OpenChain KWG 4차 모임

FOSSology 소개

2019. 12. 2

LG전자 박원재 선임연구원

Contents

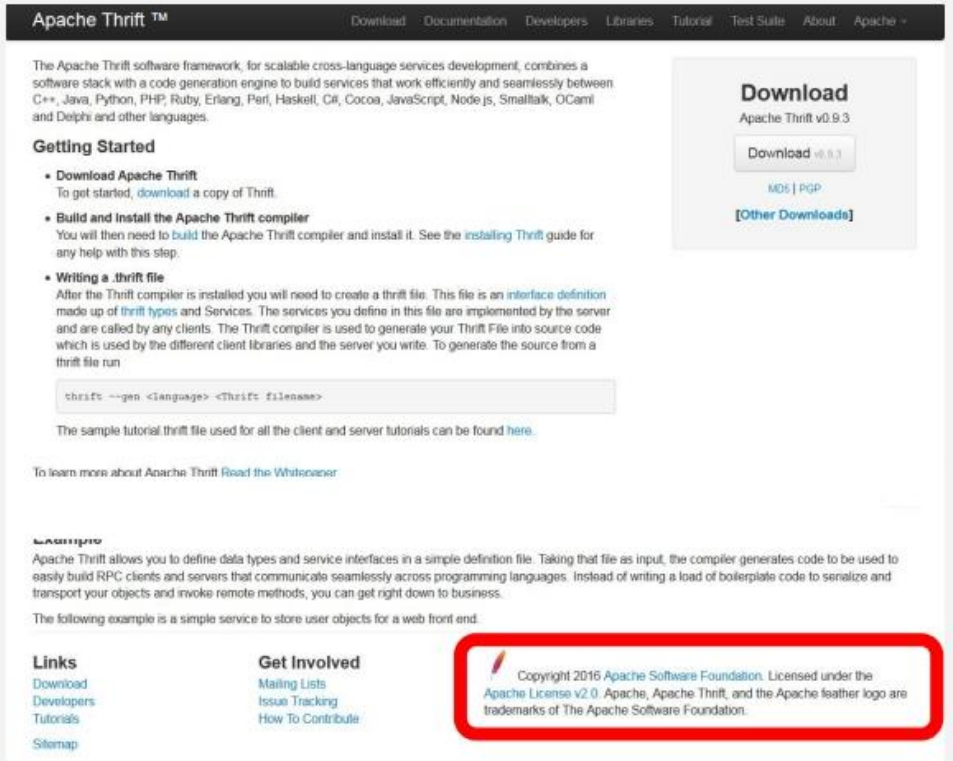
- FOSSology개요
- 설치 방법
- 사용 방법
- Conclusion

FOSSology 개요

An Example – What do we find?

The Example

- (Apache projects are known for homogenous licensing)
- Such a project declares its licensing on its Website
- However, Open Source implies using other open source
- As such, a projects can contain also parts from other open source projects



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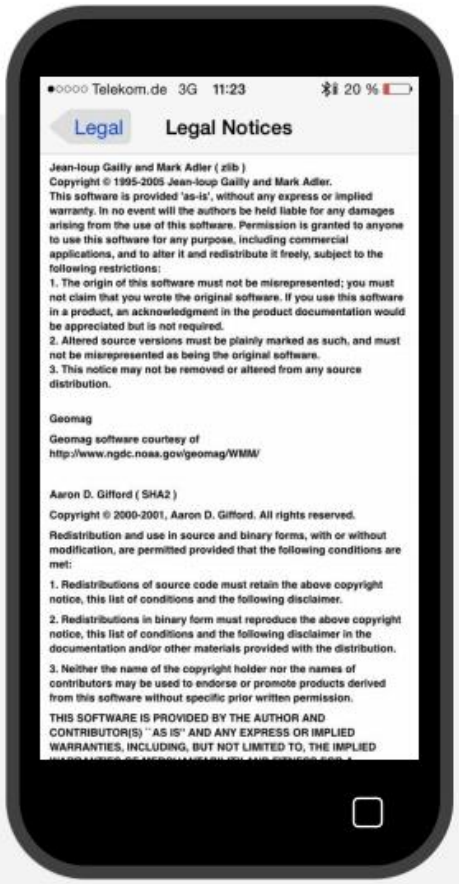
The Problem Actually

You know these examples

Distributing open source software requires to

- Provide licenses of involved software
- Provide copyright statements of involved authors
- Provide disclaimers
- … and much more



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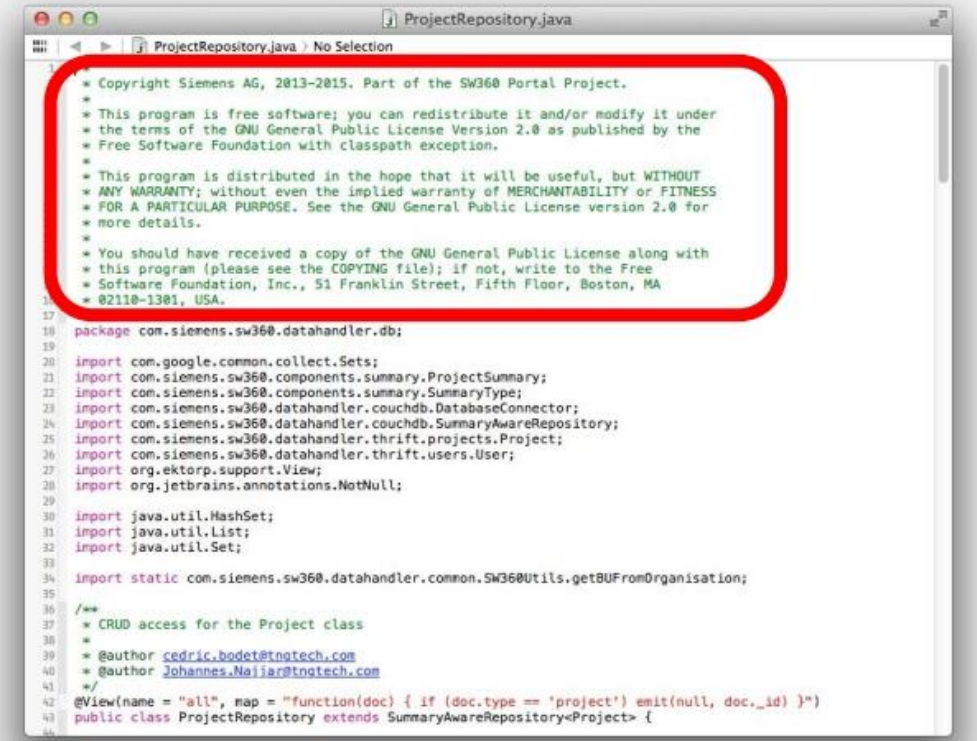
It is about finding licenses

Finding Licenses

- License texts
- References to licenses
- Written texts explaining licensing
- License relevant statements



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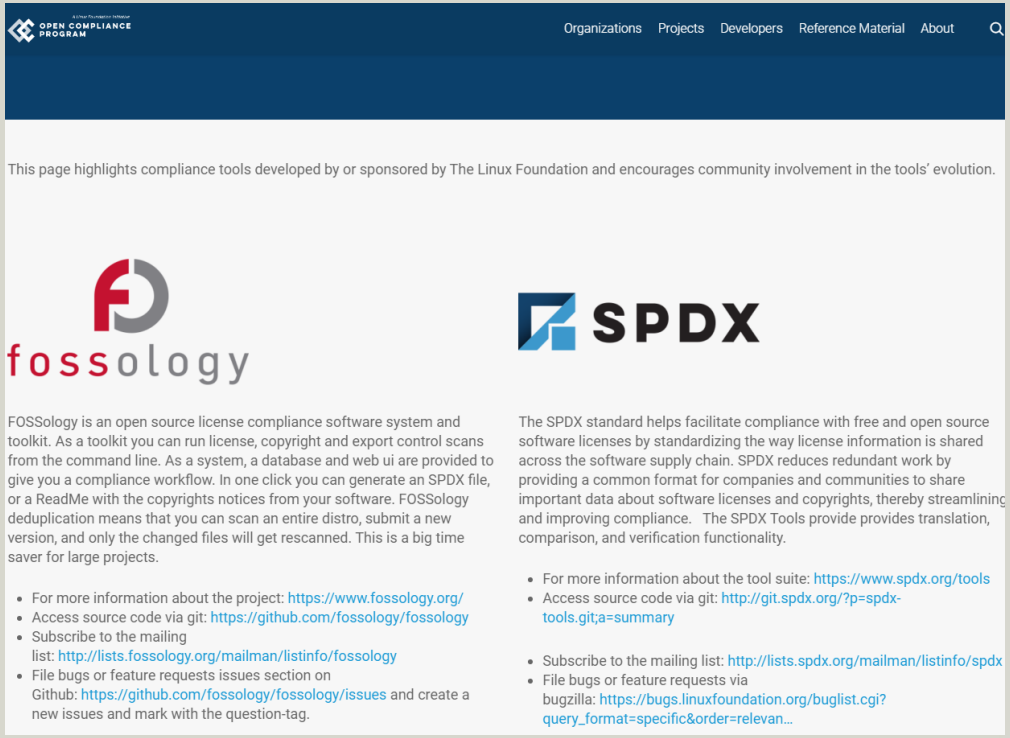
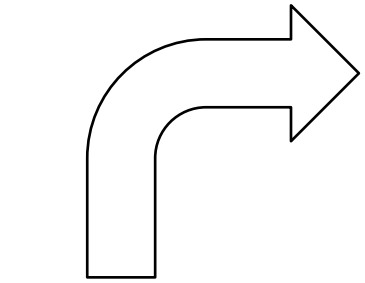
FOSSology...

www.fossology.org

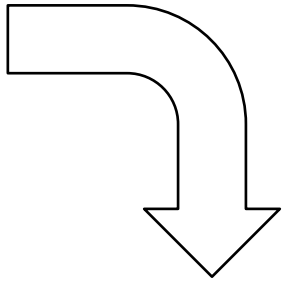
- 2008 initial publication by HP
- 2015 Linux Foundation Collaboration Project
- It is a Linux Application
- Different tasks for OSS license compliance
  - Scanning for licenses
  - Copyright, authorship, e-mails
  - ECC statements
  - Generation of documentation
  - Export and import SPDX files



FOSSology 동작 개요



fossology



```
/* Copyright (c) 2000-2009 Simon Kelley

   This program is free software; you can redistribute it and/or modify
   it under the terms of the GNU General Public License as published by
   the Free Software Foundation; version 2 dated June, 1991, or
   (at your option) version 3 dated 29 June, 2007.

   This program is distributed in the hope that it will be useful,
   but WITHOUT ANY WARRANTY; without even the implied warranty of
   MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
   GNU General Public License for more details.

   You should have received a copy of the GNU General Public License
   along with this program.  If not, see <http://www.gnu.org/licenses/>.
*/

#include "dnsmasq.h"
```

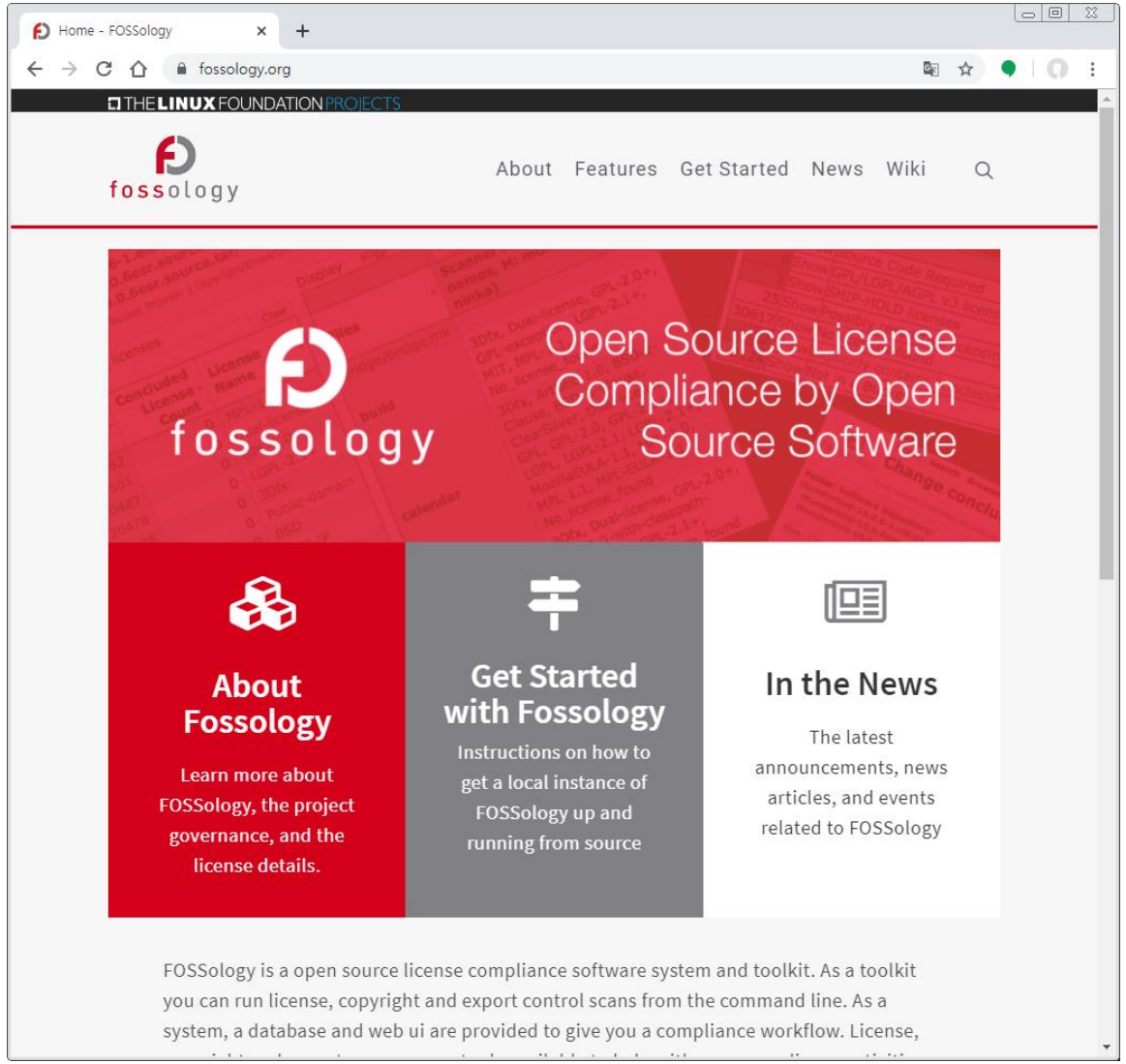
FOSSology 동작 개요

❑ 하지만, Source File내 License 문구가 지워졌다면?

❑ FOSSology는 License 문구가 지워진 Source File에서는 License 검출을 할 수 없음.

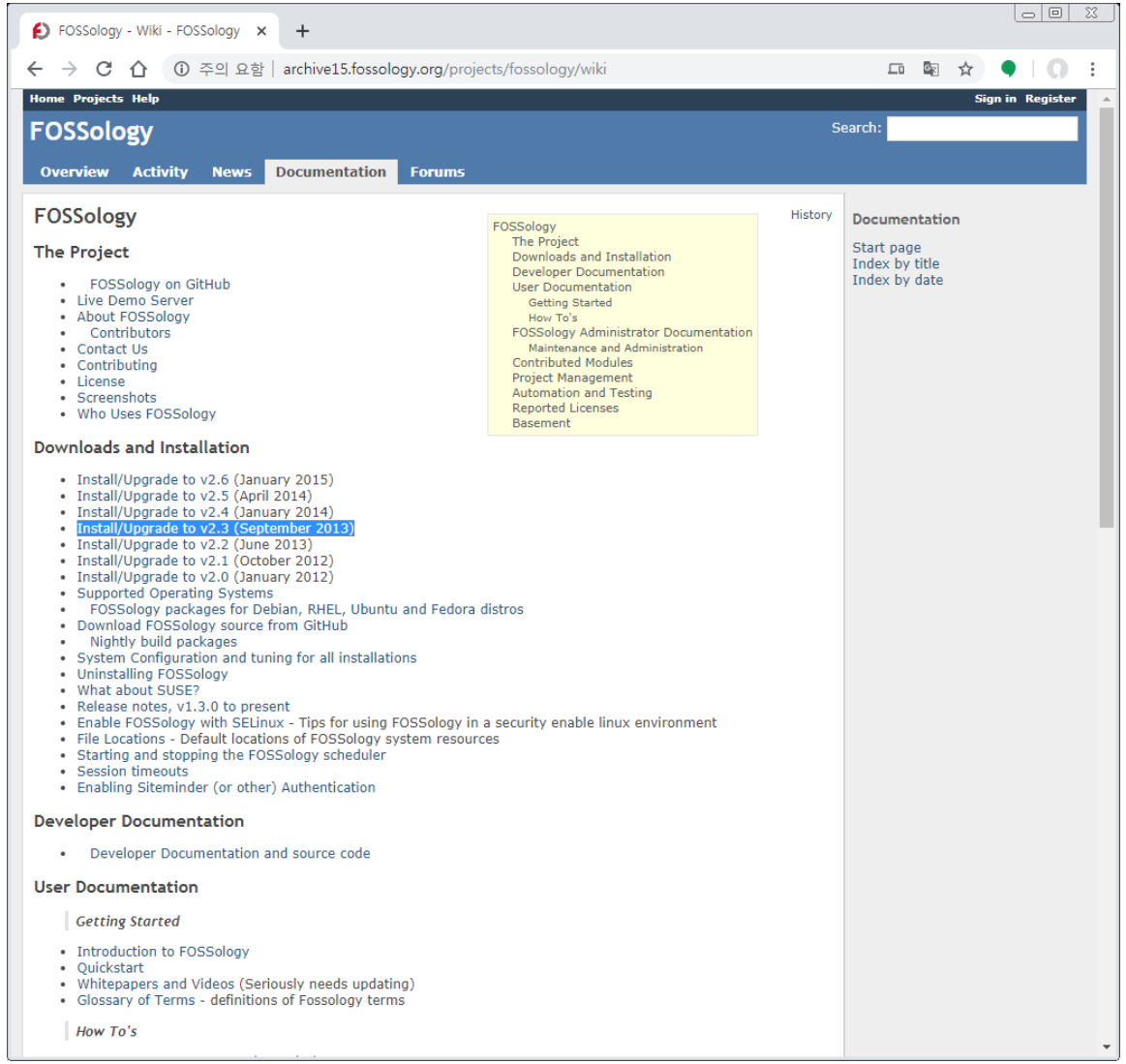
FOSSology 관련 사이트

1. FOSSology 홈페이지 (https://www.fossology.org/)



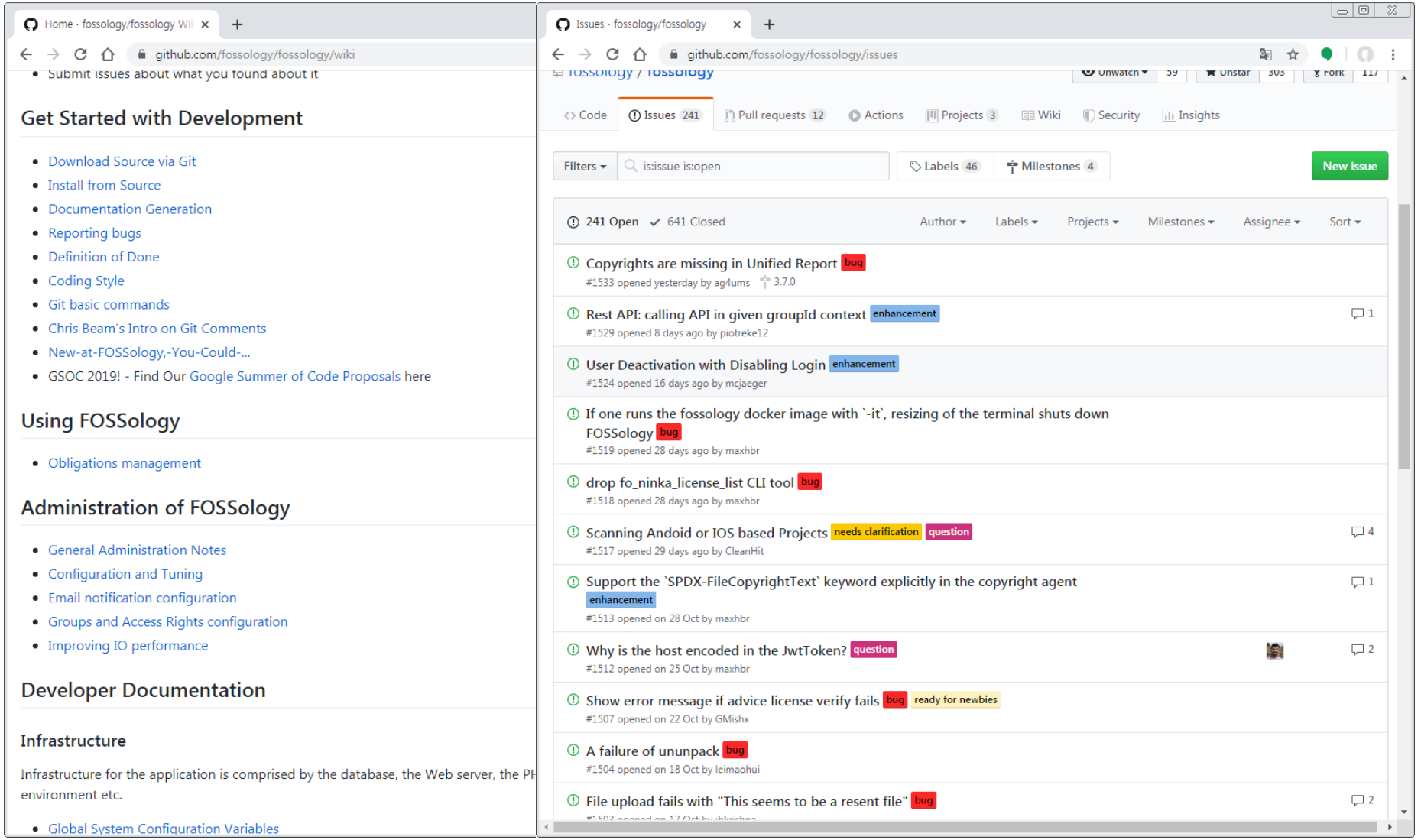
FOSSology 관련 사이트

2. FOSSology wiki 아카이브 (http://archive15.fossology.org/projects/fossology/wiki)



FOSSology 관련 사이트

3. Github (https://github.com/fossology/fossology)

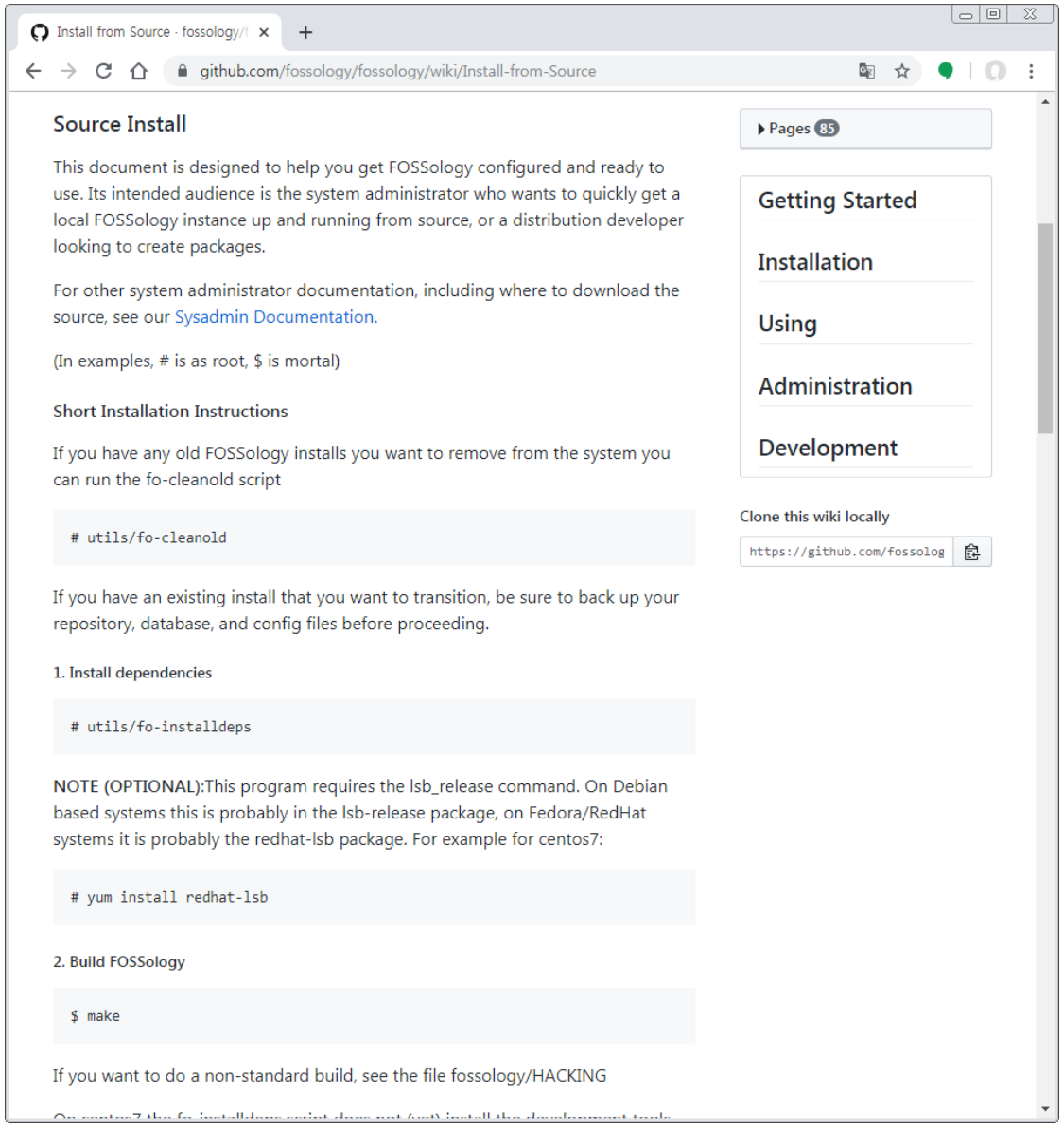


FOSSology 관련 사이트

4. Github.io (https://fossology.github.io/)

설치 방법

Source로 설치하기

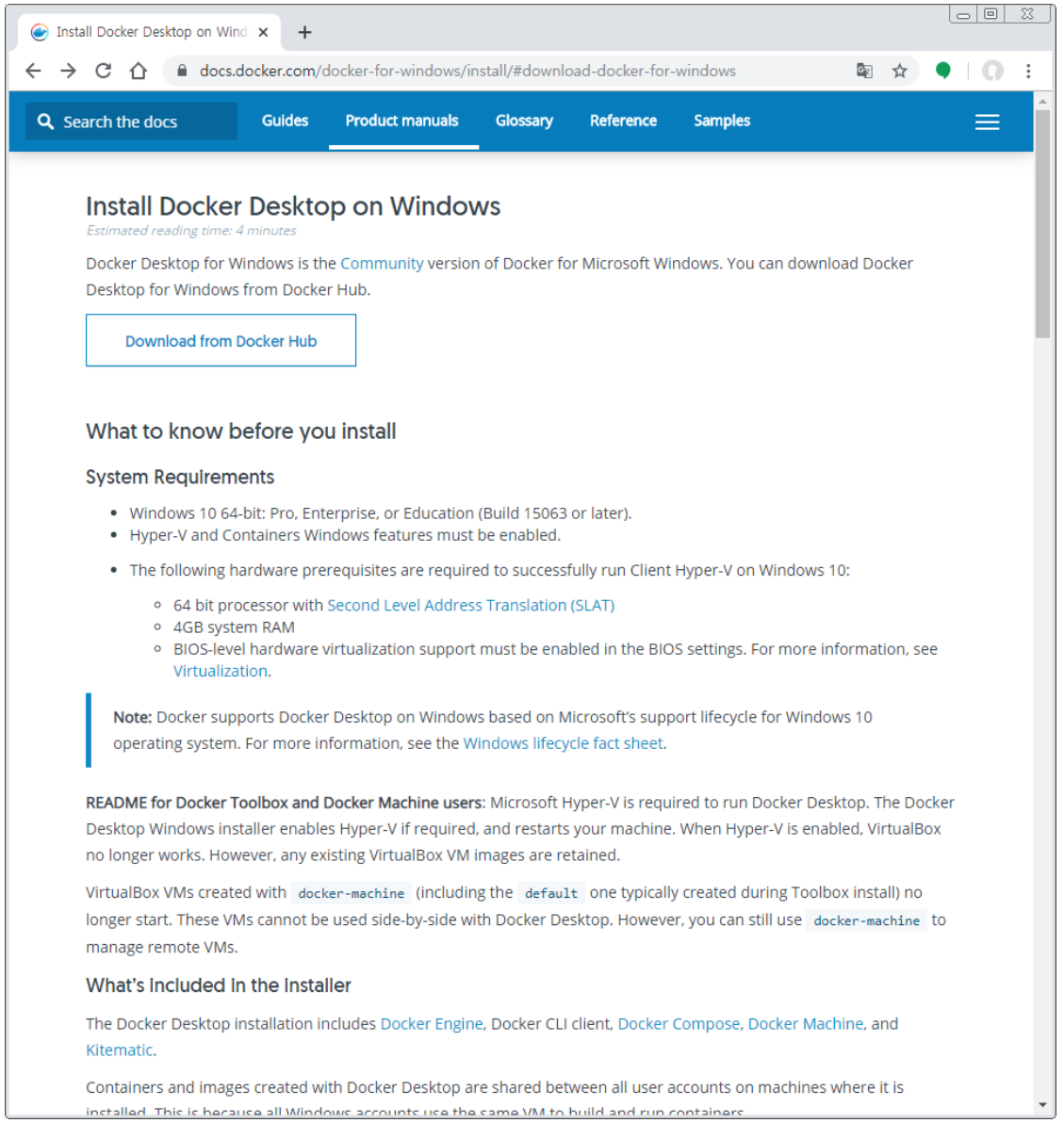


1. Source Code 확보
2. Dependency 설치 스크립트 실행
3. Make / make install
4. PHP, Apache, Postgresql 설정값 변경
5. Postinstall 스크립트 실행

https://github.com/fossology/fossology/wiki/Install-from-Source

Docker 이미지 이용하기

1. Docker Desktop 설치



Docker 이미지 이용하기

2. Command 실행

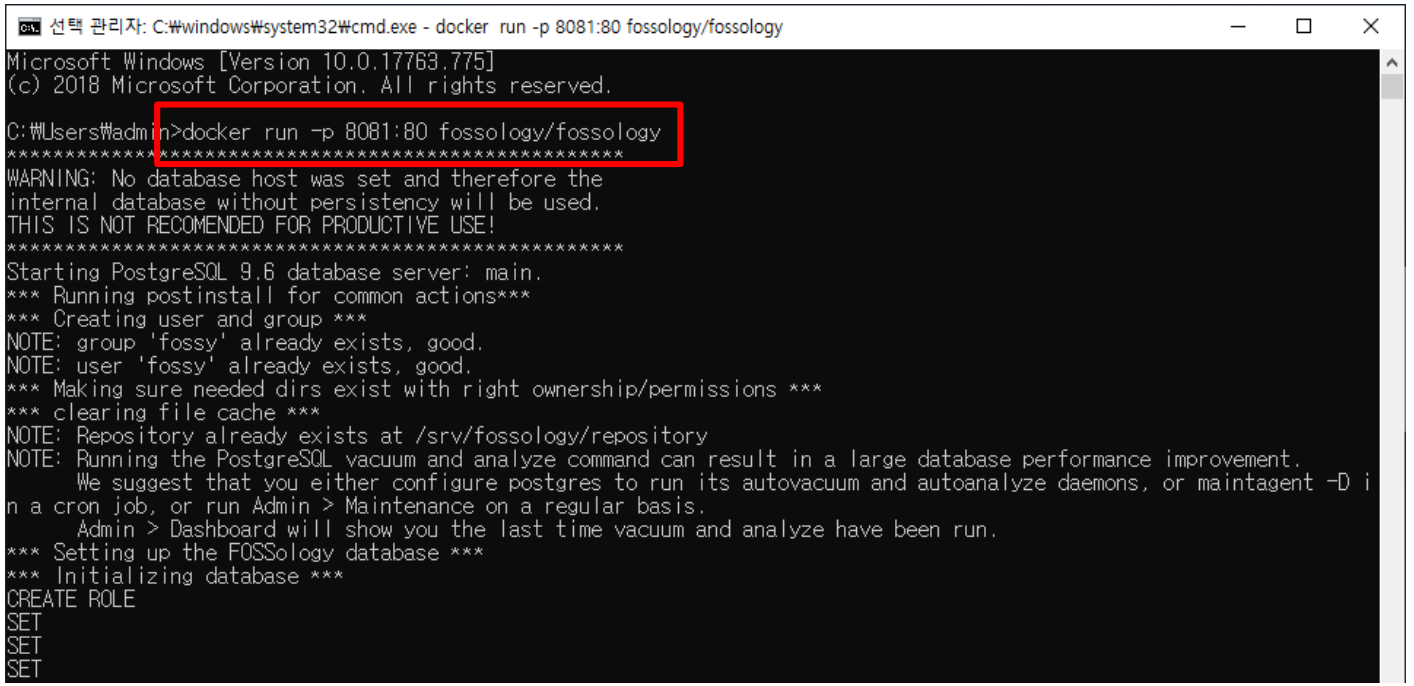
Docker

FOSSology comes with a Dockerfile allowing the containerized execution both as single instance or in combination with an external PostgreSQL database. **Note:** It is strongly recommended to use an external database for production use, since the the standalone image does not take care of data persistency.

A pre-built Docker image is available from Docker Hub and can be run using following command:

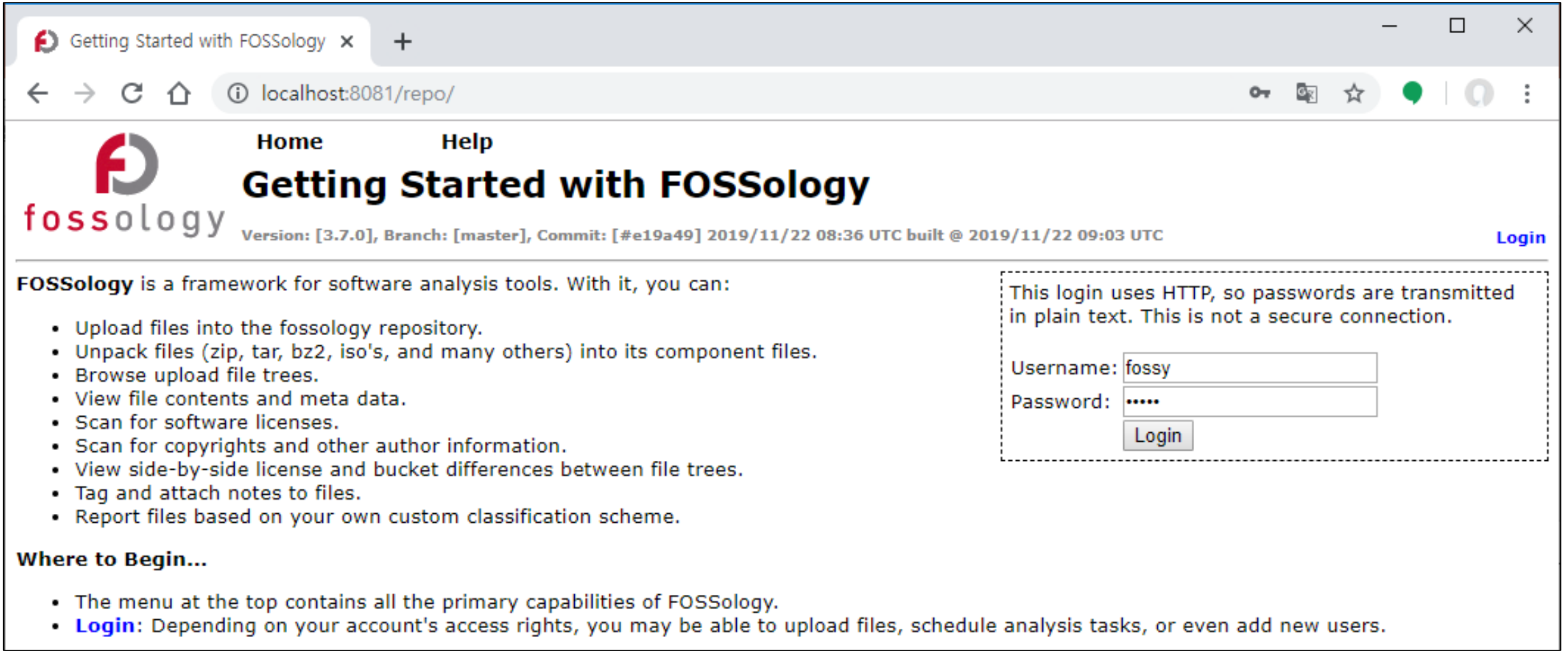
```
docker run -p 8081:80 fossology/fossology
```

The docker image can then be used using http://IP_OF_DOCKER_HOST:8081/repo user fossy passwd fossy.

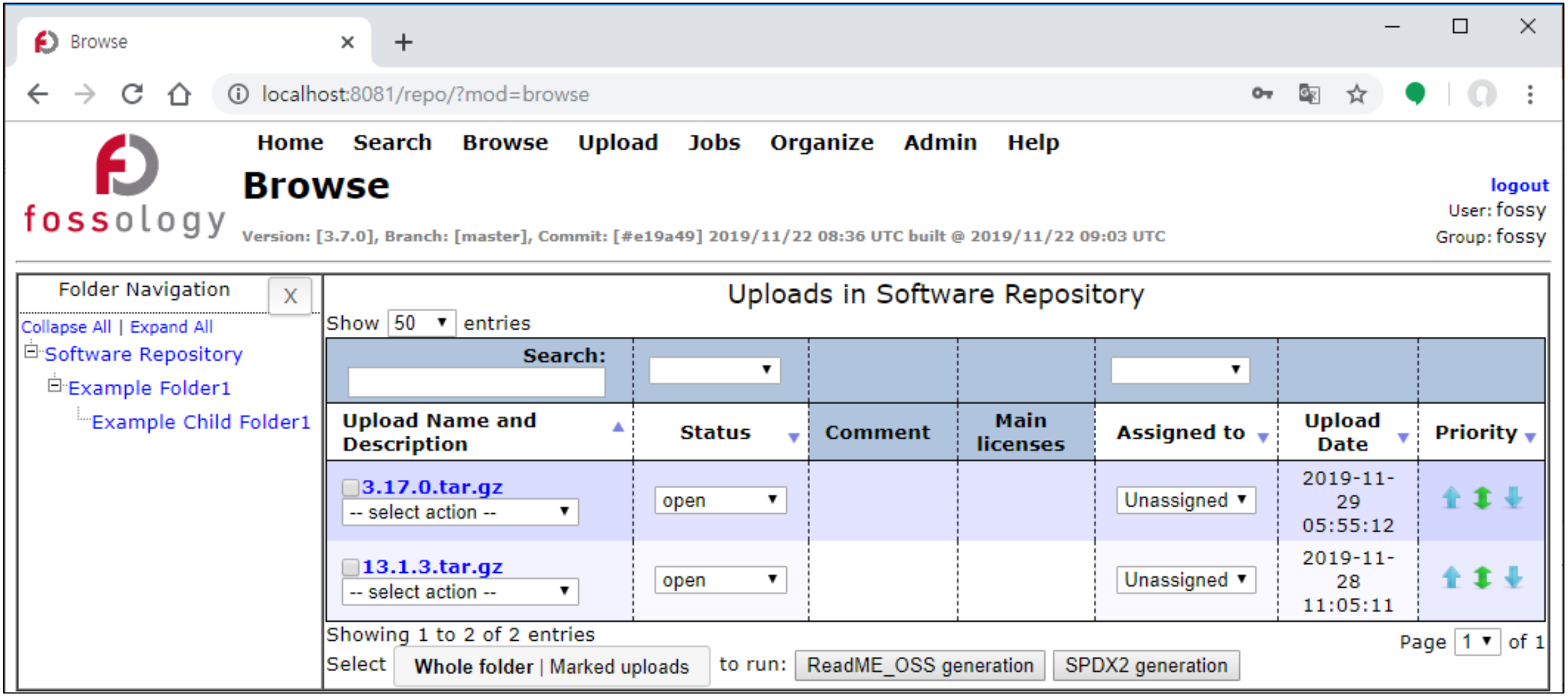


사용 방법

로그인

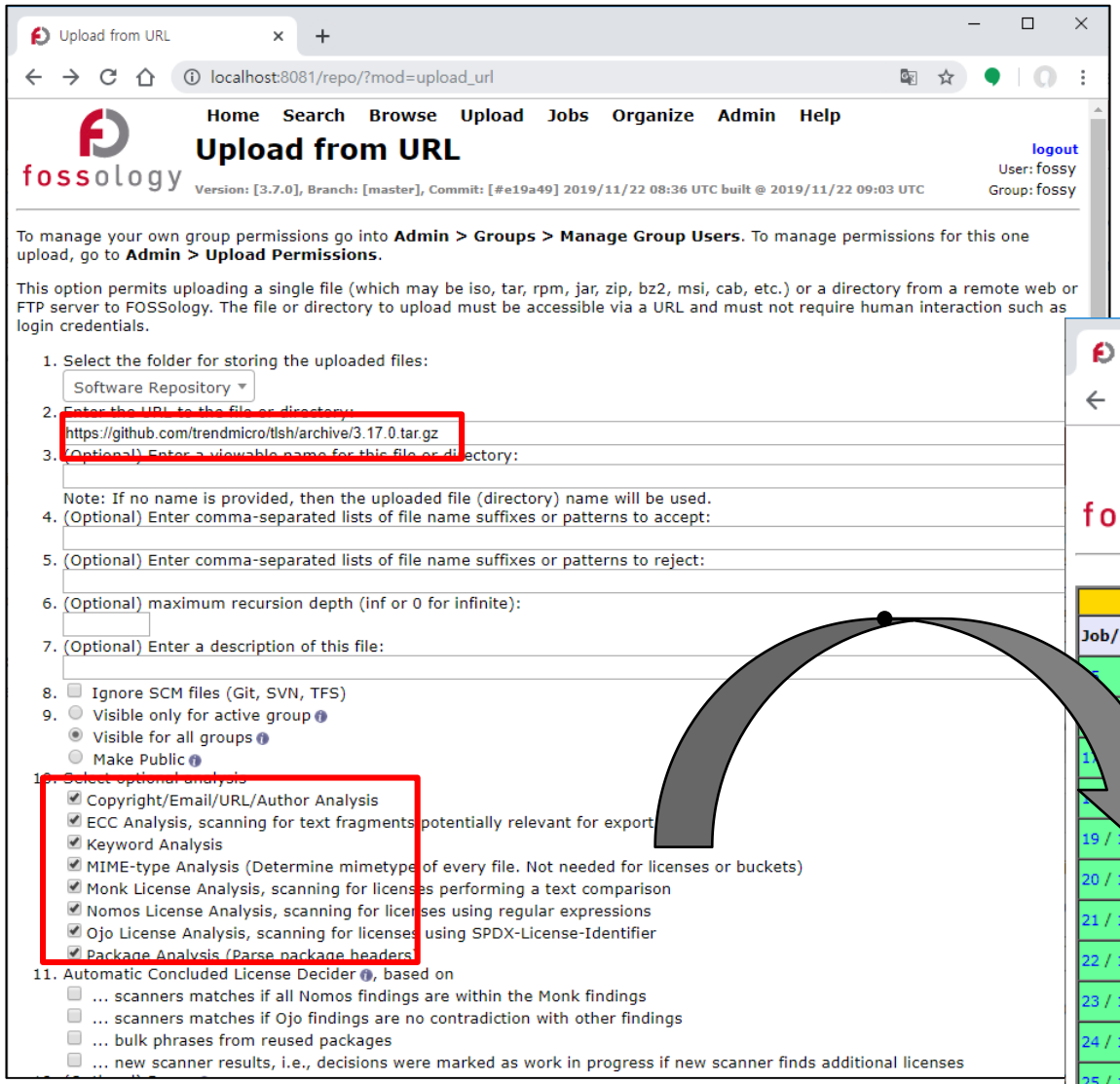

Getting Started with FOSSology
localhost:8081/repo/
Home
Help
fossology
Getting Started with FOSSology
Version: [3.7.0], Branch: [master], Commit: [#e19a49] 2019/11/22 08:36 UTC built @ 2019/11/22 09:03 UTC
Login
FOSSology is a framework for software analysis tools. With it, you can:
Upload files into the fossology repository.
Unpack files (zip, tar, bz2, iso's, and many others) into its component files.
Browse upload file trees.
View file contents and meta data.
Scan for software licenses.
Scan for copyrights and other author information.
View side-by-side license and bucket differences between file trees.
Tag and attach notes to files.
Report files based on your own custom classification scheme.
This login uses HTTP, so passwords are transmitted in plain text. This is not a secure connection.
Username: fossy
Password: •••••
Login
Where to Begin...
The menu at the top contains all the primary capabilities of FOSSology.
Login: Depending on your account's access rights, you may be able to upload files, schedule analysis tasks, or even add new users.

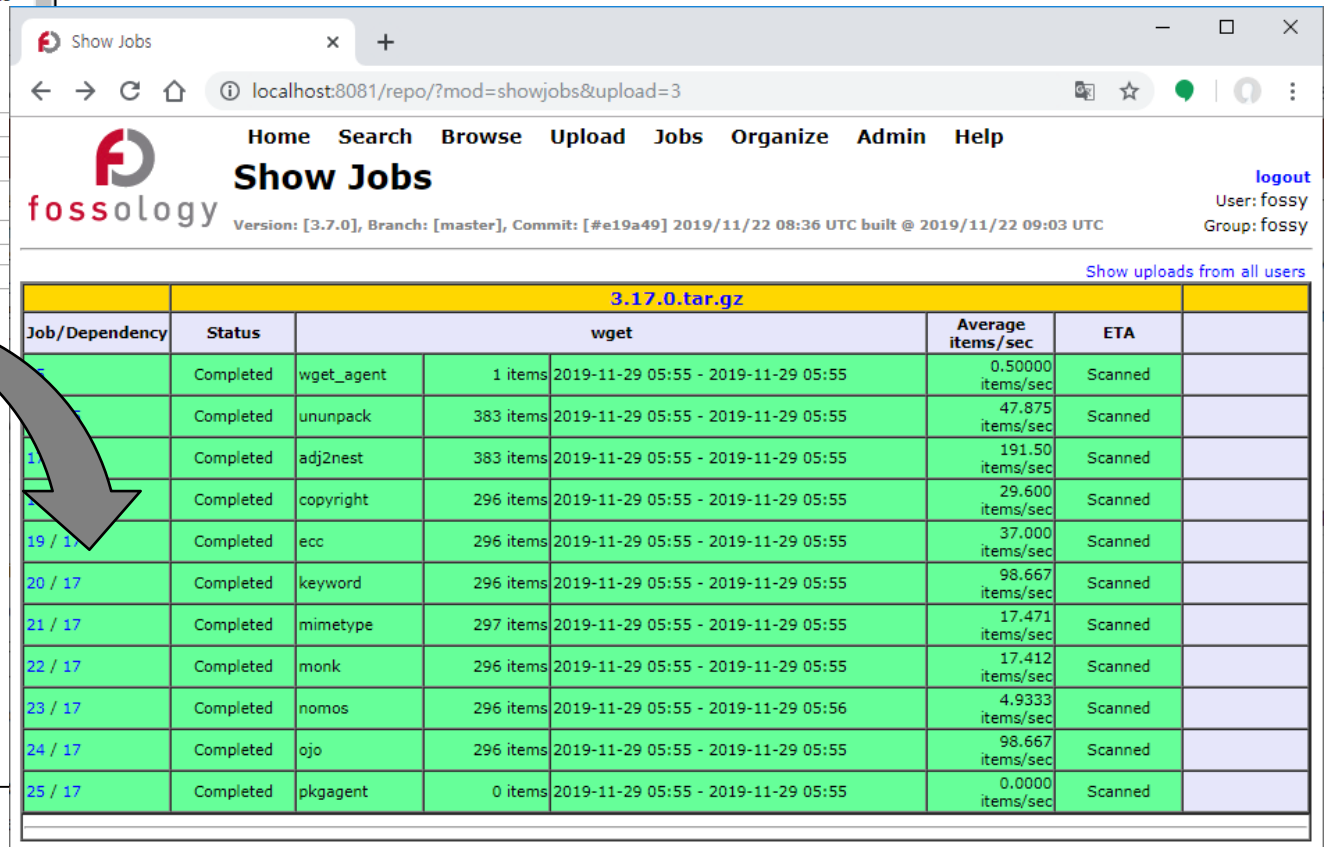
Browse


Browse
localhost:8081/repo/?mod=browse
Home Search Browse Upload Jobs Organize Admin Help
fossology
Browse
Version: [3.7.0], Branch: [master], Commit: [#e19a49] 2019/11/22 08:36 UTC built @ 2019/11/22 09:03 UTC
logout
User: fossy
Group: fossy
Folder Navigation
Collapse All | Expand All
Software Repository
Example Folder1
Example Child Folder1
Uploads in Software Repository
Show 50 entries
Search:
Upload Name and Description
Status
Comment
Main licenses
Assigned to
Upload Date
Priority
3.17.0.tar.gz
-- select action --
open
Unassigned
2019-11-29 05:55:12
13.1.3.tar.gz
-- select action --
open
Unassigned
2019-11-28 11:05:11
Showing 1 to 2 of 2 entries
Page 1 of 1
Select Whole folder | Marked uploads to run: ReadME_OSS generation SPDX2 generation

Upload

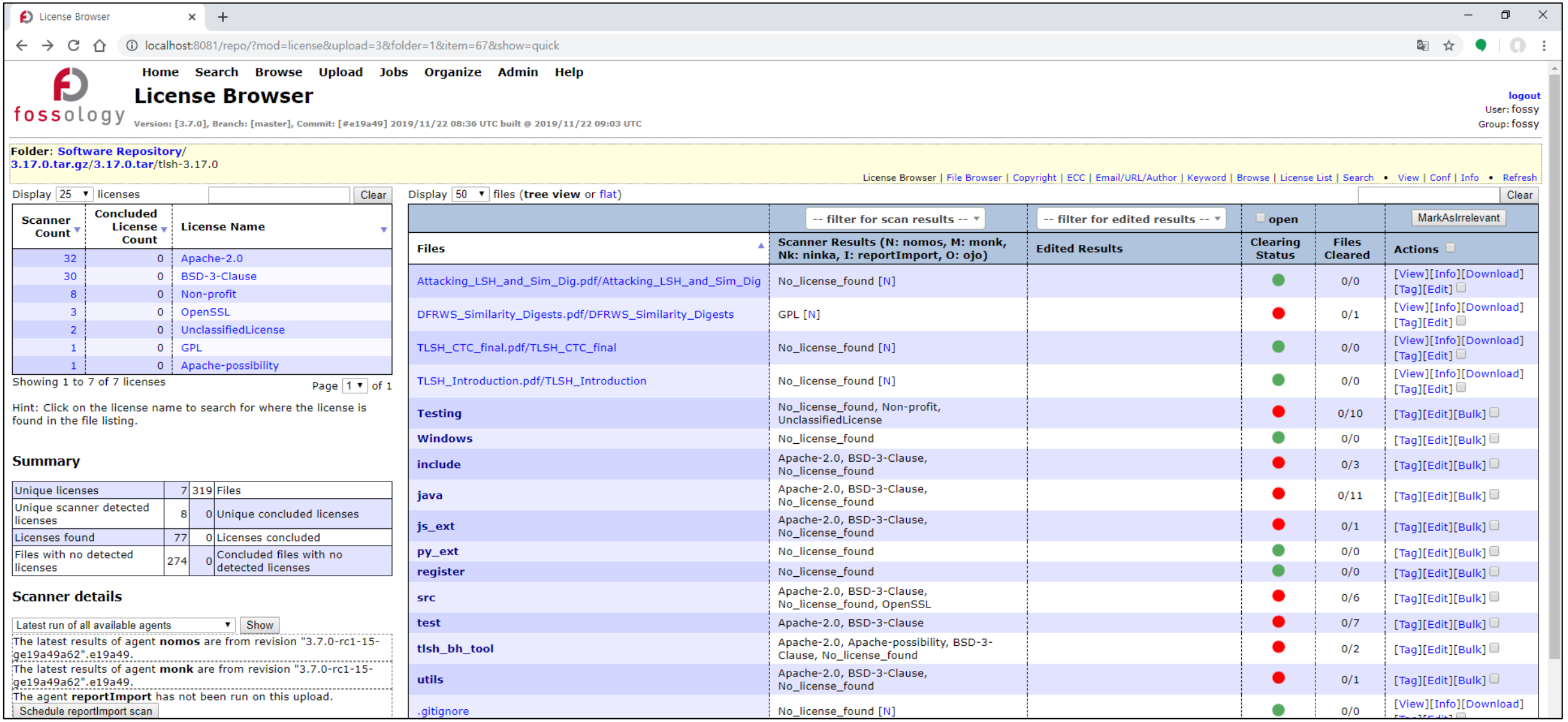
- ❑ Upload From File
- ❑ Upload From URL
- ❑ Upload From Version Control System
- ❑ Upload From Server



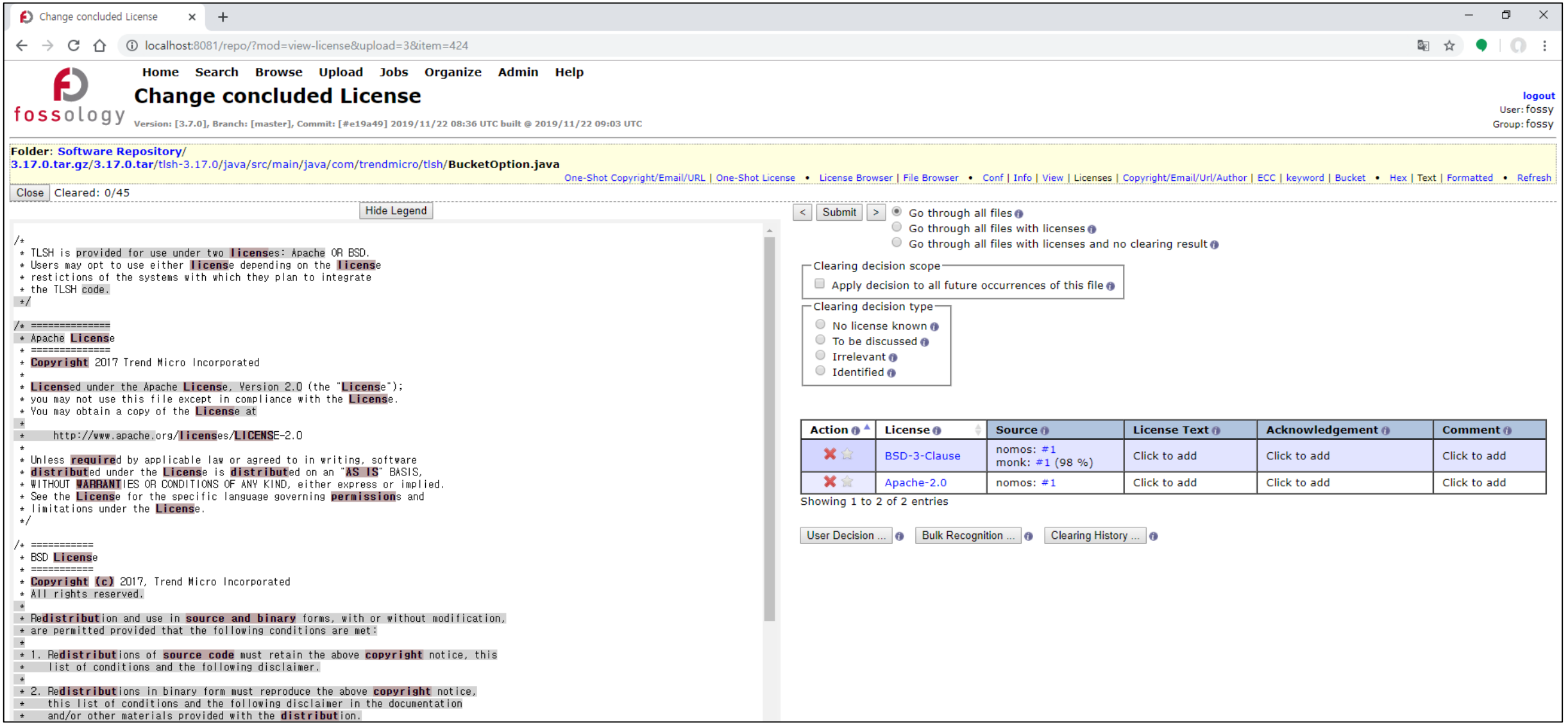


	3.17.0.tar.gz						
Job/Dependency	Status	wget			Average items/sec	ETA	
	Completed	wget_agent	1 items	2019-11-29 05:55 - 2019-11-29 05:55	0.50000 items/sec	Scanned	
	Completed	ununpack	383 items	2019-11-29 05:55 - 2019-11-29 05:55	47.875 items/sec	Scanned	
1	Completed	adj2nest	383 items	2019-11-29 05:55 - 2019-11-29 05:55	191.50 items/sec	Scanned	
	Completed	copyright	296 items	2019-11-29 05:55 - 2019-11-29 05:55	29.600 items/sec	Scanned	
19 / 1	Completed	ecc	296 items	2019-11-29 05:55 - 2019-11-29 05:55	37.000 items/sec	Scanned	
20 / 17	Completed	keyword	296 items	2019-11-29 05:55 - 2019-11-29 05:55	98.667 items/sec	Scanned	
21 / 17	Completed	mimetype	297 items	2019-11-29 05:55 - 2019-11-29 05:55	17.471 items/sec	Scanned	
22 / 17	Completed	monk	296 items	2019-11-29 05:55 - 2019-11-29 05:55	17.412 items/sec	Scanned	
23 / 17	Completed	nomos	296 items	2019-11-29 05:55 - 2019-11-29 05:56	4.9333 items/sec	Scanned	
24 / 17	Completed	ojo	296 items	2019-11-29 05:55 - 2019-11-29 05:55	98.667 items/sec	Scanned	
25 / 17	Completed	pkgagent	0 items	2019-11-29 05:55 - 2019-11-29 05:55	0.0000 items/sec	Scanned	

License Browser



개별 File 확인


Change concluded License
localhost:8081/repo/?mod=view-license&upload=3&item=424
Home Search Browse Upload Jobs Organize Admin Help
fossology
Change concluded License
Version: [3.7.0], Branch: [master], Commit: [#e19a49] 2019/11/22 08:36 UTC built @ 2019/11/22 09:03 UTC
logout
User: fossy
Group: fossy
Folder: Software Repository/
3.17.0.tar.gz/3.17.0.tar/tlsh-3.17.0/java/src/main/java/com/trendmicro/tlsh/BucketOption.java
One-Shot Copyright/Email/URL | One-Shot License • License Browser | File Browser • Conf | Info | View | Licenses | Copyright/Email/Url/Author | ECC | keyword | Bucket • Hex | Text | Formatted • Refresh
Close Cleared: 0/45
Hide Legend
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* the TLSH code.
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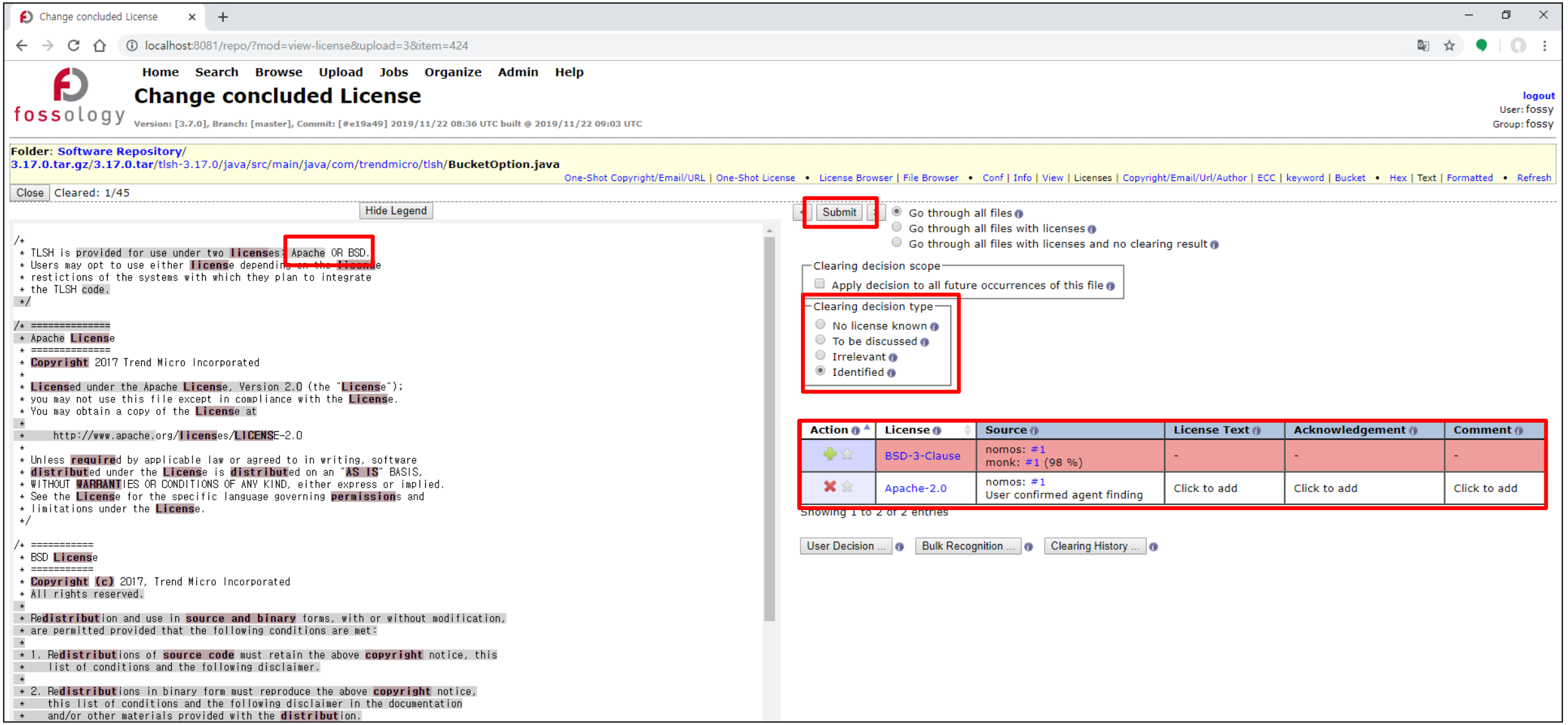
* and/or other materials provided with the distribution.
< Submit >
Go through all files
Go through all files with licenses
Go through all files with licenses and no clearing result
Clearing decision scope
Apply decision to all future occurrences of this file
Clearing decision type
No license known
To be discussed
Irrelevant
Identified
Action License Source License Text Acknowledgement Comment
BSD-3-Clause nomos: #1 monk: #1 (98 %) Click to add Click to add Click to add
Apache-2.0 nomos: #1 Click to add Click to add Click to add
Showing 1 to 2 of 2 entries
User Decision ... Bulk Recognition ... Clearing History ...

Clearing


Change concluded License
localhost:8081/repo/?mod=view-license&upload=3&item=424
Home Search Browse Upload Jobs Organize Admin Help
fossology
Change concluded License
Version: [3.7.0], Branch: [master], Commit: [#e19a49] 2019/11/22 08:36 UTC built @ 2019/11/22 09:03 UTC
logout
User: fossy
Group: fossy
Folder: Software Repository/
3.17.0.tar.gz/3.17.0.tar/tlsh-3.17.0/java/src/main/java/com/trendmicro/tlsh/BucketOption.java
One-Shot Copyright/Email/URL | One-Shot License • License Browser | File Browser • Conf | Info | View | Licenses | Copyright/Email/Url/Author | ECC | keyword | Bucket • Hex | Text | Formatted • Refresh
Close Cleared: 1/45
Hide Legend
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* restictions of the systems with which they plan to integrate
* the TLSH code.
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/* ==============
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*/
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*
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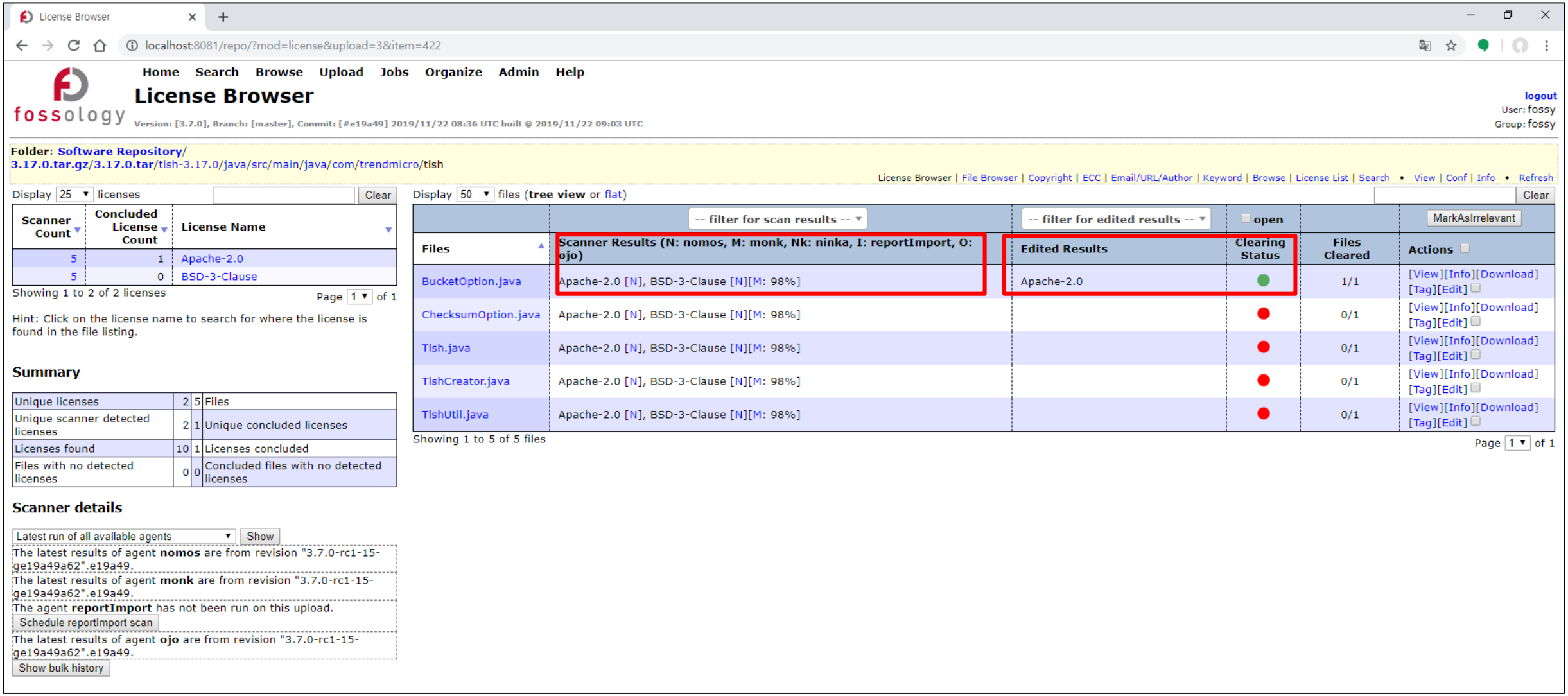
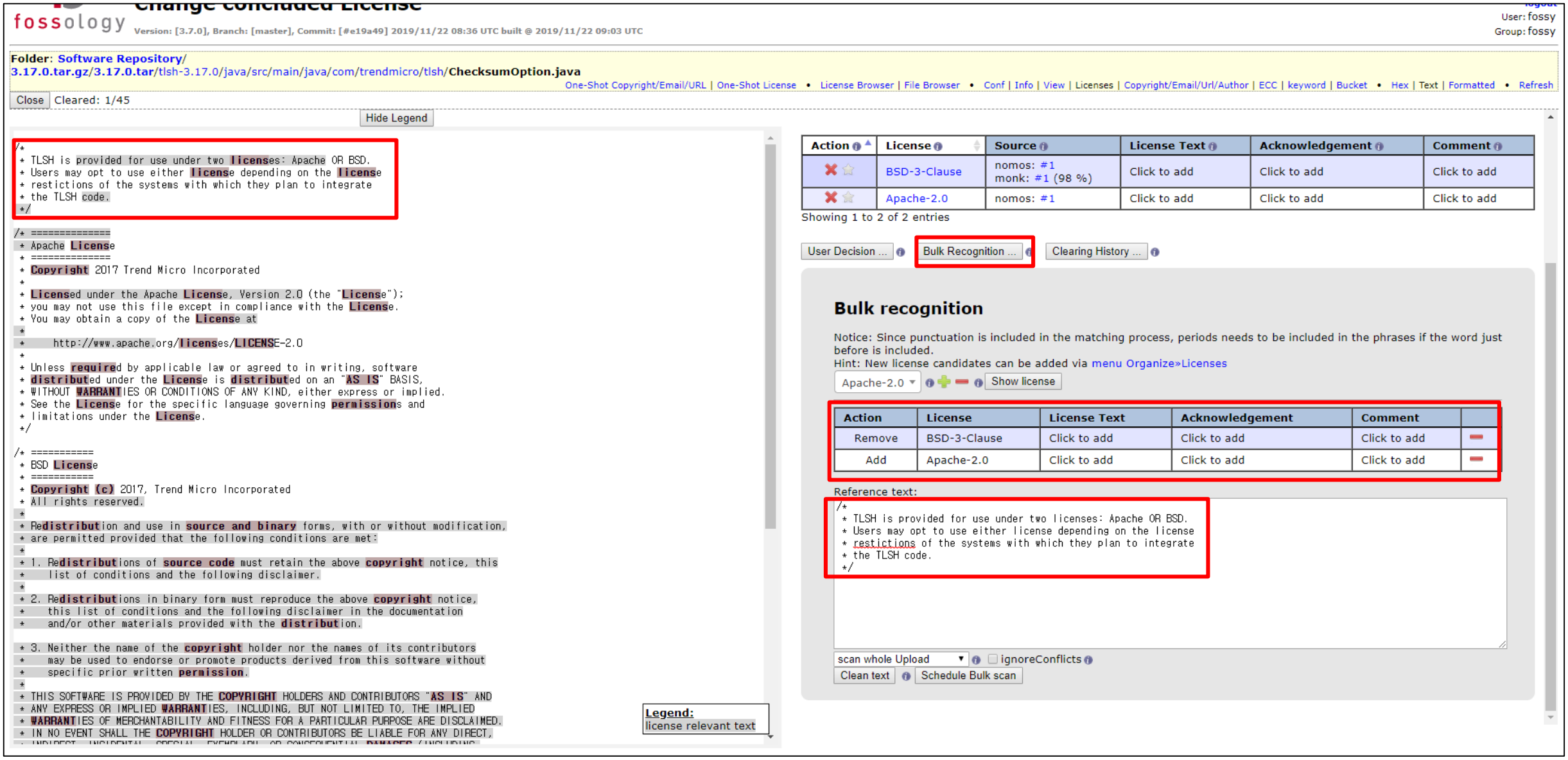
* this list of conditions and the following disclaimer in the documentation
* and/or other materials provided with the distribution.
Submit
Go through all files
Go through all files with licenses
Go through all files with licenses and no clearing result
Clearing decision scope
Apply decision to all future occurrences of this file
Clearing decision type
No license known
To be discussed
Irrelevant
Identified
Action
License
Source
License Text
Acknowledgement
Comment
BSD-3-Clause
nomos: #1
monk: #1 (98 %)
-
-
-
Apache-2.0
nomos: #1
User confirmed agent finding
Click to add
Click to add
Click to add
Showing 1 to 2 of 2 entries
User Decision ...
Bulk Recognition ...
Clearing History ...

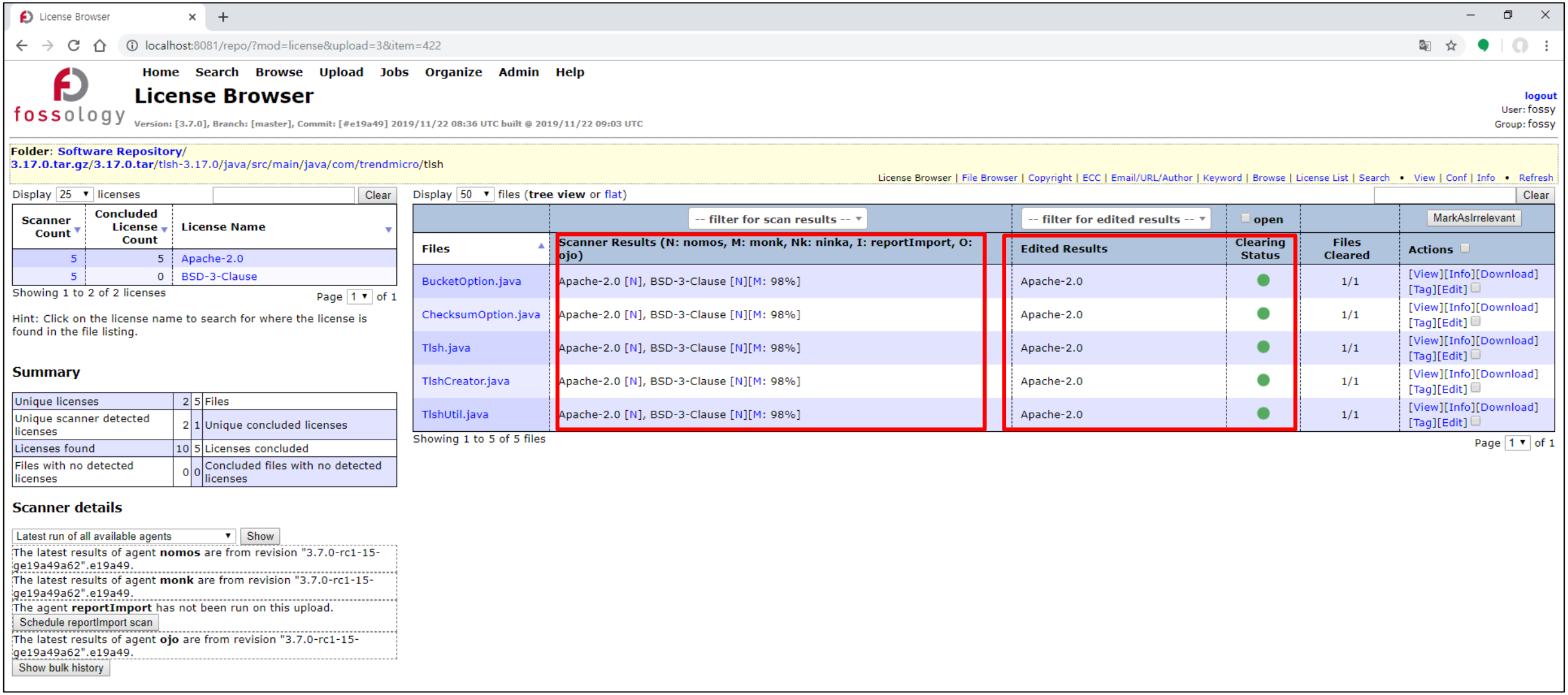
Clearing


License Browser
localhost:8081/repo/?mod=license&upload=3&item=422
Home Search Browse Upload Jobs Organize Admin Help
fossology
License Browser
Version: [3.7.0], Branch: [master], Commit: [#e19a49] 2019/11/22 08:36 UTC built @ 2019/11/22 09:03 UTC
logout
User: fossy
Group: fossy
Folder: Software Repository/
3.17.0.tar.gz/3.17.0.tar/tlsh-3.17.0/java/src/main/java/com/trendmicro/tlsh
License Browser | File Browser | Copyright | ECC | Email/URL/Author | Keyword | Browse | License List | Search • View | Conf | Info • Refresh
Display 25 licenses
Clear
Scanner Count
Concluded License Count
License Name
5 1 Apache-2.0
5 0 BSD-3-Clause
Showing 1 to 2 of 2 licenses
Page 1 of 1
Hint: Click on the license name to search for where the license is found in the file listing.
Summary
Unique licenses 2 5 Files
Unique scanner detected licenses 2 1 Unique concluded licenses
Licenses found 10 1 Licenses concluded
Files with no detected licenses 0 0 Concluded files with no detected licenses
Scanner details
Latest run of all available agents
Show
The latest results of agent nomos are from revision "3.7.0-rc1-15-ge19a49a62".e19a49.
The latest results of agent monk are from revision "3.7.0-rc1-15-ge19a49a62".e19a49.
The agent reportImport has not been run on this upload.
Schedule reportImport scan
The latest results of agent ojo are from revision "3.7.0-rc1-15-ge19a49a62".e19a49.
Show bulk history
Display 50 files (tree view or flat)
Clear
-- filter for scan results --
-- filter for edited results --
open
MarkAsIrrelevant
Files
Scanner Results (N: nomos, M: monk, Nk: ninka, I: reportImport, O: ojo)
Edited Results
Clearing Status
Files Cleared
Actions
BucketOption.java Apache-2.0 [N], BSD-3-Clause [N][M: 98%] Apache-2.0 1/1 [View][Info][Download] [Tag][Edit]
ChecksumOption.java Apache-2.0 [N], BSD-3-Clause [N][M: 98%] 0/1 [View][Info][Download] [Tag][Edit]
Tlsh.java Apache-2.0 [N], BSD-3-Clause [N][M: 98%] 0/1 [View][Info][Download] [Tag][Edit]
TlshCreator.java Apache-2.0 [N], BSD-3-Clause [N][M: 98%] 0/1 [View][Info][Download] [Tag][Edit]
TlshUtil.java Apache-2.0 [N], BSD-3-Clause [N][M: 98%] 0/1 [View][Info][Download] [Tag][Edit]
Showing 1 to 5 of 5 files
Page 1 of 1

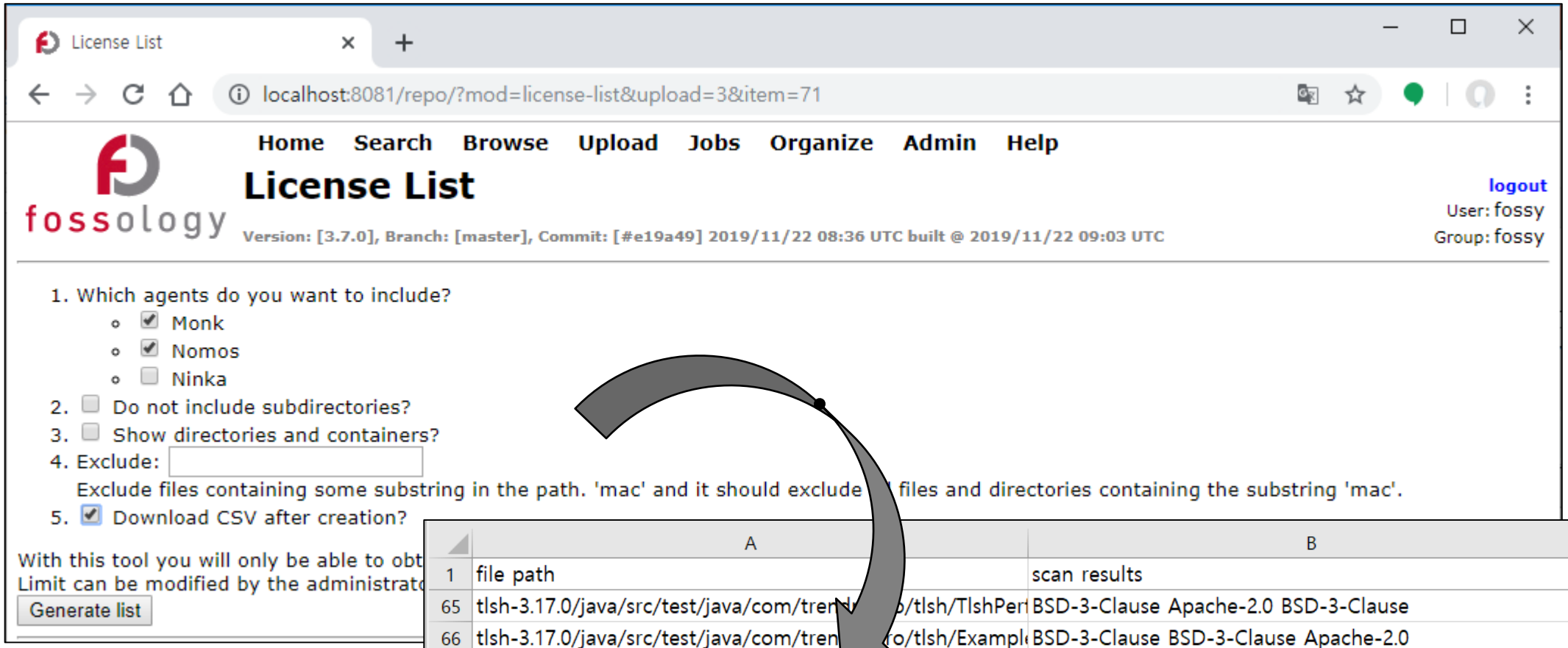
Clearing (bulk)



Clearing

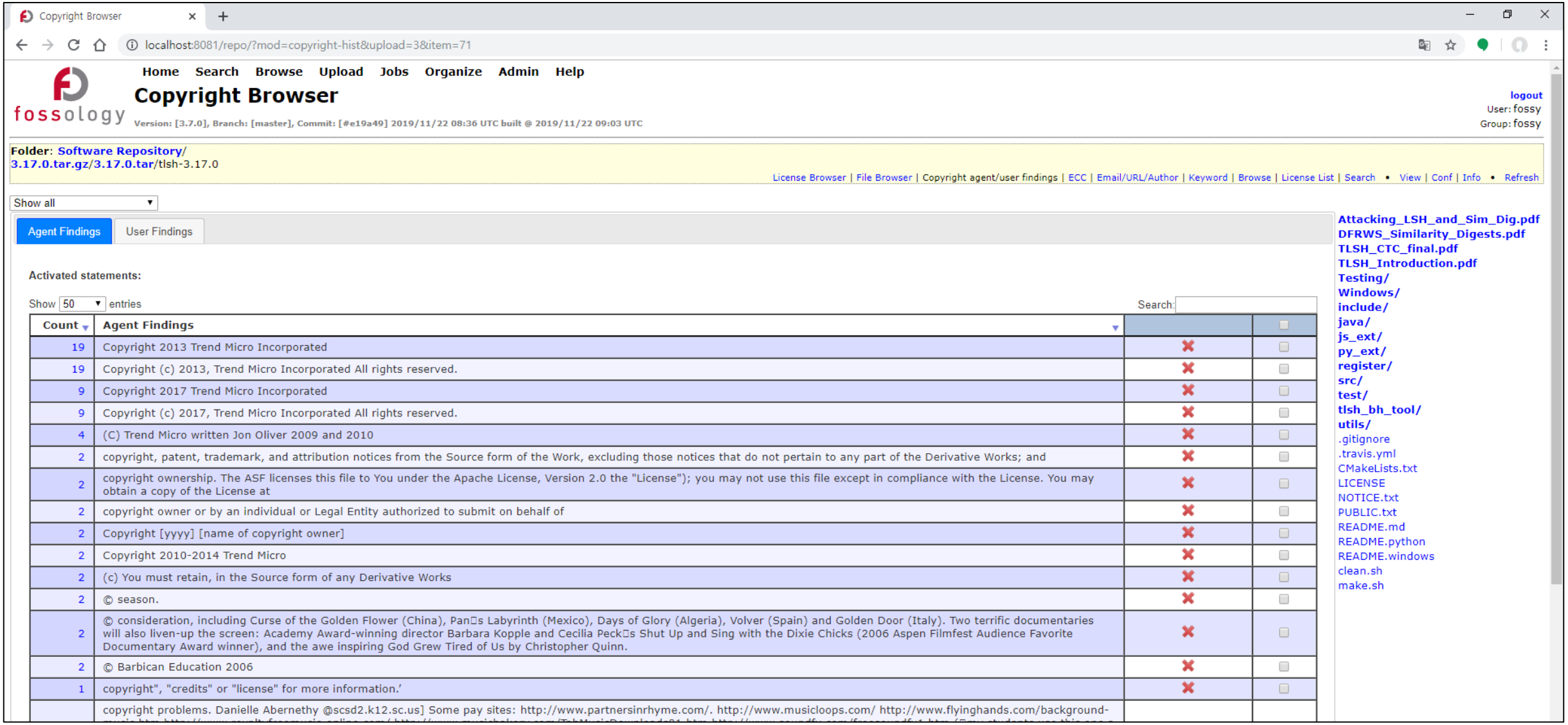

License Browser
localhost:8081/repo/?mod=license&upload=3&item=422
Home Search Browse Upload Jobs Organize Admin Help
fossology
License Browser
Version: [3.7.0], Branch: [master], Commit: [#e19a49] 2019/11/22 08:36 UTC built @ 2019/11/22 09:03 UTC
logout
User: fossy
Group: fossy
Folder: Software Repository/
3.17.0.tar.gz/3.17.0.tar/tlsh-3.17.0/java/src/main/java/com/trendmicro/tlsh
License Browser | File Browser | Copyright | ECC | Email/URL/Author | Keyword | Browse | License List | Search • View | Conf | Info • Refresh
Display 25 licenses
Clear
Scanner Count
Concluded License Count
License Name
5 5 Apache-2.0
5 0 BSD-3-Clause
Showing 1 to 2 of 2 licenses
Page 1 of 1
Hint: Click on the license name to search for where the license is found in the file listing.
Summary
Unique licenses 2 5 Files
Unique scanner detected licenses 2 1 Unique concluded licenses
Licenses found 10 5 Licenses concluded
Files with no detected licenses 0 0 Concluded files with no detected licenses
Scanner details
Latest run of all available agents
Show
The latest results of agent nomos are from revision "3.7.0-rc1-15-ge19a49a62".e19a49.
The latest results of agent monk are from revision "3.7.0-rc1-15-ge19a49a62".e19a49.
The agent reportImport has not been run on this upload.
Schedule reportImport scan
The latest results of agent ojo are from revision "3.7.0-rc1-15-ge19a49a62".e19a49.
Show bulk history
Display 50 files (tree view or flat)
Clear
-- filter for scan results --
-- filter for edited results --
open
MarkAsIrrelevant
Files
Scanner Results (N: nomos, M: monk, Nk: ninka, I: reportImport, O: ojo)
Edited Results
Clearing Status
Files Cleared
Actions
BucketOption.java Apache-2.0 [N], BSD-3-Clause [N][M: 98%] Apache-2.0 1/1 [View][Info][Download] [Tag][Edit]
ChecksumOption.java Apache-2.0 [N], BSD-3-Clause [N][M: 98%] Apache-2.0 1/1 [View][Info][Download] [Tag][Edit]
Tlsh.java Apache-2.0 [N], BSD-3-Clause [N][M: 98%] Apache-2.0 1/1 [View][Info][Download] [Tag][Edit]
TlshCreator.java Apache-2.0 [N], BSD-3-Clause [N][M: 98%] Apache-2.0 1/1 [View][Info][Download] [Tag][Edit]
TlshUtil.java Apache-2.0 [N], BSD-3-Clause [N][M: 98%] Apache-2.0 1/1 [View][Info][Download] [Tag][Edit]
Showing 1 to 5 of 5 files
Page 1 of 1

License List



	A	B	C
1	file path	scan results	concluded results
65	tlsh-3.17.0/java/src/test/java/com/tren /tlsh/TlshPer	BSD-3-Clause Apache-2.0 BSD-3-Clause	Apache-2.0
66	tlsh-3.17.0/java/src/test/java/com/tren ro/tlsh/Exampl	BSD-3-Clause BSD-3-Clause Apache-2.0	Apache-2.0
67	tlsh-3.17.0/java/src/main/java/com/trendmicro/tlsh/TlshUt	Apache-2.0 BSD-3-Clause BSD-3-Clause	Apache-2.0
68	tlsh-3.17.0/java/src/main/java/com/trendmicro/tlsh/TlshCr	BSD-3-Clause Apache-2.0 BSD-3-Clause	Apache-2.0
69	tlsh-3.17.0/java/src/main/java/com/trendmicro/tlsh/Tlsh.ja	Apache-2.0 BSD-3-Clause BSD-3-Clause	Apache-2.0
70	tlsh-3.17.0/java/src/main/java/com/trendmicro/tlsh/Check	BSD-3-Clause BSD-3-Clause Apache-2.0	Apache-2.0
71	tlsh-3.17.0/java/src/main/java/com/trendmicro/tlsh/Bucke	Apache-2.0 BSD-3-Clause BSD-3-Clause	Apache-2.0
72	tlsh-3.17.0/java/gradle/wrapper/gradle-wrapper.properties	No_license_found	
73	tlsh-3.17.0/java/gradle/wrapper/gradle-wrapper.jar/gradle-	No_license_found	

Copyright Browser



이외에...

- SPDX 문서 출력(RDF / tag:value)
- ReadMe OSS 문서(text) 출력
- Copyright, Email, URL 검출 및 출력
- Keyword 검출 등등

Conclusion

Conclusion

- 시스템 운영에 노력 필요
- 사용 방법에 따라 효과적인 Tool
- 다른 시스템에 연동 가능
- 새로운 Agent 등장으로 발전이 기대됨
- Documentation…

Q & A

감사합니다