EDGE X FOUNDRY™

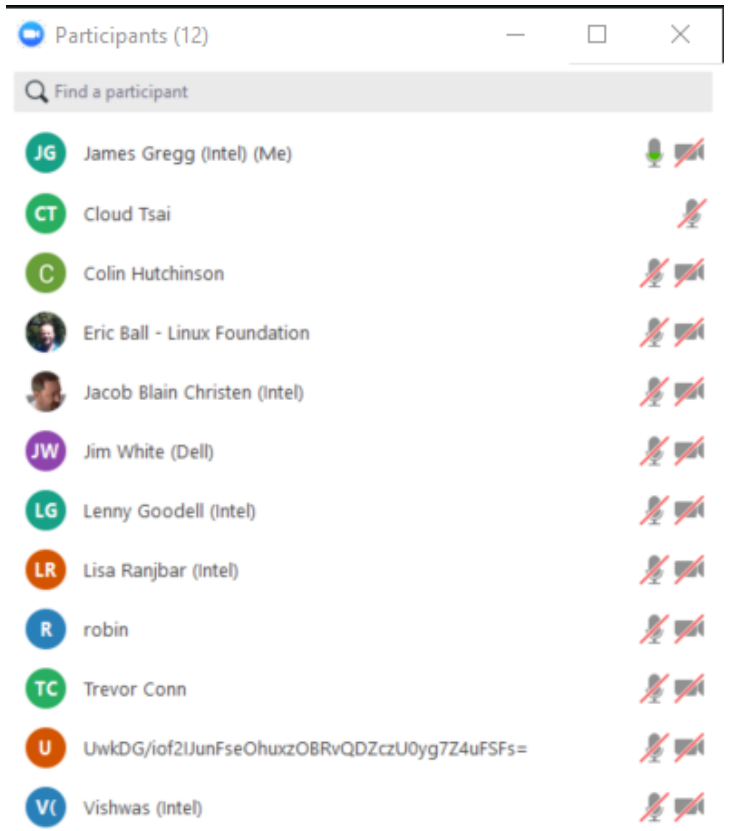
DevOps Working Group

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/iof2IJunFseOhuxzOBRvQDZczU0yg7Z4uFSFs=
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

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

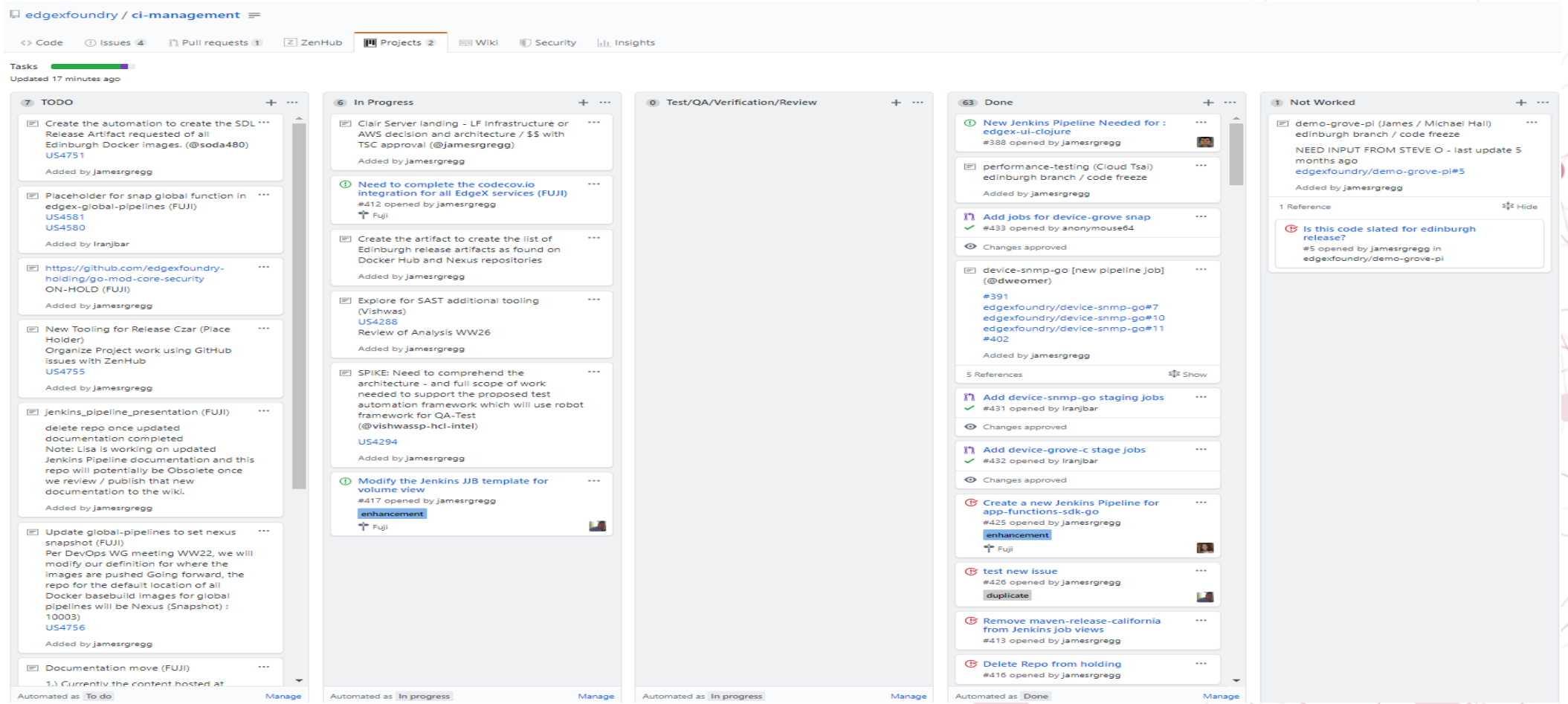
What Actions will we take?

- 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



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

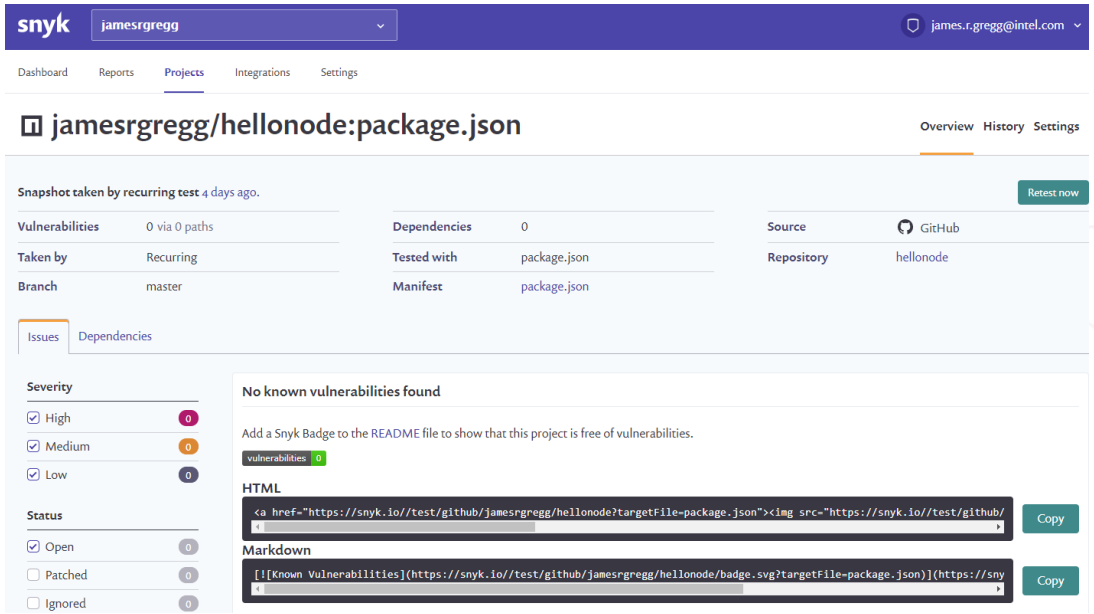
Analysis

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

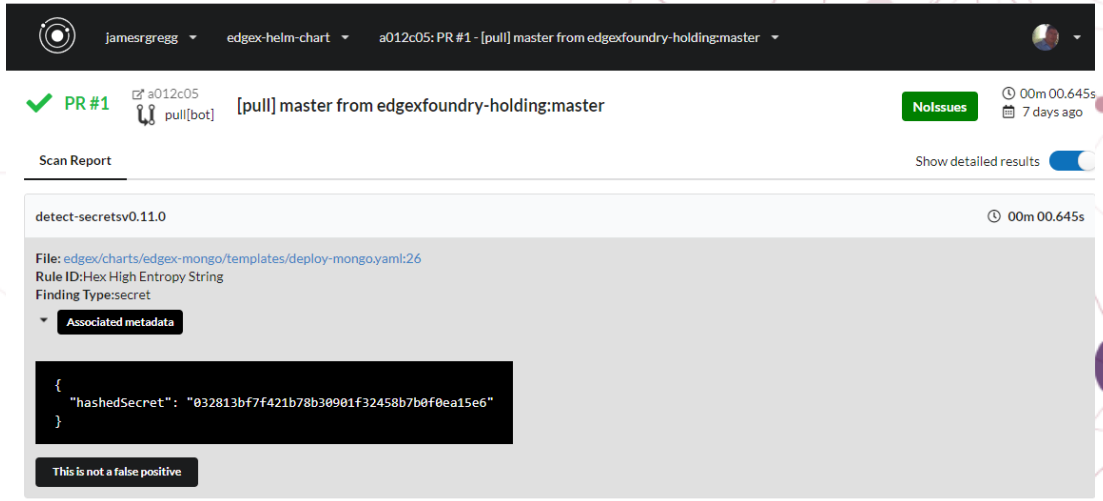
Rank	Tools	Github Integration	Support for Docker	Cost	Open Source	SCM Support	SaaS	Rules config	Remarks
4	Fortify	Don't see the proper documentation	Couldn't find it	Cost involved	No	Yes Data Sheet	Yes	Yes	It supports on demand scanning, but it is expensive.
2	SonarQube	Easy github plugin Scanner Info 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

Synk



Guardrails



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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

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Edinburgh Release

Release Planning

Edinburgh Dates

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

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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