## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Owner</th>
</tr>
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<tbody>
<tr>
<td>10 Min</td>
<td>Geneva / DevOps Updates</td>
<td>James</td>
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<tr>
<td>30 Min</td>
<td>“Release the Kraken” - Review Proposal for Automating the Edgex Releases</td>
<td>Lisa</td>
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<tr>
<td>5 Min</td>
<td>ARM Build Speed Improvements Changes</td>
<td>Eric Ball</td>
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<tr>
<td>10 Min</td>
<td>Backlog Review (Time Permitting)</td>
<td>James</td>
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<tr>
<td>5 Min</td>
<td>AOB / Opens - Snap Global Library - race detection library – alpine issue</td>
<td>All</td>
</tr>
</tbody>
</table>
Attendees

James Gregg (Intel) (Me, participant ID: 54)
Emesto Ojeda (Intel)
Bill Mahoney
Brandon Forster
Eric Ball
Jason Bonafide
Jeremy Phelps
Jim White
Lenny Goodell (Intel)
Walt (Intel)
Dharm
Uka Rashidi-Ranjbar
Vishwas Sp
DevOps WG Update

Geneva

• Jenkins Transformation to Pipelines
  • Work continues on the transformation to Jenkins Pipelines
  • Lisa is exploring work to look into full automation of the release – WIP
    • Demo / Discussion
    • Request to move cd-management out of holding to main Org EdgeX Foundry
  • Automation for the GitHub Issue labels - WIP
  • EdgeX-Go Pipeline now in place
    • Need to update documentation and work on the issue with managing multiple Jenkinsfiles
  • PR “recheck” now resolved with new Jenkins Plugin
  • git-semver unit testing - decided to fix existing code vs. rewrite - WIP

• CommunityBridge - Advanced Snyk Reporting
  • EdgeX Foundry added to the CommunityBridge Vulnerability Reporting
    • Ticket still open with Heather Willson & David Deal / CommunityBridge team
    • We now have Advanced Snyk Reports but working through multiple new issues
DevOps WG Update

Pipeline recheck functionality
• Enabled by pipeline-github-plugin
  • [https://github.com/jenkinsci/pipeline-github-plugin](https://github.com/jenkinsci/pipeline-github-plugin)
  • Add new trigger to pipeline script

```
pipeline {
    triggers {
        issueCommentTrigger('^recheck$')
    }
}
```

ARM Build Speed Improvements
• Slow ARM builds
  • [#584](https://github.com/jenkinsci/pipeline-github-plugin) Change ubuntu18.04-docker-arm64 to lf-standard-4

Eric Ball updated a comment:
• Let me begin by pointing out that the current builder is mislabeled. Though it is named "4c-2g", the hardware flavor lf-standard-2 is in fact 2c-4g. However, not all CPUs are created equal. After running a number of tests, I found that the most balanced result was using the **lf-standard-4 flavor, which is 4c-16g**. Note that both lf-standard flavors were faster than our highcpu flavors, which I tested with 4c-4g, 8c-8g, and 16c-16g configurations.
Snyk Scan Results - mongo

Docker mongo:4.2.3-bionic: latest image reported 47 vuln’s.
Release the Kraken - Lisa

**cd-management (release-kraken)**
- Repository to manage the delivery of EdgeX Foundry release artifacts
- Automate the last steps of the release

**Requirements**
- EdgeX Release artifacts are currently defined as:
  - Git Tags
  - Docker images
  - Snaps
  - Edgex-docs and SwaggerHub were not in the scope for this explore**
- Release artifacts from one or more git repositories at a time
- Repositories can have more than one artifact type to release
- Repositories can have more than one artifact of a specific type to release (ie: multiple docker images)
- Repositories may be released at different times
- Would like a history of releases… audit trail
Release-kraken (continued)

Functional Flow

• YAML files inside cd-management will describe the release
  • YAML files are 1:1 to current git repositories
  • When a change is detected in the YAML file we trigger the release for that repository
Backlog Review

edgexfoundry.org | @edgexfoundry
Meeting Minutes

Sprint Planning for next 3 week sprint - Geneva scope was completed yesterday.

Working session set up for next week regarding Snap Global Library for Geneva scope which is remaining work not yet started.

Advanced Snyk Reporting will be for SIR Team members

• Need LF IDs for SIR Team members so that they can be added to the contributor’s login for the reports

Request for moving cd-management out of holding will be submitted today for TSC vote via email

race: not working with Alpine based image  

Decision made to push the suggested workaround to HANOI scope for now. This was previously discussed in a previous working group meeting, and it's known known issue with Alpine based images. We don’t want to pull in this scope right now as it will force us to use a larger build image (non-Alpine based) and we want to try to see what performance improvements are afforded with the change LF helped us with for the ARM builds. The issue could be fixed by the Go development community at some point, which would introduce some rework to change back to using Alpine for multi-stage builds.

Snyk report for consul image to address jq High Severity CVE is documented

Hanoi Planning

Scope Discussions
Hanoi - DevOps

• Performance Optimizations for EdgeX-Go Jenkins Pipelines
Geneva Planning

Scope Discussions
## Fuji Release

- **Freeze:** Oct 23rd (Wednesday)
- **Release:** Nov 15th (Friday)

### Calendar

<table>
<thead>
<tr>
<th>Start Date: 10/23/19 (with extension)</th>
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<tbody>
<tr>
<td><strong>Week 1</strong></td>
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<tr>
<td><strong>Oct 23</strong></td>
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<td><strong>Week 2</strong></td>
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<tr>
<td><strong>Nov 1</strong></td>
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<td><strong>Week 3</strong></td>
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<td><strong>Nov 8</strong></td>
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<td><strong>Week 4</strong></td>
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<td><strong>Nov 15</strong></td>
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### Key Activities
- **Code Freeze**
- **EdgeX F2F in Phoenix**
- **Update Documentation, Compose Files and Bug Fixes**
- **Cut Fuji Branches**
- **GitHub Issues: Close / Mark for Geneva**
- **Create Fuji Jobs For Existing Repos**
- **Clair Scan of EdgeX Images**
- **Open Tickets with LF for release on 11/15/19**
- **Finalize Release Notes**
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
- Code signing / Artifact signing **
Geneva Transformation: Architecture
How long does it take? Is this all Geneva scope?

Geneva Transformation

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
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)

<table>
<thead>
<tr>
<th>Scope of Work</th>
<th>Status</th>
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<tbody>
<tr>
<td>Add static artifact analysis into the EdgeX Jenkins Pipeline</td>
<td><img src="https://raw.githubusercontent.com/" alt="✓" /> (green light)</td>
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<tr>
<td>(analysis of Docker /runtime artifacts, not the source code)</td>
<td><img src="https://raw.githubusercontent.com/" alt="✓" />, <img src="https://raw.githubusercontent.com/" alt="✓" /> (green light)</td>
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<tr>
<td>Add code and artifact signing with semantic versioning</td>
<td><img src="https://raw.githubusercontent.com/" alt="✓" />, <img src="https://raw.githubusercontent.com/" alt="✓" /> (green light)</td>
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<td>Conduct build performance optimizations by:</td>
<td><img src="https://raw.githubusercontent.com/" alt="✓" />, <img src="https://raw.githubusercontent.com/" alt="✓" /> (green light)</td>
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<tr>
<td>• Adding Pipelines for EdgeX Foundry base build images</td>
<td><img src="https://raw.githubusercontent.com/" alt="✓" />, <img src="https://raw.githubusercontent.com/" alt="✓" /> (green light)</td>
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<td>• Allow base build images to be managed locally within Nexus</td>
<td><img src="https://raw.githubusercontent.com/" alt="✓" />, <img src="https://raw.githubusercontent.com/" alt="✓" /> (green light)</td>
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<td>• Leverage PyPi Proxy for local pip dependencies</td>
<td><img src="https://raw.githubusercontent.com/" alt="✓" />, <img src="https://raw.githubusercontent.com/" alt="✓" /> (green light)</td>
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<td>Explore static code analysis like Checkmarx, Coverity, GuardRails, Synk, SonarQube</td>
<td><img src="https://raw.githubusercontent.com/" alt="✓" />, <img src="https://raw.githubusercontent.com/" alt="✓" /> (green light)</td>
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- 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
### Past / Future Agenda Topics

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<thead>
<tr>
<th>WW36</th>
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