



EDGE X FOUNDRY™

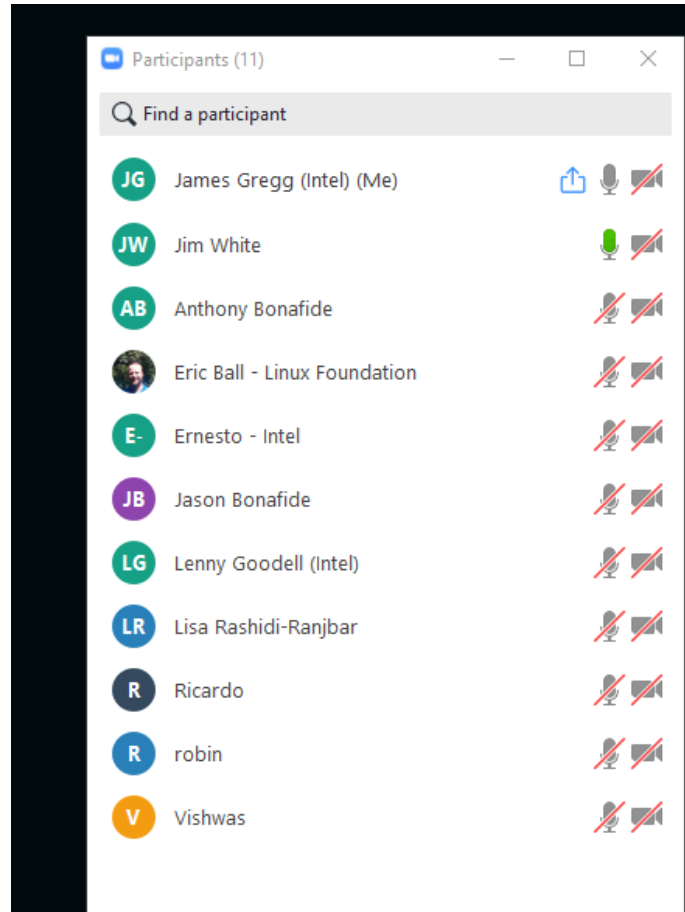
DevOps Working Group

Thursday October 3, 2019

Agenda

Time	Topic	Owner
10 Min	DevOps WG Update (Fuji)	James
10 Min	Basebuild Image Discussion	Anthony Bonafide
30 Min	Release Update / Geneva Planning	Lisa
10 Min	Opens	

Attendees



DevOps WG Update

Fuji Scope

Static Code Analysis Tools

- Snyc Integration with Jenkins - **DONE**
 - Configuration of the GitHub repo (edgex-go) and Docker public image for docker-edgex-mongo - **DONE**
 - Configure notifications to repo owner and Security WG (SIR team members) - **Still Pending**
ADD members to the invite

New Jenkins jobs for Fuji

- The following repos have new build automation slotted for Fuji but are currently still in holding - **BLOCKED**
device-bluetooth-c, device-gps, device-camera-go, regression-test, TAF

New Issues

- SonarCloud Duplicated code - Unknown root cause and no response from community for case opened last week
- support-rules-engine - converting to Pipeline job
 - building with California codebase (java) ** Need to highlight this for Geneva
- Kong ARM64 image - fixed image - was pointing to an old version of arm edgex-proxy ([PR #273](#))
 - Help Needed from QA-Test WG to update blackbox-test scripts to use updated dependencies
 - Issue with Allure plugin causing – **UNSTABLE ** build log messages

Basebuild Image Discussion

Friday, September 27, 2019



Anthony Bonafide 9:32 AM

@here Hello all,

There is an open PR regarding usage of the race condition detection tooling within Go for our CI pipelines. With the current set-up, it does not seem like we can enable the tool due to the base Docker image(s) missing low level libraries(looks like `libc`). I would like to bring this issue up and discuss it at the next DevOps working group meeting to see how we can use these tools and how can we enable this functionality across the board for other EdgeX modules/repos. You can see some more details in the PR <https://github.com/edgexfoundry/go-mod-secrets/pull/27>



AnthonyMBonafide

[#27 Add race detection flag to Makefile for tests](#)

Fix [#22](#)

Add '-race' flag to the `go test` command so that the race detection tools can be leveraged. Also, needed to enable CGO to be able to use this feature.

Signed-off-by: Anthony M. Bonafide AnthonyMBonafide@gmail.com

Comments

5

Reviewers

[@jdharms](#), [@tingyuz](#)

[edgexfoundry/go-mod-secrets](#) | Sep 20th | Added by GitHub

- Help needed - take a look at the PR and Jenkins job logs
AR: Add tracker story on this at the Project - **DONE**
- Look at this in the greater go community
- No success with the addition of the recommended library
- Might want to try to add the dependency to the build host during the build

Backlog Review

EdgeX Foundry Project

Repositories 92 Packages People 62 Teams 93 Projects 11

DevOps WG Updated 6 days ago

Filter cards + Add cards Fullscreen Menu

7 Icebox

- Snap builds should use unbuffer for better output logging
- edgeXSemver leaves command to caller but doesn't allow specifying the version/image to use
- Update snapcraft inside docker to use new setup from snapcraft
- Create global function for snap releases (Geneva)
- Make stage-snap jobs more smart about pushing metadata
- SPIKE: How will we automate full delivery (release management) of a Jenkins Pipeline
- SPIKE: How will we do Unit Testing of Pipeline code.

24 New Issues

- Github Org/Branch source plugin configuration
- Migrate docker-edgex-volume to pipeline jobs
- Migrate device-virtual-go to pipeline jobs
- Migrate device-grove-c to pipeline jobs
- Migrate device-random to pipeline jobs
- Migrate device-mqtt-go to pipeline jobs
- Migrate device-modbus-go to pipeline jobs
- Migrate edgex-go to pipeline jobs

6 Release Backlog

- Delete repo - jenkins_pipeline_presentation (FUJI)
- New build automation for device-camera-go
- New build automation for docker-edgex-consul
- New build automation for device-bluetooth-c
- New build automation needed for device-gps service
- New build automation for device-opcuac

2 In Progress

- Security WG reports issues with Sonar re: Duplicated Code. Help Needed to configure the profile to exclude based on patterns.
- New build automation for device-bacnet-c

1 QA/Code Review

- JJB template for regression test

40 Done

- Fix Kong base build image for aar to address issue in blackbox-test
- WIP- Add sigul signing to golang binaries
- Create the edgex-taf docker image build job
- We will need help from LF to add Snyk config to each of the repos I have Pipelines
- Slack integration with Jenkins Pip for Clair reporting.
- Add edgex-taf docker image build

Proposed Freeze and Release dates

- Freeze: Oct 23rd (Wednesday)
- Release: Nov 13th (Wednesday)
- 3 weeks between freeze and release (inclusive of F2F)
- Other events to consider in the timeline
 - IoT SWC (Oct 29-31)
 - OSS Lyon (Oct 28-30)
 - EdgeX Phoenix F2F (Nov 4-8)
 - US Thanksgiving holiday week (Nov 27-Dec 1)

Scheduled Maintenance

What:

All LF-hosted systems will have the host OS upgraded to CentOS 7.7. This will require shutting down services, rebooting the machine, and then restarting and testing services.

When:

Sunday 2019-10-06 21:00-23:00 PDT

Impact:

All systems hosted by LF (including Jenkins, Nexus 2/3, and Confluence) can expect about 15-30 minutes of downtime during this window. Ongoing work should be suspended for the entire duration of the maintenance window.

Why:

Important upgrade to host OS.

Fuji Release Update

Proposed Freeze and Release dates

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Meeting Minutes

- Scheduled maintenance will be worked by LF with communications only if there's an exception to the scheduled downtime.
- Need to highlight the need to look at rewrite of support-rules-engine for Geneva planning
- Help Needed on Anthony's PR for go-mod-secrets [#27](#)
Note comment suggests this is a known issue and might be addressed with golang 1.13 as Daniel V (Intel) suggested in Slack
Will continue the dialog in Slack.



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Geneva Planning

Scope Discussions

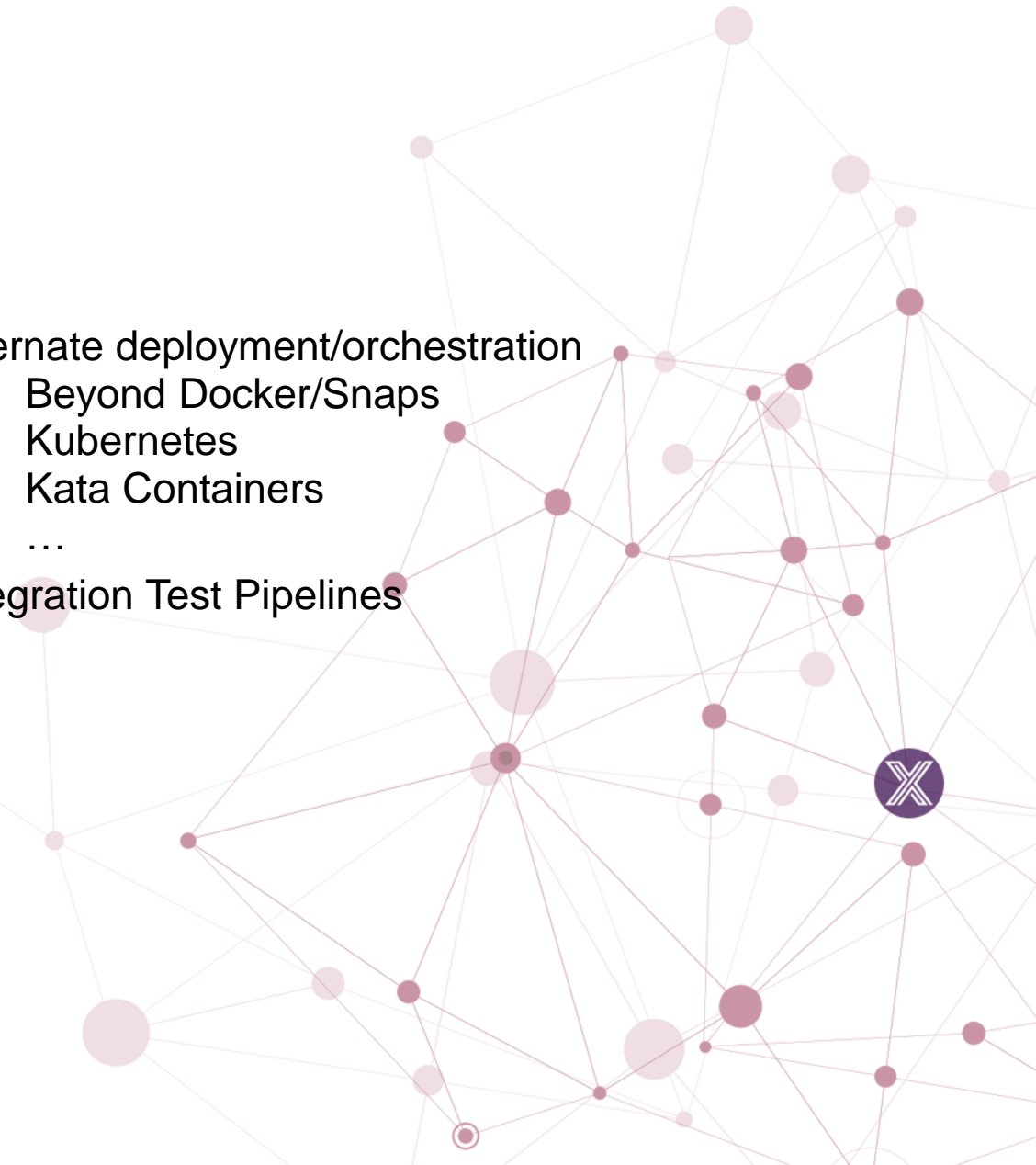
Geneva – DevOps

In

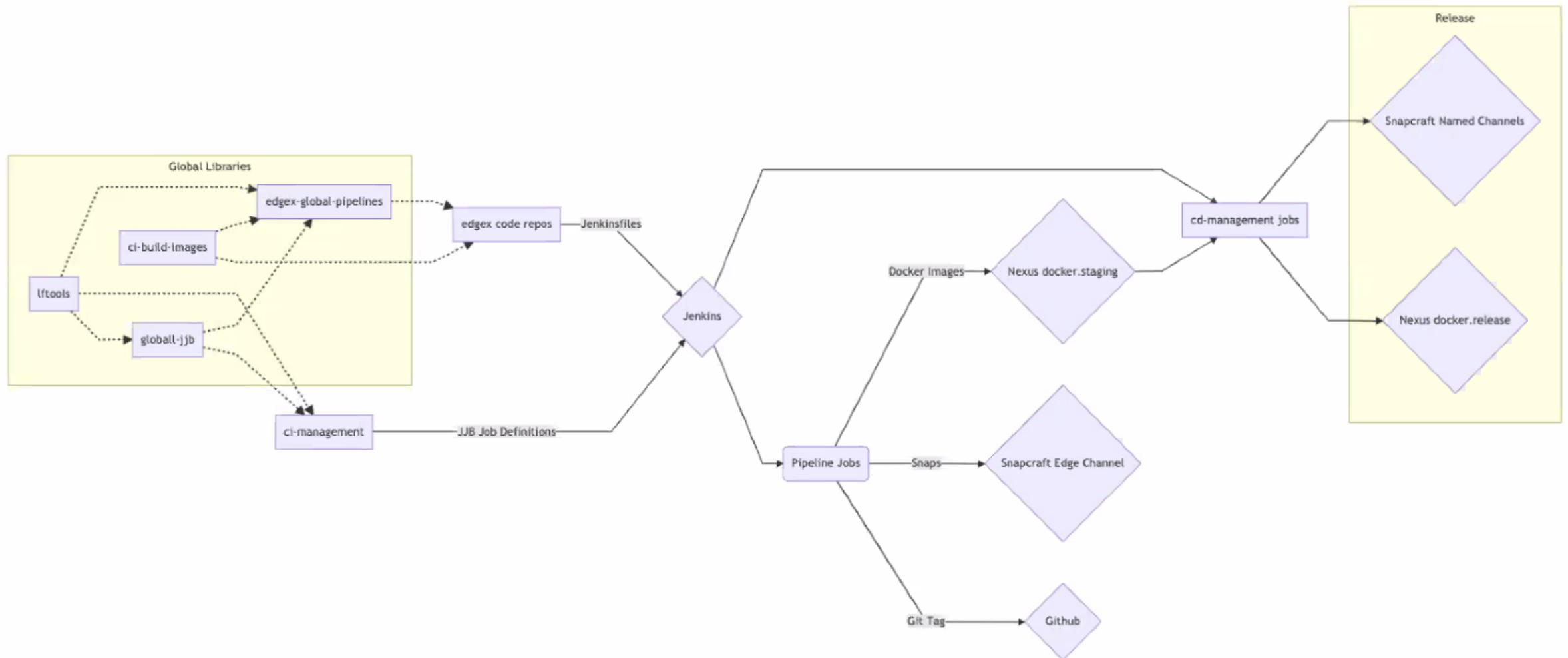
- Full Pipeline transformation for EdgeX services
 - Convert Jenkins JJB Freestyle jobs to Jenkins Pipelines
- Introduce GitHub Org Plugin
- Simplified Jenkinsfile
- Global Libraries to support Jenkins Pipeline transformation
- Add Unit testing to global-libraries (uncommitted) **
- Snyk integration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



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

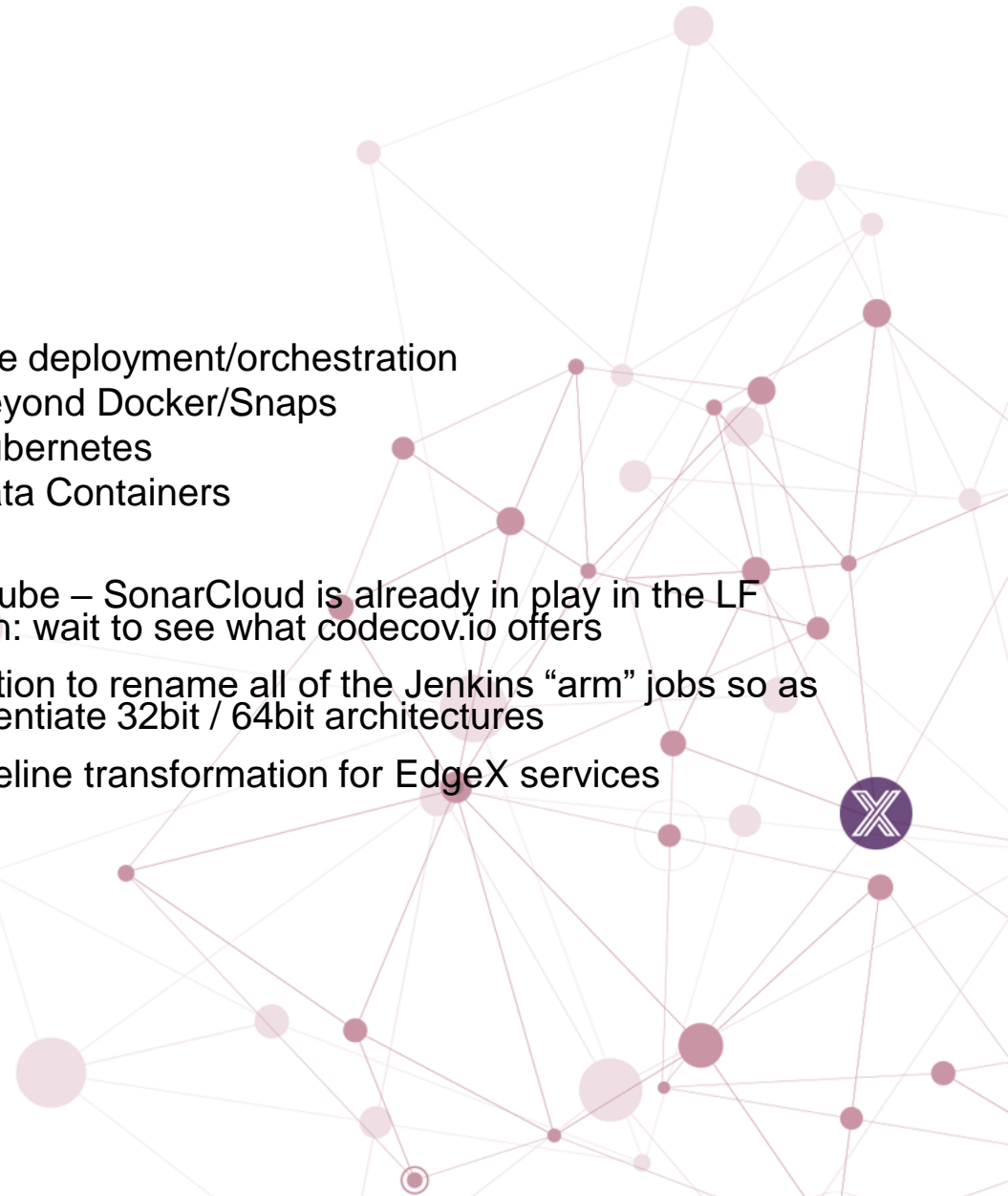
- Static code analysis tool identified and integrated into the EdgeX Jenkins Pipeline for Docker image scanning (Clair Server)

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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