



EDGE X FOUNDRY™

DevOps Working Group

Thursday June 27, 2019

Agenda

Time	Topic	Owner
10 min	Edinburgh Release : Release Update	James Gregg / Eric Ball / Jim White
20-30 min	Edinburgh Retrospective	All
20 min	Fuji Update	James Gregg
	Opens	All

Attendees

Participants (12)

Find a participant

JG	James Gregg (Intel) (Me)		
CT	Cloud Tsai		
C	Colin Hutchinson		
	Eric Ball - Linux Foundation		
	Jacob Blain Christen (Intel)		
JW	Jim White (Dell)		
LG	Lenny Goodell (Intel)		
LR	Lisa Ranjbar (Intel)		
R	robin		
TC	Trevor Conn		
U	UwkDG/iof2lJunFseOhuxzOBRvQDZczU0yg7Z4uFSFs=		
V	Vishwas (Intel)		



EdgeX DevOps WG Update

- **Edinburgh Release (v1.0.0)**
 - Finalize the release
 - Eric Ball - Publish all of the tagged / signed images to Docker Hub
 - Developer Scripts
 - Jim White - pulling together the docker-compose files
 - Security
 - Without Security
 - Nexus
 - Redis
 - Mongo (default)
- **Documentation** (new Jenkins job needed)
AS IS: The documentation for Edinburgh is good based on Edinburgh branch. Kick off the existing jobs and update the scripts to work off of the new repo for FUJI
- **Help Needed**

<https://twitter.com/search?q=RealGophersShip%20edgexfoundry&src=typd>

RealGophersShip edgexfoundry

Built with Go @RealGophersShip · Jun 25
edgexfoundry/app-functions-sdk-go (0.1.0)

edgexfoundry/app-functions-sdk-go
Contribute to edgexfoundry/app-functions-sdk-go development by creating an account on GitHub.
github.com

Built with Go @RealGophersShip · 15h
edgexfoundry/device-modbus-go (1.0.0)

edgexfoundry/device-modbus-go
Contribute to edgexfoundry/device-modbus-go development by creating an account on GitHub.
github.com

Built with Go @RealGophersShip · Jun 25
edgexfoundry/security-secret-store (1.0.0)

edgexfoundry/security-secret-store
Contribute to edgexfoundry/security-secret-store development by creating an account on GitHub.
github.com

Built with Go @RealGophersShip · Jun 24
edgexfoundry/security-api-gateway (1.0.0)

edgexfoundry/security-api-gateway
Contribute to edgexfoundry/security-api-gateway development by creating an account on GitHub.
github.com

EdgeX DevOps WG Update (continued)

- Edinburgh Release (v1.0.0)
 - Release Czar
 - Announcement: Lisa Rashidi-Ranjbar has volunteered to take on the Release Czar role starting with Fuji release.
 - Formal vote of approval from TSC (6/26).
 - Need to update the wiki with the new process which outlines the pre-release verbiage
 - Fuji Scope - Container Scanning (Clair Server landing request)
 - LF Management response indicates resourcing will be communicated after scoping exercise is completed next week.

Fabiano will be working on building on a public facing dashboard with some metrics for everything. We will want to include Lisa in the meetings with Fabiano.

Edinburgh Retrospective

What went right?

- Communication of when the release was scheduled, was very clear.
- LF and DevOps team cooperating together seemed to work well but with pressure added on top of everyone
- Most artifacts were ready to release in the beginning. It didn't seem like every repo was affected with issues (no extra work)
- Edinburgh Staging view was very helpful
- Great communication and collaboration between Intel DevOps team members and great prioritization
- Prioritization and Organization of the work (assignments and splitting up the work early on in the code release) was helpful

What went wrong?

- EdgeX-UI repos were late code drop
- Lack of a UI WG
- Communication around details was lacking from WG leads
- Need clear definition and understanding from WG leads that have different / independent release cycles
- JSD was introduced in the middle of the release and introduced issues that impacted communications with LF RE
- Availability and Competing priorities of Eric Ball / RE impacted release work
- Branches cut early caused extra work for both developers and DevOps

Edinburgh Retrospective (continued)

What Ideas would help next time?

- Jenkins Pipelines branch defined in Jenkinsfile
- Do Not cut the branch early
- Release from master
- Don't allow PRs to master during code freeze (unless bug fix)
- Release Czar manages the release and acts as coordinator
- Need better visibility as to WIP during release. What does DONE look like?
- Set clear expectations for FUJI ahead of time
- Have a solid and well defined scope for executing the release.
- Shorten the release timeframe
- Actually Freeze Code
- Don't pull in late code drops

What Actions will we take?

- Better coordination with RE to lay out the scope of work
- New UI WG
- Better tooling Pipelines
- Better clarity and organization / coordination of the work
- Release Czar coordinates and runs the release
- Shrink the release date where no development is going on during "code freeze"
- Create automation on the list of artifacts to release



Work Review

Helpdesk Ticket #	Description	Details	Status
75648	Dedicated Clair server for EdgeX	Pending decision on strategy for K8s + cost / availability of resources with LF	WIP (Brett Preston)
68377	failed job related to timeout waiting for SSH	Eric Ball follow up with the team that owns VEXHOST – no progress Issue is with building new arm images – doesn't affect edgex builds decision to leave it open for now.. Circle back with VEXHOST team	WIP (Eric) Possible look at using a different OS for the builds Proposal to use Ubuntu instead of Centos ARM image

Backlog Review

edgexfoundry / ci-management

<> Code Issues 4 Pull requests 1 ZenHub Projects 2 Wiki Security Insights

Tasks Updated 17 minutes ago

7 TODO

- Create the automation to create the SDL ...
Release Artifact requested of all Edinburgh Docker images. (@soda480)
US4751
Added by Jamesgregg
- Placeholder for snap global function in edgex-global-pipelines (FUJI)
US4581
US4580
Added by Iranjbar
- https://github.com/edgexfoundry-holding/go-mod-core-security ON-HOLD (FUJI)
Added by Jamesgregg
- New Tooling for Release Czar (Place Holder)
Organize Project work using GitHub issues with ZenHub
US4755
Added by Jamesgregg
- Jenkins_pipeline_presentation (FUJI)
delete repo once updated documentation completed
Note: Lisa is working on updated Jenkins Pipeline documentation and this repo will potentially be Obsolete once we review / publish that new documentation to the wiki.
Added by Jamesgregg
- Update global-pipelines to set nexus snapshot (FUJI)
Per DevOps WG meeting WW22, we will modify our definition for where the images are pushed Going forward, the repo for the default location of all Docker basebuild images for global pipelines will be Nexus (Snapshot) : 10003
US4756
Added by Jamesgregg
- Documentation move (FUJI)
1.1. Currently the content hosted at

Automated as To do Manage

6 In Progress

- Clair Server landing - LF Infrastructure or AWS decision and architecture / \$5 with TSC approval (@Jamesgregg)
Added by Jamesgregg
- Need to complete the codecov.io integration for all EdgeX services (FUJI)
#412 opened by Jamesgregg
Fuji
- Create the artifact to create the list of Edinburgh release artifacts as found on Docker Hub and Nexus repositories
Added by Jamesgregg
- Explore for SAST additional tooling (Vishwas)
US4288
Review of Analysis WW26
Added by Jamesgregg
- SPIKE: Need to comprehend the architecture - and full scope of work needed to support the proposed test automation framework which will use robot framework for QA-Test (@vishwassp-hcl-intel)
US4294
Added by Jamesgregg
- Modify the Jenkins JJB template for volume view
#417 opened by Jamesgregg
enhancement
Fuji

Automated as In progress Manage

0 Test/QA/Verification/Review

Automated as In progress Manage

63 Done

- New Jenkins Pipeline Needed for : edgex-ui-clojure
#388 opened by Jamesgregg
- performance-testing (Cloud Tsai)
edinburgh branch / code freeze
Added by Jamesgregg
- Add jobs for device-grove snap
#433 opened by anonymouse64
Changes approved
- device-snmpp-go [new pipeline job] (@dweomer)
#391
edgexfoundry/device-snmpp-go#7
edgexfoundry/device-snmpp-go#10
edgexfoundry/device-snmpp-go#11
#402
Added by Jamesgregg
5 References Show
- Add device-snmpp-go staging jobs
#431 opened by Iranjbar
Changes approved
- Add device-grove-c stage jobs
#432 opened by Iranjbar
Changes approved
- Create a new Jenkins Pipeline for app-functions-sdk-go
#425 opened by Jamesgregg
enhancement
Fuji
- test new issue
#426 opened by Jamesgregg
duplicate
- Remove maven-release-california from Jenkins job views
#413 opened by Jamesgregg
- Delete Repo from holding
#416 opened by Jamesgregg

Automated as Done Manage

1 Not Worked

- demo-grove-pi (James / Michael Hall)
edinburgh branch / code freeze
NEED INPUT FROM STEVE O - last update 5 months ago
edgexfoundry/demo-grove-pi#5
Added by Jamesgregg
1 Reference Hide
- Is this code slated for edinburgh release?
#5 opened by Jamesgregg in edgexfoundry/demo-grove-pi

Meeting Minutes

Codecov.io integration Update – WIP with Tyler Powers helping to update repos

SAST Analysis – review of the material

Decision made to configure edgex-go with Guardrails as per recommendation made by James Gregg

Performance Tests – missing data issue

Per Cherry Wang: *“Received the influxdb logs today, but no "File corrupt" message found.*

We would like to create an identical VM to reproduce this issue.

Requested the detail information of TIG server by ticket [IT-16584](#) and waiting for the response.”

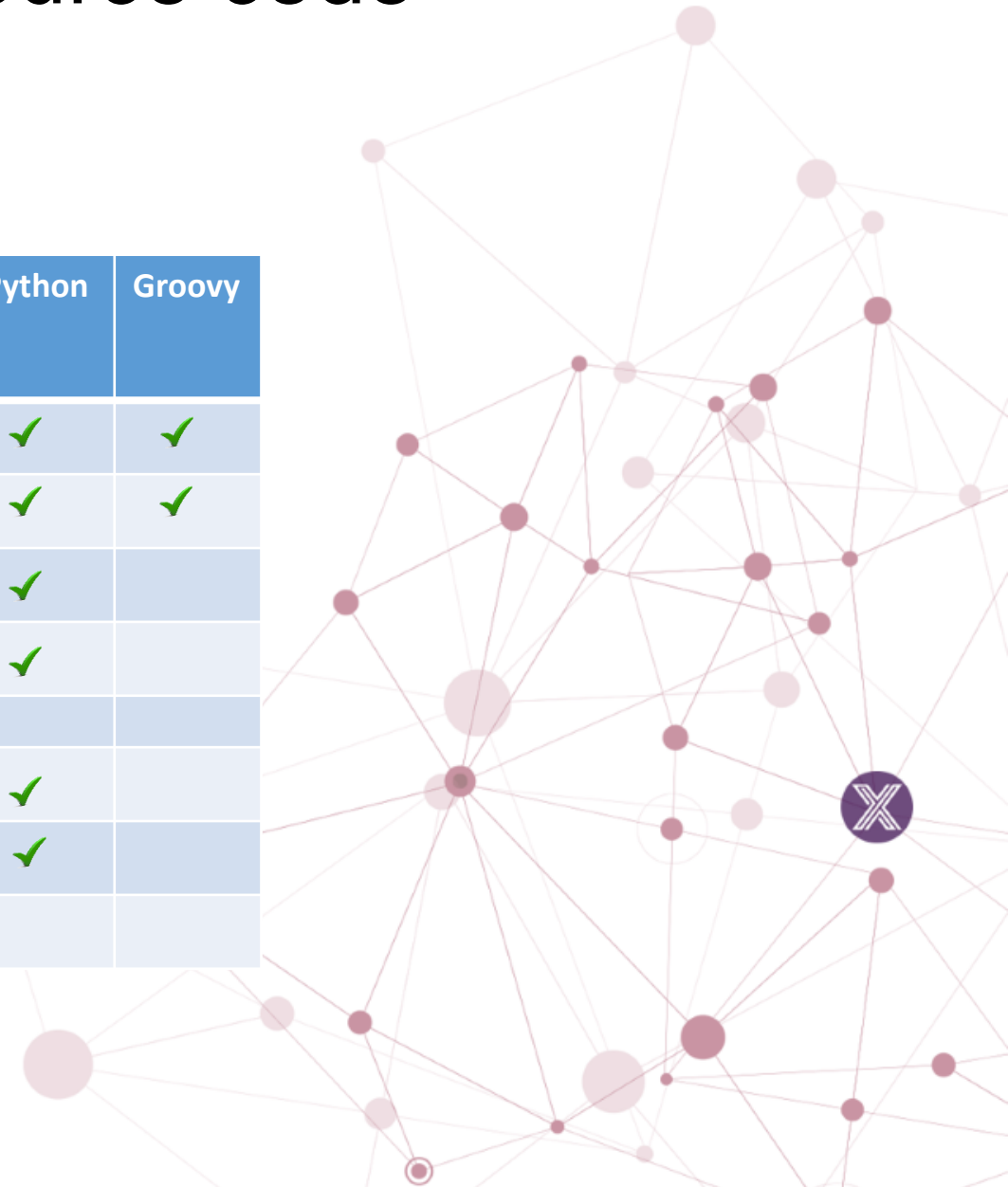
Test Automation

Per Cloud, they are missing ARM Neuman and Robot framework and need a new Docker image for additional test automation.

Cloud will put the code in ci-management/ci-build-images

Language support for Open Source code

Languages	GoLang	C	C++	JavaScript	Python	Groovy
Tools						
Fortify	✓	✓	✓	✓	✓	✓
Coverity		✓	✓	✓	✓	✓
Kritika		✓	✓	✓	✓	
SonarQube	✓			✓	✓	
Checkmarx	✓			✓		
Snyk	✓			✓	✓	
Guardrails	✓			✓	✓	
Whitehat				✓		



Analysis

Based on the previous table, the analysis are captured for the tools which supports GoLang.

Rank	Tools	Github Integration	Support for Docker	Cost	Open Source	SCM Support	SaaS	Rules config	Remarks
4	Fortify	Don't see the proper documentation	Couldn't find it	Cost involved	No	Yes Data Sheet	Yes	Yes	It supports on demand scanning, but it is expensive.
2	SonarQube	Easy github plugin Scanner Info Server Info	Yes Docker	Free for open source project, except for C, C++ Pricing	Yes	Yes • Get Started • Jenkins Configuration • Sonar Scanner	Yes	Yes	It supports GoLang, but C/C++ scanning works only on Developer / Enterprise version. Additional overhead to implement with LF resources needed to enable by FUJI.
3	Snyk	Integration not supported for GoLang (Details)	No for GoLang	Free for open source project Pricing	No	Yes Documentation	Yes	Yes	Snyk supports testing and monitoring Go projects that have their dependencies managed by dep or govendor . Go support is currently supported via the Snyk CLI and Git Integrations Seems like limited support for GoLang – need supplier roadmap Reporting requires paid plan = \$\$\$
1	Guardrails	Need to see how this could work for EdgeX Foundry.		Free for open source project Pricing	No	Yes	Yes	Yes	Paid clients have additional functionality for CLI and PR support

Quick Demo

Snyk

snyk jamesgregg james.r.gregg@intel.com

Dashboard Reports **Projects** Integrations Settings

jamesgregg/hellonode:package.json

Overview History Settings

Snapshot taken by recurring test 4 days ago. [Retest now](#)

Vulnerabilities	0 via 0 paths	Dependencies	0	Source	GitHub
Taken by	Recurring	Tested with	package.json	Repository	hellonode
Branch	master	Manifest	package.json		

Issues Dependencies

Severity

- High 0
- Medium 0
- Low 0

Status

- Open 0
- Patched 0
- Ignored 0

No known vulnerabilities found

Add a Snyk Badge to the README file to show that this project is free of vulnerabilities.

vulnerabilities 0

HTML

```
<a href="https://snyk.io/test/github/jamesgregg/hellonode?targetFile=package.json">img src="https://snyk.io/test/github/
```

[Copy](#)

Markdown

```
[[Known Vulnerabilities](https://snyk.io/test/github/jamesgregg/hellonode/badge.svg?targetFile=package.json)](https://sny
```

[Copy](#)

Guardrails

jamesgregg edgex-helm-chart a012c05: PR #1 - [pull] master from edgexfoundry-holding:master

PR #1 a012c05 [pull] master from edgexfoundry-holding:master **No Issues** 00m 00.645s 7 days ago

Scan Report [Show detailed results](#)

detect-secretsv0.11.0 00m 00.645s

File: edgex/charts/edgex-mongo/templates/deploy-mongoyaml:26
Rule ID: Hex High Entropy String
Finding Type: secret

Associated metadata

```
{
  "hashedSecret": "032813bf7f421b78b30901f32458b7b0f0ea15e6"
}
```

This is not a false positive



EDGE X FOUNDRY™

Fuji Planning

Scope Discussions

Fuji – DevOps

In

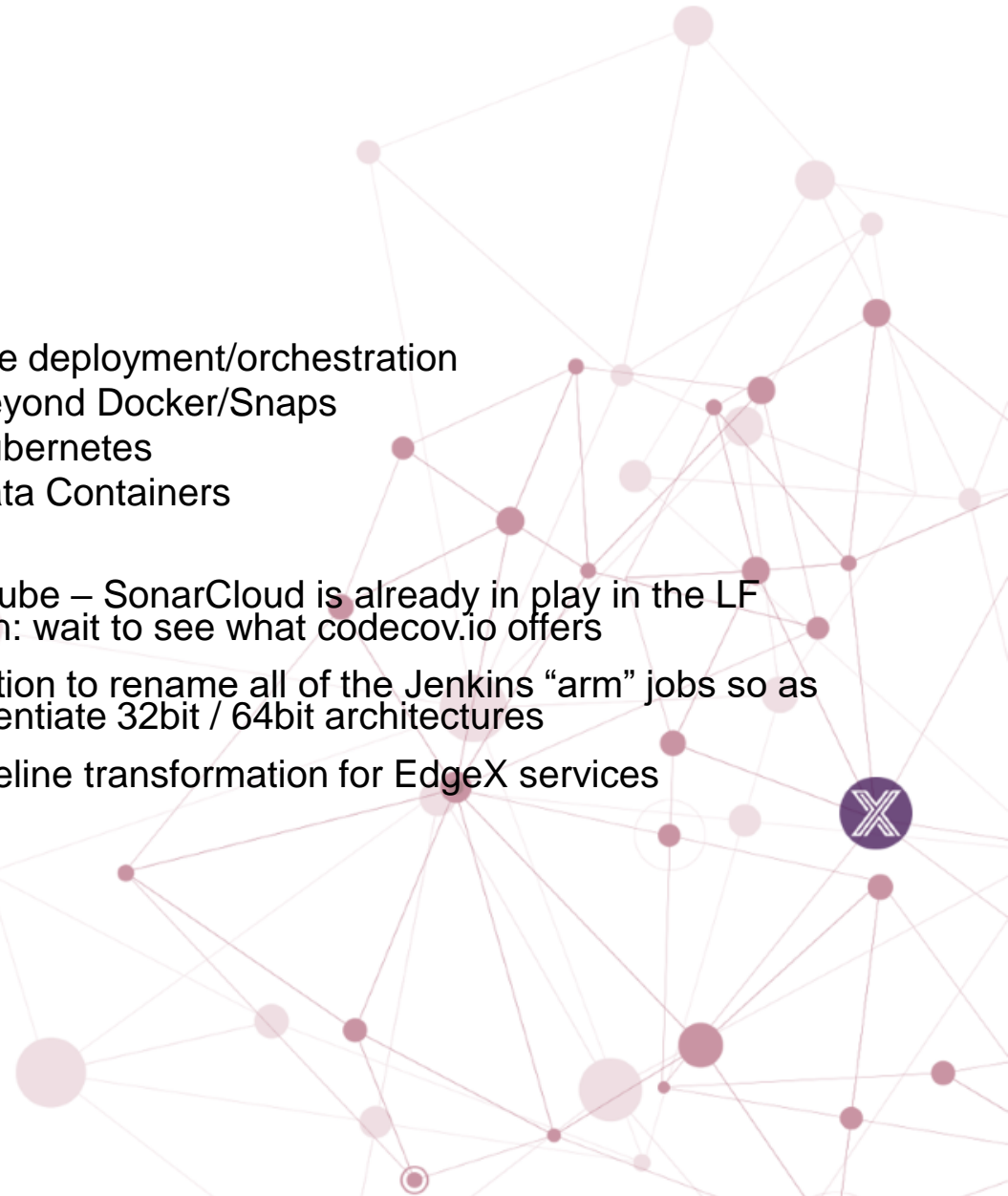
- Static code analysis tool identified and integrated into the EdgeX Jenkins Pipeline for Docker image scanning (Clair Server)

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





EDGE X FOUNDRY™

Edinburgh Release

Release Planning

Edinburgh Dates

- Freeze Date – May 28
- Release Date – June 20



The background features a detailed 3D rendering of a snake's skeleton, showing the skull, spine, and ribs. A network of red lines and dots is overlaid on the skeleton, suggesting a digital or data-driven theme. A central logo, a stylized 'X' inside a purple circle, is positioned above the main text.

EDGE X FOUNDRY™

Past / Future Agenda Topics

WW14	Documentation migration – edgex-go user documentation
WW14	Topics for Fuji F2F Jenkins Pipelines for EdgeX services
WW15	Review Aqua Microscanner – Image scanning tool for Vulnerabilities
WW16	NVIDIA – Security tooling within CodePipeline (Trevor request) 4/18/19
WW17	
WW18	
WW24	
WW26	
	Athens Project – proxy server for go package dependencies
	Community Involvement