

# Contributing to the OpenJDK

Rémi Forax – May 2021

# OpenJDK ?

Open source version (in 2006/2007)  
of the SUN sources

Used as based for all the Java distributions  
(like the linux kernel vs linux distribution)

- Oracle, RedHat, Azul, Amazon, etc

# OpenJDK Licence

## GPLv2 + classpath exception

Linking this library statically or dynamically with other modules is making a combined work based on this library. Thus, the terms and conditions of the GNU General Public License cover the whole combination.

As a **special exception**, the copyright holders of this library give you **permission to link** this library **with independent modules** to produce an executable, **regardless of the license terms of these independent modules**, and to **copy and distribute the resulting executable under terms of your choice**, provided that you also meet, for each linked independent module, the terms and conditions of the license of that module. An independent module is a module which is not derived from or based on this library. If you modify this library, you may extend this exception to your version of the library, but you are not obliged to do so. If you do not wish to do so, delete this exception statement from your version.

# JDK releases

before, mammoth releases (every 2 to 3 years)

since jdk 10, 6 month schedules

- September: jdk11, jdk13, jdk15
- April: jdk10, jdk12, jdk14 (2020), jdk16 (2021)

long term stable (LTS) every 3 years

- Currently jdk7, jdk8, jdk11

# Where is the source ?

Recently migrated to github (yai !)

- [github.com/openjdk/jdk](https://github.com/openjdk/jdk)

There are several repositories, one per OpenJDK project

- Update projects (security + some bug fixes)
  - jdk-updates (6 month releases)
  - jdk8-updates, jdk11-updates, soon jdk17-updates (LTS)
- Exploratory projects
  - Amber (Language), Valhalla (VM), Loom(VM), Panama foreign + vector (VM), Liliput (VM), etc

# Project Mailing Lists

Each project has its own mailing list

<https://mail.openjdk.java.net/mailman/listinfo>

- core-lib-dev, awt-dev, hotspot-dev, hotspot-gc-dev, ...
- amber-dev, valhalla-dev, etc

All patches, pull-requests, discussions are on the mailing list

- Pull request discussions use two ways mirroring  
Github ↔ mailing list

# Oracle Contributor Agreement

You can not contribute to the JDK without signing the OCA

- A github bot will verify that patch authors have signed the agreement

<https://oca.opensource.oracle.com/>

# Bug databases

## Two systems

- External: [bugs.java.com/bugdatabase/](https://bugs.java.com/bugdatabase/)

Everybody can enter a bug

- People paid by Oracle filter those bug reports, and transfer the relevant ones into [bugs.openjdk.java.net](https://bugs.openjdk.java.net)

- OpenJDK: [bugs.openjdk.java.net](https://bugs.openjdk.java.net)

Only OpenJDK author can enter a bug



# bugs.openjdk.java.net

## Jira instance hosted in CA

### Slow in Europe :(

Search

Save as

Export

Tools

Project: All Type: All Open Assignee: All

spec

More

Search

Advanced

Columns

Component: core-libs

T	Key	Summary	Assignee	Reporter	P	Status	Resolution	Created	Updated ↓	Due	Development
	JDK-8267196	ScheduledThreadPoolExecutor Future never finishes is submitted before shutdown	Martin Buchholz	Webbug Group	4	OPEN	Unresolved	2021-05-14	2021-05-25		
	JDK-4787260	(spec) File.equals() spec suggests canonicalization but implementation does not canonicalize	Alan Bateman	Nathanael Thompson (Inactive)	4	OPEN	Unresolved	2002-12-03	2021-05-22		
	JDK-8267222	SoftReference not cleared on OutOfMemoryError: Requested array size exceeds VM limit	Stuart Marks	Jan Lahoda	4	OPEN	Unresolved	2021-05-17	2021-05-19		
	JDK-8266846	Add java.time.InstantSource	Stephen Colebourne	Stephen Colebourne	4	OPEN	Unresolved	2021-05-10	2021-05-15		
	JDK-8257745	ArrayList::removeRange doesn't throw exception when from > to	Rajendrakumar Pallath	Webbug Group	4	OPEN	Unresolved	2020-12-03	2021-05-13		
	JDK-4191279	Float.toString() produces incorrect results	Brian Burkhalter	Dmitry Khukhro (Inactive)	4	OPEN	Unresolved	1998-11-19	2021-04-24		
	JDK-6270734	(ann) Serialized form of annotations persists objects from sun.* packages	Joe Darcy	Nelson Dcosta (Inactive)	4	OPEN	Unresolved	2005-05-16	2021-04-19		

The long march ... to contribute

# Contributing using Github

Create remote repositories accessible using git

and add your public SSH key

Fork an existing openjdk remote repository (using the fork button)

e.g. from [github.com/openjdk/jdk](https://github.com/openjdk/jdk) to [github.com/forax/jdk](https://github.com/forax/jdk)

Clone a local copy

```
git clone git@github.com:forax/jdk
```

Build the jdk

```
./configure + make images
```

Hack the local copy: *do the magic*

Re-build and test:

```
make images + make test
```

# Contributing using Github (2)

*... Hack + Re-build*

Commit and push the local copy to your remote repository

`git commit + git push`

Create a pull request (PR) from the remote copy to the openjdk repository

pull request button on your github repository

A github bot verifies that you have signed the OCA

Associate the PR to the bug

inside the PR: `/issue JDK-XXXXXXX`

The PR is reviewed on the mailing list/github

After discussion, the PR is approved or rejected