LFN Mentorship
Project Presentation

August 2020
ONAP Security Requirements - SDC

› Introduction
  › **Name:** Amir Mohamad
  › **Originally from:** Cairo
  › **Currently in:**
  › **University:** Queen’s University, Ontario Canada
  › **Mentor(s):** Amy Zwarico, Pierre Close, Christophe Closset & Ofir Sonsino
  › **LFN Project:** ONAP Security Requirements - SDC
ONAP Security Requirements - SDC

› **Project Description:**
  › This project focuses on addressing the remaining Security requirements defined by the ONAP SECCOM Community based on SDC JIRA Backlog.
  › The priority will be given to Upgrade maven direct dependencies to more recent versions, so they don’t include **security vulnerabilities**

› **Technologies, frameworks and tools:**
  › Java
  › Maven
  › Third-party packages: log4j, jackson,, netty-all, testing, snakeyaml,…
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Project Deliverables:

1. Implement the required updates (Direct dependencies with CVE, Junit4→Junit5, Java 11 upgrade)
2. Implement any required code modifications due to the upgrade
3. Fix security tickets and OJSI*

* OJSI: ONAP JIRA Security Issues
## ONAP Security Requirements - SDC

### Project Execution & Accomplishments:

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set up SDC local development environment and run Sanity tests. Get familiar with SDC components and understand the interaction among them</td>
<td>Done</td>
</tr>
<tr>
<td>Upgrade <strong>maven dependencies</strong> to more recent versions so they don’t include <strong>security vulnerabilities</strong></td>
<td>Partially done</td>
</tr>
<tr>
<td>Generate certificates with <strong>AAF</strong> in deploy time and integrate them</td>
<td>X</td>
</tr>
<tr>
<td>Getting <strong>CII badges</strong> (passing/silver/gold)</td>
<td>X</td>
</tr>
<tr>
<td>Bounce checking <strong>special characters</strong> for <strong>SDC</strong> APIs</td>
<td>X</td>
</tr>
<tr>
<td>Upgrade: to Java 11, Junit 4 to 5</td>
<td>X</td>
</tr>
</tbody>
</table>

For most upgrades, I had to understand the intricate details of packages to successfully do the upgrade.
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- Project Execution & Accomplishments:

  - By generous invitation and support from my mentor Amy Zwarico

  I delivered a presentation during Monday’s PTLs meeting to share my findings during packages upgrade process
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Project Output or Results:

- Upgrade Vulnerable Direct Dependencies [many] - Merged - Amir Mohamad - sdc - master - Sep 08 - S
- Upgrade Vulnerable Direct Dependencies [jackson] - Merged - Amir Mohamad - sdc - master - Sep 04 - M
- Upgrade Vulnerable Direct Dependencies [log4j] - Merged - Amir Mohamad - sdc - master - Jul 31 - L

https://gerrit.onap.org/r/c/sdc/+/109617 [log4j]
https://gerrit.onap.org/r/c/sdc/+/110367 [jackson]
https://gerrit.onap.org/r/c/sdc/+/114368 [snakeyaml]
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› Recommendations for future work:

› Documentation needs improvements and timeliness

› Code optimization and improvement:
  › Ex: logging
  › This could be enhanced for easier maintenance and upgrade in the future
  › Could be a regular requirement in each release. Exact package or feature(s) to be selected by the TSC
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Insights Gained:

- I used to work on big codebase projects (in IBM Egypt), but the scale in SDC was slightly bigger
- I get to understand and consume third-party packages, more than I ever had
- Now, I’m more familiar with OSS development lifecycle and tools
- In opensource divers communities, respect and understanding are essential to succeed and improve

Advice to future mentees:
- Stay connected with and seek help from your mentor(s) and community members
- Do your best, work hard, be patient and persistent (specially with Documentation :-)

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Next Step(s):

- **Short-term:** will do my best to finish the direct dependency upgrades, time permitting

- **Mid-term (summer 2021):** Seek a summer internship with a Canadian CSP or vendor (preferably to work on ONAP)

- **Long-term (graduating in fall 2021):** Continue contributing to ONAP, with a career goal to join a CSP or vendor in USA or Canada
THANK YOU!

RIP DAN
Will never forget you!