



EDGE X FOUNDRY™

DevOps Working Group

Thursday August 29, 2019
























Agenda

Time	Topic	Owner
10 Min	DevOps WG Update (Fuji)	James Gregg
10 Min	Nexus Artifact Reporting	Lisa Rashidi-Ranjbar
10 Min	Other Business: Multiple Topics	All
10 Min	Geneva Planning	James Gregg
10 Min	Opens	All

Attendees

Participants (11)

Find a participant

- JG James Gregg (Intel) (Me)  
- L Lisa Rashidi-Ranjbar   
- 14802259620 
- TC Trevor Conn  
- CH Colin Hutchinson  
-  Eric Ball - Linux Foundation  
- E- Ernesto - Intel  
- JW Jim W  
- R Ricardo  
- T Tyler  
- V Vishwas  



DevOps WG Update

Fuji Scope

Container Scanning

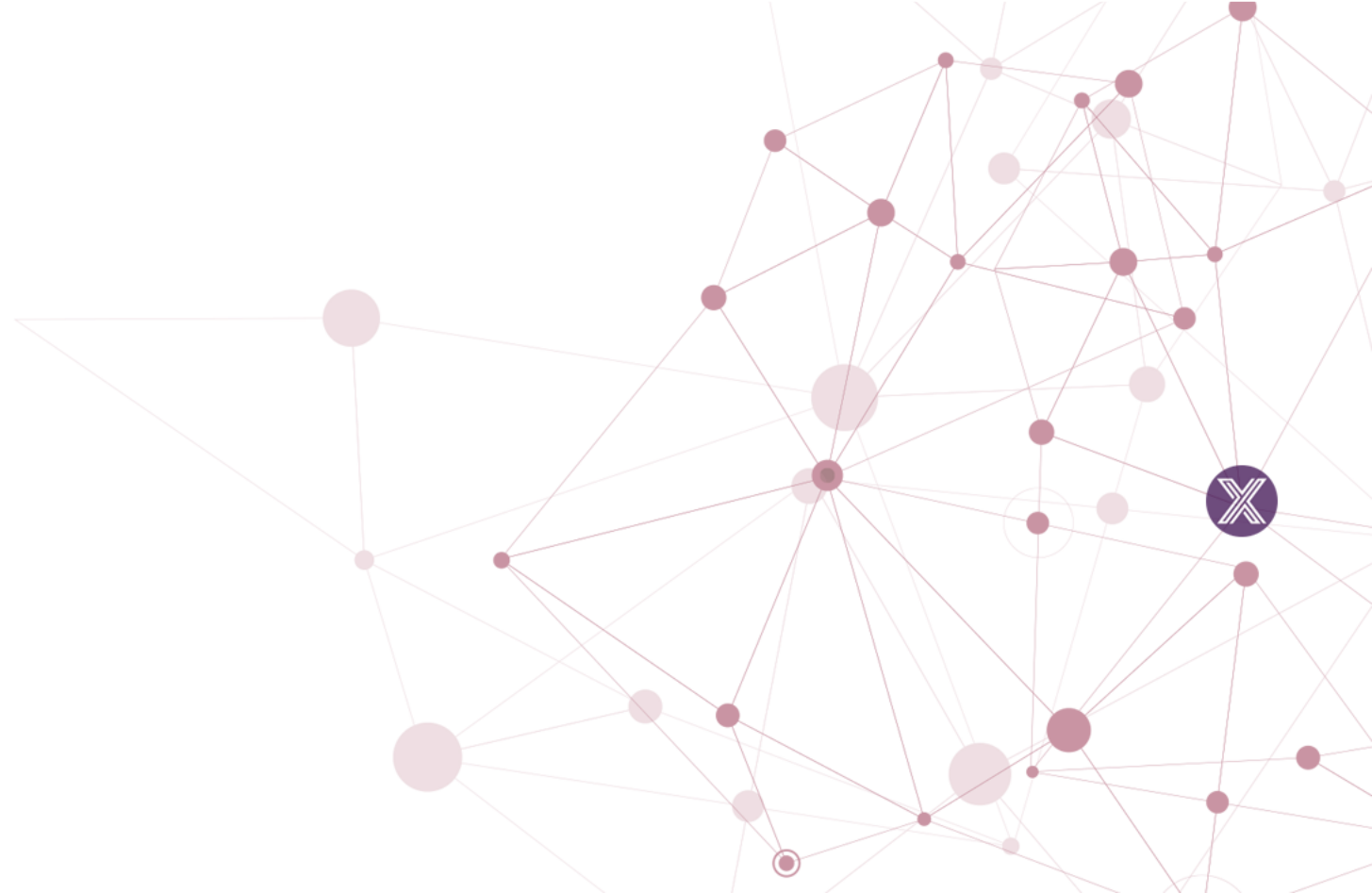
- Switched Jenkins Pipeline to the new LF hosted endpoint for Clair scanned container reports.

Static Code Analysis Tools

- Snyc Integration with Jenkins
 - Tested new Snyc build image within Jenkins Pipeline - edgex-go scans compared against known good CLI scan and image scan found a bug in the build image that needed remediated to set GO PATH correctly in the image. - **DONE**
 - Create a new global library that will be used with Jenkins Pipeline stage that runs the Snyc CLI scan using the new Snyc build-agent image - **WIP**
 - SPIKE:
 - Need to figure out the way we want to integrate Open Source repos using a common / shared account to Snyc
 - Configure notifications to SIR team members
- **NEW** Jenkins Pipeline for go-mod-secrets (Issue #468) – **DONE**
- go-mod-core-security repo in EdgeX Foundry holding Archived – Thank you Jim White!
- Owning WG added to description on EdgeX Foundry Org repos – Thank you Eric Ball!
- Maintenance Scheduled for today – 8/29/19 5PM PST

Work Review

Helpdesk Ticket #	Description	Details	Status
	Snyk configuration on repo using LF service account	Help needed by LF to configure repo using service account	



Backlog Review

EdgeX Foundry Project

Repositories 89 Packages People 56 Teams 90 Projects 11

DevOps WG Updated 7 days ago

Filter cards Add cards Fullscreen Menu

4 Icebox

- regex for isReleaseStream is overly broad
- Snap builds should use unbuffer for better output logging
- edgeXSemver leaves command to caller but doesn't allow specifying the version/image to use
- Slack integration with Jenkins Pipeline for Clair reporting.

5 New Issues

- SPIKE: How will we automate full delivery (release management) of a Jenkins Pipeline
- SPIKE: How will we do Unit Testing of Pipeline code.
- Update snapcraft inside docker to use new setup from snapcraft
- Refactor docker push scripts to be more generic
- Delete repo - jenkins.pipeline_presentation (FUJI)

5 Release Backlog

- New build automation for device-bacnet-c (BLOCKED)
- New build automation for device-bluetooth-c (BLOCKED)
- New build automation for docker-edgex-mongo bootstrap (BLOCKED)
- New build automation needed for device-gps service (BLOCKED)
- Placeholder for snap global function in edgeX-global-pipelines (FUJI)

3 In Progress

- EdgeX DevOps: Create the EdgeX TAF Reporting
- SPIKE: Snyk integration with EdgeX Foundry Open Source repo as POC
- We will need help from LF to add the Snyk config to each of the repos that have Pipelines

1 QA/Code Review

- WIP: Add sigul signing to golang binaries

26 Done

- New Jenkins Pipeline needed for go-mod-secrets
- https://github.com/edgexfoundry-holding/go-mod-core-security *** THIS REPO NEEDS TO BE ARCHIVED ***
- repository: add description and topics
- Clair Server landing - LF Infrastructure or AWS decision and architecture / \$\$ with TSC approval (@jamesgregg)
- New Build Automation needed for application-service-configurable
- Nexus sys-info build log is missing some system information
- New image for sonar scanner needed for use with SonarCloud
- app-functions-sdk seems to be having an issue with gitsenver

Meeting Minutes

- Bring Jenkins Pipeline Transformation topic back for review
- Nexus Artifact Management Discussion
 - Nexus has a lot of images which are never going to be used.
 - It's difficult to identify what's there let alone what's needed.
 - Trevor proposes a simplified Tagging convention for Docker images
 - There is a need to introduce a cleanup routine (lifecycle policy) of Nexus repos
 - Blackbox / Performance testing is dependent upon the maturity of the new TAF which has yet to be implemented.
 - Blackbox tests locate their nightly images for testing using this script – <https://github.com/edgexfoundry/blackbox-testing/blob/master/bin/env.sh>

Nexus Artifacts Standard

Attach metadata in docker labels for reporting and tracking purposes

- Jenkins server url
- Job name
- Build #
- LF build log link
- Repo name

Use docker tags as sliding labels to track

- Branch following tags
 - ie: master, edinburgh, fuji, etc
- The numbered version tag would be released at the end of the cycle
 - 1.1.0 - Test/QA WG
- Latest follows the latest commit in Github

Feedback:

- Clean up old development versions
- No value in image built for every commit
- No lifecycle policy for clean up of Nexus
- Get Test/QA WG Input
- Get App WG Input
- Also create a proposal for the automated release vision based off the metadata Lisa has been advocating for



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Geneva Planning

Scope Discussions

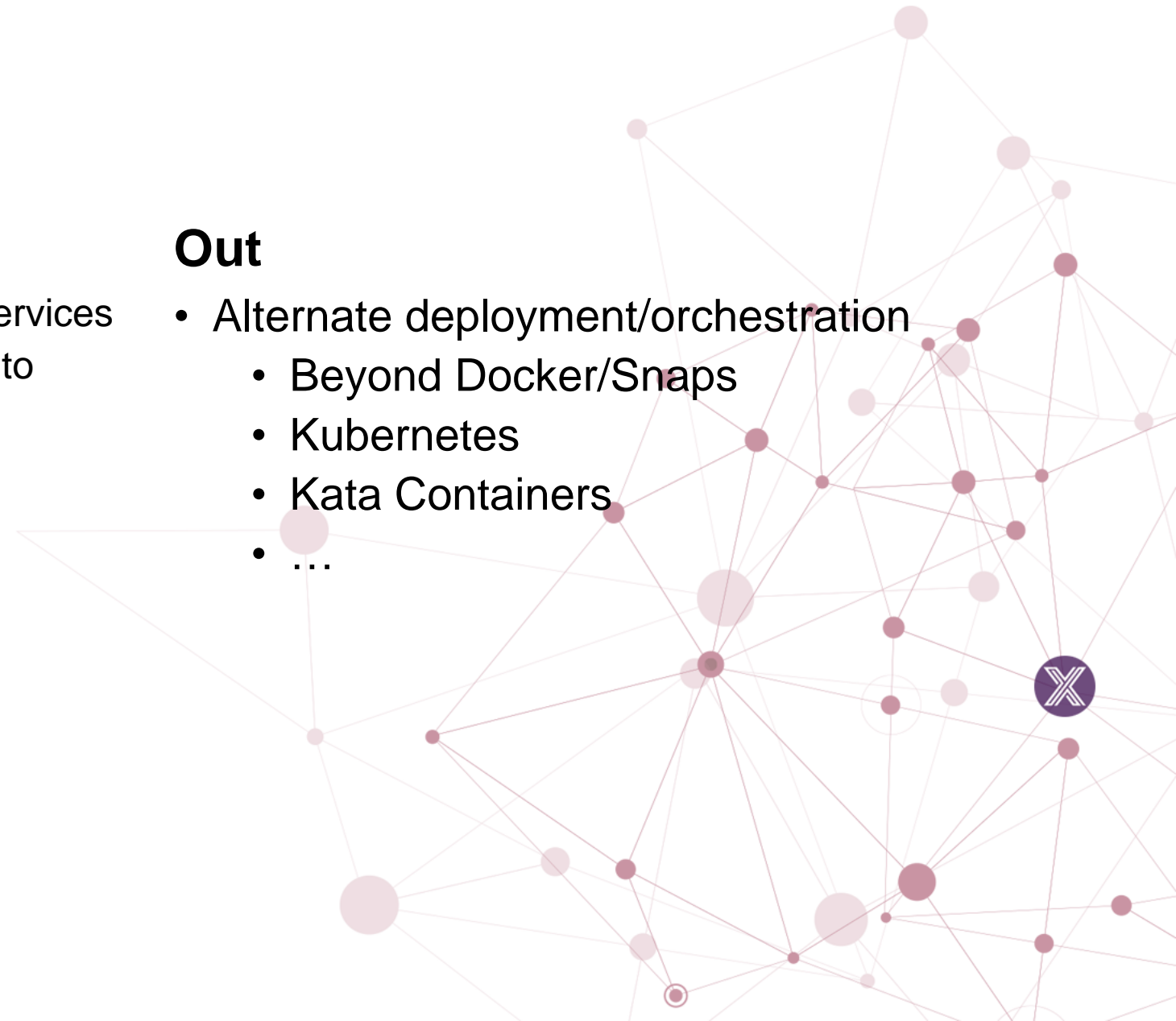
Geneva – DevOps

In

- Full Pipeline transformation for EdgeX services
 - Convert Jenkins JJB Freestyle jobs to Jenkins Pipelines
- Introduce GitHub Org Plugin
- Add Unit testing to global-libraries
- Nexus Cleanup
- Snyk integration all repos

Out

- Alternate deployment/orchestration
 - Beyond Docker/Snaps
 - Kubernetes
 - Kata Containers
 - ...





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Fuji Planning

Scope Discussions

Fuji – DevOps

In

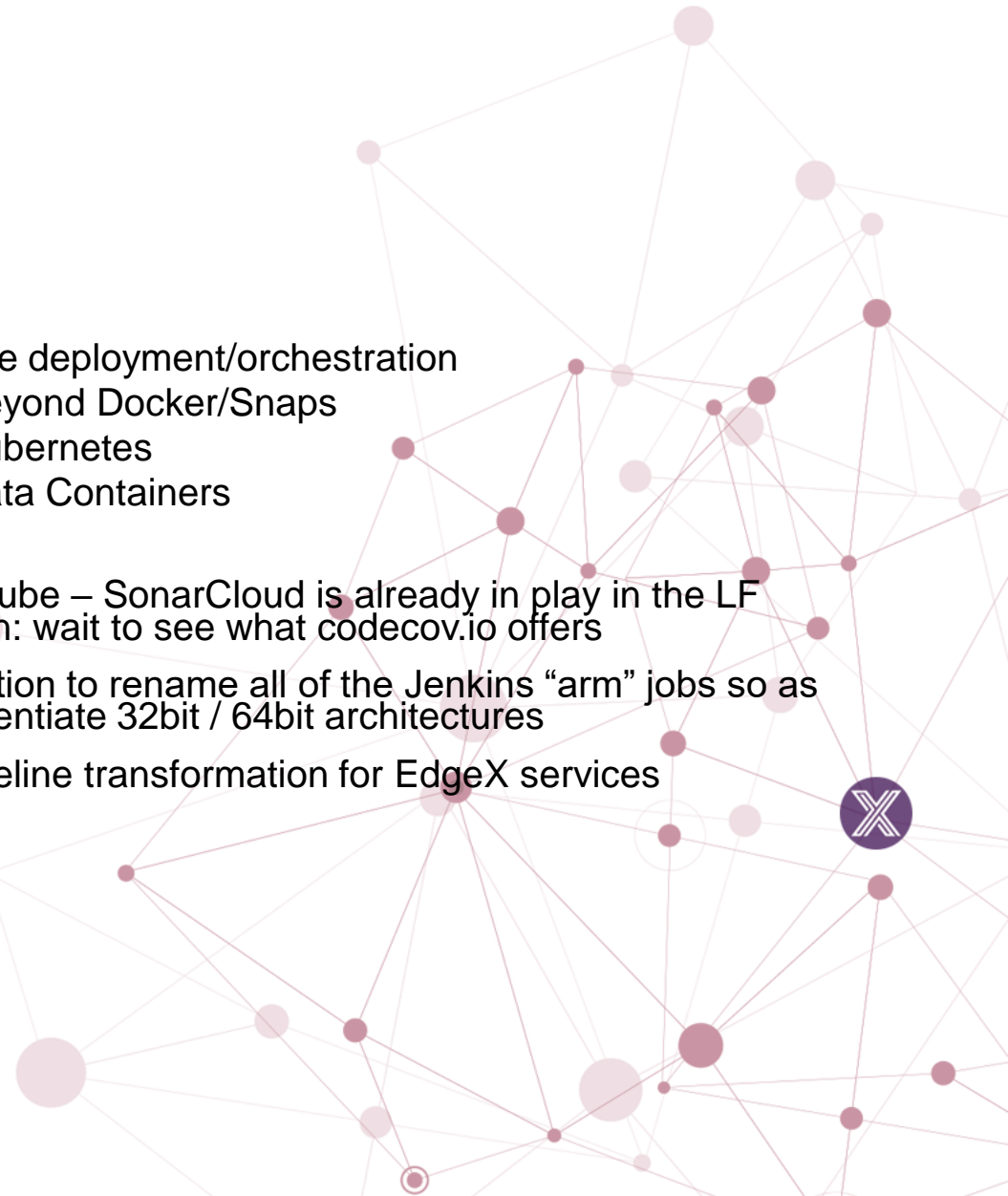
- Static code analysis tool identified and integrated into the EdgeX Jenkins Pipeline for Docker image scanning (Clair Server)

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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Past / Future Agenda Topics

WW36	
WW37	