

RBC Global Asset Management

Fall 2024 Co-op Term Wrap-up

GAM Digital

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December 11, 2024

For internal use only



At a Glance

Key Highlights



Vulnerability
reduction



Angular version
updates



Documentation &
knowledge sharing

At a Glance

Advancements

IAP-frontend:
Ready for
production

Institutional-
frontend:
Vulnerability
free

Helios on
Actions
Migration

Contributions to ICP0 team



Help progress the migration of application from PCF to OCP4



Learned, documented and shared the iap-frontend and iap-backend local setup and deployment



Learned, documented and ran the iap and icp frontend manual and automated tests



Authored multiple confluence documents to help new team members with onboarding and share gained knowledge

[IAP local setup](#)

[ICP0 frontend testing](#)

[ICP0 PCF token renewal](#)

[ICP0 - Restarting IAP PCF Instance](#)

Problems & Solutions

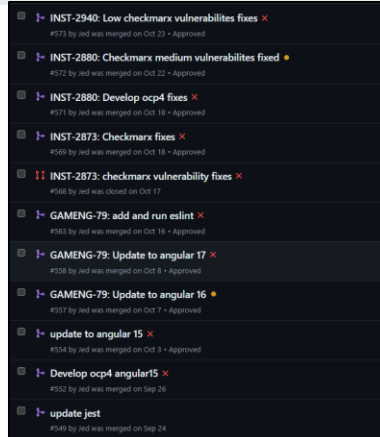
Problems

- Lots of information regarding ICP0 bottled necked with offshore developers
 - Startup: Roman Buta, Anna Myropolska
 - Testing: Rhiddhi Gupta

Solutions

- Adjusted schedule to account for time zone difference
- Created confluence pages to allow information to be easily shared with others

Contributions to iap-frontend



- Contributed to the version update of Angular, going from **v10** → **v17**
 - Version by version update
 - Resolved build issues for each version
 - Updated/removed incompatible packages
- Removed and replaced deprecated API's
- Removed critical **40+ critical/high**, and over **500+ low** NexusIQ vulnerabilities
- Migrated deprecated TSLint to ESLint, enforcing clean & readable coding practices

ICP0 / iap-frontend / develop-ocp4 / Run #18

Run Details

Select Org ICP0 / Select Project iap-frontend / Select Branch develop-ocp4

Rebuild Repackage... Rollback

Run # Failed to deploy to DEV QAT UAT prod

Started by undefined undefined

Commit empty line to trigger helios build 980905a2

Artifact 0.1.0-develop-ocp4-18-980905a

Scans Nexus IQ 43 44 584 Checkmarx 0 23 34 Aqua(1) 0 0 0 iap-fr... 0 0 0

Start time Fri Sep 13 2024, 2:54 PM EDT

Duration 11 min 30 sec

Platform OpenShift Container Platform 4 0

ICP0 / iap-frontend / release-ocp4 / Run #5

Run Details

Select Org ICP0 / Select Project iap-frontend / Select Branch release-ocp4

Rebuild Repackage... Rollback

Run # 5 Success! Deployed to DEV QAT UAT prod

Started by Zakhar Sorokun

Commit Merge branch 'pre-release-ocp4' into release-ocp4 d3954752

Artifact 0.1.0-release-ocp4-3-d395475

Scans Nexus IQ 0 0 0 Aqua(1) 0 0 0 iap-fr... 0 0 0 DAST 0 0 0 5

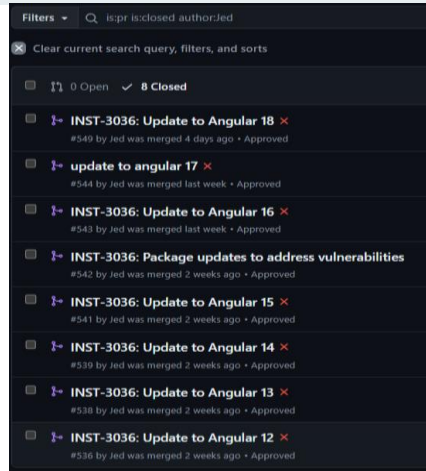
Start time Wed Nov 20 2024, 12:24 PM EST

Duration 33 min 44 sec

Triggered from Run #32 1

Platform OpenShift Container Platform 4 0

Contributions to institutional-frontend



- Updated Angular version; going from **v10** → **v18**
 - Version by version update
 - Resolved build issues for each version
 - Updated/removed incompatible packages
- Removed and replaced deprecated API's
- Resulted in a decrease of **57 critical**, **90 medium** & over **900+ low** Nexus IQ vulnerabilities
- Added ESLint scripts allowing project to be linted; resulting in clean and readable code
- Migrated repo to GitHub Actions
 - Resolving artifactory issues on Jenkins
 - Allowing faster build & scan process

ICP0 / institutional-frontend / develop / Run #11

Run Details

Select Org: ICP0 / Select Project: institutional-frontend / Select Branch: develop

Run #11

Started by: PICP0SRVDEVOPS

Commit: revert what Anna misconfigured in https://rbcgithub.fg.rbc.com/ICP0/institutional-frontend/commit/b5801792bc33f2bca29afe662835d392af05ee19_d6291a0

Scans: Nexus IQ (57 critical, 93 medium, 1201 low), Checkmarx (4 critical, 23 medium, 86 low)

Run #29

Started by: PICP0SRVDEVOPS

Commit: Merge pull request #558 from rbc-gam/INST-3036-2_70f57cb

Scans: Nexus IQ (0 critical, 3 medium, 233 low)

How does this help?



Advanced the migration of ICP0 frontend applications to OCP4



Now on a LTS Angular version (v2 to v15 are no longer supported)



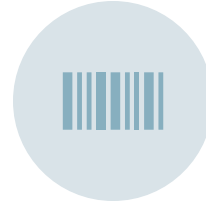
More secure applications

Less susceptible to attacks that can compromise user data

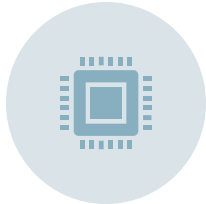
What did I learn?



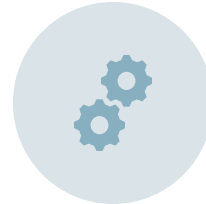
The full software development process (not just development)



Code quality & security



Devops (Helios, Jenkins, GitHub Actions)



Automated and regression testing



Importance of documentation

Thank You!