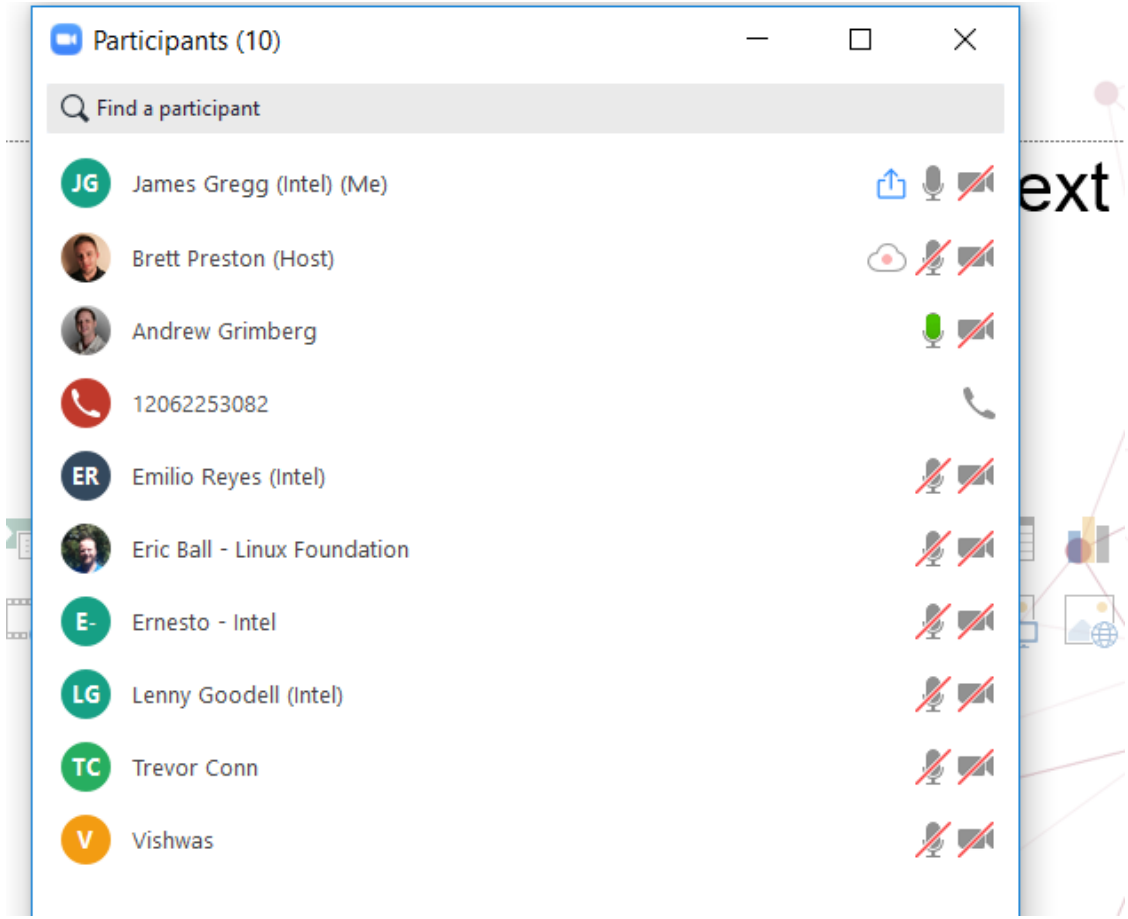
DevOps Working Group

Thursday August 1, 2019

Agenda

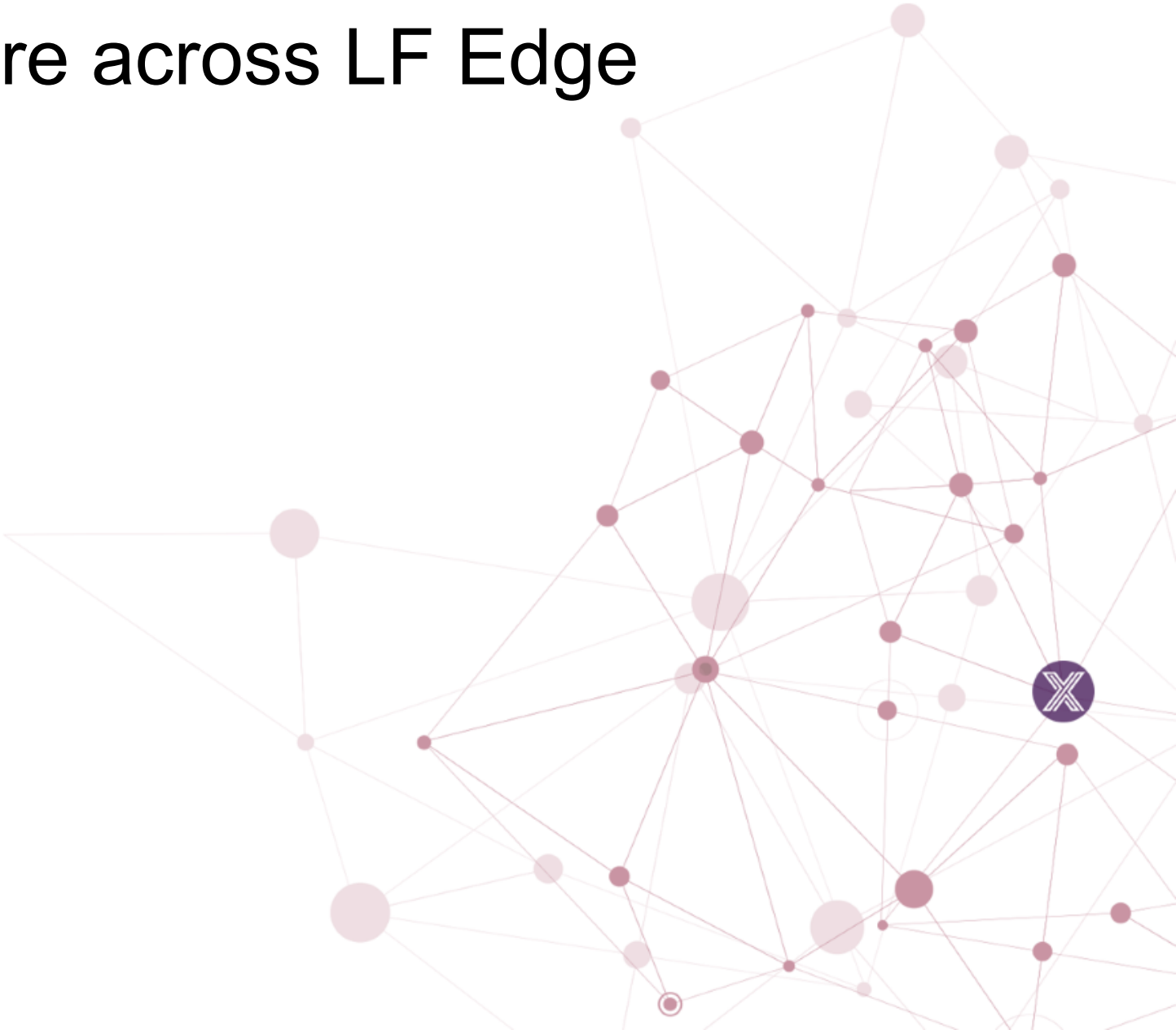
Time	Topic	Owner
10 min	“shared” CI Infrastructure across LF Edge	Andrew Grimberg
10 Min	Fuji Update	James Gregg
10 min	Other Business: Multiple Topics	James / Trevor / Jim White
10 Min	Opens	All

Attendees


Participants (10)
Find a participant
JG James Gregg (Intel) (Me)
Brett Preston (Host)
Andrew Grimberg
12062253082
ER Emilio Reyes (Intel)
Eric Ball - Linux Foundation
E- Ernesto - Intel
LG Lenny Goodell (Intel)
TC Trevor Conn
V Vishwas

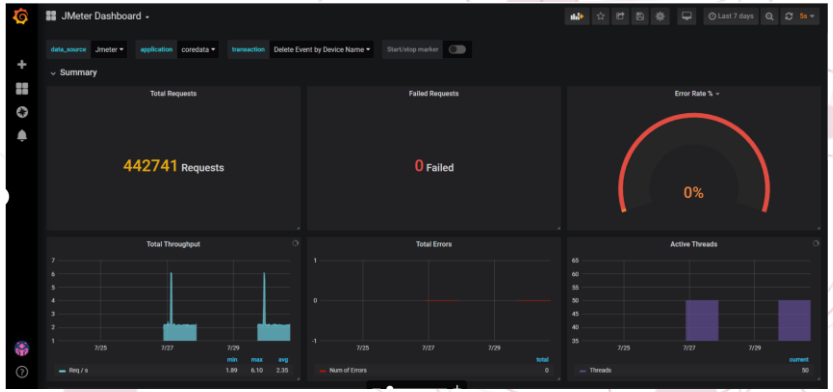
“shared” CI Infrastructure across LF Edge

- Share of core infra
  - Jenkins / Jenkins Sandbox
  - Nexus / Nexus
- Small = less than 500
  - Between Akraino / EdgeX
- Timing
  - Sooner than Later



DevOps WG Update

- **Fuji Scope**
- Performance Optimizations – Ernesto optimized the Pipeline jobs (does all the post build actions in about 20 seconds, down from 1m40s-2m)
  - Added a User story to do the same optimization for the Freestyle jobs in this Sprint
  - Emilio picked up the story and it's looking like a lot of extra work that may not be worth it right now. Will know more next week.
- Container Scanning (Clair Server landing request) has now been committed to by Linux Foundation with resources planned and funding approved for hosting on AWS.
  - Expected Completion: This Week (WW31)
- Static Code Analysis Tools
  - Plan to review output of tools
    - Checkmarx - DONE
    - Snyk - DONE
    - Coverity – HELP NEEDED
    - SonarQube / SonarCloud - DONE
  - Snyk demo will need to be rescheduled in the Security WG
- 2nd round of cleanup GitHub holding repos - audit to address orphaned teams, archived repos, set owners of repos based on WG chair membership
  - Audit EdgexFoundry for review next week
- Review of the Linux Foundation Infrastructure as Code re: Performance Testing completed
  - Meeting with Jordan Conway 7/23
  - Jordan modified the EB implementation – scale up to single t3.xlarge
  - QA-Test WG reported performance-tests ran successfully without data loss

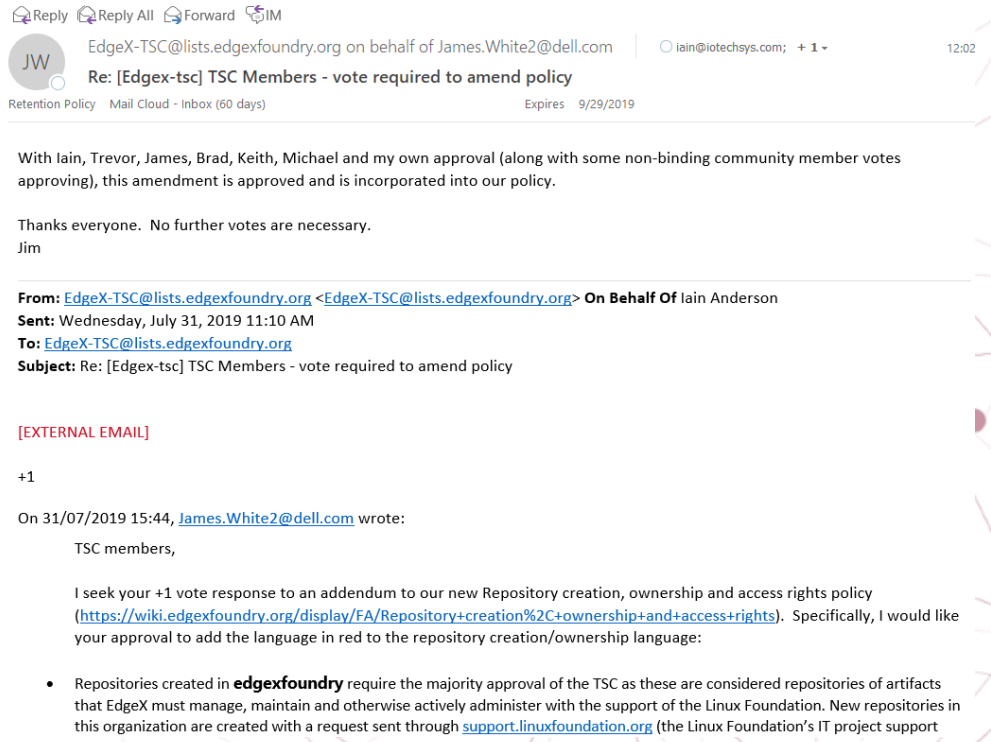


EDGE X FOUNDRY™

INFORM

Other Business: Topic 1
Holding Repo General Change Requests (James)

- **Holding Repo Change Requests**
  - TSC approved change 7/31 to verbiage on the wiki will reflect that ANY change requests made for holding repos, do not require TSC approval and that the working group chair may request permission changes to holding repos via JSD ticket submission.



Reply Reply All Forward IM

JW EdgeX-TSC@lists.edgexfoundry.org on behalf of James.White2@dell.com iain@iotechsys.com; + 1 12:02

Re: [Edgex-tsc] TSC Members - vote required to amend policy

Retention Policy Mail Cloud - Inbox (60 days) Expires 9/29/2019

With Iain, Trevor, James, Brad, Keith, Michael and my own approval (along with some non-binding community member votes approving), this amendment is approved and is incorporated into our policy.

Thanks everyone. No further votes are necessary.
Jim

From: EdgeX-TSC@lists.edgexfoundry.org <EdgeX-TSC@lists.edgexfoundry.org> **On Behalf Of** Iain Anderson
Sent: Wednesday, July 31, 2019 11:10 AM
To: EdgeX-TSC@lists.edgexfoundry.org
Subject: Re: [Edgex-tsc] TSC Members - vote required to amend policy

[EXTERNAL EMAIL]

+1

On 31/07/2019 15:44, James.White2@dell.com wrote:

TSC members,

I seek your +1 vote response to an addendum to our new Repository creation, ownership and access rights policy (https://wiki.edgexfoundry.org/display/FA/Repository+creation%2C+ownership+and+access+rights). Specifically, I would like your approval to add the language in red to the repository creation/ownership language:

- Repositories created in **edgexfoundry** require the majority approval of the TSC as these are considered repositories of artifacts that EdgeX must manage, maintain and otherwise actively administer with the support of the Linux Foundation. New repositories in this organization are created with a request sent through support.linuxfoundation.org (the Linux Foundation's IT project support

EDGE X FOUNDRY™

INFORM

Other Business: Topic 2
Repo Ownership / Teams

- Repo Ownership / Team

- Seeking help from LF to update Descriptions on repo to set the <wg chair / working group name>

Other Business: Topic 2
Test Automation Framework (Vishwas / Ernesto)

- DevOps has been assisting with scope of work in support of the QA-Test WG for an updated TAF which leverages robot framework.
- Validation of the Code will need to be done in Production if writing to Nexus is not allowed by LF policy
- Other Suggestions

```
[Pipeline] sh
+ lftools deploy nexus-zip https://nexus.edgexfoundry.org taf-test sandbox/vex-yul-edgex-jenkins-2/taf-global-test/8 reports/taf-reports.zip
Uploading reports/taf-reports.zip failed. It contained the following files
   reports/test-results.html
ERROR: Failed to upload to Nexus with status code: 403.
<html>
  <head>
    <title>403 - Forbidden</title>
    <meta http-equiv="Content-Type" content="text/html; charset=utf-8"/>
```

Other Business: Topic 3
API Endpoints (Trevor)

DISCUSSION

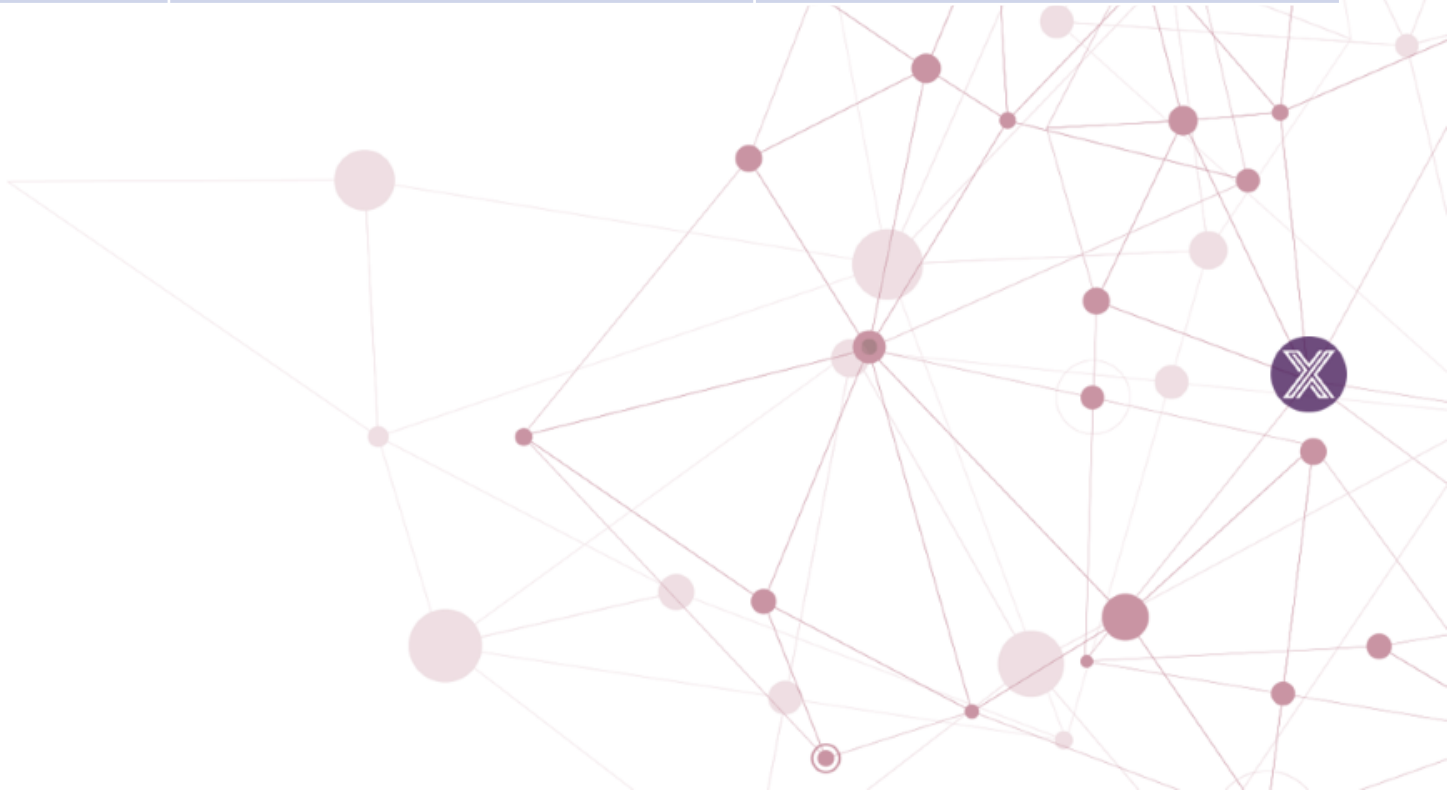
- API Endpoints
- How do we want to report versioning long term based off a tag?

NEEDS FURTHER DISCUSSION WITH LISA
ON-HOLD

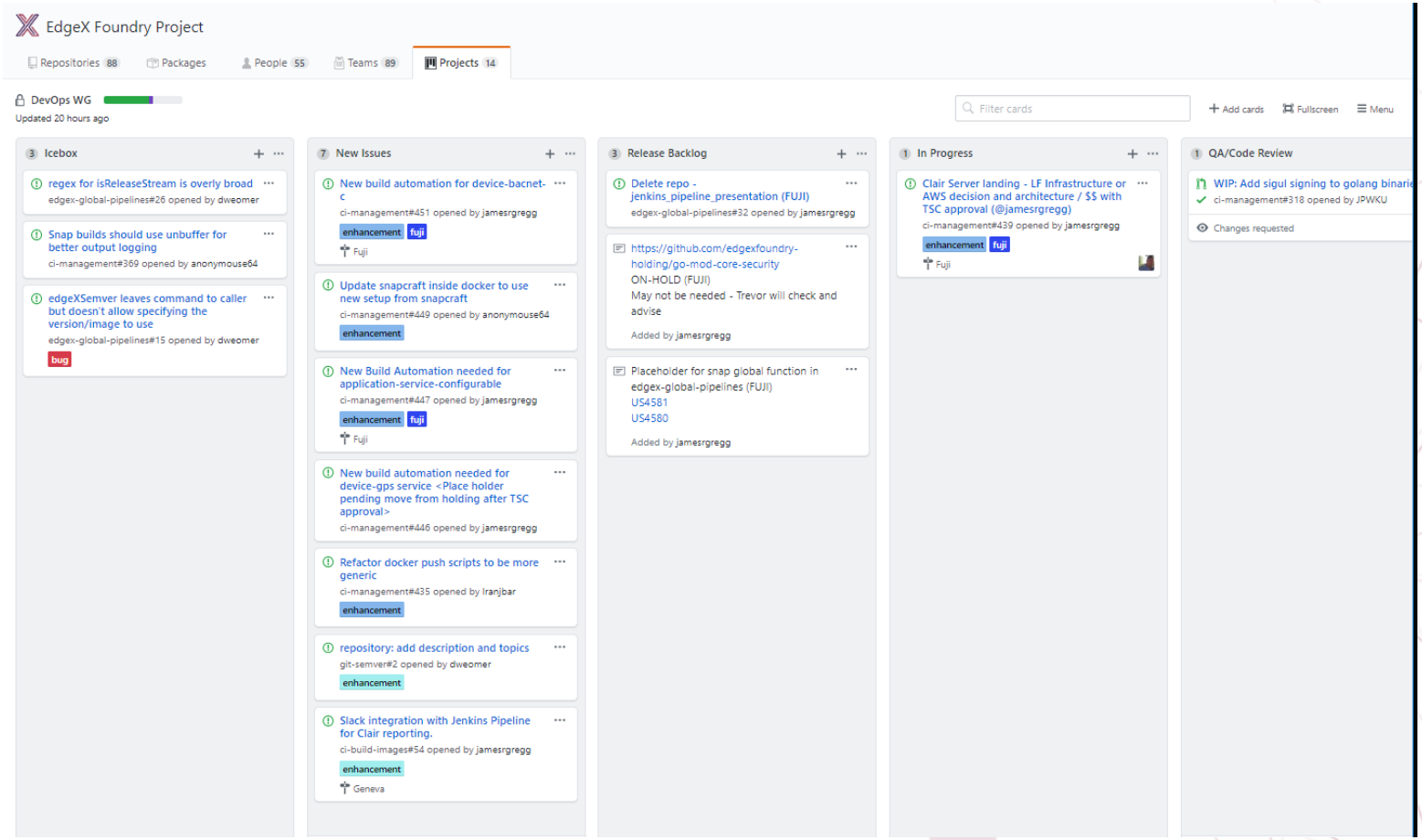
- ~/Documents/code/git/tsconn23/edgex-go $ git describe
- fatal: No tags can describe '9b423a24532468bb1930ea6ffe9af800680590aa'.
- Try --always, or create some tags.
- Consul
- Jq
  - Decision:
    Jacob will send some examples to core list for review

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
IT-17020	Status Update Requested: Clair Server		
IT-17019	Permissions request for SonarCloud	Need to change Quality Profile / Quality Gate	
IT-16855	New Nexus Repo for Test Automation Framework (taf)		
IT-16993	Modify committer permissions		



Backlog Review



Meeting Minutes

Discussion re: shared infrastructure for LF Edge umbrella projects which are deemed “small” enough to share a common infrastructure.

- Full scope of work involved needs to be comprehended.
- Roles and Responsibilities of both LF and DevOps community needs to be described with project plan (timing / schedule should not be disruptive to planned releases nor introduced in the middle of a release)
- Need to see an Architecture and GitHub Organization level model
- Need to understand what other options we might consider that might lessen the burden the LF is seeing with supporting multiple dedicated infrastructures
- Consideration of use of Pipelines and Jenkins Plugins within the shared infrastructure is needed
- Performance Concerns re: Majority of builds for some of the other projects are building ARM

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 - DONE
- Better tooling Pipelines (Geneva)
- 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

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

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: • 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

EDGE X FOUNDRY™

Edinburgh Release

Release Planning

Edinburgh Dates

- Freeze Date – May 28
- Release Date – June 20
- Press Release – July 11
- Dot Release – July 22

edgexfoundry.org | @edgexfoundry

Past / Future Agenda Topics

WW27	No Meeting – US Holiday
WW28	
WW29	
WW30	
WW31	
WW32	
WW33	
WW34	
WW35	
	Athens Project – proxy server for go package dependencies
	Community Involvement