BLACK DUCK
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THE FOSS UNIVERSE IS EVER EXPANDING

Open Source Projects

- 2007: 0
- 2009: 500,000
- 2011: 1,000,000
- 2013: 1,500,000
- 2015: 2,000,000

- 10+ Million staff years
- >7,500+ sites
- 2,300+ licenses
- 4B+ files/1,000,000+ unique projects
WHAT IS FOSS?

• It’s third party software
• No single “official” definition
PRIMARY OSS LICENSE CATEGORIES

Permissive Licenses (Academic)
- Licensee can use, copy, modify and distribute the software
- Licensee is allowed to combine the source with open source or proprietary software
- Licensee is NOT obligated to distribute the source code of derivative works

Copyleft Licenses (Viral, Reciprocal)
- Any Licensee modifications to the software (derivative works) must be distributed under the same reciprocal OSS license
- Copyleft licenses are substantially more complex than permissive licenses

See www.opensource.org
OSS – THE 4 FREEDOMS

1. The freedom to run the program, for any purpose.
2. The freedom to **study how the program works**, and adapt it your needs.
3. The freedom to redistribute copies so you can help your neighbour.
4. The freedom to **improve the program, and release your improvements to the public**, so the whole community benefits.
Open Source Definition

1. Free Redistribution
2. Program must include Source Code and must allow distribution in source code as well as compiled form.
3. Must Allow Modifications and Derived Works
4. Integrity of the Author's Source Code
5. No Discrimination Against Persons or Groups
6. No Discrimination Against Fields of Endeavor
7. Distribution of License – no additional license can be required of others who redistribute the program
8. License Must Not Be Specific to a Product
9. License Must Not Restrict Other Software
10. License Must Be Technology-Neutral – not predicated on any individual technology

Who is the OSI (Open Source Initiative)?

The OSI are the stewards of the Open Source Definition (OSD) and the community-recognized body for reviewing and approving licenses as OSD-conformant.
OTHER INTERESTING FOSS LICENSES

- Beer-ware
- Tofu
- Fender Stratocaster
- No-nuke
- Chicken Dance
TOP 20 OPEN SOURCE LICENSES

Ranked according to number of open source projects using the license:
- Top 10 licenses account for 93%
- Top 20 licenses account for 97%
- GPL family of licenses account for 53%

<table>
<thead>
<tr>
<th>Rank</th>
<th>License</th>
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<tbody>
<tr>
<td>1</td>
<td>GNU General Public License (GPL) 2.0</td>
</tr>
<tr>
<td>2</td>
<td>Apache License 2.0</td>
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<tr>
<td>3</td>
<td>GNU General Public License (GPL) 3.0</td>
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<tr>
<td>4</td>
<td>MIT License</td>
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<tr>
<td>5</td>
<td>BSD License 2.0</td>
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<tr>
<td>6</td>
<td>Artistic License (Perl)</td>
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<tr>
<td>7</td>
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<td>8</td>
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<tr>
<td>9</td>
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<tr>
<td>10</td>
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<td>12</td>
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<td>13</td>
<td>Common Development and Distribution License (CDDL)</td>
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<tr>
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<tr>
<td>15</td>
<td>Common Public License (CPL)</td>
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<tr>
<td>16</td>
<td>zlib/libpng License</td>
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<td>17</td>
<td>Academic Free License</td>
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<tr>
<td>18</td>
<td>GNU Affer GPL v3</td>
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<td>19</td>
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</tr>
<tr>
<td>20</td>
<td>Open Software License (OSL)</td>
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Source: //www.blackducksoftware.com/oss/licenses#top20   April 2014
THE GOOD NEWS / BAD NEWS

Average Enterprise uses 29% open source code.

“50% of companies will face challenges due to lack of FOSS policy and management”
REAL WORLD EXAMPLE

“Over 80% of the software in our handsets is open source”

Carl-Eric Mols, Head of OSS, Sony Mobile Communications
MULTI-SOURCE DEVELOPMENT; CODE ENTERS A CODE BASE UNCHECKED

- **Commercial 3rd Party Code**
  - Purchasing
    - Licensing?
    - Security?
    - Quality?
    - Support?

- **Open Source**

- **Code Base**

**SECURITY RISK**
Which components have vulnerabilities and what are they?

**LEGAL RISK**
Which licenses are used and do they match anticipated use of the code?

**OPERATIONAL RISK**
Which versions of code are being used, and how old are they?
A typical Enterprise IT organization has thousands of applications and uses hundreds of open source components.

Some apps
Up to 90+% Open Source

ENTERPRISE AVERAGE
30%

Fig. 1. Open source and Proprietary code base composition. UK Investment Bank Trading Application.
BLACK DUCK’S EXPERIENCE ANALYZING CODE

• 99% of code audits find open source.
• 95% of audits find unknown open source.
• 75% of audits contain unknown licenses.
• 50% of code audits contain GPL.
• Audits on average contain 33% open source.
• 5% of M&A deals never materialize due to our findings.
WHY INVESTORS & ACQUIRERS CARE

• Investors and Acquirers are asking about OSS use & compliance

• Current Litigation: compliance is an important issue
  • Versata v. Ameriprise
  • Ximpleware v. Ameriprise

• M&A OSS Problems:
  • Longer/Larger Escrows
  • Purchase Price Erosion
  • Costly Remediation