DevSecOps Day EMEA Unlock 2024

JFROG CURATION

SEAMLESSLY CURATE SOFTWARE PACKAGES ENTERING YOUR ORGANIZATION

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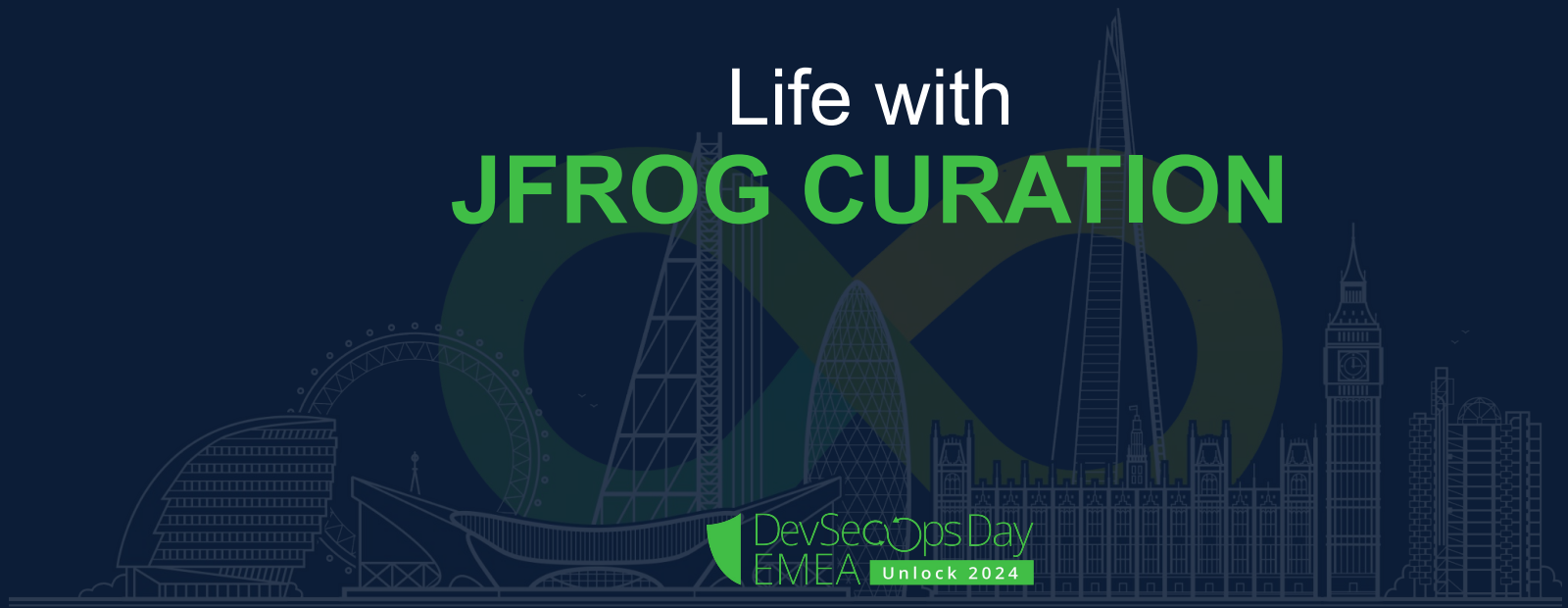
SOFTWARE SUPPLY CHAIN SECURITY

- Life With JFrog Curation
- Should We Shift Further Left?
- Rolling out Curation in JFrog
- Curation New & Upcoming Features



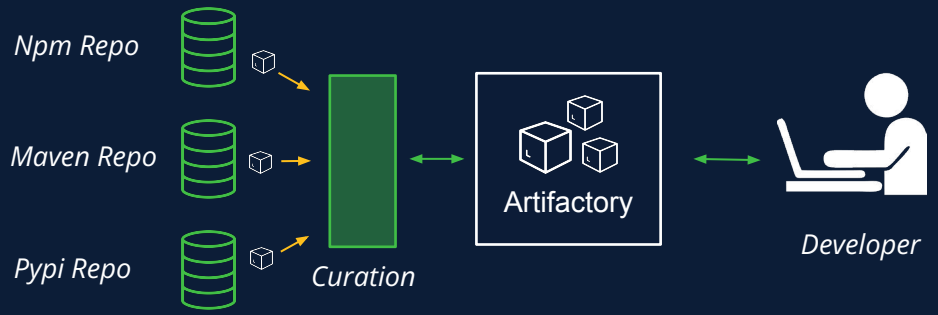
Life with
JFROG CURATION

LIFE WITH JFROG CURATION

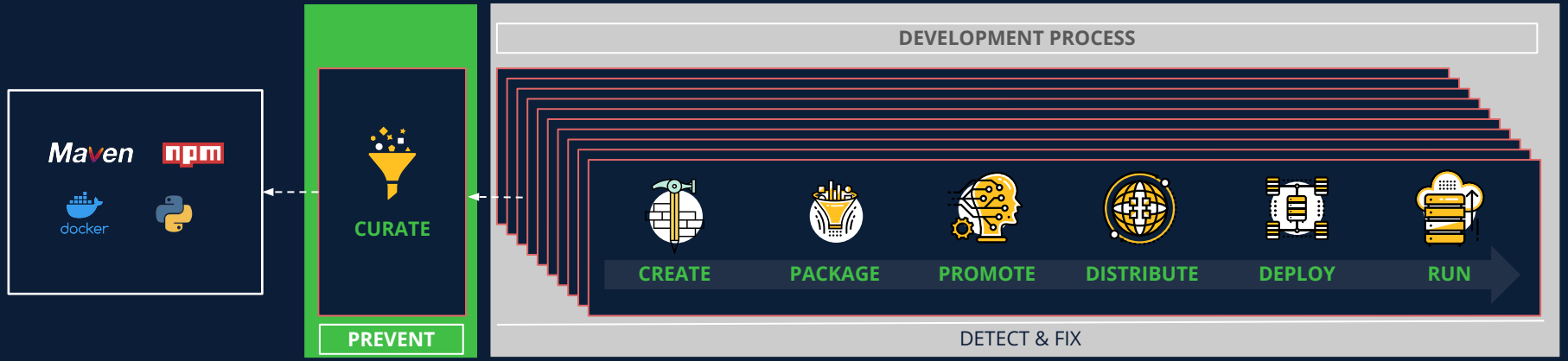
- Centralize Visibility and Control
  of 3rd party (OSS) package downloads

- Automate Curation of 3rd Party Packages to provide your developers with a trusted source of software components

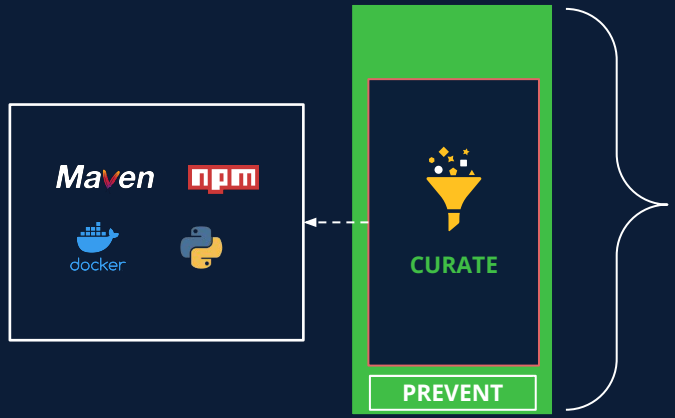
- Improve DevSecOps Experience & Realize Cost Savings
  with seamless integration and reduced remediation later in your SDLC



LIFE WITH JFROG CURATION



LIFE WITH JFROG CURATION

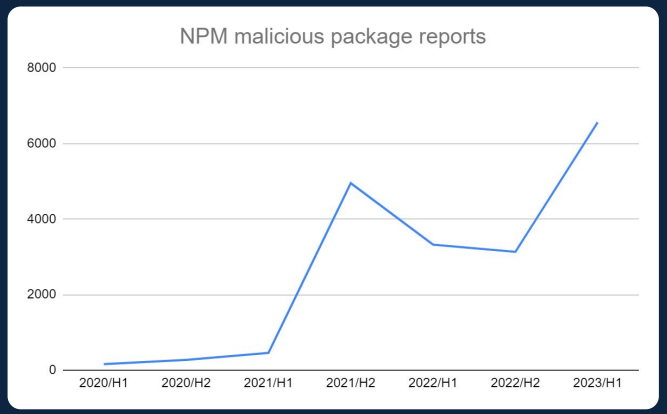


First Line of Defense for any SDLC Program

Should We
SHIFT FURTHER LEFT?

SHOULD WE SHIFT FURTHER LEFT ?

MALICIOUS PACKAGES



Block Before Use

- Protect Any Pipeline Automatically
  - SDLC Program Maturity Agnostic
  - Pipelines Under The Radar
- Optionally Protect Developer Local Env

DEMO PART I

Blocking malicious

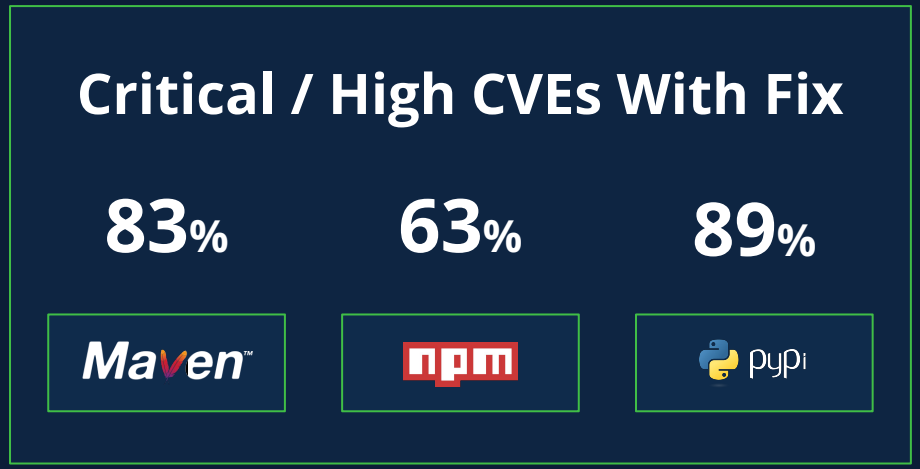
Demo Part I (3 minutes) - Block malicious

Script

- preset:
  - ensure no block malicious exist
- open Curation webapp
- Present the curated remotes and show no malicious package coverage in the organization
- Add block malicious packages on all org policy
- Present the coverage in curated repositories page
- open vs code in cors demo folder
- run npm install in terminal without cors.js -> success
- add cors.js latest and fail
- present the audit of it as failed
- Explain the ease of protecting from malicious across the org from now forward with this policy

SHOULD WE SHIFT FURTHER LEFT?

FORCING FIX (UPGRADE) WHEN AVAILABLE



- Avoid later stage risk
- Covers any pipeline
- Different SDLC Maturity Stages

DEMO PART II

Forcing fix (upgrade) when available

Demo Part I (4 minutes) - Fix fixable

Script

- preset:
  - block on critical with fix only
- open in vs code the folder “electron demo”
- make sure there is a policy with “block critical with a fix”
- npm install in the terminal and open-graph 0.2.6 (Latest)
- run ./jf ca and present the failure in tough-cookie transitive
- present the open-graph in catalog and the tough-cookie transitive critical with a fix
- explain we need to use overrides maybe
- add override to tough-cookie latest version
- run npm install
- run ./jf ca
- explain the fix at the gate values and mind set used

SHOULD WE SHIFT FURTHER LEFT?

FORCING REPLACEMENT WHEN NEEDED

Packages Added in 2022

15% Maven

44% npm

22% PyPi

SHOULD WE SHIFT FURTHER LEFT?

FORCING REPLACEMENT WHEN NEEDED

“Unmaintained” Packages

(latest older than 2 years)

53% Maven™

42% npm

50% pypi

JFrog

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SHOULD WE SHIFT FURTHER LEFT?

FORCING REPLACEMENT WHEN NEEDED

Critical / High CVEs No Fix

Maven	npm	PyPi
17%	37%	11%

SHOULD WE SHIFT FURTHER LEFT?

FORCING REPLACEMENT WHEN NEEDED

Unmaintained with Critical / High CVEs No Fix

Maven	npm	PyPi
33%	65%	42%

SHOULD WE SHIFT FURTHER LEFT ?

FORCING REPLACEMENT WHEN NEEDED

Unmaintained Package

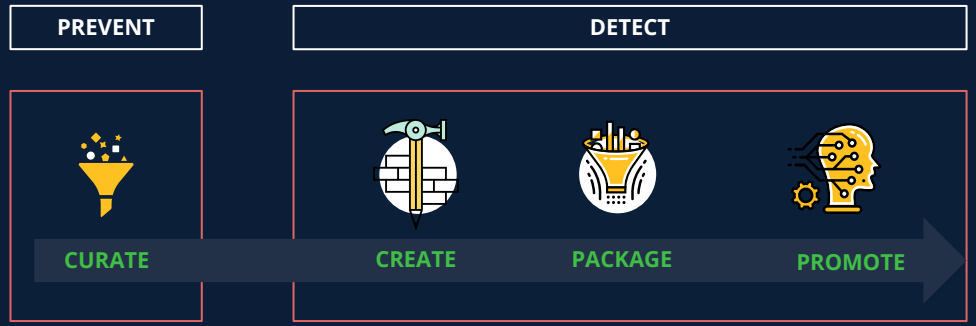
High Operational & Security Risk

SHOULD WE SHIFT FURTHER LEFT ?

FORCING REPLACEMENT WHEN NEEDED

Cost of Replacement

Minutes › Hours › Days › Weeks



DEMO PART III

Forcing replacement when needed

Demo Part III (4 minutes) - Blocking if no fix and waiver

Script

- preset
  - block critical with or without only
- open in vs code jxon project
- present the jxon version used
- open the terminal and run npm install
- present the failure
- run ./jf ca and pre4sent the block on transitive xmldom
- present the data in Catalog for jxon and xmldom
- explain the option to waive because of popularity
- explain the model of force remediation at the gate

ROLLING CURATION IN JFROG

~500	
Developers	
US, India, Israel, Ukraine, France	
Globally Distributed	Curated Stack

ROLLING OUT JFROG CURATION IN JFROG

HOW WE ARE DOING IT

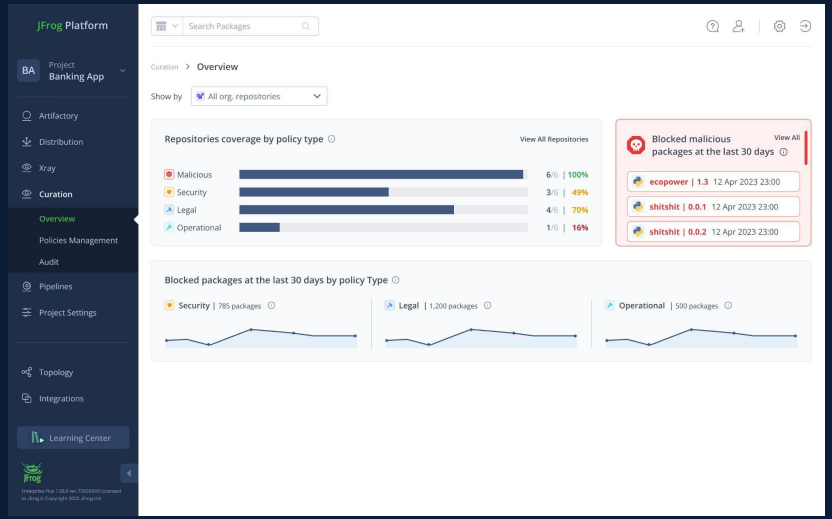
Phase I: Dry-run & Block Malicious

- ~11K distinct assessed
- Critical/High CVEs (170 fix / 14 no fix)
- Unmaintained (1.5k npm / 16 maven / pypi 36)

Next:

- Curate remaining eco systems
- More Blocking Policies as
  - Critical with fix
  - Unmaintained
  - Banned licenses

SOME NEW FEATURES

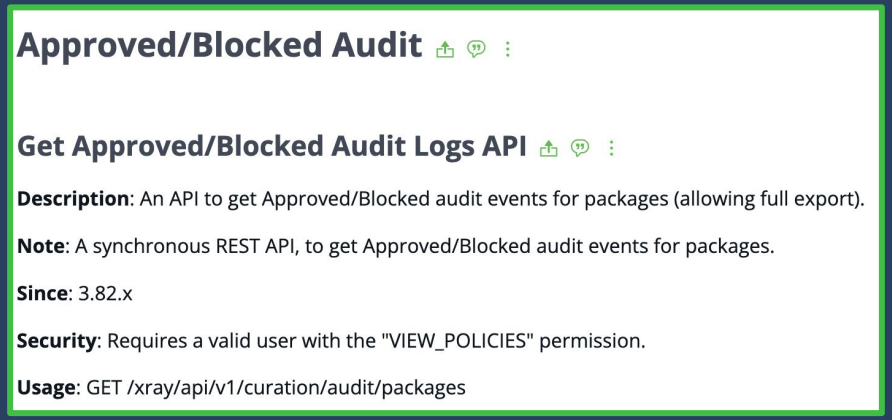


Audit API

CURATION AUDIT API

https://jfrog.com/help/r/jfrog-rest-apis/jfrog-curation-rest-apis

- Extract package blocked/approved events
- Send to log management systems
- Send to SIEM/SOC threat detection systems



DEMO PART IV

New features

Demo Part VI - Dashboard & Docker Hub (5 minutes)

Script

- present the new dashboard
- present the new docker conditions and policies in place for the docker remote (efective view)
- present blocking of a package that is both malicious and not docker official
- present the image https://hub.docker.com/r/docker2021repos/postgres
- try to pull it using:
  - docker pull swampupdemo01.jfrog.io/docker-remote-repo/docker2021repos/postgres
- present the failure in the audit
- present the malicious in the dashboard

UPCOMING NEXT…

- Policies for group of remote (JFrog Project)
- Customized conditions
- Cross JFS policies
- Additional eco systems
- Support Curation in JFrog IDE plugin
- Waiver management (APIs, ServiceNow)
- Manage all via APIs
- Additional notification channels

QUESTIONS?

THANK YOU!