# Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Owner</th>
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<tbody>
<tr>
<td>10 Min</td>
<td>Geneva / DevOps Updates</td>
<td>James</td>
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<tr>
<td>20 Min</td>
<td>Snap Global Library</td>
<td>Ernesto</td>
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<tr>
<td>10 Min</td>
<td>GitHub Issues Automation</td>
<td>Ernesto</td>
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<td>15 Min</td>
<td>Backlog Review (Time Permitting)</td>
<td>James</td>
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<td>5 Min</td>
<td>AOB / Opens</td>
<td>All</td>
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Attendees

<table>
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<tr>
<th>Participant</th>
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<tr>
<td>James Gregg</td>
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<td>Ernesto Ojeda</td>
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<td>Tony Espy</td>
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<td>Bill Mahoney</td>
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<td>Dheeraj</td>
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<td>Eric Ball</td>
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<td>Jeremy Phelps</td>
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<td>Jim White</td>
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<td>Lenny Goodell</td>
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<td>Lisa Rashidi-Ranjbar</td>
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<td>Trevor Conn</td>
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<td>Vishwas Sp</td>
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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
    • “release-kraken” full automation of the release continues
    • demo last week in DevOps WG meeting
    • cd-management repo moved out of holding
    • Will need to coordinate working session with LF Release Engineering
  • Automation for the GitHub Issue labels - WIP
  • ARM builds now using new build agent - ubuntu18.04-docker-arm64-4c-16g
    • edgex-go build performance improved building faster for ARM
    • ~15 min average improvement which helps the whole pipeline
  • PR “recheck” now resolved with new Jenkins Plugin
  • git-semver unit testing - decided to fix existing code vs. rewrite - WIP
  • Update lftools for ci-build images - WIP
  • Snap Global Library developed with plans to demo this week in DevOps WG meeting

CommunityBridge - Advanced Snyk Reporting
• EdgeX Foundry added to the CommunityBridge Vulnerability Reporting
  • EdgeX Foundry added to the CommunityBridge Vulnerability Reporting
  • We now have Advanced Snyk Reports but working through multiple new issues
CB Update: Snyk Advanced Reporting
Snap Global Library + Release-Kraken
GitHub Issues Label Automation

Use Case
A user has a GitHub repo `edgexfoundry/my-template` where they manage a master list of labels. They now want to copy all the labels found in repo `edgexfoundry/my-template` to ALL repositories under the `edgexfoundry.org` domain.

Triggers
- Manual (User initiated)
- Cron (Weekly)

Script Usage
`github-copy-label.sh`

EnvVars
- GH_TOKEN_PASW (Required) - The GitHub personal access token used to authenticate GitHub Commands
- GH_BASE_URL (Optional) - GitHub API URL. Can be changed to point to a different GitHub API endpoint i.e. GitHub Enterprise

Example
```
export GH_TOKEN_PASW="**********
./github-copy-label.sh "edgexfoundry" "my-template" "ci-management|sample-service"
```

Demo
- Labels from edgex-go were applied to cd-management
Backlog Review

• [https://github.com/orgs/edgexfoundry/projects/18](https://github.com/orgs/edgexfoundry/projects/18)

Discussion regarding new device services
- need to still consider new build automation for device-ble service
  needs to be approved within Device WG and moved out of holding
- other services may still be WIP for Geneva - blocked

OH DevOps support is still unknown - blocked
Meeting Minutes

Snap Global Library for Geneva
- Review PR with inputs from Tony Espy as a reviewer
- Sandbox testing needs to be completed
- Process for new snaps discussed with the following plan
  - Lisa created stories for the snap integrations into the pipelines but essentially we are going to modify edgeXBuildGoApp to add a new stage to detect whether the codebase is "snappable". If it is it will just invoke the edgeXSnap function. On each merge to master the snap would be pushed to the snap store "latest/edge" channel.
  - The other integration will be for edgex-go. We will create a new pipeline branch in cd-management that will run nightly and will build and push that snap to the snap store latest/edge channel.
  - The edgex-go pipeline is pretty much done already on the sandbox as part of my testing out the global function edgex-go pipeline is about 80% complete

Snyk Advanced Reporting has been turned over to the SIR team
Discussed plans to "release when ready" just the patched images to address High Severity / Critical CVEs
- No issue to release dot releases just the images which are stand alone (mongo, consul etc…)

Decision to move forward with the implementation of the GitHub Issues label automation
  - No objections from anyone and +1 votes from TSC members on the call

Branch protections needed on device-rest-go
- Submit a JSD ticket asking LF to set the branch protections needed
Hanoi Planning

Scope Discussions
Hanoi - DevOps

- Performance Optimizations for EdgeX-Go Jenkins Pipelines
- Code Coverage for Jenkins Global Libraries (codecov.io)
- Kubernetes - Explore options from LF for supporting Jenkins on K8s
- Validation / Testing - Simplify testing
- Semantic Versioning – revisit need to refactor git-semver
- Monitoring
- Alerting
- Caching Dependencies
- Shared Infra with Open Horizons – Add On Build Automation for OH
Geneva Planning

Scope Discussions
Fuji Release

- Freeze: Oct 23\textsuperscript{rd} (Wednesday)
- Release: Nov 15\textsuperscript{th} (Friday)
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 – edgedx-go
  - Create a new repo for edgedx-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

<table>
<thead>
<tr>
<th>Activity</th>
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<tr>
<td>Add static artifact analysis into the EdgeX Jenkins Pipeline (analysis of Docker /runtime artifacts, not the source code)</td>
<td>✔️</td>
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<tr>
<td>Add code and artifact signing with semantic versioning</td>
<td>✔️</td>
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<tr>
<td>Conduct build performance optimizations by:</td>
<td>✔️</td>
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<tr>
<td>• Adding Pipelines for EdgeX Foundry base build images</td>
<td>✔️</td>
</tr>
<tr>
<td>• Allow base build images to be managed locally within Nexus</td>
<td>✔️</td>
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<tr>
<td>• Leverage PyPi Proxy for local pip dependencies</td>
<td>✔️</td>
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<tr>
<td>Explore static code analysis like Checkmarx, Coverity, GuardRails, Synk, SonarQube</td>
<td>✔️</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>
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