

Current status and perspectives of the OSSelot Project

Caren Kresse

Open Source Automation Development Lab (OSADL) eG



- The **OSSelot** project provides a publicly available **database** with **curated compliance information** for frequently used FOSS components (and related tooling → see second lecture).
- The database contains license and copyright analysis results:
 - README (and *info.json*) with metadata of the package, *e.g.* download location, purl, creator, reviews, comments
 - SPDX Tag:Value, JSON, YAML, RDF reports with concluded licenses, copyright notices, and comments on decisions per file
 - Disclosure document with aggregated license texts, copyright notices and acknowledgments per package



- Some manual input and review of the data is still indispensable, but:

The reuse of curated licensing and copyright information can tremendously reduce the time required to clear a software package!

Some dates and numbers

- The **OSSelot** project was publicly launched in the COOL lecture in December 2022.
- By now, there is a total of **842 packages** (516 unique) and 3,501,617 files analyzed.
- These packages are **84.07 % consistent** (→ all dependencies are also curated).
- **Some of the big ones:** gcc, llvm, e2fsprogs, 4 versions of the Linux kernel and 8 versions of zephyr are already curated.
- There are 17 **contributors**.
- Several **external tools** (e.g. FOSSology, SCANOSS, Yocto) already integrate OSSelot material.

Side benefits (1): File licensing

Manual curation and quality checks can reveal licensing issues of single source code files, e.g.:

- The library libaudit is predominantly licensed under LGPL-2.1 (**weak copyleft**) and several permissive licenses.
- Only one file was licensed under GPL-2.0-or-later (**strong copyleft**) up to version 3.0.9, requiring the entire library to be licensed under GPL.
- The OSSelot project contacted the maintainer about this issue to clarify that older versions can also be used under LGPL.

Side benefits (2): Dependency licensing

Building packages and analyzing their dependencies can reveal even more, e.g.:

- WebKitGTK introduced changes between version 4.1 and 6.0 that include a dependency on liblzo and libjbig.
- Both libraries are licensed under GPL-2.0, i.e. requiring all **linked programs** to also be licensed under the GPL-2.0.
- The OSSelot project makes such **problematic dependencies visible**.

/usr/lib/libwebkit2gtk-4.1.so.0.13.5

(LLGPL-3.0-or-later OR GPL-2.0-or-later) AND Permission-Notice

(OBSD OR CCO-1.0 OR MIT-0 OR MIT OR Public-domain) AND LGPL-2.1-or-later

(AFL-2.0 OR LGPL-2.1-or-later)

(AFL-2.0 OR GPL-2.0-or-later)

(Apache-2.0-WITH-LLVM-exception AND Unicode-DFS-2015)

(BSD-2-Clause AND BSD-3-Clause OR GPL-2.0-only)

(BSD-2-Clause AND AOMPL-1.0)

(BSD-2-Clause-Gladman AND CC-BY-SA-2.5)

(BSD-3-Clause AND BSD-2-Clause)

(BSD-3-Clause AND HPND)

(BSD-3-Clause AND HPND-export-US-modify AND HPND-sell-variant)

(BSD-3-Clause AND HPND-export-US-modify)

(BSD-3-Clause AND HPND-sell-variant)

(BSD-3-Clause AND ISC AND HPND)

(BSD-3-Clause AND ISC AND Permission-Notice AND HPND)

(BSD-3-Clause AND ISC)

(BSD-3-Clause AND LGPL-2.0-or-later)

(BSD-3-Clause AND LGPL-2.1-or-later AND HPND)

(BSD-3-Clause AND LGPL-2.1-or-later)

(BSD-3-Clause AND LGPL-2.1-or-later-WITH-GCC-exception-2.0)

(BSD-3-Clause AND Patent-License-Grant)

(BSD-3-Clause AND Permission-Notice AND HPND)

(BSD-3-Clause AND Permission-Notice AND ISC)

(BSD-3-Clause AND Permission-Notice AND LGPL-2.1-or-later AND HPND)

(BSD-3-Clause AND Permission-Notice AND LGPL-2.1-or-later)

(BSD-3-Clause AND Permission-Notice AND MIT AND HPND)

(BSD-3-Clause OR GPL-2.0-only)

(BSD-4-Clause-UC AND X11-distribute-modifications-variant AND BSD-3-Clause)

(FTL OR GPL-2.0-or-later)

(GPL-2.0-only OR BSD-3-Clause)

(GPL-2.0-or-later OR LGPL-3.0-or-later)

(GPL-3.0-or-later-WITH-GCC-exception-3.1 AND Permission-Notice)

(HPND AND BSD-3-Clause AND LGPL-2.1-or-later)

(HPND AND BSD-3-Clause)

(HPND AND MIT AND X11-distribute-modifications-variant)

(HPND AND MIT)

(HPND AND MIT-open-group)

(HPND AND Permission-Notice AND BSD-3-Clause)

(HPND-export-US AND BSD-3-Clause AND HPND-sell-variant)

(HPND-export-US AND HPND-sell-variant)

(HPND-export-US-modify AND BSD-2-Clause)

(HPND-export-US-modify AND HPND-sell-variant)

(HPND-export-US-modify AND MIT)

(HPND-sell-variant AND (MPL-1.1 OR LGPL-2.1-only))

(HPND-sell-variant AND MIT)

(HPND-sell-variant AND MIT-open-group)

(ICU AND LGPL-2.0-or-later)

(ISC AND BSD-3-Clause)

(ISC AND LGPL-2.1-or-later)

(ISC AND Permission-Notice)

(Inner-Net-2.0 AND LGPL-2.1-or-later)

(LGPL-2.0-or-later AND LGPL-2.1-or-later)

(LGPL-2.1-or-later AND BSD-3-Clause AND ISC AND HPND)

(LGPL-2.1-or-later AND BSD-3-Clause)

(LGPL-2.1-or-later AND GPL-2.0-only)

(LGPL-2.1-or-later AND GPL-3.0-or-later-WITH-Bison-exception-2.2)

(LGPL-2.1-or-later AND ISC)

(LGPL-2.1-or-later AND Inner-Net-2.0)

(LGPL-2.1-or-later AND LGPL-2.0-or-later)

(LGPL-2.1-or-later AND Preserve-Permission-Notice)

(LGPL-2.1-or-later AND SunPro)

(LGPL-2.1-or-later OR BSD-3-Clause)

(LGPL-3.0-or-later OR GPL-2.0-or-later)

(MIT AND BSD-3-Clause AND HPND)

(MIT AND BSD-3-Clause OR GPL-2.0-only)

(MIT AND BSD-3-Clause)

(MIT AND HPND)

(MIT AND ICU)

(MIT AND ISC)

(MIT AND LGPL-2.1-or-later)

(MIT AND OLDAP-2.8)

(MIT AND Public-domain)

(MIT AND X11-distribute-modifications-variant)

(MIT-open-group AND HPND)

(MIT-open-group AND HPND-sell-variant)

(MIT-open-group AND NTP)

(MIT-open-group AND Tektronix)

(MPL-1.1 OR LGPL-2.1-only)

(Permission-Notice AND ISC AND LGPL-2.1-or-later)

(Permission-Notice AND ISC AND MIT)

(Permission-Notice AND ISC)

(Preserve-Permission-Notice AND LGPL-2.1-or-later)

(Public-domain AND (MPL-1.1 OR LGPL-2.1-only))

(Public-domain AND OBSD)

(Public-domain AND Apache-2.0-WITH-LLVM-exception)

(Public-domain AND GPL-3.0-or-later-WITH-GCC-exception-3.1)

(Public-domain AND MIT)

(TCL AND (AFL-2.1 OR GPL-2.0-or-later))

(TCL AND LGPL-2.0-or-later)

(U-Michigan AND HPND-export-US-modify)

(Unicode-DFS AND Apache-2.0-WITH-LLVM-exception)

(Unicode-DFS AND BSD-3-Clause)

(Unicode-DFS AND ICU)

(Warranty-Disclaimer AND RSA-MD)

(X11-distribute-modifications-variant AND MIT)

(warranty-disclaimer AND LGPL-2.1-only)

OBSD

Apache-2.0

Apache-2.0 OR CCO-1.0 OR LGPL-2.1-or-later

Apache-2.0-WITH-LLVM-exception

BSD-2-Clause

BSD-2-Clause-Acknowledgment

BSD-2-Clause-Gladman

BSD-2-Clause-NetBSD

BSD-2-Clause-NetBSD AND BSD-3-Clause

BSD-3-Clause

BSD-3-Clause OR GPL-1.0-or-later

BSD-3-Clause OR LGPL-2.0-or-later

BSL-1.0

CCO-1.0

CCO-1.0 AND LGPL-2.1-or-later

Export-Restriction

GPL-2.0-or-later-WITH-GCC-exception-2.0

GPL-3.0-or-later-WITH-Bison-exception-2.2

GPL-3.0-or-later-WITH-GCC-exception-3.1

HPND

HPND-export-US

HPND-export-US-modify

HPND-sell-variant

IJG

ISC

LGPL-2.0-or-later

LGPL-2.1-only

LGPL-2.1-or-later

LGPL-2.1-or-later AND Public-domain

LGPL-2.1-or-later-WITH-GCC-exception-2.0

LGPL-2.1-or-later-WITH-Spell-exception

MIT

MIT AND Permission-Notice

MIT-HPND-Export-US

MIT-Modern-variant

MIT-open-group

MIT-style

NCSA

NOASSERTION

NTP

OLDAP-2.8

Permission-Notice

Permission-Notice AND warranty-disclaimer

Preserve-Permission-Notice

Public-domain

SunPro

Tektronix

U-Michigan

Unicode-DFS

X11

X11-distribute-modifications-variant

Zlib

blessing AND Public-domain

bzip2-1.0.8

libpng-2.0

As expression

As resolved expression

As simplified expression

/usr/lib/libwebkitgtk-6.0.so.4.5.5

(LLGPL-3.0-or-later OR GPL-2.0-or-later) AND Permission-Notice

(OBSD OR CCO-1.0 OR MIT-0 OR MIT OR Public-domain) AND LGPL-2.1-or-later

(AFL-2.0 OR LGPL-2.1-or-later)

(Apache-2.0-WITH-LLVM-exception AND Unicode-DFS-2015)

(BSD-2-Clause AND (BSD-3-Clause OR GPL-2.0-only))

(BSD-2-Clause AND AOMPL-1.0)

(BSD-2-Clause-Gladman AND CC-BY-SA-2.5)

(BSD-3-Clause AND BSD-2-Clause)

(BSD-3-Clause AND HPND)

(BSD-3-Clause AND HPND-export-US-modify AND HPND-sell-variant)

(BSD-3-Clause AND HPND-export-US-modify)

(BSD-3-Clause AND HPND-sell-variant)

(BSD-3-Clause AND ISC AND HPND)

(BSD-3-Clause AND ISC AND Permission-Notice AND HPND)

(BSD-3-Clause AND ISC)

(BSD-3-Clause AND LGPL-2.0-or-later)

(BSD-3-Clause AND LGPL-2.1-or-later AND HPND)

(BSD-3-Clause AND LGPL-2.1-or-later)

(BSD-3-Clause AND LGPL-2.1-or-later-WITH-GCC-exception-2.0)

(BSD-3-Clause AND Patent-License-Grant)

(BSD-3-Clause AND Permission-Notice AND HPND)

(BSD-3-Clause AND Permission-Notice AND ISC)

(BSD-3-Clause AND Permission-Notice AND LGPL-2.1-or-later AND HPND)

(BSD-3-Clause AND Permission-Notice AND LGPL-2.1-or-later)

(BSD-3-Clause AND Permission-Notice AND MIT AND HPND)

(BSD-3-Clause OR GPL-2.0-only)

(BSD-4-Clause-UC AND X11-distribute-modifications-variant AND BSD-3-Clause)

(FTL OR GPL-2.0-or-later)

(GPL-2.0-only OR BSD-3-Clause)

(GPL-2.0-or-later OR LGPL-3.0-or-later)

(GPL-3.0-or-later-WITH-GCC-exception-3.1 AND Permission-Notice)

(HPND AND BSD-3-Clause AND LGPL-2.1-or-later)

(HPND AND BSD-3-Clause)

(HPND AND MIT AND X11-distribute-modifications-variant)

(HPND AND MIT)

(HPND AND MIT-open-group)

(HPND AND Permission-Notice AND BSD-3-Clause)

(HPND-export-US AND BSD-3-Clause AND HPND-sell-variant)

(HPND-export-US AND HPND-sell-variant)

(HPND-export-US-modify AND BSD-2-Clause)

(HPND-export-US-modify AND HPND-sell-variant)

(HPND-export-US-modify AND MIT)

(HPND-sell-variant AND (MPL-1.1 OR LGPL-2.1-only))

(HPND-sell-variant AND MIT)

(HPND-sell-variant AND MIT-open-group)

(ICU AND LGPL-2.0-or-later)

(ISC AND BSD-3-Clause)

(ISC AND LGPL-2.1-or-later)

(ISC AND Permission-Notice)

(Inner-Net-2.0 AND LGPL-2.1-or-later)

(LGPL-2.0-or-later AND GPL-2.0-or-later)

(LGPL-2.0-or-later AND HPND-sell-variant)

(LGPL-2.0-or-later AND LGPL-2.1-or-later)

(LGPL-2.0-or-later AND LGPL-3.0-or-later)

(LGPL-2.0-or-later AND MIT-open-group)

(LGPL-2.0-or-later AND MPL-2.0)

(LGPL-2.0-or-later AND TCL)

(LGPL-2.1-or-later AND BSD-3-Clause AND HPND)

(LGPL-2.1-or-later AND BSD-3-Clause AND ISC AND HPND)

(LGPL-2.1-or-later AND BSD-3-Clause)

(LGPL-2.1-or-later AND GPL-2.0-only)

(LGPL-2.1-or-later AND GPL-2.0-or-later)

(LGPL-2.1-or-later AND GPL-3.0-or-later-WITH-Bison-exception-2.2)

(LGPL-2.1-or-later AND ISC)

(LGPL-2.1-or-later AND Inner-Net-2.0)

(LGPL-2.1-or-later AND LGPL-2.0-or-later)

(LGPL-2.1-or-later AND Preserve-Permission-Notice)

(LGPL-2.1-or-later AND SunPro)

(LGPL-2.1-or-later OR BSD-3-Clause)

(LGPL-3.0-or-later OR GPL-2.0-or-later)

(MIT AND BSD-3-Clause AND HPND)

(MIT AND BSD-3-Clause AND HPND-export-US-modify)

(MIT AND BSD-3-Clause)

(MIT AND HPND)

(MIT AND ICU)

(MIT AND ISC)

(MIT AND LGPL-2.1-or-later)

(MIT AND OLDAP-2.8)

(MIT AND Public-domain)

(MIT AND X11-distribute-modifications-variant)

(MIT OR Unlicense)

(MIT-open-group AND HPND)

(MIT-open-group AND HPND-sell-variant)

(MIT-open-group AND NTP)

(MIT-open-group AND Tektronix)

(MPL-1.1 OR LGPL-2.1-only)

(Permission-Notice AND ISC AND LGPL-2.1-or-later)

(Permission-Notice AND ISC AND MIT)

(Permission-Notice AND ISC)

(Preserve-Permission-Notice AND LGPL-2.1-or-later)

(Public-domain AND (MPL-1.1 OR LGPL-2.1-only))

(Public-domain AND OBSD)

(Public-domain AND Apache-2.0-WITH-LLVM-exception)

(Public-domain AND GPL-3.0-or-later-WITH-GCC-exception-3.1)

(Public-domain AND MIT)

(TCL AND LGPL-2.0-or-later)

(U-Michigan AND HPND-export-US-modify)

(Unicode-DFS AND Apache-2.0-WITH-LLVM-exception)

(Unicode-DFS AND BSD-3-Clause)

(Unicode-DFS AND ICU)

(Warranty-Disclaimer AND RSA-MD)

(X11-distribute-modifications-variant AND MIT)

(libtiff AND BSD-4.3TAHOE)

(warranty-disclaimer AND LGPL-2.1-only)

OBSD

Apache-2.0

Apache-2.0 OR CCO-1.0 OR LGPL-2.1-or-later

Apache-2.0-WITH-LLVM-exception

BSD-2-Clause

BSD-2-Clause-Acknowledgment

BSD-2-Clause-Gladman

BSD-2-Clause-NetBSD

BSD-2-Clause-NetBSD AND BSD-3-Clause

BSD-3-Clause

BSD-3-Clause OR GPL-1.0-or-later

BSD-3-Clause OR LGPL-2.0-or-later

BSL-1.0

CCO-1.0

CCO-1.0 AND LGPL-2.1-or-later

Export-Restriction

GPL-2.0-or-later

GPL-2.0-or-later-WITH-GCC-exception-2.0

GPL-3.0-or-later-WITH-Bison-exception-2.2

GPL-3.0-or-later-WITH-GCC-exception-3.1

HPND

HPND-export-US

HPND-export-US-modify

HPND-sell-variant

IJG

ISC

LGPL-2.0-or-later

LGPL-2.1-only

LGPL-2.1-or-later

LGPL-2.1-or-later AND Public-domain

LGPL-2.1-or-later-WITH-GCC-exception-2.0

LGPL-2.1-or-later-WITH-Spell-exception

MIT

MIT AND Permission-Notice

MIT-HPND-Export-US

MIT-Modern-Variant

MIT-open-group

MIT-style

NCSA

NOASSERTION

NTP

OLDAP-2.8

Permission-Notice

Permission-Notice AND warranty-disclaimer

Preserve-Permission-Notice

Public-domain

SunPro

TCL

Tektronix

U-Michigan

Unicode-DFS

X11

X11-distribute-modifications-variant

Zlib

blessing AND Public-domain

bzip2-1.0.8

libpng-2.0

libtiff

As expression

As resolved expression

As simplified expression



/usr/lib/libwebkitgtk-6.0.so.4.5.5

((LGPL-3.0-or-later OR GPL-2.0-or-later) AND Permission-Notice) (0BSD OR CC0-1.0 OR MIT-0 OR MIT OR Public-domain) AND LGPL-2.1-or-later (AFL-2.0 OR LGPL-2.1-or-later) (Apache-2.0-WITH-LLVM-exception AND Unicode-DFS-2015) (BSD-2-Clause AND (BSD-3-Clause OR GPL-2.0-only)) (BSD-2-Clause AND AOMPL-1.0) (BSD-2-Clause-Gladman AND CC-BY-SA-2.5) (BSD-3-Clause AND BSD-2-Clause) (BSD-3-Clause AND HPND) (BSD-3-Clause AND HPND-export-US-modify AND HPND-sell-variant) (BSD-3-Clause AND HPND-export-US-modify) (BSD-3-Clause AND HPND-sell-variant) (BSD-3-Clause AND ISC AND HPND) (BSD-3-Clause AND ISC AND Permission-Notice AND HPND) (BSD-3-Clause AND ISC) (BSD-3-Clause AND LGPL-2.0-or-later) (BSD-3-Clause AND LGPL-2.1-or-later AND HPND) (BSD-3-Clause AND LGPL-2.1-or-later) (BSD-3-Clause AND LGPL-2.1-or-later-WITH-GCC-exception-2.0) (BSD-3-Clause AND Patent-License-Grant) (BSD-3-Clause AND Permission-Notice AND HPND) (BSD-3-Clause AND Permission-Notice AND ISC) (BSD-3-Clause AND Permission-Notice AND LGPL-2.1-or-later AND HPND) (BSD-3-Clause AND Permission-Notice AND LGPL-2.1-or-later) (BSD-3-Clause AND Permission-Notice AND MIT AND HPND) (BSD-3-Clause OR GPL-2.0-only) (BSD-4-Clause-UC AND X11-distribute-modifications-variant AND BSD-3-Clause) (FTL OR GPL-2.0-or-later) (GPL-2.0-only OR BSD-3-Clause) (GPL-2.0-or-later OR LGPL-3.0-or-later) (GPL-3.0-or-later-WITH-GCC-exception-3.1 AND Permission-Notice) (HPND AND BSD-3-Clause AND LGPL-2.1-or-later) (HPND AND BSD-3-Clause) (HPND AND MIT AND X11-distribute-modifications-variant) (HPND AND MIT) (HPND AND MIT-open-group) (HPND AND Permission-Notice AND BSD-3-Clause) (HPND-export-US AND BSD-3-Clause AND HPND-sell-variant) (HPND-export-US AND HPND-sell-variant) (HPND-export-US-modify AND BSD-2-Clause) (HPND-export-US-modify AND HPND-sell-variant) (HPND-export-US-modify AND MIT) (HPND-sell-variant AND (MPL-1.1 OR LGPL-2.1-only)) (HPND-sell-variant AND MIT) (HPND-sell-variant AND MIT-open-group) (ICU AND LGPL-2.0-or-later) (ISC AND BSD-3-Clause) (ISC AND LGPL-2.1-or-later) (ISC AND Permission-Notice) (Inner-Net-2.0 AND LGPL-2.1-or-later) (LGPL-2.0-or-later AND GPL-2.0-or-later) (LGPL-2.0-or-later AND HPND-sell-variant) (LGPL-2.0-or-later AND LGPL-2.1-or-later) (LGPL-2.0-or-later AND LGPL-3.0-or-later) (LGPL-2.0-or-later AND MIT-open-group) (LGPL-2.0-or-later AND MPL-2.0) (LGPL-2.0-or-later AND TCL) (LGPL-2.1-or-later AND BSD-3-Clause AND HPND) (LGPL-2.1-or-later AND BSD-3-Clause AND ISC AND HPND) (LGPL-2.1-or-later AND BSD-3-Clause) (LGPL-2.1-or-later AND GPL-2.0-only) (LGPL-2.1-or-later AND GPL-2.0-or-later) (LGPL-2.1-or-later AND GPL-3.0-or-later-WITH-Bison-exception-2.2) (LGPL-2.1-or-later AND ISC) (LGPL-2.1-or-later AND Inner-Net-2.0) (LGPL-2.1-or-later AND LGPL-2.0-or-later) (LGPL-2.1-or-later AND Preserve-Permission-Notice) (LGPL-2.1-or-later AND SunPro) (LGPL-2.1-or-later OR BSD-3-Clause) (LGPL-3.0-or-later OR GPL-2.0-or-later) (MIT AND BSD-3-Clause AND HPND) (MIT AND BSD-3-Clause AND HPND-export-US-modify) (MIT AND BSD-3-Clause) (MIT AND HPND) (MIT AND ICU) (MIT AND ISC) (MIT AND LGPL-2.1-or-later) (MIT AND OLDAP-2.8) (MIT AND Public-domain) (MIT AND X11-distribute-modifications-variant) (MIT OR Unlicense) (MIT-open-group AND HPND) (MIT-open-group AND HPND-sell-variant) (MIT-open-group AND NTP) (MIT-open-group AND Tektronix) (MPL-1.1 OR LGPL-2.1-only) (Permission-Notice AND ISC AND LGPL-2.1-or-later) (Permission-Notice AND ISC AND MIT) (Permission-Notice AND ISC) (Preserve-Permission-Notice AND LGPL-2.1-or-later) (Public-domain AND (MPL-1.1 OR LGPL-2.1-only)) (Public-domain AND 0BSD) (Public-domain AND Apache-2.0-WITH-LLVM-exception) (Public-domain AND GPL-3.0-or-later-WITH-GCC-exception-3.1) (Public-domain AND MIT) (TCL AND LGPL-2.0-or-later) (U-Michigan AND HPND-export-US-modify) (Unicode-DFS AND Apache-2.0-WITH-LLVM-exception) (Unicode-DFS AND BSD-3-Clause) (Unicode-DFS AND ICU) (Warranty-Disclaimer AND RSA-MD) (X11-distribute-modifications-variant AND MIT) (libtiff AND BSD-4.3TAHOE) (warranty-disclaimer AND LGPL-2.1-only) 0BSD Apache-2.0 Apache-2.0 OR CC0-1.0 OR LGPL-2.1-or-later Apache-2.0-WITH-LLVM-exception BSD-2-Clause BSD-2-Clause-Acknowledgment BSD-2-Clause-Gladman BSD-2-Clause-NetBSD BSD-2-Clause-NetBSD AND BSD-3-Clause BSD-3-Clause BSD-3-Clause OR GPL-1.0-or-later BSD-3-Clause OR LGPL-2.0-or-later BSL-1.0 CC0-1.0 CC0-1.0 AND LGPL-2.1-or-later Export-Restriction **GPL-2.0-or-later**

/usr/lib/libjbig.so.2.1|/usr/lib/liblzo2.so.2.0.0:

jbig.c, jbig_arc, src/lzo1.c, src/lzo1_99.c, src/lzo1a.c, src/lzo1a_99.c, src/lzo1b_1.c, src/lzo1b_2.c, src/lzo1b_3.c, src/lzo1b_4.c, src/lzo1b_5.c, src/lzo1b_6.c, src/lzo1b_7.c, src/lzo1b_8.c, src/lzo1b_9.c, src/lzo1b_99.c, src/lzo1b_9x.c, src/lzo1b_cc.c, src/lzo1b_d1.c, src/lzo1b_d2.c, src/lzo1b_rr.c, src/lzo1b_xx.c, src/lzo1c_1.c, src/lzo1c_2.c, src/lzo1c_3.c, src/lzo1c_4.c, src/lzo1c_5.c, src/lzo1c_6.c, src/lzo1c_7.c, src/lzo1c_8.c, src/lzo1c_9.c, src/lzo1c_99.c, src/lzo1c_9x.c, src/lzo1c_cc.c, src/lzo1c_d1.c, src/lzo1c_d2.c, src/lzo1c_rr.c, src/lzo1c_xx.c, src/lzo1f_1.c, src/lzo1f_9x.c, src/lzo1f_d1.c, src/lzo1f_d2.c, src/lzo1x_1.c, src/lzo1x_1k.c, src/lzo1x_1l.c, src/lzo1x_1o.c, src/lzo1x_9x.c, src/lzo1x_d1.c, src/lzo1x_d2.c, src/lzo1x_d3.c, src/lzo1x_o.c, src/lzo1y_1.c, src/lzo1y_9x.c, src/lzo1y_d1.c, src/lzo1y_d2.c, src/lzo1y_d3.c, src/lzo1y_o.c, src/lzo1z_9x.c, src/lzo1z_d1.c, src/lzo1z_d2.c, src/lzo1z_d3.c, src/lzo2a_9x.c, src/lzo2a_d1.c, src/lzo2a_d2.c, src/lzo_crc.c, src/lzo_init.c, src/lzo_ptr.c, src/lzo_str.c, src/lzo_util.c

GPL-2.0-or-later-WITH-GCC-exception-2.0 GPL-3.0-or-later-WITH-Bison-exception-2.2 GPL-3.0-or-later-WITH-GCC-exception-3.1 HPND HPND-export-US HPND-export-US-modify HPND-sell-variant IUG ISC LGPL-2.0-or-later LGPL-2.1-only LGPL-2.1-or-later LGPL-2.1-or-later AND Public-domain LGPL-2.1-or-later-WITH-GCC-exception-2.0 LGPL-2.1-or-later-WITH-Spell-exception MIT MIT AND Permission-Notice MIT-HPND-Export-US MIT-Modem-Variant MIT-open-group MIT-style NCSA NOASSERTION NTP OLDAP-2.8 Permission-Notice Permission-Notice AND warranty-disclaimer Preserve-Permission-Notice Public-domain SunPro TCL Tektronix U-Michigan Unicode-DFS X11 X11-distribute-modifications-variant Zlib blessing AND Public-domain bzip2-1.0.8 libpng-2.0 libtiff As expression As resolved expression As simplified expression

How to use OSSelot data

to clear a software package with a different version using FOSSology

General process

- Upload the OSSelot version of the package into FOSSology and **import the OSSelot data**.
→ **This clears the entire package automatically!**
- Run a **license scan** on the required version of the package.
- **Reuse** the result from the cleared OSSelot package on the required version.
- Only **new or modified** files remain to be cleared manually.

How to use OSSelot data

to clear a software package with a different version using FOSSology

Manually via GUI

- Find the **closest available version** of the required package in OSSelot, and **upload the source code** into FOSSology **without scanning**, but with **Reuse from OSSelot** referencing the given version. **This clears the package automatically!**
- Upload the source code of the required version into FOSSology with scanner runs and **Reuse from local** referencing the cleared OSSelot package.
- **Clear** the remaining files.

Automatable via REST APIs

- Use the OSSelot REST API to find out for which package versions **OSSelot data are available**.
- **Upload the source code** of the available OSSelot package into **FOSSology** (without scanning) via the FOSSology REST API.
- Download the **curated SPDX RDF reports from OSSelot** and **import** them into the respective FOSSology upload. **This clears the package automatically!**
- Upload the source package of the required version into FOSSology, run **scanners** and **reuse**, referencing the corresponding OSSelot upload.
- **Clear** the remaining files (via GUI).

Current status and perspectives of the OSSelot Project
Compact OSADL Online Lectures
November 12, 2025

Upload a New File

Version: [4.6.0.0], Branch: [master], Commit: [#b159d6] 2025/10/29 10:52 +01:00 built @ 2025/11/03 16:41 +01:00

To manage your own group permissions go into Admin > Groups > Manage Group Users. To manage permissions for this one upload, go to Admin > Upload Permissions.

This option permits uploading a single file (which may be iso, tar, rpm, jar, zip, bz2, msi, cab, etc.) from your computer to FOSSology. Your FOSSology server has imposed a maximum upload file size of 700Mbytes.

1. Select the folder for storing the uploaded files:

Software Repository ▾

2. Select the file(s) to upload:

Browse... bash-5.2.37.tar.gz

[snip]

8. Select optional analysis:

- ☐ Bucket Analysis ⓘ
- ☐ Compatibility License Analysis, scanning for licenses compatibility ⓘ
- ☐ Copyright/Email/URL/Author Analysis ⓘ
- ☐ ECC Analysis ⓘ
- ☐ IPRA Analysis ⓘ
- ☐ Keyword Analysis ⓘ
- ☐ MIME-type Analysis ⓘ
- ☐ Monk License Analysis ⓘ
- ☐ Nomos License Analysis ⓘ
- ☐ Ojo License Analysis ⓘ
- ☐ Package Analysis ⓘ
- ☐ REUSE.Software Analysis ⓘ
- ☐ SCANOSS Toolkit ⓘ
- ☐ Software Heritage Analysis ⓘ

[snip]

10. (Optional) Reuse ⓘ

Set the reuse information ⓘ

11. ScanCode Toolkit ⓘ, scan for

- ☐ License ⓘ
- ☐ Copyright ⓘ
- ☐ Email ⓘ
- ☐ URL ⓘ

After you press Upload, please be patient while your file is transferring.

Upload

Reuse configuration

bash-5.2.37.tar.gz

- (Optional) Reuse ⓘ

Reuse source: OSSelot SPDX2 ⓘ

Package name: bash

Fetch Versions ⓘ

Versions:

- ☐ 5.1.16
- ☐ 5.2.15
- ☐ 5.2.32
- ☒ 5.2.37

Import options:

Create new licenses as:

- ☒ License candidate
- ☐ New license

Match license using:

- ☐ Shortname
- ☒ SPDX ID

Add the License Info as findings from:

- ☐ SPDX tag of type licenseInfoInFile
- ☒ SPDX tag of type licenseConcluded

☒ Add concluded licenses as decisions☒ Also overwrite existing decisions☐ Import as "to be discussed"☐ Add the copyright information as textfindings

Close

License Browser

Version: [4.6.0.0], Branch: [master], Commit: [#b159d6] 2025/10/29 10:52 +01:00 built @ 2025/11/03 16:41 +01:00

Folder: [Software Repository/](#)
[bash-5.2.37.tar.gz](#)

[Software Heritage](#) | [License Browser](#) | [File Browser](#) | [Spasht](#) | [Copyright](#) | [ECC](#) | [Email/URL/Author](#) | [IPRA](#) | [Keyword](#)

Display 50 files (tree view or [flat](#))

[Clear](#)

	-- filter for scan results --	-- filter for edited results --	☐ Open		-select option-
Files	Scanner Results (N: nomos, M: monk, Nk: ninka, I: reportImport, O: ojo, Sc: scancode, Sp: spasht, Rs: reso, So: scanoss)	Edited Results	Clearing Status	Cleared / Open / Total	Actions ☐
bash-5.2.37.tar/ bash-5.2.37	Artistic-1.0-Perl, Autoconf-exception, Bison-exception, Bison-exception-2.2, BSD-3-Clause, BSD-4-Clause-UC, BSD-style, CC-BY-SA-3.0, CC-BY-SA-4.0, Freeware, FSF, FSFAP, FSFUL, FSFULLR, Gettext-Permission-Notice, GFDL, GFDL-1.1, GFDL-1.1-or-later, GFDL-1.3, GFDL-1.3-invariants-only, GFDL-1.3-no-invariants-or-later, GFDL-1.3-or-later, GNU-Manpages, GPL, GPL-1.0-or-later, GPL-2.0-only, GPL-2.0-or-later, GPL-2.0-or-later-WITH-Autoconf-exception, GPL-2.0--with-bison-exception, GPL-3.0-only, GPL-3.0-or-later, GPL-3.0-or-later-WITH-Autoconf-exception, GPL-3.0-or-later-WITH-Bison-exception, GPL-3.0-or-later-WITH-Bison-exception-2.2, GPL-3.0-or-later-WITH-TeX-exception, HPND, ISC, Latex2e, LGPL-2.0-or-later, LGPL-2.1-or-later, License-of-GNU-Licenses, LicenseRef-scancode-autoconf-simple-exception, LicenseRef-scancode-autoconf-simple-exception-2.0, LicenseRef-scancode-bison-exception-2.0, LicenseRef-scancode-free-unknown, LicenseRef-scancode-fsf-notice, LicenseRef-scancode-fsf-unlimited-no-warranty, LicenseRef-scancode-other-permissive, LicenseRef-scancode-public-domain, LicenseRef-scancode-tex-exception, LicenseRef-scancode-unknown-license-reference, LicenseRef-scancode-warranty-disclaimer, MIT, Non-commercial, NOT-public-domain, NTP, OFL-1.1, Public-domain, Public-domain-ref, See-file, See-file.COPYING, TeX-exception, UnclassifiedLicense, X11, X11-possibility	GPL-2.0-or-later, GFDL-1.3-no-invariants-or-later, GPL-3.0-or-later-WITH-Bison-exception, X11, GNU-Manpages, FSFULLR, License-of-GNU-Licenses, Gettext-Permission-Notice, GPL-2.0-or-later-WITH-Autoconf-exception, Public-domain, NTP, FSFUL, GPL-3.0-or-later-WITH-Bison-exception-2.2, Latex2e, FSF, FSFAP, BSD-4-Clause-UC, GPL-3.0-or-later, GPL-3.0-or-later-WITH-Autoconf-exception, GPL-3.0-or-later-WITH-TeX-exception		1042 / 1042 / 3319	[Tag] [Edit] [Bulk] ☐

100 % cleared

Upload a New File

Version: [4.6.0.0], Branch: [master], Commit: [#b159d6] 2025/10/29 10:52 +01:00 built @ 2025/11/03 16:41 +01:00

To manage your own group permissions go into [Admin > Groups > Manage Group Users](#). To manage permissions for this one upload, go to [Admin > Upload Permissions](#).

This option permits uploading a single file (which may be iso, tar, rpm, jar, zip, bz2, msi, cab, etc.) from your computer to FOSSology. Your FOSSology server has imposed a maximum upload file size of 700Mbytes.

1. Select the folder for storing the uploaded files:

2. Select the file(s) to upload:

 bash-5.3.tar.gz

[snip]

8. Select optional analysis:

- ☐ Bucket Analysis ⓘ
- ☐ Compatibility License Analysis, scanning for licenses compatibility ⓘ
- ☒ Copyright/Email/URL/Author Analysis ⓘ
- ☐ ECC Analysis ⓘ
- ☐ IPRA Analysis ⓘ
- ☐ Keyword Analysis ⓘ
- ☐ MIME-type Analysis ⓘ
- ☒ Monk License Analysis ⓘ
- ☒ Nomos License Analysis ⓘ
- ☒ Ojo License Analysis ⓘ
- ☐ Package Analysis ⓘ
- ☐ REUSE Software Analysis ⓘ
- ☐ SCANOSS Toolkit ⓘ
- ☐ Software Heritage Analysis ⓘ

[snip]

10. (Optional) Reuse ⓘ

 ⓘ

11. ScanCode Toolkit ⓘ, scan for

- ☐ License ⓘ
- ☐ Copyright ⓘ
- ☐ Email ⓘ
- ☐ URL ⓘ

After you press Upload, please be patient while your file is transferring.

Reuse configuration

bash-5.3.tar.gz

• (Optional) Reuse ⓘ

Reuse source: ⓘ

- ☒ Select an already uploaded package for reuse in specific folder
- ☒ Enhanced reuse (slower) ⓘ
- ☒ Reuse main license/s ⓘ
- ☒ Reuse report configuration settings ⓘ
- ☒ Reuse deactivated copyrights ⓘ

Upload to reuse:

License Browser

Version: [4.6.0.0], Branch: [master], Commit: [#b159d6] 2025/10/29 10:52 +01:00 built @ 2025/11/03 16:41 +01:00

Folder: [Software Repository/](#)
[bash-5.3.tar.gz](#)

[Software Heritage](#) | [License Browser](#) | [File Browser](#) | [Spasht](#) | [Copyright](#) | [ECC](#) | [Email/URL/Author](#) | [IPRA](#) | [Keyword](#) | [Browse](#)

Display files (tree view or [flat](#))

Clear

	-- filter for scan results -- ▾	-- filter for edited results -- ▾	☐ Open		-select option- ▾
Files ▲	Scanner Results (N: nomos, M: monk, Nk: ninka, I: reportImport, O: ojo, Sc: scancode, Sp: spasht, Rs: reso, So: scanoss)	Edited Results	Clearing Status	Cleared / Open / Total	Actions ☐
bash-5.3.tar/ bash-5.3	Autoconf-exception, Autoconf-exception-generic, Autoconf-exception-generic-3.0, Bison-exception-2.2, BSD-4-Clause-UC, BSD-style, CC-BY-SA-3.0, Freeware, FSF, FSFAP, FSFUL, FSFULLR, GFDL, GFDL-1.3, GFDL-1.3-only, GFDL-1.3-or-later, GNU-Manpages, GPL, GPL-2.0-only, GPL-2.0-or-later, GPL-2.0+-with-bison-exception, GPL-3.0-only, GPL-3.0-or-later, ISC, LGPL-2.1-or-later, Linux-man-pages-copyleft-2-para, MIT, No_license_found, Non-commercial, NOT-public-domain, Public-domain, Public-domain-ref, See-file, See-file.COPYING, TeX-exception, Texinfo-exception, UnclassifiedLicense, X11, X11-possibility	GPL-2.0-or-later, GFDL-1.3-no-invariants-or-later, X11, FSFULLR, License-of-GNU-Licenses, Gettext-Permission-Notice, GPL-2.0-or-later-WITH-Autoconf-exception, Public-domain, FSFUL, FSF, GPL-3.0-or-later, GPL-3.0-or-later-WITH-TeX-exception		479 / 1151 / 3444	[Tag] [Edit] [Bulk] ☐

41 % cleared

Showing 1 to 1 of 1 files

Page of 1

- 41 % is comparatively low and likely due to the major version upgrade.
- Reusing bash-5.2.32 for bash-5.2.37 clears 94 %.

License Browser

Version: [4.6.0.0], Branch: [master], Commit: [#b159d6] 2025/10/29 10:52 +01:00 built @ 2025/11/03 16:41 +01:00

Folder: [Software Repository/](#)
[bash-5.3.tar.gz](#)

[Software Heritage](#) | [License Browser](#) | [File Browser](#) | [Spasht](#) | [Copyright](#) | [ECC](#) | [Email/URL/Author](#) | [IPRA](#) | [Keyword](#) | [Browse](#)

Display files (tree view or [flat](#))

	-- filter for scan results -- ▾	-- filter for edited results -- ▾	☐ Open		-select option- ▾
Files ▲	Scanner Results (N: nomos, M: monk, Nk: ninka, I: reportImport, O: ojo, Sc: scancode, Sp: spasht, Rs: reso, So: scanoss)	Edited Results	Clearing Status	Cleared / Open / Total	Actions ☐
bash-5.3.tar/ bash-5.3	Autoconf-exception, Autoconf-exception-generic, Autoconf-exception-generic-3.0, Bison-exception-2.2, BSD-4-Clause-UC, BSD-style, CC-BY-SA-3.0, Freeware, FSF, FSFAP, FSFUL, FSFULLR, GFDL, GFDL-1.3, GFDL-1.3-only, GFDL-1.3-or-later, GNU-Manpages, GPL, GPL-2.0-only, GPL-2.0-or-later, GPL-2.0+-with-bison-exception, GPL-3.0-only, GPL-3.0-or-later, ISC, LGPL-2.1-or-later, Linux-man-pages-copyleft-2-para, MIT, No_license_found, Non-commercial, NOT-public-domain, Public-domain, Public-domain-ref, See-file, See-file.COPYING, TeX-exception, Texinfo-exception, UnclassifiedLicense, X11, X11-possibility	GPL-2.0-or-later, GFDL-1.3-no-invariants-or-later, X11, FSFULLR, License-of-GNU-Licenses, Gettext-Permission-Notice, GPL-2.0-or-later-WITH-Autoconf-exception, Public-domain, FSFUL, FSF, GPL-3.0-or-later, GPL-3.0-or-later-WITH-TeX-exception		924 / 1151 / 3444	[Tag] [Edit] [Bulk] ☐

**41 % cleared
(two bulk scans bring
this up to 80 %)**

Showing 1 to 1 of 1 files

Page of 1

- 41 % is comparatively low and likely due to the major version upgrade.
- Reusing bash-5.2.32 for bash-5.2.37 clears 94 % (without additional bulk scans).

How to use OSSelot data

to clear a software package with a different version using FOSSology

Manually via GUI

- Find the **closest available version** of the required package in OSSelot, and **upload the source code** into FOSSology **without scanning**, but with **Reuse from OSSelot** referencing the given version. **This clears the package automatically!**
- Upload the source code of the required version into FOSSology with scanner runs and **Reuse from local** referencing the cleared OSSelot package.
- Clear** the remaining files.

Automatable via REST APIs

- Use the OSSelot REST API to find out for which package versions **OSSelot data are available**.
- Upload the source code** of the available OSSelot package into **FOSSology** (without scanning) via the FOSSology REST API.
- Download the **curated SPDX RDF report from OSSelot** and **import** it into the respective FOSSology upload. **This clears the package automatically!**
- Upload the source package of the required version into FOSSology, run **scanners** and **reuse**, referencing the corresponding OSSelot upload.
- Clear** the remaining files (via GUI).

List available OSSelot data

constants

parameters

- List available versions:

```
$ wget -q0 - https://www.osselot.org/curated.php?bash  
bash/version-5.1.16  
bash/version-5.2.15  
bash/version-5.2.32  
bash/version-5.2.37
```

- And use the OSSelot REST API (<https://raw.githubusercontent.com/Open-Source-Compliance/package-analysis/refs/heads/main/openapi.yaml>) to download the curated SPDX RDF report:

```
$ curl GET https://rest.osselot.org/xml/bash/5.2.37 \  
>bash-5.2.37.rdf
```

Upload OSSelot source code into FOSSology

```
$ curl -L -X POST \  
  "https://fossology-server.com/repo/api/v1/uploads" \  
  -H 'folderId: [parent folder id]' \  
  -H 'uploadDescription: OSSelot Baseline' \  
  -H 'uploadType: url' \  
  -H 'Authorization: Bearer [token]' \  
  -H 'Content-Type: application/json' \  
  --data-raw '{"location": { \  
    "url": "https://ftp.gnu.org/gnu/bash/bash-5.2.37.tar.gz", \  
    "name": "bash-5.2.37" \  
  }}' \  
  {"code":201,"message":9,"type":"INFO"}
```

upload id

Import curated SPDX report into OSSelot upload

```
$ curl -L -X POST \
  "https://fossology-server.com/repo/api/v1/report/import?upload=9
                                     &reportFormat=spdxrdf" \
  -H 'Authorization: Bearer [token]' \
  -H 'Content-Type: multipart/form-data' \
  -F 'report=@bash-5.2.37.rdf' \
  -F 'addLicenseInfoFromInfoInFile=false' \
  -F 'addLicenseInfoFromConcluded=true' \
  -F 'addConcludedAsDecisionsTBD=false'
```



Get clearing status of OSSelot package

```
$ curl -L -X GET \  
  "https://fossology-server.com/repo/api/v1/uploads/9/summary" \  
  -H 'Authorization: Bearer [token]' | json_pp | grep filesToBeCleared
```

upload id

```
"filesToBeCleared" : 0,
```


Upload required source package into FOSSology

```
$ curl -L -X POST \  
  "https://fossology-server.com/repo/api/v1/uploads" \  
  -H 'folderId: [parent folder id]' \  
  -H 'uploadDescription: my required package' \  
  -H 'uploadType: file' \  
  -H 'Authorization: Bearer [token]' \  
  -H 'Content-Type: multipart/form-data' \  
  -F 'fileInput=@bash-5.3.tar.gz;type=application/octet-stream'
```

```
{"code":201,"message":10,"type":"INFO"}
```

upload id

Run scans and reuse on required source package

```
$ curl -L -X POST \  
  "https://fossology-server.com/repo/api/v1/jobs" \  
  -H 'Authorization: Bearer [token]' \  
  -H 'Content-Type: application/json' \  
  -H 'folderId: [folder id]' \  
  -H 'uploadId: 10' \  
  --data-raw '{ \  
    "analysis": {"copyright_email_author": true, "monk": true, "nomos": true, \  
                                                         "ojo": true}, \  
    "reuse": {"reuse_upload": 9, \  
              "reuse_group": "[reuse group name]", "reuse_enhanced": true, \  
              "reuse_main": true, "reuse_report": true, "reuse_copyright": true} \  
  }'
```

upload id

reuse upload id

Get clearing status of required source package

```
$ curl -L -X GET \  
  "https://fossology-server.com/repo/api/v1/uploads/10/clearing-progress" \  
  -H 'Authorization: Bearer [token]' | json_pp
```

upload id

```
{  
  "totalFilesCleared" : 479,  
  "totalFilesOfInterest" : 1151  
}
```

An average embedded Linux system ...

- ... is covered by OSSelot to around 50 %:

acpid, adduser, apache2, apparmor, apt, audispd-plugins, base-files, base-passwd, bash, bsdutils, ca-certificates, common, container networking-plugins, coreutils, cpio, cron, crun, cryptsetup, dash, dbus, debconf, debian-archive-keyring, debianutils, diffutils, dirmngr, dmidecode, dmsetup, dpkg, e2fsprogs, findutils, firewall, fuse-overlayfs, fuse3, gcc-12-base, gir1.2-glib-2.0, gir1.2-nm-1.0, golang-github-containers-common, golang-github-containers-image, grep, gzip, hostname, ifupdown, init, iproute2, iptables, iputils-ping, isc-dhcp-client, klibc-utils, kmod, less, libacl1, libapr1, libaprutil1, libarchive13, libargon2-1, libassuan0, libattr1, libb2-1, libbluetooth3, libbpf1, libbrotli1, libbsd0, libbz2-1.0, libc-bin, libcap-ng0, libcap2, libconfig9, libcrypt1, libcurl3-gnutls, libdb5.3, libdebconfclient0, libduktape207, libedit2, libelf1, libexpat1, libffi8, libgcrypt20, libgdbm-compat4, libglib2.0-0, libgmp10, libgnutls30, libgpg-error0, libgpgme11, libgpiod2, libgssapi-krb5-2, libhogweed6, libicu72, libidn2-0, libjansson4, libjson-c5, libkeyutils1, libldap-2.5-0, liblocale-gettext-perl, liblua5.3-0, liblz4-1, liblzma5, libmd0, libmm-glib0, libmn10, libncursesw6, libndp0, libnetfilter-conntrack3, libnewt0.52, libnfnetwork0, libnftables1, libnftnl11, libnghttp2-14, libnph0, libns12, libp11-kit0, libpam-modules, libpam-systemd, libpcre2-8-0, libperl5.36, libpolkit-agent-1-0, libpopt0, libproc2-0, libpsl5, libpython3-stdlib, libpython3.11-minimal, libreadline8, librsync2, librtmp1, librsasl2-2, libseccomp2, libselinux1, libsemanage2, libsepol2, libslang2, libslirp0, libsqlite3-0, libssh2-1, libssl3, libsubid4, libswupdate0.1, libtasn1-6, libteamdctl0, libtext-charwidth-perl, libtext-iconv-perl, libtext-wrap18n-perl, libtirpc-common, libtss2-esys-3.0.2-0, libunistring2, liburiparser1, libwebsockets17, libwrap0, libxml2, libxxhash0, libyajl2, libyaml-0-2, libzck1, libzstd1, linux-image-6.12.11, logrotate, mawk, media-types, minicoredumper, nano, net-tools, ntpsec, pinentry-curses, podman, python3, sed, sensible-utils, skopeo, swupdate, sysuser-helper, sysvinit-utils, tar, tzdata, usr-is-merged, vim-common, watchdog, xml-core, zlib

Current status and perspectives of the OSSelot Project

Compact OSADL Online Lectures

November 12, 2025