OpenSSL GPL-2.0 APL-1.0
EUPL-1.1 MPL-2.0
CDDL-1.1 LGPL-3.0
CC-BY-2.5
Libpng Watcom-1.0
Intel-ACPI ICU
CC-BY-SA-4.0 Zlib
BSD-2-Clause
WTFPL Unicode-DFS-2016
BSD-3-Clause X11
GFDL-1.3 CC-BY-NC-3.0
bzip2-1.0.6 AGPL-3.0
Apache-2.0
FTL Info-ZIP
LGPL-2.1 libtiff
Beerware
MS-RL GPL-3.0 MS-PL

Licensing

Make ReactOS conform again!

Colin Finck <colin@reactos.org>
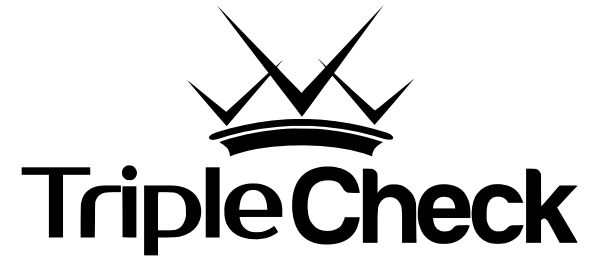
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Motivation

- Using more and more licenses inside ReactOS

- Importing third-party code wherever possible

- Trying to provide an Open-Source alternative to a closed-source product

Motivation

- Visited TripleCheck training on Open-Source licensing in May

- TripleCheck audits software for license identification and compliance

What can we combine?

It's all about the GPL

Unlike Apache, BSD, CDDL, and MIT licenses:

- The GPL applies to the entire "work" and not just to the files under GPL

- Any "Derivative Work" must be licensed under GPL too

Sources:
- https://insights.ubuntu.com/2016/02/18/zfs-licensing-and-linux/
- https://opensource.stackexchange.com/a/1712
- https://www.softwarefreedom.org/resources/2007/gpl-non-gpl-collaboration.html

What that means for us

✔️ No problems combining "GPLv2 only" with "GPLv2 or later" source files (e.g. **vgafontedit**)

✔️ No problems combining "GPLv2 only" with "2-clause BSD" source files (e.g. **ntoskrnl**)

But applicable license is "GPLv2 only" in both cases!

Sources:
- http://triplecheck.tech/sourcecode.html

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What is a Derivative Work?

Free Software Foundation position:

- Linking a program to any GPL library makes it a Derivative Work under GPL

- Only exception is linking to "major components (compiler, kernel, and so on) of the operating system, unless that component itself accompanies the executable"

Sources:
- https://www.gnu.org/licenses/old-licenses/gpl-2.0.html
- https://www.gnu.org/licenses/old-licenses/gpl-2.0-faq.html.en#LinkingWithGPL
- https://www.gnu.org/licenses/old-licenses/gpl-2.0-faq.html.en#MereAggregation
- https://www.gnu.org/licenses/old-licenses/gpl-2.0-faq.html.en#WindowsRuntimeAndGPL

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What is a Derivative Work?

Position presented during TripleCheck training:

- If your program depends on a GPL library and this one cannot be exchanged, it is a Derivative Work

- If your program uses a GPL library over a well-defined interface that allows exchange, it is not a Derivate Work

Example: Linking to MySQL vs. using it over a Database Abstraction Layer

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What is a Derivative Work?

Other positions:

- Linking is only one indicator for a Derivative Work

- A self-contained Linux kernel module implementing a filesystem is not a Derivative Work of the Linux Kernel

Example: Ubuntu's ZFS on Linux

Sources:
- https://lwn.net/Articles/548216/
- https://insights.ubuntu.com/2016/02/18/zfs-licensing-and-linux/

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What that means for us

✔️ For most of ReactOS, using the GPL doesn't affect the license of linked modules:

- DLLs and Drivers have well-defined interfaces
- Can be exchanged by their non-GPL Windows counterparts
- "Major components of the operating system" exception applies

✔️ We can even link modules under different licenses

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Even better

✔ We can drop the additional lines of our GPL

```
...


ReactOS may be used, runtime linked, and distributed with non-free software
(meaning that such software has no obligations to open-source, or render
free, their non-free code) such as commercial device drivers and commercial
applications. This exception does not alter any other responsibilities of
the licensee under the GPL (meaning that such software must still obey
the GPL for the free ("open-sourced") code that has been integrated into
the said software).
```

✔ I see legally no difference between GPL and LGPL
when implementing a Windows counterpart

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Some No-Gos remain

❌ Linking GPLv2 **rapps** to GPLv3 **atlex**

- atlex becomes a statically linked, integral part of rapps with no Windows counterpart to replace it

❌ Relicensing Microsoft sample code under GPL

❌ Taking any code that has no license associated

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What do we need to do?

Ensuring commercial usage

- ReactOS must be usable commercially!

- Affected components need to be removed or license terms renegotiated

Examples: FullFAT file system library, wallpapers

Using SPDX license headers

SPDX defines short, parseable names for most licenses out there.

Example:

```
/*
 * PROJECT:     ReactOS Print Spooler Service
 * LICENSE:     GPL-2.0+ (https://spdx.org/licenses/GPL-2.0+)
 * PURPOSE:     Functions related to Printers and printing
 * COPYRIGHT:   Copyright 2015-2017 Colin Finck <colin@reactos.org>
 */
```

Full name	Identifier
3dfx Glide License	Glide
Abstyles License	Abstyles
Academic Free License v1.1	AFL-1.1
Academic Free License v1.2	AFL-1.2
Academic Free License v2.0	AFL-2.0
Academic Free License v2.1	AFL-2.1
Academic Free License v3.0	AFL-3.0
Academy of Motion Picture Arts and Sciences BSD	AMPAS
Adaptive Public License 1.0	APL-1.0
Adobe Glyph List License	Adobe-Glyph
Adobe Postscript AFM License	APAFML
Adobe Systems Incorporated Source Code License Agreement	Adobe-2006
Affero General Public License v1.0	AGPL-1.0
Afmparse License	Afmparse
Aladdin Free Public License	Aladdin
Amazon Digital Services License	ADSL

https://spdx.org/licenses/

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Using .ABOUT files

.ABOUT files give information about third-party components

```
name: freetype
home_url: https://www.freetype.org
license_spdx: GPL-2.0
license_url: http://git.savannah.gnu.org/cgit/freetype/freetype2.git/tree/docs/LICENSE.TXT?h=VER-2-8
version: 2.8

# which files belong to this component?
about_resource: ../sdk/lib/3rdparty/freetype

# when was this ABOUT file created or last updated?
date: 2017-08-03
```

Sources:
- https://www.aboutcode.org/
- http://triplecheck.tech/components/

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Using .ABOUT files

Less information is ambiguous:

- FreeType is available under two licenses, and we use the less common option

- Some Open-Source projects change the license from one version to another
  - Example: iText PDF Library

Fulfilling license paperwork

Apache License requires author attribution in prominent places

We could show a complete overview about
all components, authors and licenses here:
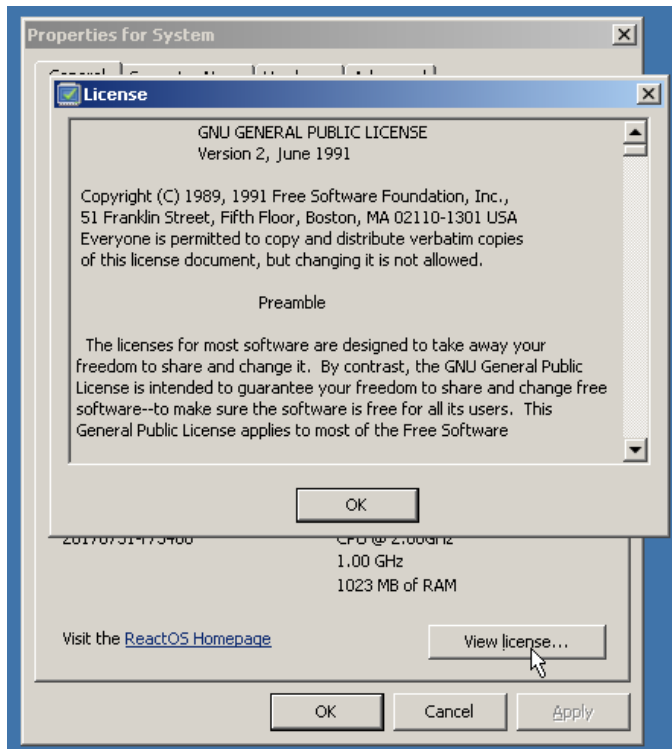
A Little Housekeeping

- Cleaning up modules where multiple GPL versions are used together

- Importing Windows driver samples from GitHub:
  - MS-PL grants you patent use!
  - May replace some of our modified Microsoft sample code under different terms

Sources:
- https://github.com/Microsoft/Windows-driver-samples

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Thank you for your attention!

Questions?

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