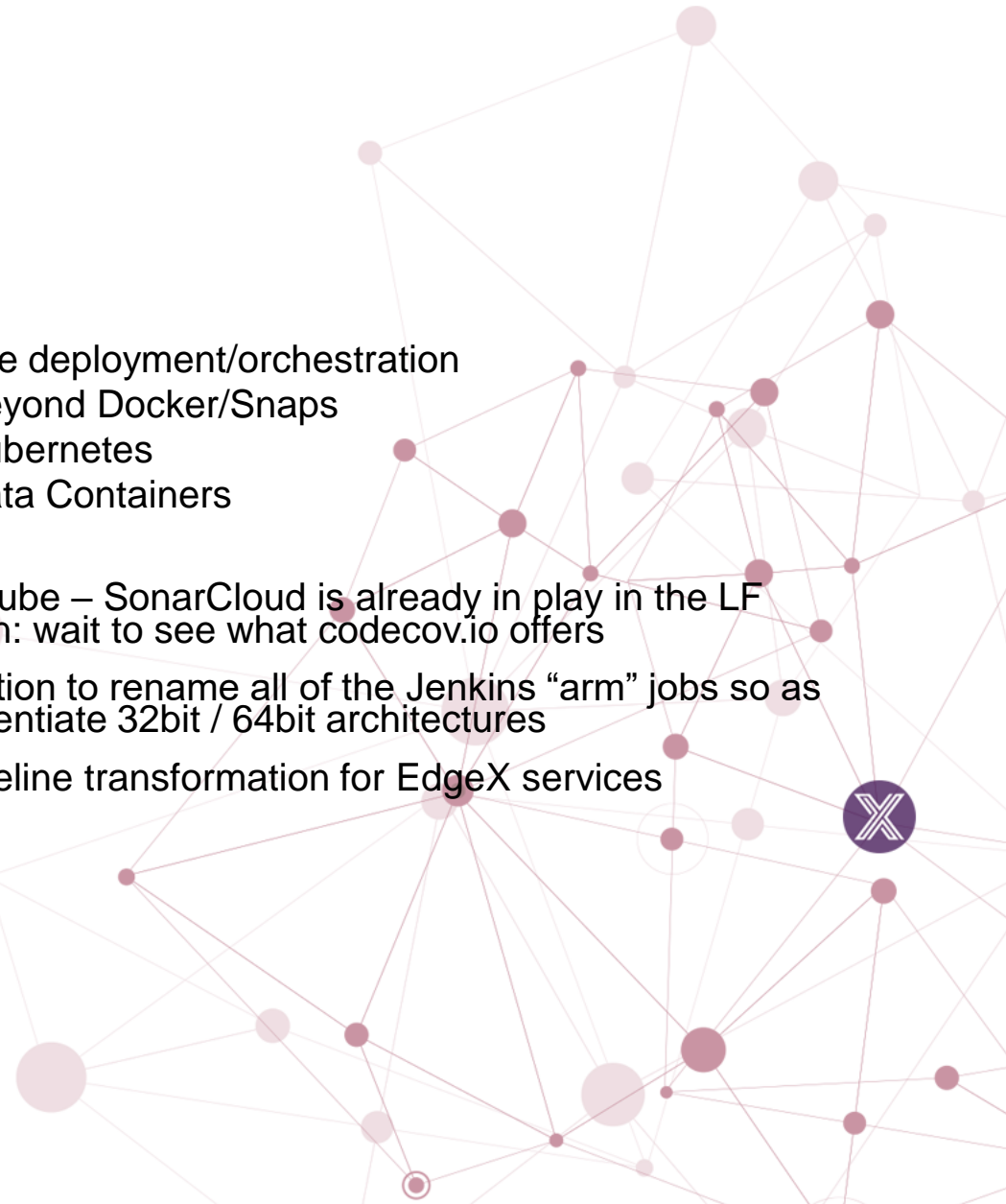
- Static code analysis tool identified and integrated into the EdgeX Jenkins Pipeline for Docker image scanning (Clair Server)

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"> • 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 	
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



EDGE X FOUNDRY™

Past / Future Agenda Topics

WW36	
WW37	