

A network diagram background consisting of numerous yellow circular nodes connected by thin blue lines, set against a dark blue gradient background. The nodes are scattered across the right side of the image, with lines crisscrossing between them.

LFN Mentorship Project Presentation

August 2020

 THE **LINUX** FOUNDATION

 **LF** NETWORKING

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

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> Project Execution & Accomplishments:

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

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:

Gerrit										
CHANGES	YOUR	DOCUMENTATION	BROWSE	Q amir mohamad			AMIR MOHAMAD			
Subject	Status	Owner	Assignee	Repo	Branch	Updated	Size	CR	V	
☆ Upgrade Vulnerable Direct Dependencies [snakeyaml]	WIP	Amir Mohamad	–	sdc	master	Oct 29	S			✗
☆ 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/+/I109617> [log4j]
- › <https://gerrit.onap.org/r/c/sdc/+/I10367> [jackson]
- › <https://gerrit.onap.org/r/c/sdc/+/I11071> [Netty-all, toggIz-console, commons-beanutils & testng]
- › <https://gerrit.onap.org/r/c/sdc/+/I14368> [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
- › **Midium-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!