# Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Owner</th>
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<tbody>
<tr>
<td>10 Min</td>
<td>DevOps WG Update (Fuji)</td>
<td>James</td>
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<tr>
<td>10 Min</td>
<td>Release Update / Code Freeze 10/23/19</td>
<td>Lisa</td>
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<td>10 Min</td>
<td>Snyk Reporting / CommunityBridge Explore</td>
<td>James</td>
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Attendees
DevOps WG Update

Fuji Scope
Static Code Analysis Tools
  • Snyk Integration with Jenkins **DONE**
  • Configuration of the GitHub repo (edgex-go) and Docker public image for docker-edgex-mongo **DONE**
  • Configure notifications to repo owner and Security WG (SIR team members) - **DONE**

New Jenkins jobs for Fuji
The following repos have new build automation slotted for Fuji but are currently still in holding
device-bluetooth-c, device-gps, regression-test – **BLOCKED**
device-bacnet-c – **WIP**
device-camera-go - **WIP**

New Issues
SonarCloud Duplicated code - Identified as a bug by Sonar community
  support-rules-engine - converting to Pipeline job – **DONE**
git-semver bug fixes - **DONE**
Kong ARM64 image - fixed image - **DONE**
Backlog Review
**Fuji Release Dates**

- **Freeze:** Oct 23rd (Wednesday)
- **Release:** Nov 13th (Wednesday)

<table>
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<th>Fuji Release</th>
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<tr>
<td><strong>Start Date:</strong> 10/23/19</td>
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- **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 11/13/19**
- **Finalize Release Notes**
Example: Advanced Snyk Reports
Meeting Minutes

• 11/5 training day – Geneva Planning F2F
  • DevOps asked to provide high level overview to EdgeX developers re: Jenkins Pipelines
  • Advanced Training is available online
    Please reference: CloudBees University: Jenkins Pipeline – Fundamentals (8 hours)
    https://standard.cbu.cloudbees.com/cloudbees-university-jenkins-pipeline-fundamentals

• Release Planning communications to LF
  • Open JSD ticket and share the plan calling attention to resourcing / help needed from LF Release Engineer
  • Post schedule to Slack - #DevOps channel
Problem / Proposed Solutions

Pull Request Issues

• PRs are submitted with too many lines of code changed making it difficult to review in a timely manner

• Break up the story to submit PRs with smaller chunk of code changes
Problem / Proposed Solutions

Pull Request Issues
• Pull Requests do not contain the right level of information and should be reviewed by more than one reviewer with approvals by a minimum of two (2) people
• Pull requests should include a reference to the Issue #

• Use GitHub Pull Request templates
  • Template would include the basics (tests, multiple reviewers, comments, documentation)
  • Reference: Creating a pull request template for your repository

• Set branch protections on the repo to include 2 approvers
  • Holding repos should have branch protections set up so when / if the repo moves out of holding, the branch protections are in place once moved to main org
Problem / Proposed Solutions

• Missing Unit Tests

• Unit tests should be included in the code
  • We will use codecov.io to measure code coverage
  • Pull Request reviewers should consider unit testing when completing a review before approving the PR
Geneva Planning

Scope Discussions
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>
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<tr>
<th>Scope of Work</th>
<th>Status</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>
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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>
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<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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