



EDGE X FOUNDRY™

# DevOps Working Group

Thursday September 26, 2019

# Agenda

Time	Topic	Owner
10 Min	DevOps WG Update (Fuji)	James
10 Min	SonarCloud Issues	Trevor
30 Min	Release Update / Geneva Planning	Lisa / Jim
10 Min	Opens	

# Attendees

Participants (10)

Find a participant

- JG James Gregg (Intel) (Me)
- LR Lisa Rashidi-Ranjbar
- TC Trevor Conn
- ER Emilio Reyes (Intel)
- EB Eric Ball - Linux Foundation
- JB Jason Bonafide
- JW Jim White
- LG Lenny Goodell (Intel)
- R Ricardo
- V Vishwas



# DevOps WG Update

## Fuji Scope

### Static Code Analysis Tools

- Snyc Integration with Jenkins - **DONE**
- GitHub Repo / Snyc Integration
  - Integrate GitHub Organization – Snyc set up as ‘edgex-Jenkins’
  - Integration with the repo (app-service-configurable) - **DONE**
    - Added Scan stage to Jenkinsfile (app-service-configurable)
    - Modified the Snyc global library to call monitor method as part of the Jenkins Pipeline
  - Add additional integration for ongoing Docker image scan - Docker Hub
    - Issue with docker-edgex-mongo image identified
    - Weekly scans now report NEW vulnerabilities if found
  - Configure notifications to SIR team members – **DONE**  
*Note: several invitations pending*
  - Slack integration with Snyc – new scope **DONE**
  - Email notifications in the Free plan go to Snyc Administrator – Everyone added has the same role.
  - Budget request for Standard plan
    - Supports additional reporting and RBAC for Collaborator role
- New device services – **BLOCKED**
- git-semver bug - **WIP**

# Follow Up – WW38

- Action Items
- Help Needed - support-rules engine
  - Issue needs to be created for support-rules engine
  - May require additional support from DevOps

Is this still an open - Yes

Latest image isn't including the java code – something in the build

Image gets tagged with latest commit, but code doesn't match that.

- Create a new Issue to address / pull in

# Snyk Dashboard

**snyk** edgex-jenkins 🔊 james.r.gregg@intel.com 📄

Dashboard Reports **Projects** Integrations Settings

🔍 Search repositories Search View last import log Add project

CI/CLI 1  Docker Hub 3

> 📂 1 **edgexfoundry/app-service-configurable** 0 H 0 M 0 L

∨ 📂 2 **edgexfoundry/docker-edgex-mongo** 134 H 104 M 20 L

© edgexfoundry/docker-edgex-mongo:1.0.1 67 H 52 M 10 L Tested an hour ago ⚙️


© edgexfoundry/docker-edgex-mongo:latest 67 H 52 M 10 L Tested 5 hours ago ⚙️

∨ 📂 1 **edgexfoundry/docker-edgex-ui-go** 0 H 0 M 0 L

📦 edgexfoundry/docker-edgex-ui-go:1.0.0 0 H 0 M 0 L Tested 6 hours ago ⚙️

# Slack integration - #snyk-reports

Today


 **snyk-bot** APP 7:41 AM

**CVE-2019-5094**  
New vulnerability in package `e2fsprogs/e2fsprogs` at the edgex-jenkins organization.

Severity	Package
Low	e2fsprogs/e2fsprogs
Issue ID	
<a href="#">SNYK-LINUX-E2FSPROGS-468973</a>	

Affected projects:

- edgexfoundry/docker-edgex-mongo:1.0.1**  
Package version: 1.42.12-2+b1  
[Fix manually or ignore](#)
- edgexfoundry/docker-edgex-mongo:latest**



# Work Review

Helpdesk Ticket #	Description	Details	Status
IT-17609	IT-17609 Add additional contacts to a JSD ticket	Unable to add Lisa to the JSD tickets using LFID or GitHub ID	RESOLVED

[Help Center](#)

## Requests

Export

Open requests

EdgeX

Any request type

Search for requests

No requests were found.

Try modifying your search criteria or [create a request](#).



# Backlog Review

EdgeX Foundry Project

Repositories 90 Packages People 60 Teams 91 Projects 11

DevOps WG Updated yesterday

Filter cards + Add cards Fullscreen Menu

23 New Issues

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

Automated as To do Manage

7 Release Backlog

- Delete repo - jenkins\_pipeline\_presentation (FUJI)  
edgex-global-pipelines#32 opened by jamesgregg
- New build automation for device-camera-go  
ci-management#482 opened by jamesgregg  
blocked enhancement fuji
- New build automation for docker-edgex-consul  
ci-management#480 opened by Iranjbar  
blocked fuji
- New build automation for device-bacnet-c  
ci-management#451 opened by jamesgregg  
blocked enhancement fuji

2 In Progress

- Security WG reports issues with Sonar re: Duplicated Code. Help Needed to configure the profile to exclude based on patterns.  
Added by jamesgregg
- Fix Kong base build image for aarch64 to address issue in blackbox-testing  
ci-build-images#78 opened by jamesgregg  
bug fuji

2 QA/Code Review

- WIP: Add sigul signing to golang binaries  
ci-management#318 opened by JPWKU  
Changes requested
- JJB template for regression test  
ci-management#461 opened by vishwassp-hcl-intel  
hold  
Changes requested

Automated as In progress Manage

38 Done

- Create the edgex-taf docker i build job  
ci-build-images#74 opened by we  
enhancement fuji
- We will need help from LF to Snyk config to each of the re have Pipelines  
ci-build-images#76 opened by jamesgregg  
fuji wip
- Slack integration with Jenkins for Clair reporting.  
ci-build-images#54 opened by jar  
enhancement  
Geneva

Automated as Done

# SonarCloud – Duplicated Code

- Edgex-go PR with a single character change introduced MAJOR issue with identification of Duplicated Code
  - Trevor created custom Sonar profile for EdgeX Way to remove assessment of any Duplicated Code

Discussion / Help Needed

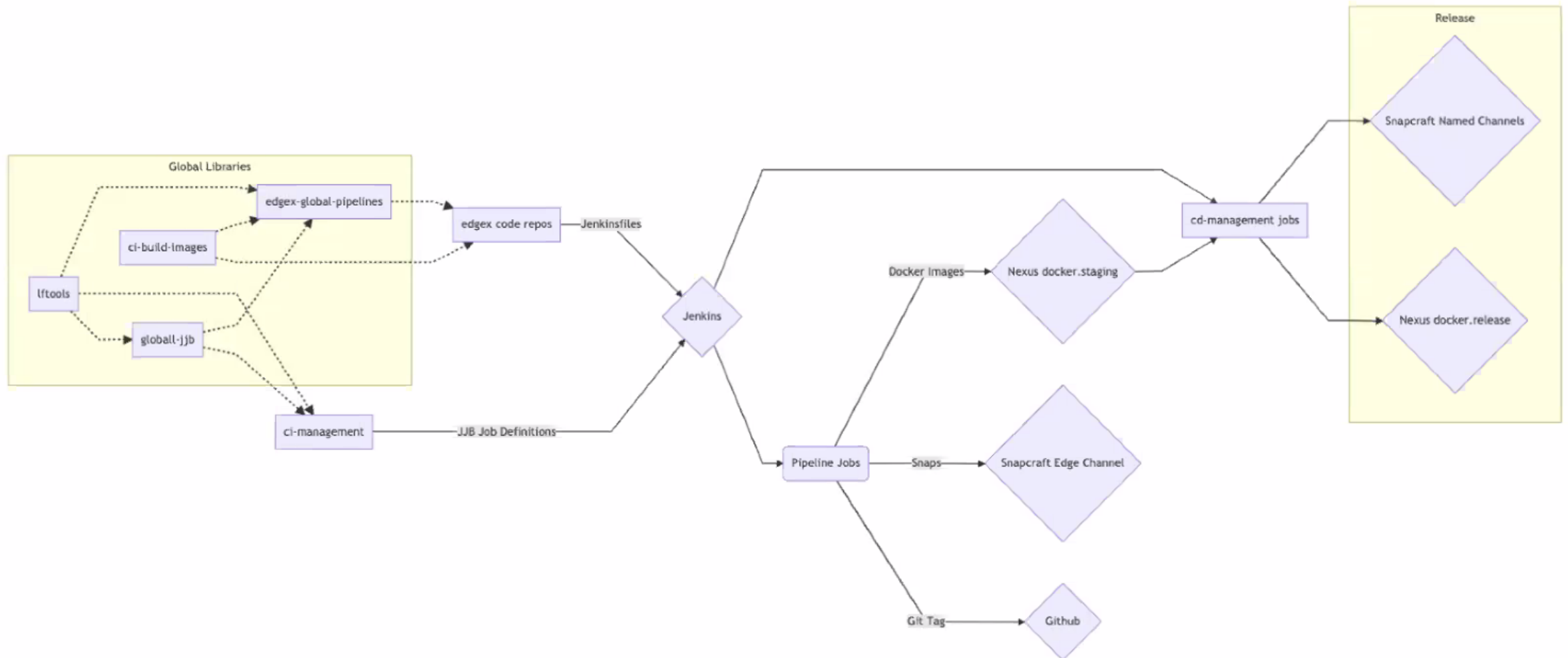
AR: Open ticket up with Sonar and try to figure out what caused it?

# Fuji Release Update (Lisa)

## Current Developer Experience

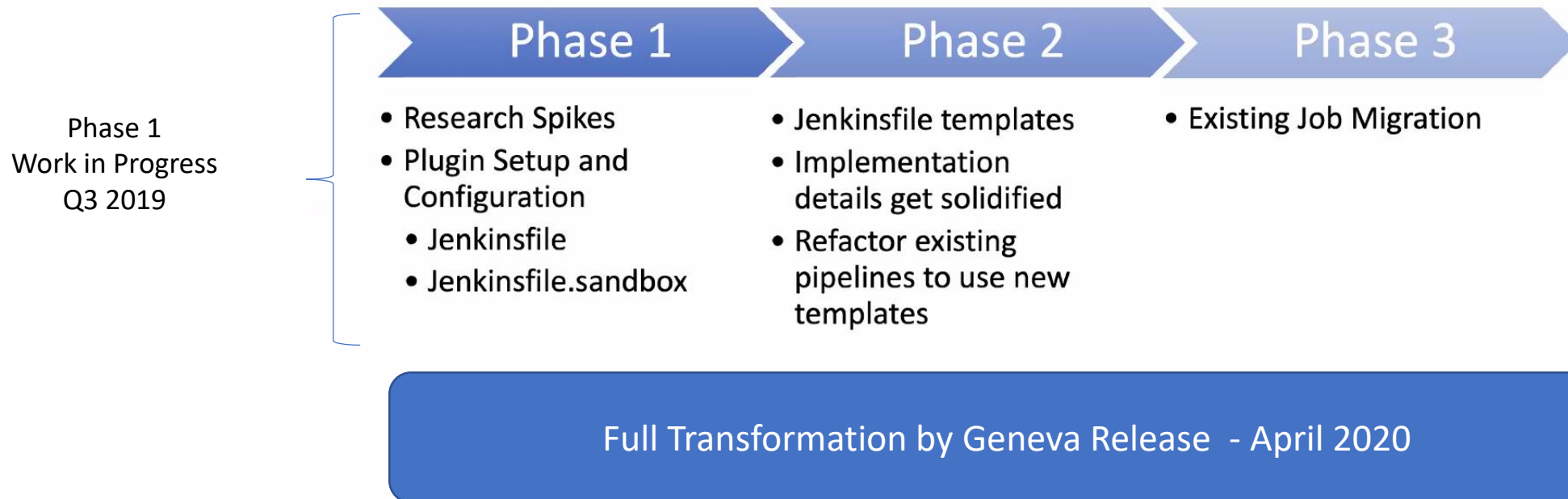
- Currently with the CI infrastructure developers have to make changes in several repositories; ci-management and their own repositories
- The builds maintained in ci-management are versioned separately from the code they are building causing potential problems
- Developers have to understand JJB and the sandbox to update their job
  - In most cases this is too big of a heavy lift for developers to engage

# Geneva Transformation: Architecture



# How long does it take? Is this all Geneva scope?

## Geneva Transformation



# Meeting Minutes

- Expect Fuji Release date by EOW next week
  - Tracking to November
- Open issue related to - support-rules engine
  - Issue created in ci-management – [Issue #492](#)
- Sample-Service Discussion
  - AR: Email to TSC to vote on moving sample-service out of holding for DevOps test / validation of Pipelines and git-semver
- No existing policy that discusses what artifacts must get signed with sigul
  - AR: Need to Discuss with Jeremy Phelps - [PR #318](#) for signing go-modules with sigul
- Feedback – Geneva Scope of Work
  - Streamlined Pipeline removes verification phase
  - Offers better Developer Experience
  - 3 Phases
    - Currently in Phase 1 - planning and pre-work
  - AR: Open JSD for help needed from LF to configure the Jenkins GitHub Org Plugin
    - Need to create required webhooks for top level Org





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# Geneva Planning

Scope Discussions

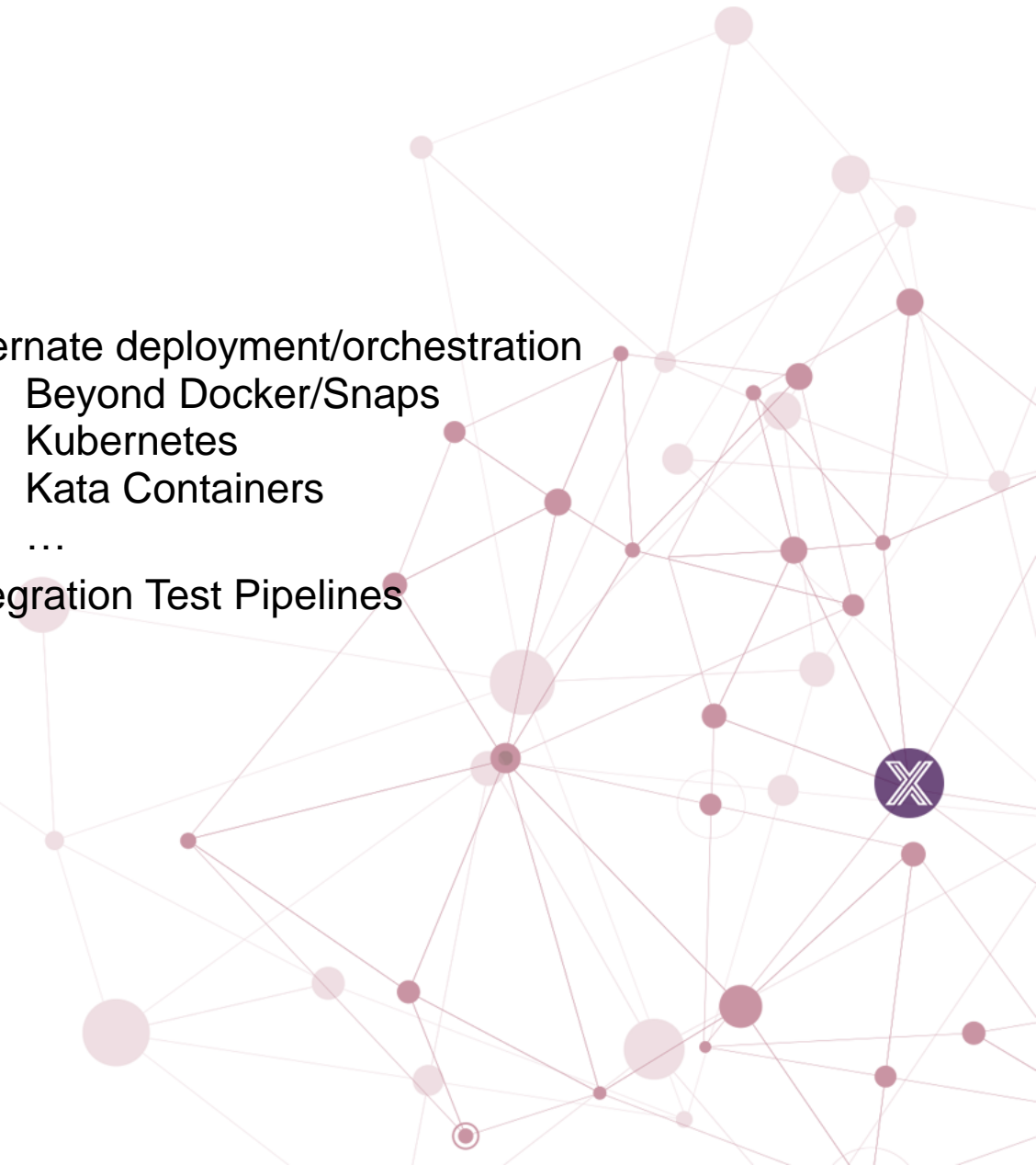
# Geneva – DevOps

## 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







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# Fuji Planning

Scope Discussions

# Fuji – DevOps

## In

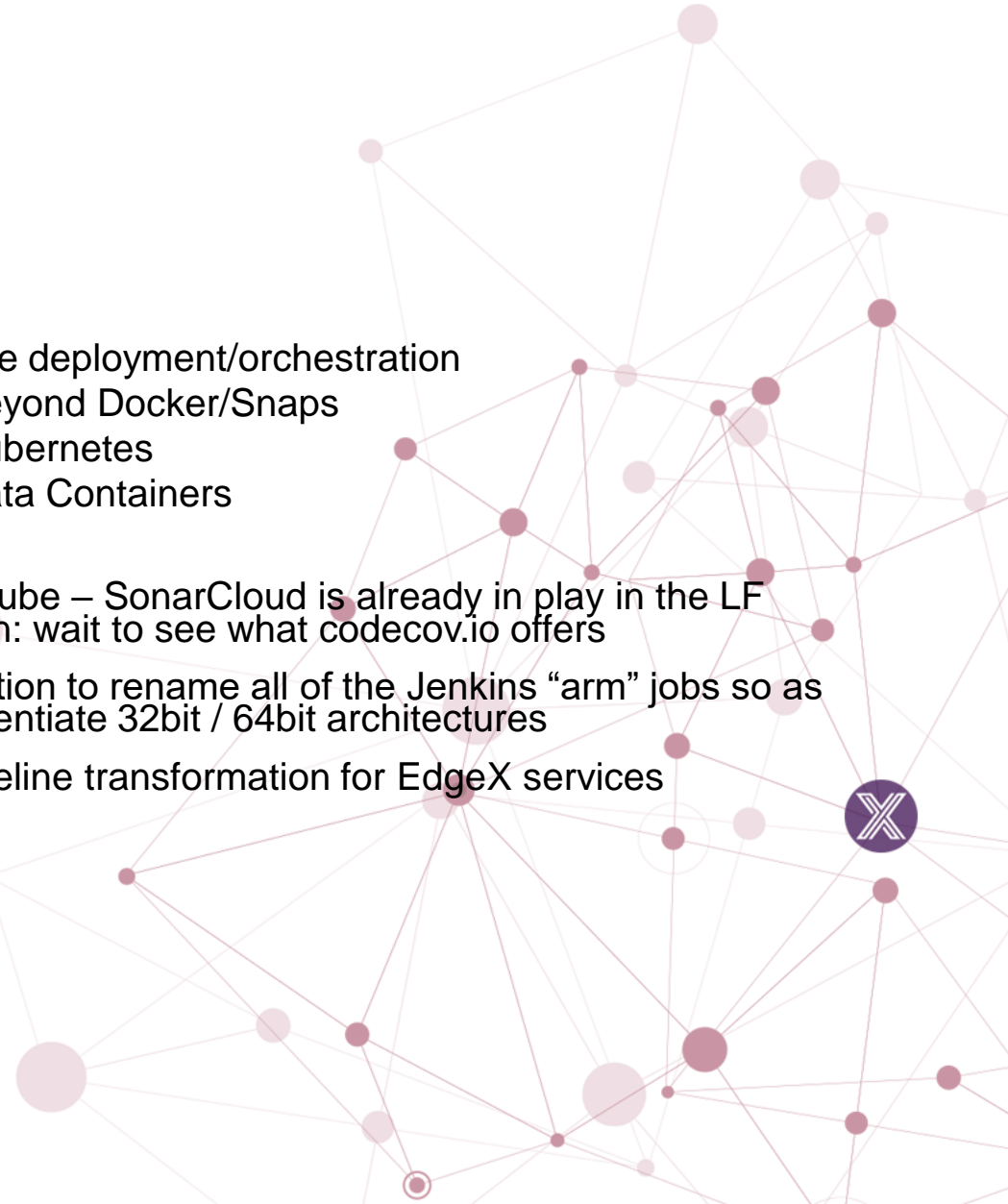
- Static code analysis tool identified and integrated into the EdgeX Jenkins Pipeline for Docker image scanning (Clair Server)

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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# Past / Future Agenda Topics

WW36	
WW37	