



JDK Updates & OpenJDK

Dalibor Topić
Principal Product Manager
Java Platform Group, Oracle

@robilad

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JavaYourNext

(Cloud)

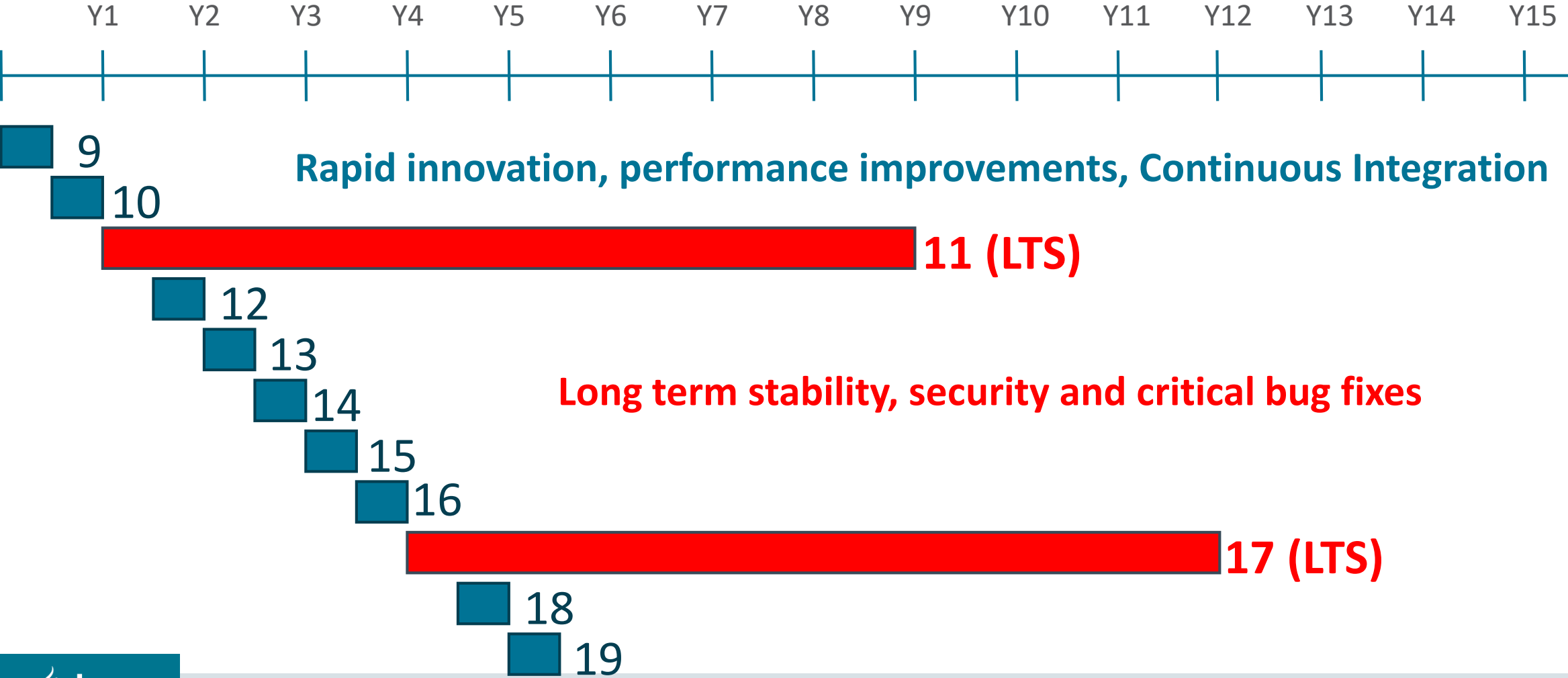


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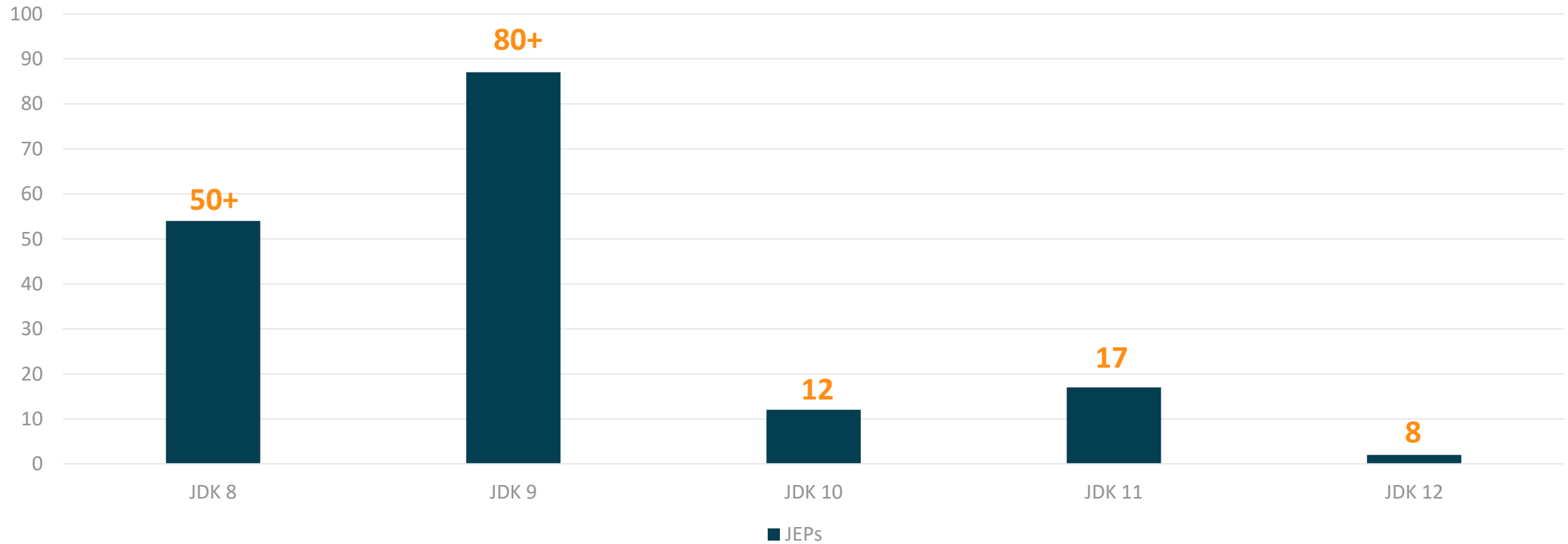
JDK Updates

New Release Model: 6-Month Releases & LTS Every 3 Years



Targeted JEPs per JDK Release

JEPs



Building JDK 11 Together

Issues fixed in JDK 11 per organization

■ Oracle
 ■ SAP
 ■ Red Hat
 ■ Google
 ■ Independent
 ■ BellSoft
 ■ IBM
 ■ Alibaba
 ■ Amazon
 ■ ARM
 ■ Azul
 ■ Intel
 ■ JetBrains
 ■ Linaro
 ■ Qualcomm DCT



Building JDK 12 Together

Issues fixed in JDK 12 per organization

Legend: Oracle (dark blue), SAP (light blue), Red Hat (teal), Google (orange), Independent (dark orange), BellSoft (brown), IBM (dark grey), Alibaba (light blue), Amazon (dark blue), ARM (orange), Azul (brown), Intel (dark brown), JetBrains (teal), Linaro (light blue), Twitter (teal), Huawei (orange)



Java SE Downloads



Java Platform (JDK) 11

Java Platform, Standard Edition

Java SE 11.0.2(LTS)

Java SE 11.0.2 is the latest release for the Java SE 11 Platforms

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Oracle JDK

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To Learn more about these options visit [Oracle JDK Releases for Java 11 and Later](#)

← → ↻ 🏠 🔒 https://jdk.java.net/11/

jdk.java.net

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Early-Access Releases
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[JDK 12](#)
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Archive

JDK 11.0.2 General-Availability Release

This page provides production-ready open-source builds of the Java Development Kit, version 11.0.2, an implementation of the Java SE 11.0.2 Platform under the GNU General Public License, version 2, with the Classpath Exception.

Commercial builds of JDK 11.0.2 from Oracle under a non-open-source license, for a wider range of platforms, can be found at the [Oracle Technology Network](#).

Documentation

- [Features](#)
- [Release notes](#)
- [API Javadoc](#)
- [Tool & command reference](#)

Builds

| | | |
|--------------------|---------------------------------|-----------------|
| Linux/x64 | tar.gz (sha256) | 187513052 bytes |
| macOS/x64 | tar.gz (sha256) | 182670822 |
| Windows/x64 | zip (sha256) | 187383323 |

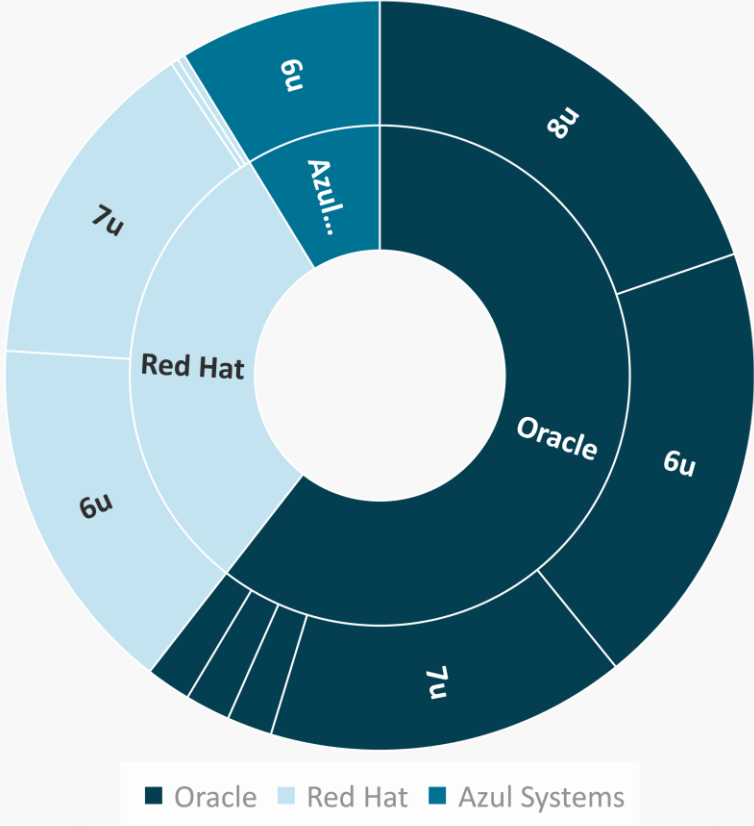
JDK Updates in OpenJDK

JDK Updates in OpenJDK

- Four active update Projects
 - OpenJDK 6 led by Andrew Brygin from Azul Systems
 - OpenJDK 7u led by Andrew Haley from Red Hat
 - OpenJDK 8u led by Andrew Haley from Red Hat
 - JDK Updates (9 and above) led by Rob McKenna from Oracle
- I'll focus on
 - JDK Updates

Maintaining OpenJDK Releases

Number of months an organization was maintaining updates in OpenJDK by Mar. 2019



JDK Updates

- Project Lead
 - Sets technical direction, communicates schedules, etc.
 - Rob McKenna (Oracle)
- Maintainers
 - Approve or reject changes after coordinating with stake holders, uphold policies
 - David Buck, Sean Coffey, Jeff Dinkins, Rob McKenna, Naoto Sato, Dalibor Topic (all Oracle)
 - 11u Lead Maintainer: Andrew Haley (Red Hat)
- Code repositories
 - <https://hg.openjdk.java.net/jdk-updates/jdk11u/>
 - <https://hg.openjdk.java.net/jdk-updates/jdk12u/>
- Mailing lists
 - Development: jdk-updates-dev@openjdk.java.net
 - Commits: jdk-updates-changes@openjdk.java.net

JDK Updates Repository Maintainer Transitions

- A maintainer (group) that intends to step down sends an e-mail to the list
 - Announcing their plans
 - Providing a time frame to allow everyone to plan for it
 - Call for new maintainers
- If some new maintainers step up, then
 - the Project Lead gets to choose if they are suitable
 - Maintaining OpenJDK Updates is not trivial
 - If so, adds them as maintainers for that repository
- Maintainers may
 - Specify alternative code review and approval mechanisms
 - Choose a different set of platforms and CPU architectures to support
 - No expectation of continuity

[10u communication] End of maintenance

Rob McKenna [rob.mckenna at oracle.com](mailto:rob.mckenna@oracle.com)

Wed Jul 25 15:15:01 UTC 2018

- Previous message: [Question on the "Updates Project" processes](#)
 - **Messages sorted by:** [\[_date \]](#) [\[_thread \]](#) [\[_subject \]](#) [\[_author \]](#)
-

I'm sending this mail to notify the community that the current maintainers intend to step down as maintainers for the JDK 10 Updates forest [1] at the end of September.

This being the case we would like to invite prospective new maintainers to step forward at this point to ensure a smooth transition should they wish to maintain this forest beyond the end of September.

Meanwhile, we're in the process of preparing a jdk11u forest for this Project, which I and the other maintainers from Oracle plan to maintain going forward until we step down. I'll send an update to the alias once it's available.

-Rob

[1] <http://hg.openjdk.java.net/jdk-updates/jdk10u>

JDK Updates Development Process

- Ground Rules
 - Process can change after discussion on mailing list
 - Changes not specific to an update must go into JDK Project first (i.e. backports only)
 - Changes must go through review by Reviewers and push approval by Maintainers
- Public Code Review
 - Can be skipped if change is identical to JDK Project (i.e. already reviewed)
 - Changes must have been reviewed by at least one Reviewer
 - Original Author and Reviewers should agree change is suitable for backport
- Push Approvals
 - Done through labels in JIRA
 - jdk11u-fix-request, jdk11u-fix-yes
 - Any reasonable fix which improves stability, security or performance should be considered
 - CPU fix merges, TZ data updates, test fixes, changes to Root CA certs, build numbers, downstream ports

approval-requests

Discard changes

Details

Export

Tools

 labels in regexLabel("jdk.*u-fix-request")


Basic



1-43 of 43

Columns

| T | Key | Summary | Assignee | Reporter | P | Status | Resolution | Created | Updated | Due | Development |
|---|-------------|---|-------------------|-------------------|---|----------|------------|------------|------------|-----|-------------|
| | JDK-8212118 | Clipping problems with complex affine transforms: negative scaling factors or small scaling factors | Laurent Bourgès | Laurent Bourgès | 3 | RESOLVED | Fixed | 2018-10-12 | 2018-10-13 | | |
| | JDK-8212110 | Build of saproc.dll broken on Windows 32 bit after JDK-8210647 | Severin Gehwolf | Severin Gehwolf | 4 | RESOLVED | Fixed | 2018-10-12 | 2018-10-12 | | |
| | JDK-8211856 | [ppc, s390] ProblemList some failing tests. | Goetz Lindenmaier | Goetz Lindenmaier | 4 | RESOLVED | Fixed | 2018-10-08 | 2018-10-12 | | |
| | JDK-8211839 | java.nio.file.Files.writeString writes garbled UTF-16 instead of UTF-8 | Deepak Kejriwal | Webbug Group | 3 | OPEN | Unresolved | 2018-10-08 | 2018-10-11 | | |
| | JDK-8211768 | [s390] Implement JFR profiling. | Gunter Haug | Gunter Haug | 4 | RESOLVED | Fixed | 2018-10-05 | 2018-10-12 | | |
| | JDK-8211387 | [Zero] atomic_copy64: Use ldrex for atomic reads on ARMv7 | Severin Gehwolf | Severin Gehwolf | 4 | RESOLVED | Fixed | 2018-10-02 | 2018-10-11 | | |
| | JDK-8211208 | make AllocateHeapAt an unsupported option on AIX | Matthias Baesken | Matthias Baesken | 3 | RESOLVED | Fixed | 2018-09-27 | 2018-10-11 | | |
| | JDK-8211105 | AArch64: Disable cos/sin and log intrinsics in jdk11u pending fix | Andrew Dinn | Andrew Dinn | 1 | RESOLVED | Fixed | 2018-09-25 | 2018-09-27 | | |
| | JDK-8211065 | Private method check in linkResolver is incorrect | David Holmes | David Holmes | 2 | RESOLVED | Fixed | 2018-09-24 | 2018-10-11 | | |
| | JDK-8210964 | add more ld preloading info to hs_error file on Linux | Matthias Baesken | Matthias Baesken | 3 | RESOLVED | Fixed | 2018-09-20 | 2018-10-12 | | |
| | JDK-8210918 | JDK-8210334 / Add test to exercise server-side client hello processing | Jamil Nimeh | Jamil Nimeh | 4 | RESOLVED | Fixed | 2018-09-19 | 2018-10-01 | | |
| | JDK-8210846 | TLSv.1.3 interop problems with OpenSSL 1.1.1 when used on the client side with mutual auth | Jamil Nimeh | Webbug Group | 2 | RESOLVED | Fixed | 2018-09-17 | 2018-09-26 | | |
| | JDK-8210836 | Build fails with warn_unused_result in openjdk/src/jdk.hotspot.agent/linux/native/libsaproc/ps_core.c | Jini George | Brian Burkhalter | 2 | RESOLVED | Fixed | 2018-09-17 | 2018-10-11 | | |
| | JDK-8210810 | Escaped character at specific position in argument file is not handled properly | Henry Jen | Webbug Group | 3 | RESOLVED | Fixed | 2018-09-16 | 2018-10-12 | | |
| | JDK-8210775 | JVM TI Spec missing copyright | Iris Clark | Iris Clark | 4 | RESOLVED | Fixed | 2018-09-14 | 2018-10-11 | | |
| | JDK-8210761 | libjsig is being compiled without optimization | Severin Gehwolf | Severin Gehwolf | 4 | RESOLVED | Fixed | 2018-09-14 | 2018-10-11 | | |
| | JDK-8210736 | jdk/javax/xml/crypto/dsig/GenerationTests.java slow on linux | Weijun Wang | Weijun Wang | 4 | RESOLVED | Fixed | 2018-09-13 | 2018-10-12 | | |

JDK Updates Release Schedules

Under the new [JDK Project](#) release model, new feature releases are planned to be released in a strict 6 month cadence. Once a feature release enters RDP2, a corresponding jdk-updates forest should be opened to accommodate fixes that would not otherwise make the feature release GA.

The first jdk-updates release in a series occurs within a month of the JDK feature release ship date. The cutoff date for getting approved fixes into this first release is approximately 5 weeks after the RDP2 date for the feature release.

For the second jdk-updates release, the cutoff date is approximately 4 weeks after the GA date of the first update release.

Contributing to JDK Updates Development

- Become an OpenJDK Contributor first
 - OCA
 - <http://openjdk.java.net/contribute>
- Read the docs
 - <http://openjdk.java.net/projects/jdk-updates/>
- Subscribe to the mailing list
 - <http://mail.openjdk.java.net/mailman/listinfo/jdk-updates-dev>
- Discuss changes you want to backport on the mailing list first
- Start with small changes to learn the process
- Expect to hear ‘no, thank you’ from maintainers
 - not every change is suitable for backporting, or
 - may require additional work (CSR)

What happens next with OpenJDK 8u and OpenJDK 11u

- 8u:
 - Transitioned to new Project Lead.
- 9u, 10u:
 - Finished.
- 11u:
 - Transitioned to new maintainers.
- 12u:
 - In development, accepting changes for 12.0.2.

What happens after an OpenJDK maintainer transition

- New maintainers may have different
 - Priorities & goals
 - Backport the minimal set of changes necessary or more?
 - Support a single CPU/OS (vendor) or more?
 - Resources
 - Patch existing HotSpot or try to use the latest from JDK instead?
 - Timing
 - Backports take time, to non-mainstream platforms even more so
 - Release for all platforms at the same time?
 - Support time frame?
- Other considerations
 - Multiple successful maintainer transitions in the past
 - Commercial support

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- Significant discount available for large deployment support requirements (i.e. 50% discount for 10k-20K processor units)
- Making Java support affordable to everyone

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- Getting support from the steward of the Java platform
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- Access to mission-critical bug fixes before they get included in publicly available releases
- Simple monthly subscription pricing (pay as you use)

Summary

- The cloud is demanding a faster pace and continuous delivery
 - Accelerating the pace of innovations with 6-month releases while providing stability and security to enterprise mission-critical services via 3 years LTS releases
- Oracle is simplifying Java licensing by transitioning out of the BCL “dual purpose” license
 - JDK 11 is delivered both as Oracle OpenJDK under GPL/CPE license for free, and Oracle JDK under Oracle technology license for commercial support
- Oracle introduced a new Java subscription offering to make Java support affordable and predictable for everyone
- Established JDK Updates Project in OpenJDK
 - Enables contributions
 - Enables transitions

openjdk.java.net and jdk.java.net