OPEN COMPLIANCE REFERENCE TOOLING



Open Compliance Reference Tooling Welcome

- ▶ Marcel Kurzmann
- ▶ Working at Bosch.IO GmbH
- Represents Bosch in the OpenChain Governance board
- ► Regular participant of the tooling group



- ► INAL: I 'm not a lawyer!
- **▶** Disclaimer:
 - ► The following presentation is only for demonstration of the process and the tooling. The metadata was partly manipulated for the showcases.
 - ▶ If you plan to deploy a tool-suite comparable to the Open Compliance Reference Tooling please consult your legal team before applying license-classifications, rules and the output formats in your specific context.



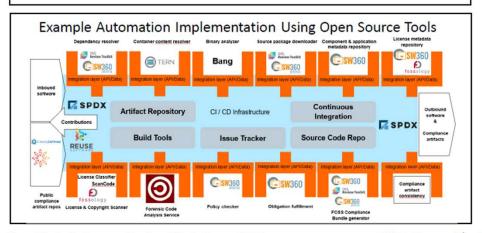


Reference Tooling Work Group



We are building an open source compliance toolchain ecosystem with open source tools as an open source project. To accomplish this we:

- · Use existing independent tooling projects
- · Provide reference workflows to allow their adoption
- Provide the concepts and glue to ensure easy interoperability and integration in existing environments
- Provide reference turnkey toolchains that can be used without fees by anybody





Join Us in Creating a New Era for Open Source Compliance

Mailing List: oss-based-compliance-tooling@groups.io

Subscription page: https://groups.io/g/oss-based-compliance-tooling

Online meetings: Bi-weekly - Invitations are sent to the mailing list

Website: https://oss-compliance-tooling.org/

And of course we are on GitHub:

https://github.com/Open-Source-Compliance/Sharing-creates-value

Open Compliance Reference Tooling

"Metadata debts"?



▶ "Technical debts" and "Metadata debts"

ISO/IEC DIS 5230:2020(E)
ISO #####-#:###(E)

3.3 Open source content review and approval

3.3.1 Bill of materials

A process shall exist for creating and managing a bill of materials that includes each open source component (and its identified licenses) from which the supplied software is comprised.

Verification material(s):

- □ 3.3.1.1 A documented procedure for identifying, tracking, reviewing, approving, and archiving information about the collection of open source components from which the supplied software is comprised.
- □ 3.3.1.2 Open source component records for the supplied software that demonstrates the documented procedure was properly followed.

Rationale:

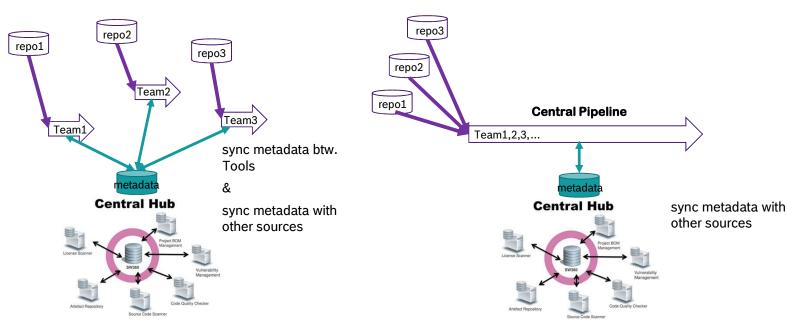
To ensure a process exists for creating and managing an open source component bill of materials used to construct the supplied software. A bill of materials is needed to support the systematic review and approval of each component's license terms to understand the obligations and restrictions as it applies to the distribution of the supplied software.



Open Compliance Reference Tooling

Range of application

► No single reference but depending on context e.g. heterogonuous vs. homogenuous OSM setups







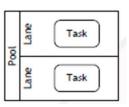


Open Compliance Reference Tooling End to end process flow

- ► Business Process Modeling Notation
- ► Details see BPMN http://www.bpmb.de/index.php/BPMNPoster



- ► Gateways ♦ ♦
- ► Lanes



Open Compliance Reference Tooling And now ...

...the process in action

The process in bpmn and png + a role-description is available here:

https://github.com/Open-Source-Compliance/Sharing-creates-value/tree/master/Tooling-Landscape/OpenComplianceReferenceTooling

It is planned to enhance the process picture with a mapping to respective tools.

To keep it simple, the todays demo is based on OSS Review Toolkit as orchestrator. In the scan step ScanCode will be used.



Open Compliance Reference Tooling If you want to repeat steps on your own that I will present...

Preparation:

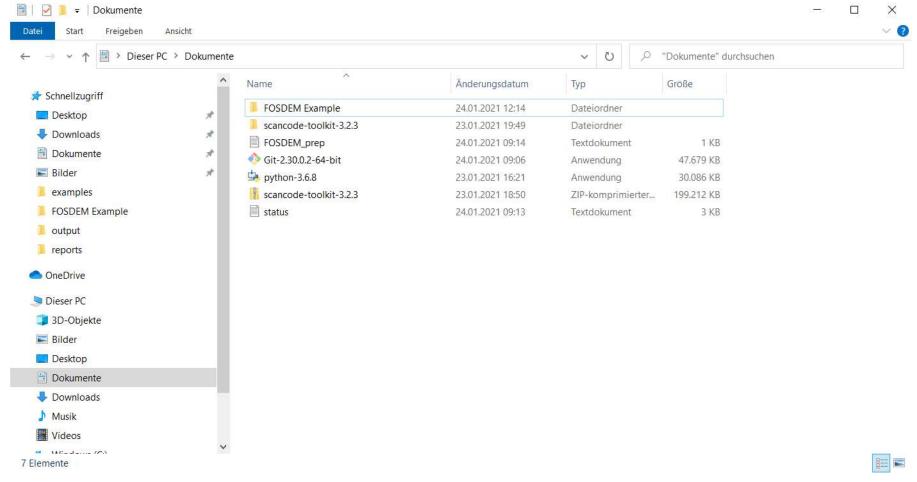
- ► Take a Windows Computer and create a new user (ideally with administrator rights)
- ► Install java from https://www.codejava.net/java-se/download-and-install-java-11-openjdk-and-oracle-jdk => OpenJDK11; set JAVA_HOME & set PATH as described
- ► Install python 3.6.8 from https://www.python.org/ftp/python/3.6.8/python-3.6.8.exe
- ► Install scancode toolkit 3.2.3 from https://scancode-toolkit.readthedocs.io/en/latest/getting-started/install.html; set PATH to scancode.bat
- ► Install git from https://git-scm.com/download/win
- ► Get a ort-binary (by building it on your own or from a colleague who has an IDE ready anyway)
- ► Install ort
- ► run "ort requirements"



Open Compliance Reference Tooling Expected ort requirements feedback

```
Datei Bearbeiten Format Ansicht Hilfe
OS = Windows NT
COMSPEC = C:\WINDOWS\system32\cmd.exe
JAVA_HOME = c:\Program Files\Java\jdk-11.0.2
       - Askalono: Requires 'askalono.exe' in version =0.4.3. Tool not found.
        - BoyterLc: Requires 'lc.exe' in version =1.3.1. Tool not found.
        - Licensee: Requires 'licensee.bat' in version =9.13.0. Tool not found.
        + ScanCode: Requires 'scancode.bat' in version =3.2.1-rc2. Found version 3.2.3.
PackageManagers:
       - Bower: Requires 'bower.cmd' in version >=1.8.8. Tool not found.
        - Bundler: Requires 'bundle.bat' in version >=1.16.0. Tool not found.
        - Cargo: Requires 'cargo' in no specific version. Tool not found.
        - Composer: Requires 'composer.bat' in version >=1.5.0. Tool not found.
        - Conan: Requires 'conan' in version >=1.18.0. Tool not found.
        - GoDep: Requires 'dep' in no specific version. Tool not found.
        - GoMod: Requires 'go' in no specific version. Tool not found.
        - Npm: Requires 'npm.cmd' in version >=5.7.0 <6.15.0. Tool not found.
        * Pip: Requires 'pip' in no specific version. Found version 18.1.
        - Pipenv: Requires 'pipenv' in version >=2018.10.9. Tool not found.
        - Pub: Requires 'pub.bat' in version >=2.2.0. Tool not found.
        - Sbt: Requires 'sbt.bat' in version >=0.13.0. Tool not found.
        - Stack: Requires 'stack' in version >=2.1.1. Tool not found.
        - Yarn: Requires 'yarn.cmd' in version >=1.3.0 <1.23.0. Tool not found.
VersionControlSystems:
        - Cvs: Requires 'cvs' in no specific version. Tool not found.
        * Git: Requires 'git' in no specific version. Found version 2.30.0.windows.2.
        - GitRepo: Requires 'repo' in no specific version. Tool not found.
        - Mercurial: Requires 'hg' in no specific version. Tool not found.
Other tools:
        * PythonVersion: Requires 'py' in no specific version. Found version 3.6.8.
        - VirtualEnv: Requires 'virtualenv' in version >=15.1.0 <20.3.0. Tool not found.
        - The tool was not found in the PATH environment.
        + The tool was found in the PATH environment, but not in the required version.
        * The tool was found in the PATH environment in the required version.
Not all tools were found in their required versions.
                                                                                                                                                             100% Unix (LF)
```



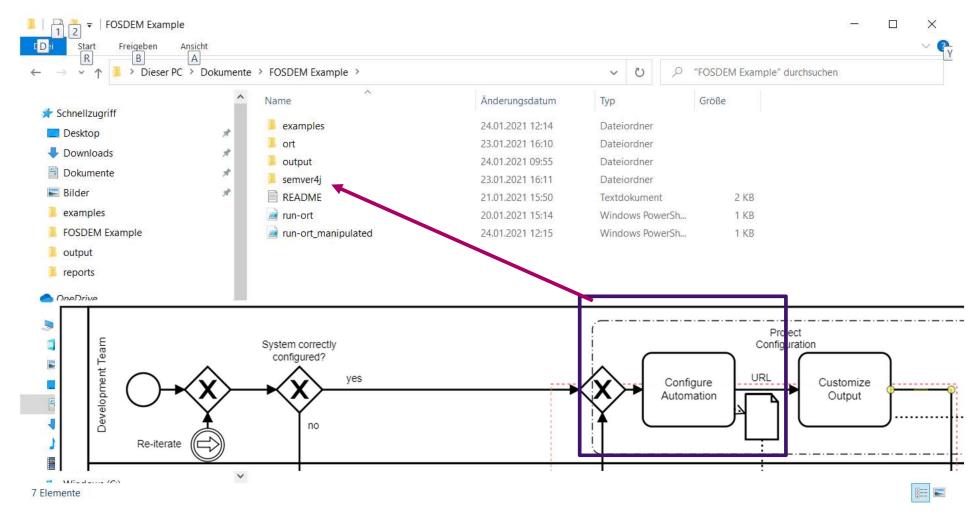


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Open Compliance Reference Tooling About the example...

- ► Based on semver4j see https://github.com/vdurmont/semver4j.git
- ► Comes with a dependency to junit that will be used for the demo and some manipulations will be applied mainly to the ort-files





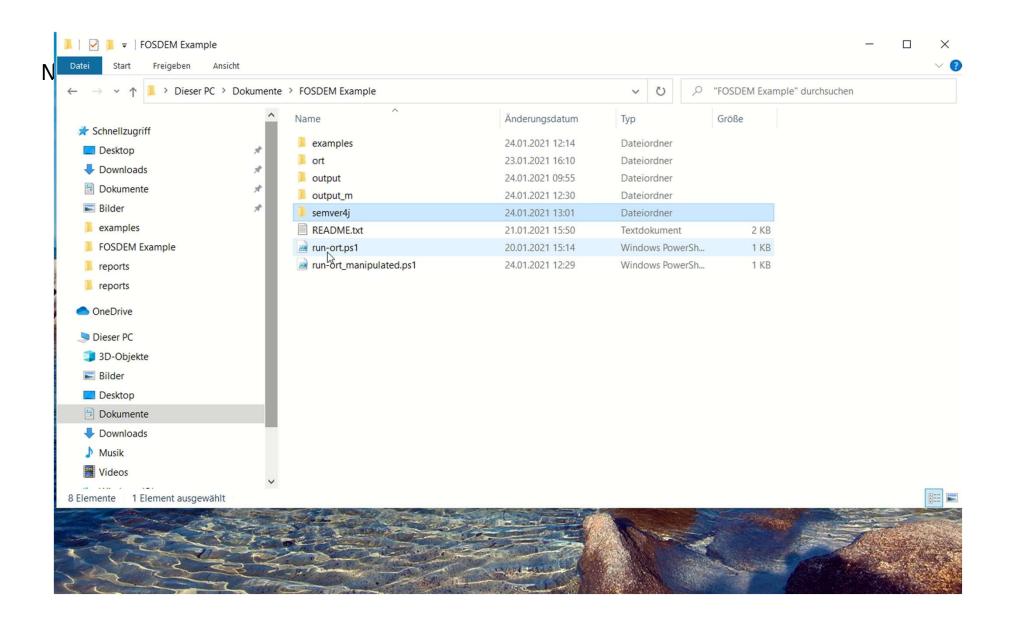
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Open Compliance Reference Tooling Happy Path

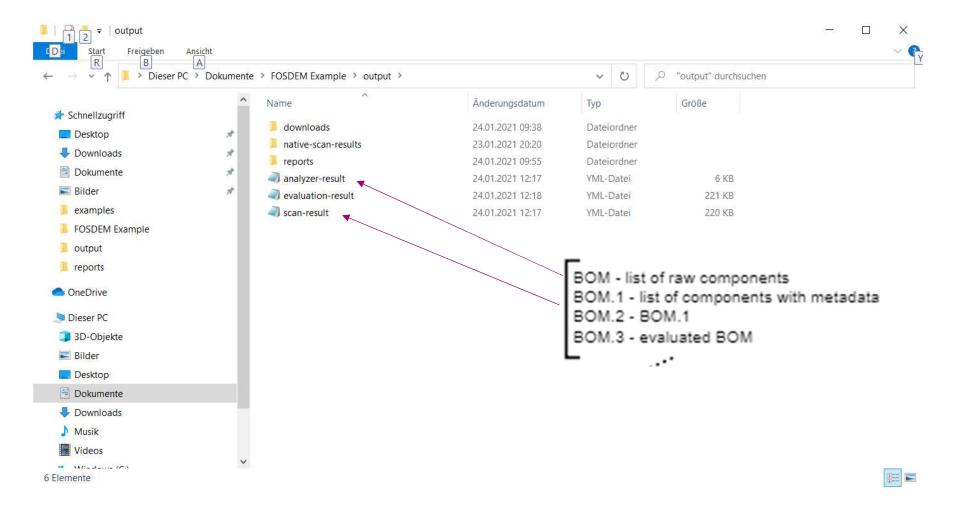
► Case 1: Continuous Development/Continuous integration => fast feedback

```
File Edit Format View Help
.\ort\bin\ort.bat --force-overwrite analyze -i .\semver4j -o .\output
.\ort\bin\ort.bat --force-overwrite scan -i .\output\analyzer-result.yml -o .\output
.\ort\bin\ort.bat --force-overwrite evaluate --package-curations-file .\examples\curations.yml --rules-file .\examples\rules.kts --
license-classifications-file .\examples\license-classifications.yml -i .\output\scan-result.yml -o .\output
.\ort\bin\ort.bat --force-overwrite report -f NoticeTemplate,StaticHtml,WebApp -i .\output\evaluation-result.yml -o .\output\reports
```

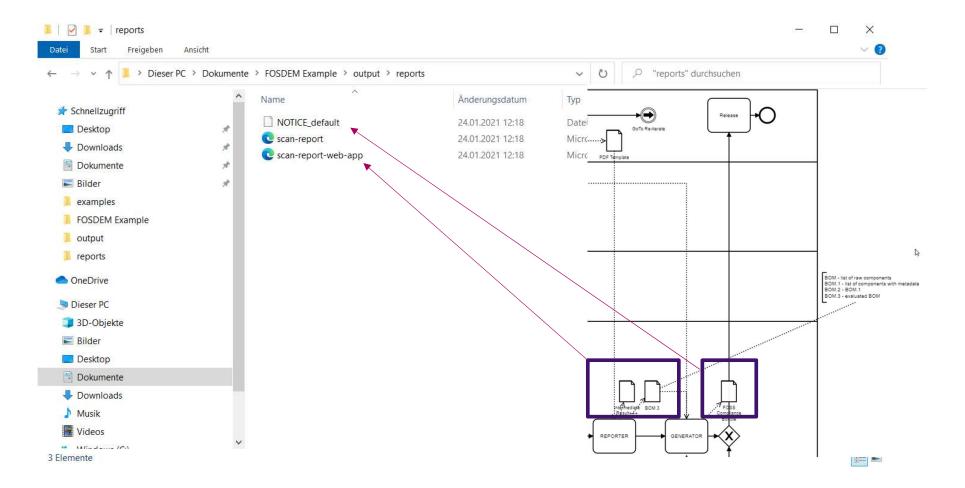




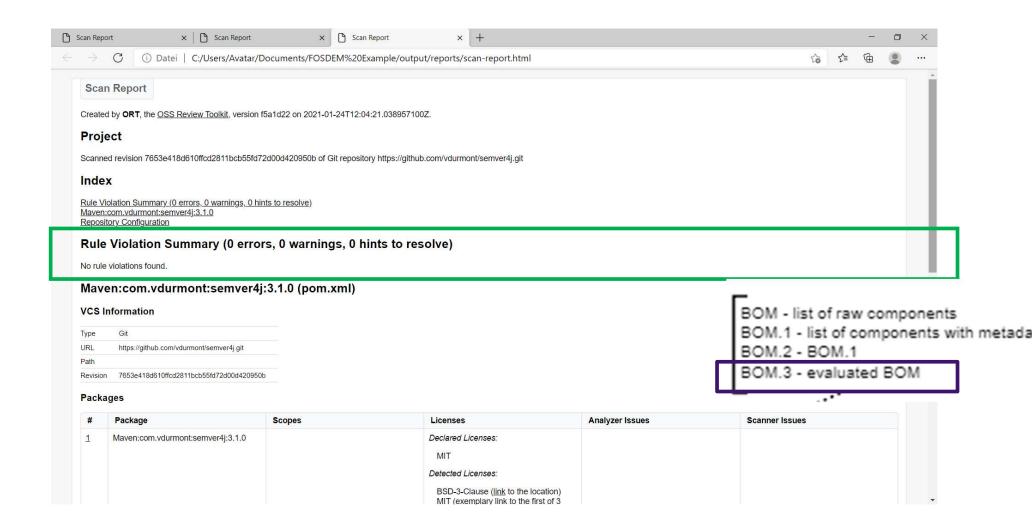
Case 1: Continuous Development/Continuous integration => fast feedback Bc ©



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Open Compliance Reference Tooling Reality – subset of potential real world cases

- ► Case 2:
 - ▶ Open Source Office issue: a license classification is missing
 - ▶ solution: Open Source Office provides an updated license-classifications.yml
- ► Case 3:
 - ▶ Development Team issue: a license is classified non-suitable to the context
 - solution: development team provides a new development increment where the component is removed
- ► Case 4
 - ▶ Development Team + Open Source Office issue: a license is classified non-suitable to the context
 - solution: development team excludes "test" pattern in .ort.yml in project root directory
- ► Case 5
 - Curation Team issue: metadata missing for a dependency
 - solution: curation team investigates the situation and provides the metadata in curations.yml



Open Compliance Reference Tooling

Reality – subset of potential real world cases

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► Case 4

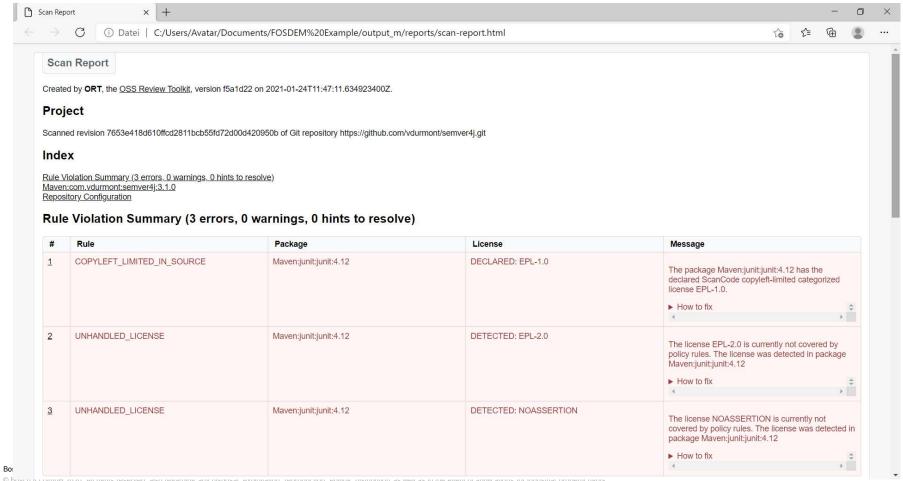
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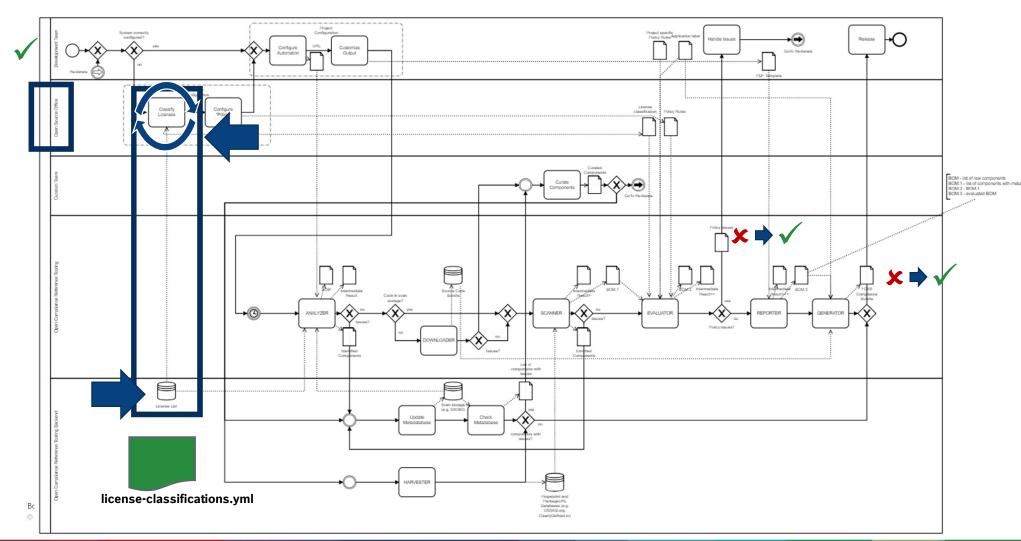


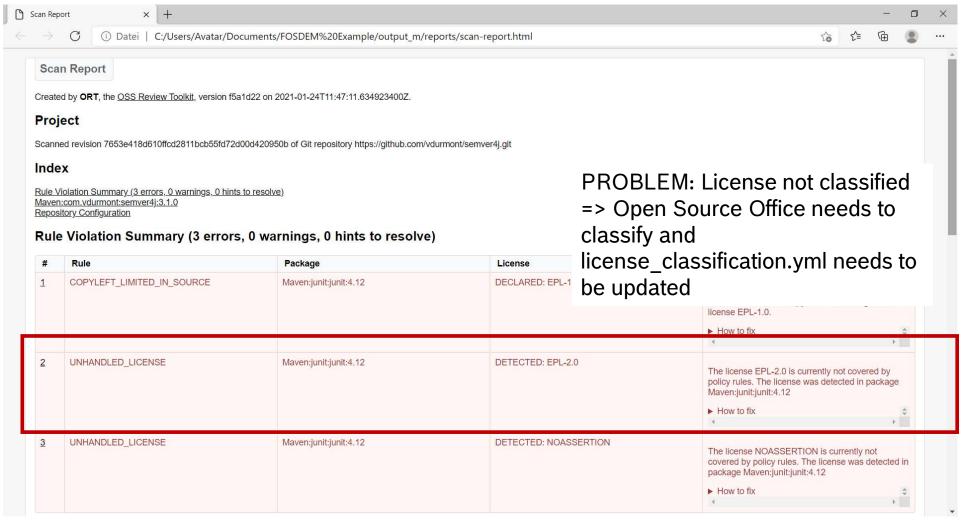
Case 2: Open Source Office - issue



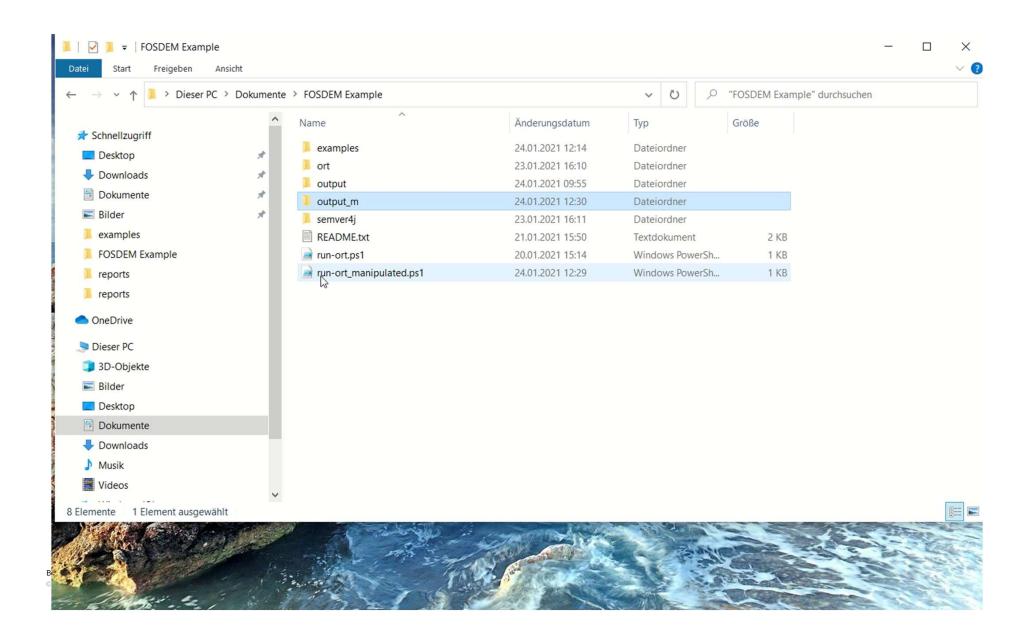
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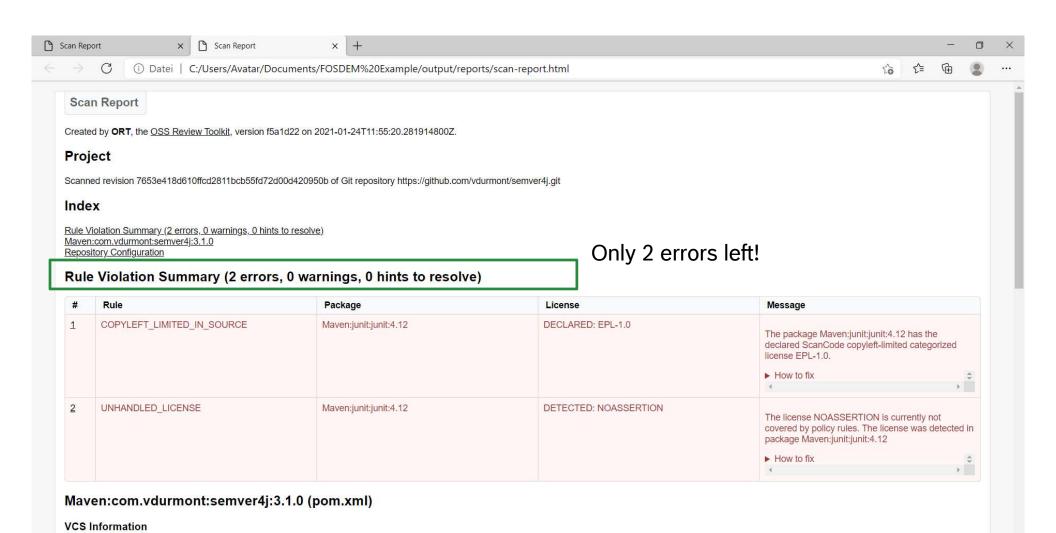
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Type

Git

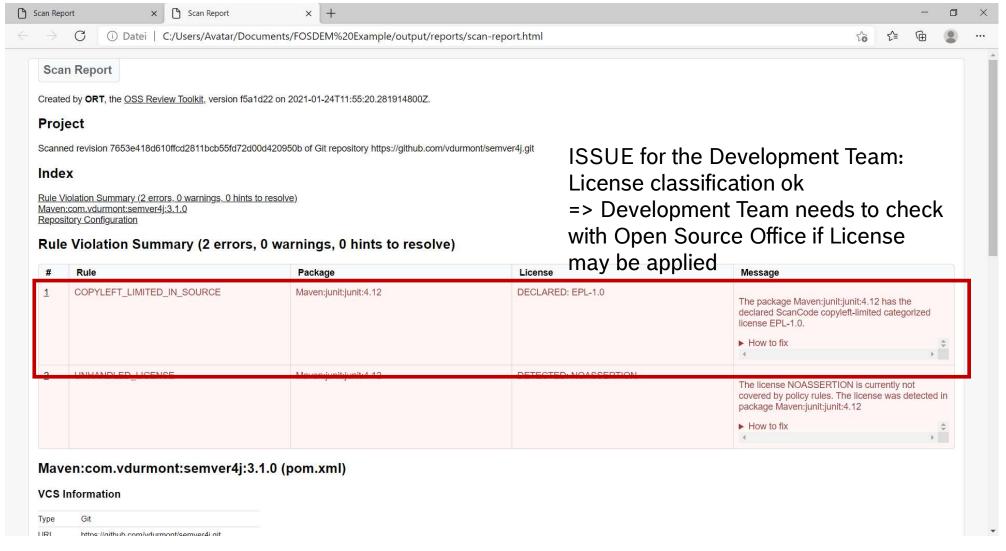
https://aithub.com/vdurmont/semver4i.ait

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Case 3: Development Team + Open Source Office - issue



Case 3: Development Team + Open Source Office - issue X new increment Bc ©

Open Compliance Reference Tooling Reality – subset of potential real world of

Reality – subset of potential real world cases

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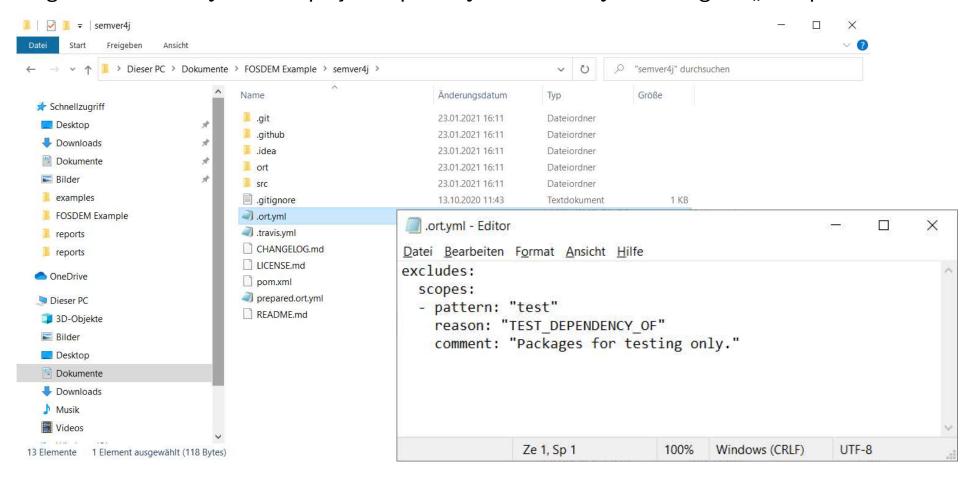
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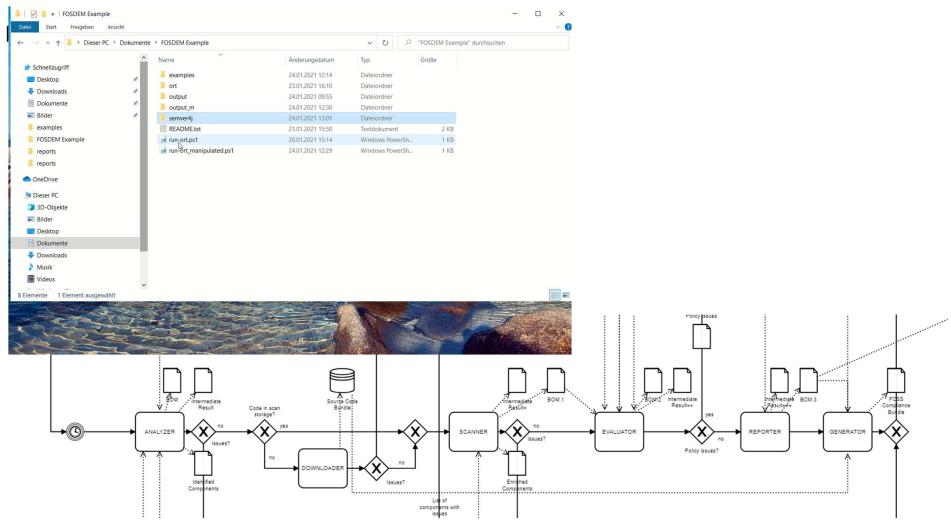


Case 4: Development Team + Open Source Office - issue .ort.yml X • Bc ©

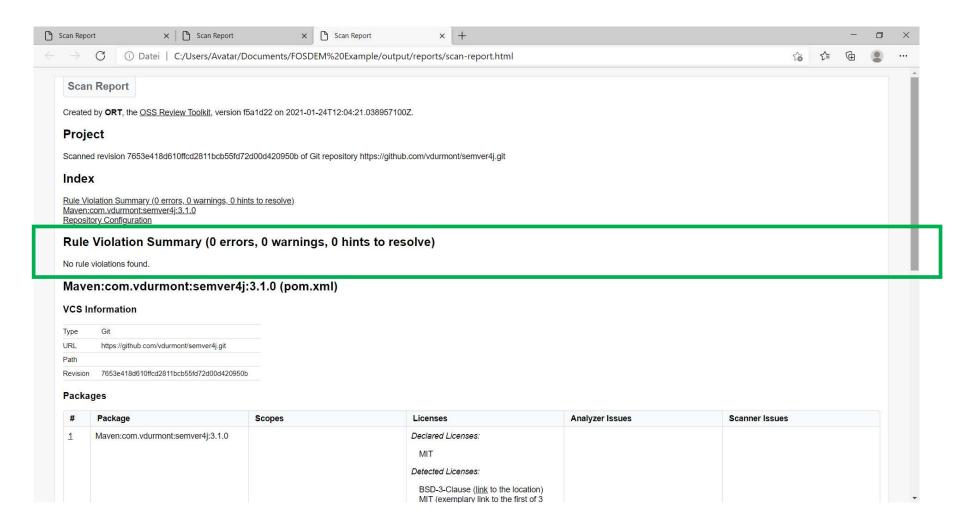
Case 4: Development Team - issue

BUT – Development Team states that it is only for testing and will not be distributed! – team configures this in .ort.yml in the project repository root folder by excluding the "test" pattern





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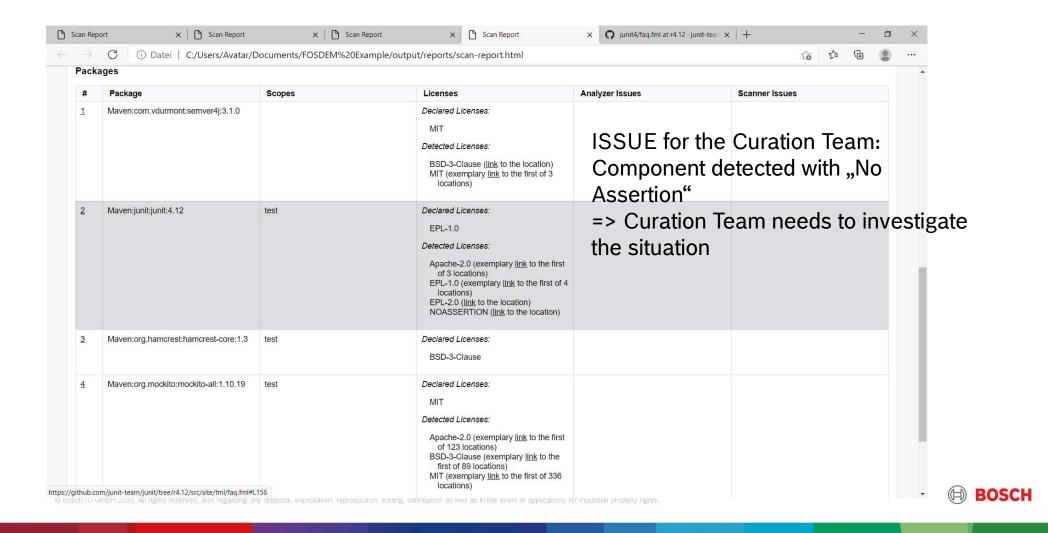
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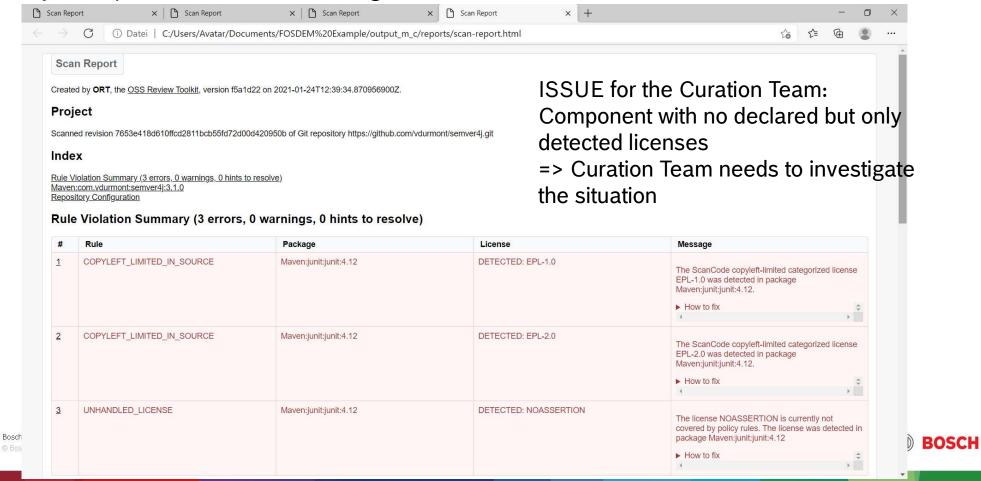
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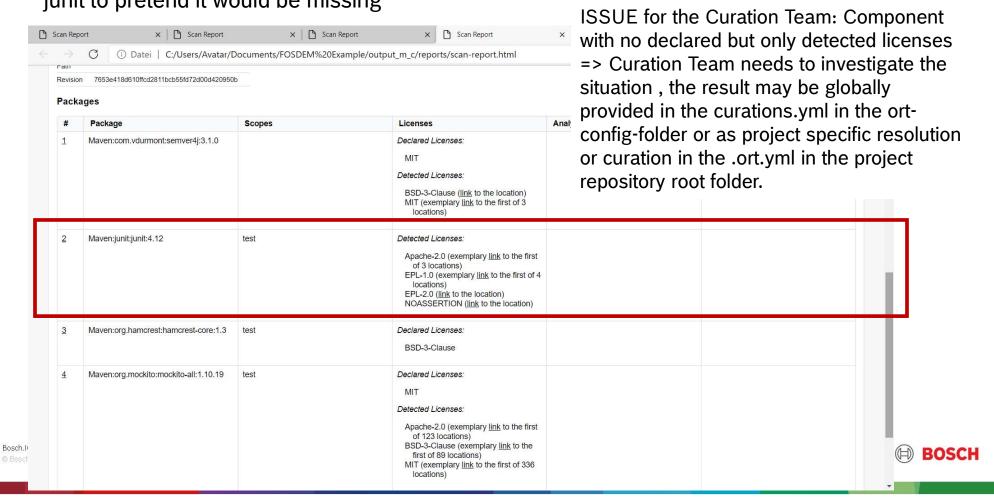




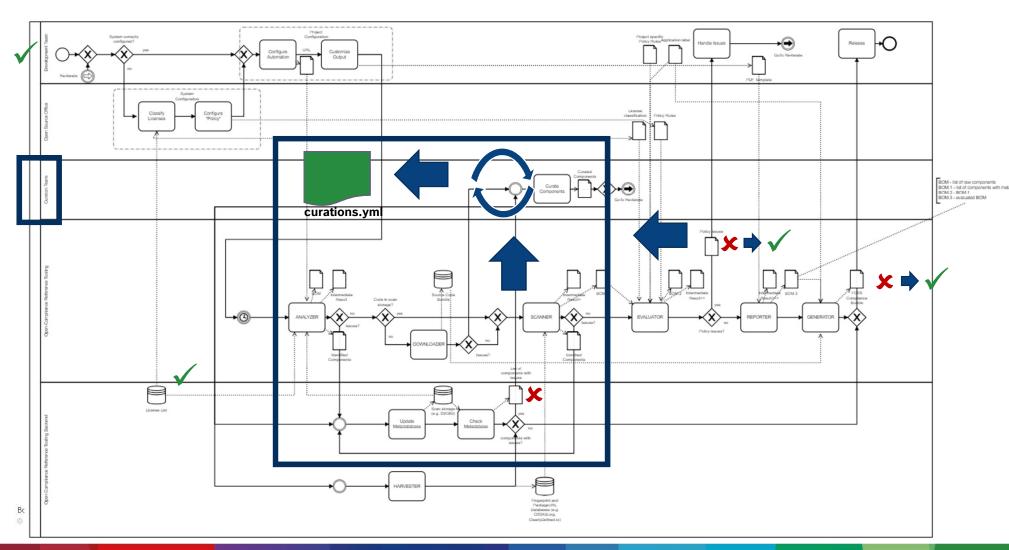
For demonstration: scan-result.yml manipulated => deleted the license declaration for junit to pretend it would be missing



For demonstration: scan-result.yml manipulated => deleted the license declaration for junit to pretend it would be missing



Case 5: Curation Team issue





Home Search Browse Upload Jobs Organize Admin Help

License Browser

User:

fossology Version: [3.8.1_1.0], Branch: [release/fossology-3.8.1], Commit: [#9596c2] 2020/11/06 03:52 UTC built @ 2020/11/06 03:57 UTC

Group:

Folder: Software Repository/ I junit4-r4.12.zip/junit4-r4.12	INST/ INS	ST Checks/				
Display 25 ▼ licenses			File Browser Copyright Files (tree view or	ECC Email/URL/Author Keyword Browse flat)	License List S	earch • View Conf Inf
Concluded	Clear		EPL-1.0 *	filter for edited results 🔻	□open	MarkAsi

Scanner Count *	Concluded License v Count	License Name	
4	0	EPL-1.0	
4	0	CPL	
2	0	Apache- 2.0	
1	0	BSD-3- Clause	

Showing 1 to 4 of 4 licenses

Hint: Click on the license name to search for where the license is found in the file listing. Page $\boxed{1~\checkmark}$ of 1

Summary

Unique licenses	4	565	Files
Unique scanner detected licenses	5	0	Unique concluded licenses
Licenses found	11	0	Licenses concluded
Files with no detected licenses	554	0	Concluded files with no detected licenses

Jispiay 50	isplay 50 V lies (tree view of hat)				
	EPL-1.0 ▼	filter for edited results 🔻	open		MarkAslı
Files A	Scanner Results (N: nomos, M: monk, Nk: ninka, I: reportImport, O: ojo)	Edited Results	Clearing Status	Files Cleared	Actions
src	Apache-2.0, EPL- 1.0, No_license_found		•	0/3	[Tag][Ed
epl- v10.html	EPL-1.0 [N][M: 87%]		•	0/1	[View][Ir [Downloa [Edit] [
LICENSE- junit.txt	EPL-1.0 [N][M: 99%]		•	0/1	[View][Ir [Downloa [Edit] [
pom.xml	EPL-1.0 [N]		•	0/1	[View][Ir [Downloa [Edit] [

Showing 1 to 4 of 4 files (filtered from 19 total entries)

Pag

Open Compliance Reference Tooling Sharing the metadata...



- ► The curations in the tool may be shared with ClearlyDefined if configured accordingly
- ► This way it is also possible to benefit from curations that were already shared in the community and reduce the effort

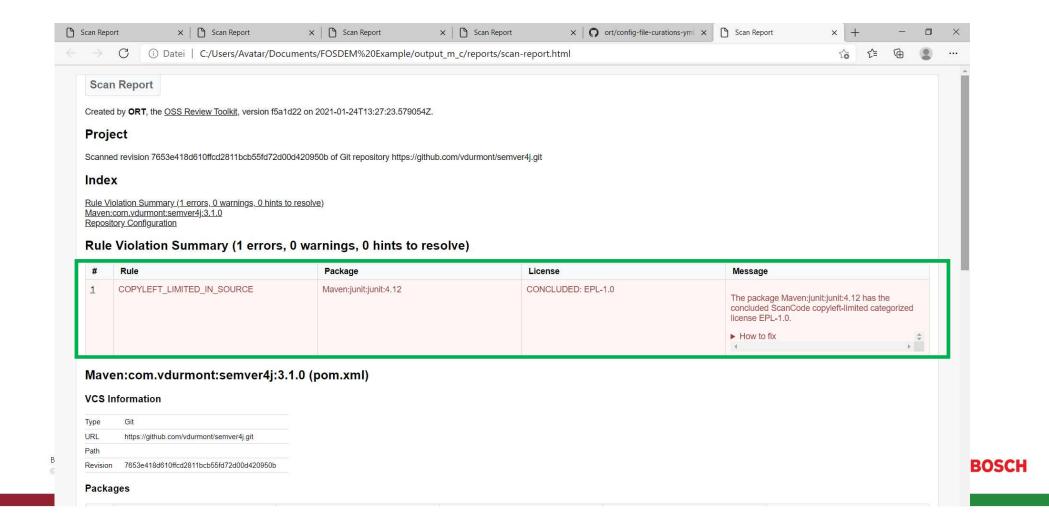


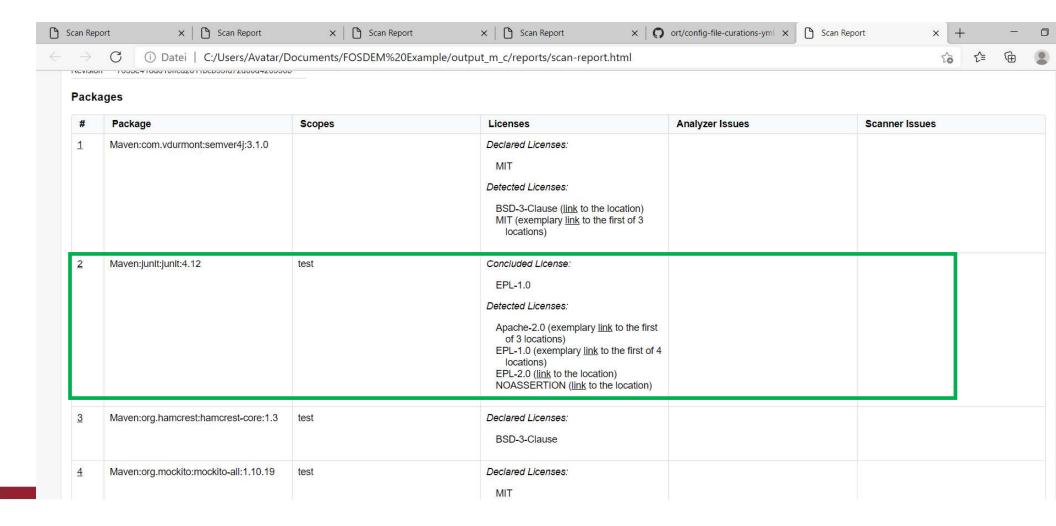
► https://clearlydefined.io











THANK YOU!



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Mailing List: oss-based-compliance-tooling@groups.io

Subscription page: https://groups.io/g/oss-based-compliance-tooling

Online meetings: Bi-weekly -Invitations are sent to the mailing list

Website: https://oss-compliance-tooling.org/

And of course we are on GitHub:

https://github.com/Open-Source-Compliance/Sharing-creates-value

