



EDGE X FOUNDRY™

DevOps Working Group

Thursday February 20, 2020

Agenda

Time	Topic	Owner
10 Min	Geneva / DevOps Updates	Ernesto
5 Min	Pipeline recheck functionality	Ernesto
5 Min	ARM Build Speed Improvements Research	Ernesto
10 Min	Backlog Review	
10 Min	Opens	

Attendees

EO	Ernesto Ojeda (Intel) (me, participan...		
JW	Jim White		
CH	Colin Hutchinson		
VS	Vishwas Sp		
W(Walt (Intel)		
L	Lisa Rashidi-Ranjbar		



DevOps WG Update

- **Geneva**
- **Jenkins Transformation to Pipelines**
 - Work complete on the transformation to Jenkins Pipelines
 - Exceptions: snap jobs and Blackbox testing
 - edgex-docs transformation <https://edgexfoundry.github.io/edgex-docs/> - WIP (Initial pipeline created)
 - Lisa is continuing the explore work to look into full automation of the release
 - Automation for the GitHub Issue labels – WIP
 - git-semver new features – PR's Open ready for review
- **CommunityBridge - Advanced Snyk Reporting**
- EdgeX Foundry added to the CommunityBridge Vulnerability Reporting
 - Ticket still open with Heather Willson & David Deal / CommunityBridge team
 - EdgeXProject should have access to the advanced reporting "in a couple of days"

DevOps WG Update

Pipeline recheck functionality

- Enabled by pipeline-github-plugin
 - <https://github.com/jenkinsci/pipeline-github-plugin>
 - Add new trigger to pipeline script

```
pipeline {
  triggers {
    issueCommentTrigger('^recheck$')
  }
}
```

- Currently attempting to test on the sandbox. However, we ran into issues. LF Ticket open investigate why the plugin is not working. IT-19040

ARM Build Speed Improvements

- James opened a ticket with the LF to see if anything could be done to speed up the ARM builds. We are hoping adding more CPU could make some difference.

Backlog Review

EdgeX Foundry Project

Repositories 99 Packages People 68 Teams 100 Projects 12

DevOps WG Updated 4 minutes ago

Filter cards + Add cards Fullscreen Menu

6 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
- Update snapcraft inside docker to use new setup from snapcraft**
ci-management#449 opened by anonymouse64
- Make stage-snap jobs more smart about pushing metadata**
ci-management#475 opened by anonymouse64
- Root cause analysis of the ARM failures for blackbox-testing - Infrastructure failures**
ci-management#520 opened by Iranjbar

8 New Issues

- Build Automation for Open Horizons**
edgex-global-pipelines#63 opened by jamesgregg
- New build automation for device-bluetooth-c**
ci-management#470 opened by jamesgregg
- New build automation for device-opcua-c**
ci-management#481 opened by jamesgregg
- New build automation needed for device-gps service**
ci-management#446 opened by jamesgregg
- Set up codecov for edgex-global-pipelines**
edgex-global-pipelines#56 opened by Iranjbar

1 Release Backlog

- Cleanup empty views in EdgeX Jenkins**
ci-management#552 opened by jamesgregg

10 In Progress

- Automation for the Git Hub Issues labels**
ci-management#554 opened by jamesgregg
- Help Needed - Mongo Snyk report for updated edgex-mongo image - Assigned to Venkat**
US6168: Mongo update to cover CVE issue
- SPIKE: How will we automate full delivery (release management) of a Jenkins Pipeline**
edgex-global-pipelines#42 opened by jamesgregg
- Create global function for snap releases (Geneva)**
edgex-global-pipelines#45 opened by jamesgregg

0 QA/Code Review

Meeting Minutes



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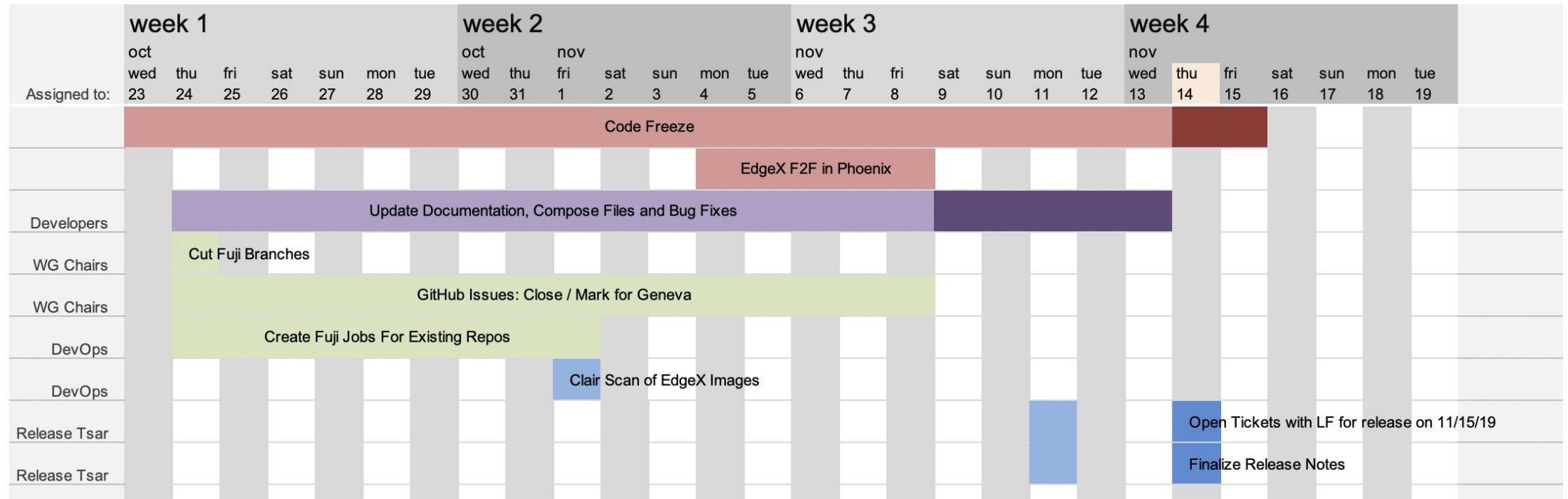
Geneva Planning

Scope Discussions

Fuji Release

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

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



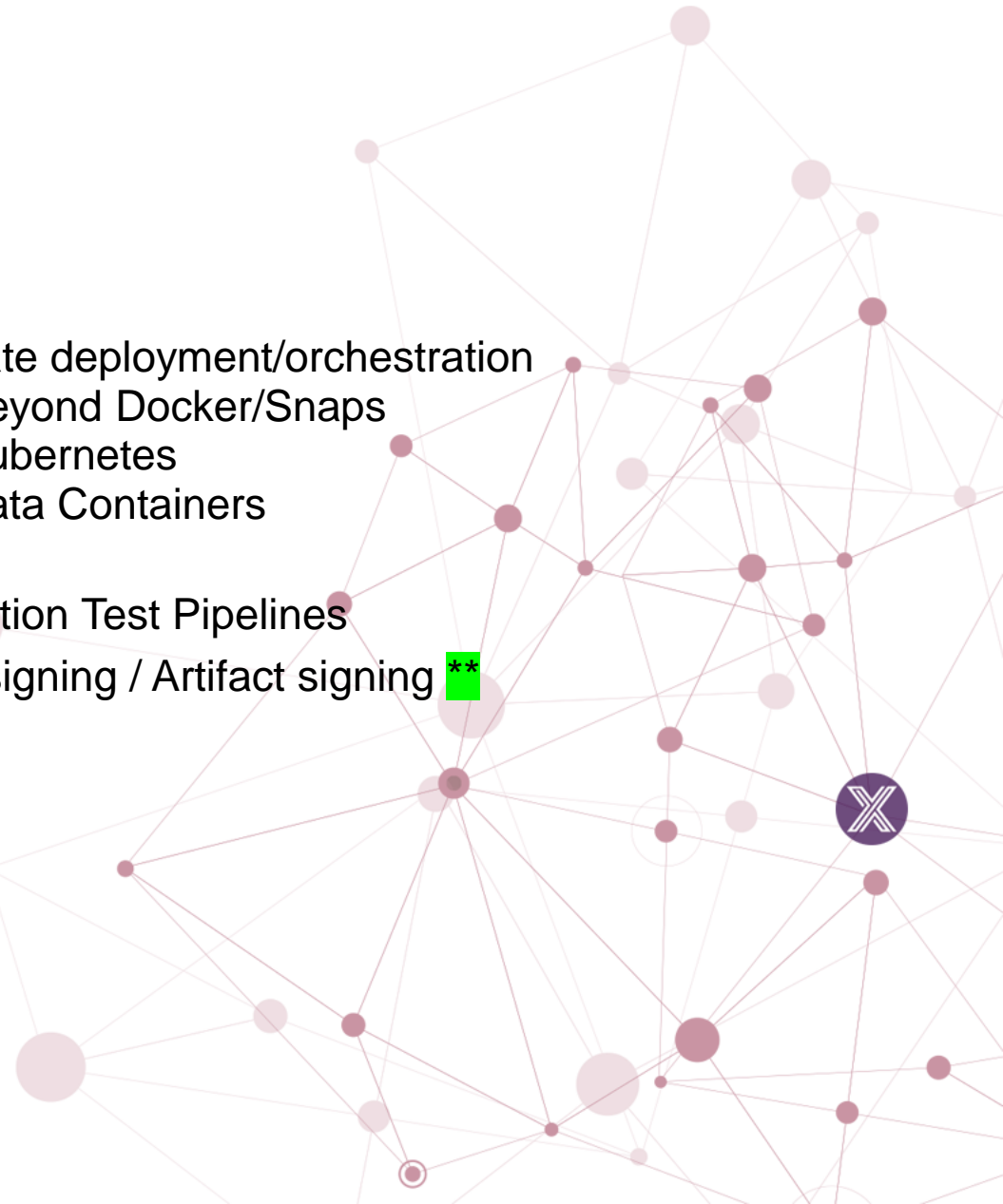
Geneva – DevOps

In

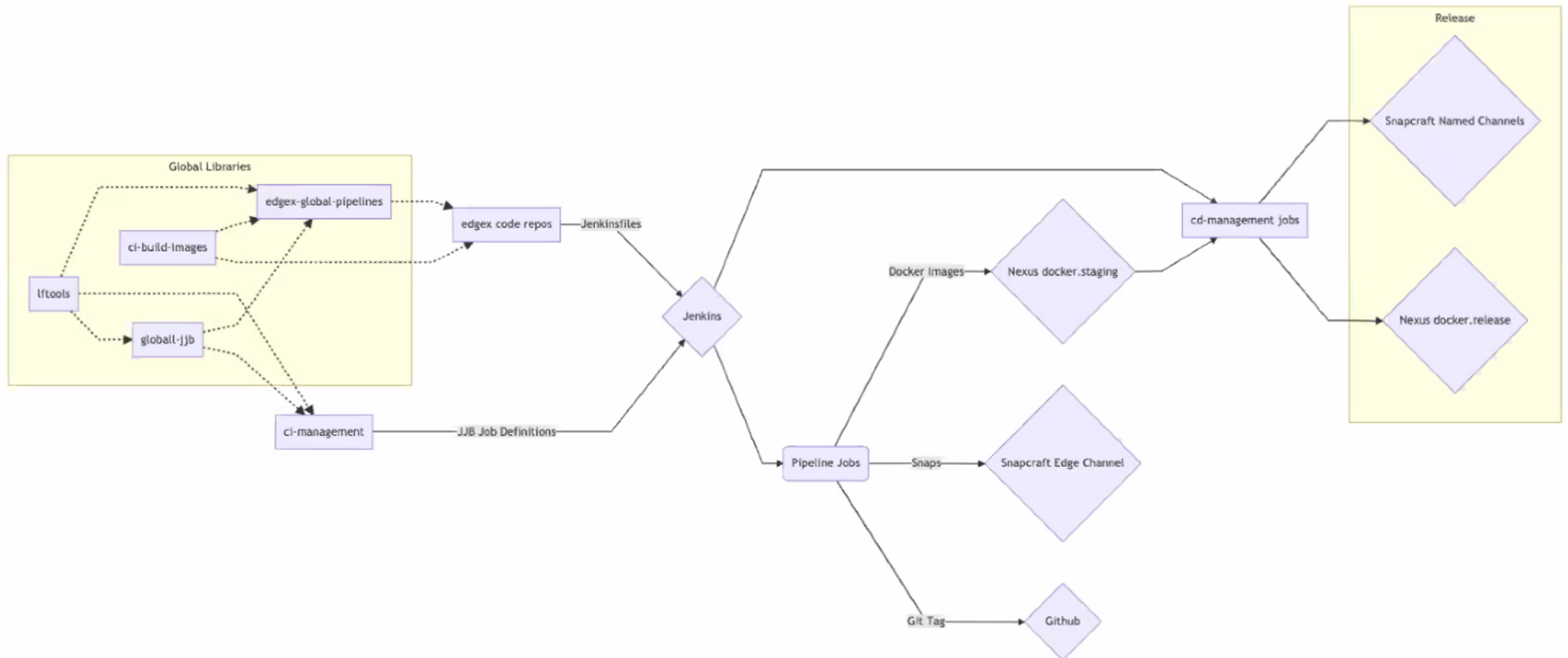
- Full Pipeline transformation for EdgeX services
 - Convert Jenkins JJB Freestyle jobs to Jenkins Pipelines
- Introduce GitHub Org Plugin
- Simplified Jenkinsfile
- Global Libraries to support Jenkins Pipeline transformation
- Add Unit testing to global-libraries (uncommitted) **
- Snyk integration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

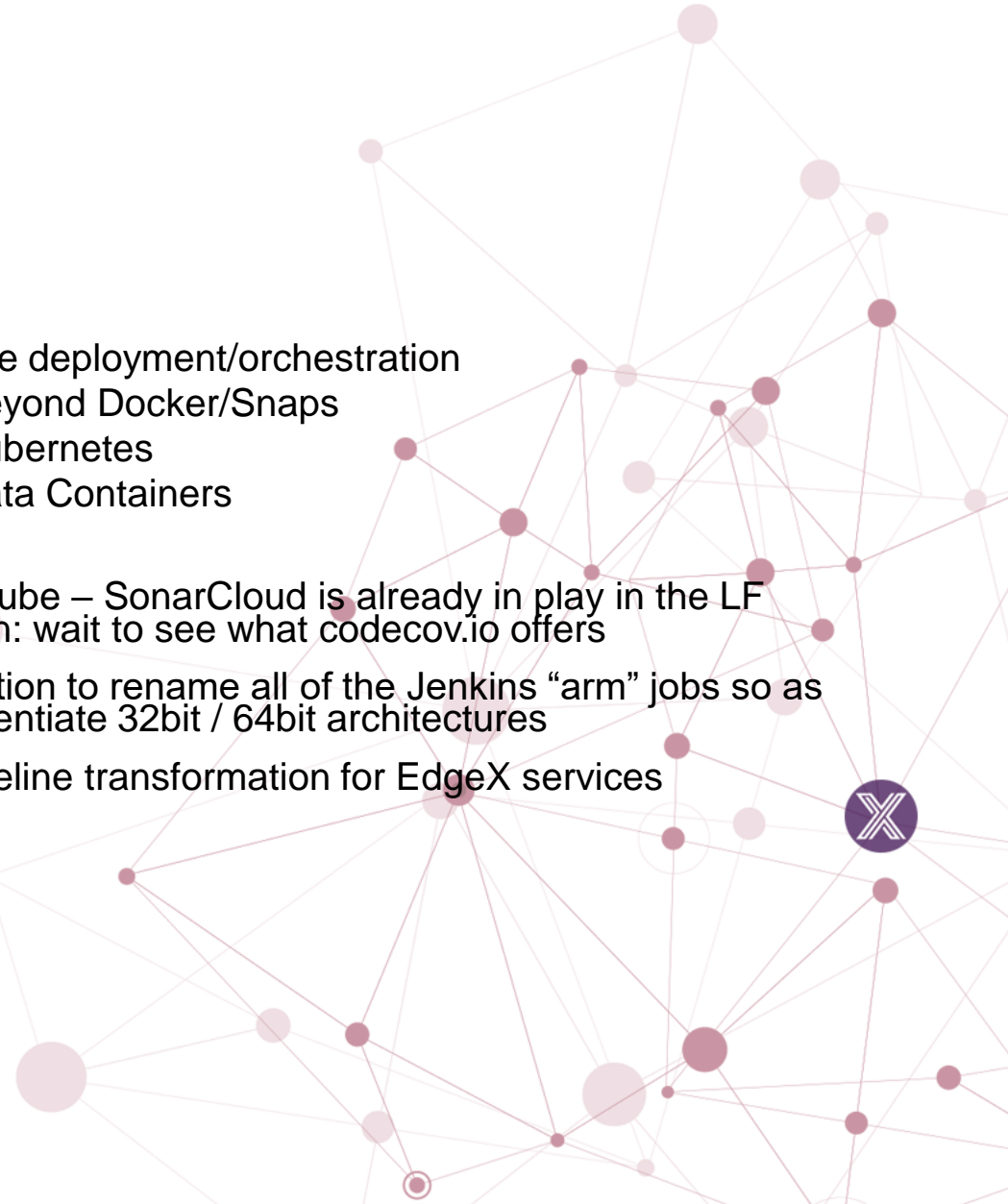
- Static code analysis tool identified and integrated into the EdgeX Jenkins Pipeline for Docker image scanning (Clair Server)

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"> • 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



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