Quality Outreach Report December 2020

Quality Outreach Report introduction

The first Quality Report was published in September 2015 here, our initial intention was to provide a report every six months. We now release a Feature Release every 6 months so we have decided to publish a Quality Outreach Report every three months.

The previous report was issued in September 2020 here.

- Section one looks at the number of FOSS Project participating in the Quality Outreach.
- Section two lists Bug logging activities over the past three months (end of September 2020 - December 2020).
- Section three lists FOSS project activity on JDK 16 Early Access builds.
- Section four gives a summary of the Outreach Feedback Survey.
- Section five lists traffic on quality-discuss@openjdk.java.net.

1.0 FOSS Projects listed on Quality Outreach Wiki

We now have 139 FOSS Projects and their developers listed on the Quality Outreach Wiki page.

There have been 6 new FOSS Projects added since the last report in September 2020. Welcome!

New Projects added:

- Hibernate Reactive
- Hibernate Search
- Hibernate Validator
- JaColine
- JFreePDF
- VMOptionsExplorer

Note, we have a further 15 Projects that we communicate with that are not listed on the wiki i.e 154 projects in total.

All FOSS Projects receive regular updates when Early Access (EA) builds become available, they are encouraged to test and report back any issues they find during their testing.

2.0 Bugs logged since September 2020

Developers from 10 of the 154 participating projects filed 15 new issues in the JDK Bug System in the last three months, thank you!

<table>
<thead>
<tr>
<th>Priority</th>
<th>Fixed</th>
<th>Open</th>
<th>Duplicate</th>
<th>Not an Issue</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>P2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>P3</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>P4</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Total Unique Issues</td>
<td>4</td>
<td>9</td>
<td>0</td>
<td>2</td>
<td>15</td>
</tr>
</tbody>
</table>

The table above lists the number of bugs logged in total - 15, of which 2 were P2, 5 were P3 bugs and 8 were P4 bugs.

<table>
<thead>
<tr>
<th>Component</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>P4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>core-libs</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>core-svc</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>hotspot</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>tools</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Total Unique Issues</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>15</td>
</tr>
</tbody>
</table>

The table above lists the number of bugs logged by Component. The 15 Bugs were found in 4 component areas.

2.1 FOSS Projects logging significant bugs
The following Projects have submitted bug reports in the last three months and deserve special mention:

- Apache Ant
- Apache Lucene
- Apache Tomcat
- Apache Zookeeper
- Byte Buddy
- Graph Hopper
- JaCoCo
- JOSM
- JUnit5
  - JDK-8253761 - Bug logged & fix provided by Christian
  - JDK-8255576 - Bug logged & fix provided by Christian
- RxJava

2.2 Overall Summary of bugs filed by FOSS Projects since October 2013

<table>
<thead>
<tr>
<th>Priority</th>
<th>Fixed</th>
<th>Open</th>
<th>Duplicate</th>
<th>Not an Issue</th>
<th>Incomplete</th>
<th>Won't fix</th>
<th>Can't Reproduce</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>P2</td>
<td>58</td>
<td>2</td>
<td>10</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>82</td>
</tr>
<tr>
<td>P3</td>
<td>107</td>
<td>16</td>
<td>27</td>
<td>22</td>
<td>3</td>
<td>7</td>
<td>6</td>
<td>0</td>
<td>188</td>
</tr>
<tr>
<td>P4</td>
<td>31</td>
<td>38</td>
<td>12</td>
<td>10</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>0</td>
<td>106</td>
</tr>
<tr>
<td>P5</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Total Unique Issues</td>
<td>211</td>
<td>56</td>
<td>50</td>
<td>38</td>
<td>7</td>
<td>13</td>
<td>15</td>
<td>2</td>
<td>392</td>
</tr>
</tbody>
</table>

3.0 FOSS activity on JDK 16 Early Access Builds - bugs logged since September 2020

<table>
<thead>
<tr>
<th>Priority</th>
<th>Fixed</th>
<th>Open</th>
<th>Duplicate</th>
<th>Not an Issue</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>P2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>P3</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>P4</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total Unique Issues</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>11</td>
</tr>
</tbody>
</table>

The following Projects have submitted bug reports against JDK 16 Early Access builds:

- Apache Ant
- Apache Tomcat
- Apache Zookeeper
- Byte Buddy
- Graph Hopper
- JaCoCo
- JOSM
- JUnit5
- RxJava

3.1 Testing Early Access builds of JDK 16 - list of FOSS Projects results and their comments

<table>
<thead>
<tr>
<th>FOSS Project</th>
<th>JDK 16 EA</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Apache Ant</td>
<td>✔️</td>
<td>Logged a regression issue with build 28 - JDK-8258246</td>
</tr>
<tr>
<td>2 Apache Derby</td>
<td>✔️</td>
<td>Derby builds and tests cleanly against JDK 16 build 28.</td>
</tr>
<tr>
<td>3 Apache Lucene</td>
<td>✔️</td>
<td>Confirm that the bug(JDK-8252739) is fixed in JDK 16 build 18.</td>
</tr>
<tr>
<td>4 Apache Synscope</td>
<td>✔️</td>
<td>Reported issues due to newly introduced JEP 396 from their dependencies.</td>
</tr>
<tr>
<td>5 Apache Tomcat</td>
<td>✔️</td>
<td>Apache Tomcat's build and tests pass with JDK 16 b28 on both x86_64 and aarch64, Ubuntu 20.04!</td>
</tr>
<tr>
<td>6 Apache Wicket</td>
<td>✔️</td>
<td>Apache Wicket build and tests are OK with JDK 16 b28 for both aarch64 and x86_64 (Ubuntu 20.10)!</td>
</tr>
<tr>
<td>7 Apache Zookeeper</td>
<td>✔️</td>
<td>Not able to run ZooKeeper tests due to an open issue(byte-buddy/issues/983) with ByteBuddy.</td>
</tr>
</tbody>
</table>
Updated Eclipse Collections to use latest build JDK 16 EA b21.

eo-yaml builds successfully with OpenJDK 16 EA b6.

FXGL tests are also green on JDK 16.

FXyz works fine with latest 16-ea+24.

Logged regression on JDK 16 b25 - [JDK-8256837](https://bugzilla.redhat.com/show_bug.cgi?id=8256837)

Tested with version 5.5.0-SNAPSHOT. Everything works fine with JDK 16 EA build 28.

Tested with versions 6.1, 6.2 and 7.0. Everything works fine with JDK 16 EA build 28.

Tested with versions 5.11 and 6.0. Everything works fine with JDK 16 EA build 28.

Tested with version 1.0. Everything works fine with JDK 16 EA build 28.

JaCoCo tests are green on JDK 16 and we already started testing JDK 17.

Happy to report build passed for JDK 16 build 26. I specifically was looking for the datetime kata to pass.

JobRunr works with records out-of-the-box.

Tried with JDK 16(b21) as well now. I haven't discovered any issues.

Logged bug on JDK 16 EA build and same got fixed in b25.

Logged and fixed bugs in JDK 16 EA.

Tested the Micrometer 1.5.x build with 16 EA build 17 and did not have any problems.

All tests are green in PDFsam with this version - JDK 16 b28.

RxJava 3.0.9 snapshot fails on JDK 16 b28 due to the type extraction bug from last time: [byte-buddy/issues/983](https://github.com/byte-buddy/byte-buddy/issues/983)

All green on Sejda.

### 4.0 Outreach Feedback Survey

We received feedback from 65 FOSS Projects - Thank you for taking the time to respond!

1. Does your project support JDK 15 - Yes (51), No - but have plans to (4), No Plans (10)
2. Have you tested JDK 16 EA builds - Yes (41), No - but have plans to (14), No Plans (10)
3. Do you find availability emails useful - Yes (63), No - 1
4. Any libraries/tools that should be added to the Quality Outreach program: We received pointers to 7 FOSS Projects that we are not currently engaged with.
5. Please provide any feedback on the Quality Outreach program:
   - Add more content to the emails - blogs etc.
   - Allow project to update the external Quality page
   - Add a CI

Again, thank you for responding and providing excellent feedback.

### 5.0 Discussion of the quality-discuss@openjdk.java.net mailing list

- Total 1 member participated in various discussions on the mailing list.
- Discussion threads
  - OpenJDK 17 EA build test results - 1
  - OpenJDK 16 EA build test results - 10
  - OpenJDK 16 EA builds availability - 4
  - Announcement of JDK 16 Rampdown Phase One - 1

The next Quality Outreach report is due in March 2021