



DEVOXX FRANCE 2025

COMMENT BUILDER JAVA DEPUIS SES SOURCES





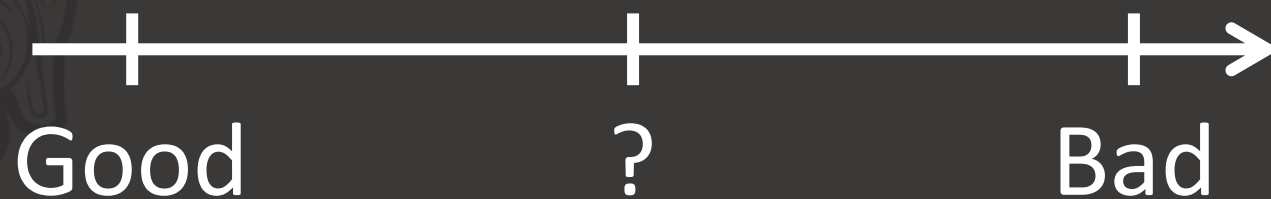
MAIS...
POURQUOI ?!?





Pour identifier un commit
après une mise à jour

♥ git bisect ♥



JDK-8322282 → fixé en 21.0.3

```
final ReadableInterval validTime = value.getValidTime();
if (validTime.getStartMillis() < ...) {
    // No exception here
}

// not important code here

if (validTime.getStartMillis() < ...) {
    // NullPointerException
    // Cannot invoke "ReadableInterval.getStartMillis()"
    // because "validTime" is null
}
```



JDK-8328744 → livré en 21.0.4

+30% de consommation mémoire sur certains benchmarks

ParallelGC n'utilisait pas toute la mémoire configurée avec -Xmx





Let's go!





```
$ git clone https://github.com/openjdk/jdk.git
Cloning into 'jdk'...
```

```
...
```

```
Updating files: 100% (68960/68960), done.
```

```
$ cd jdk
```

```
$ git checkout jdk-24-ga
```

```
Updating files: 100% (10056/10056), done.
```

```
Note: switching to 'jdk-24-ga'.
```





```
$ bash configure
```

```
...
```

```
Autoconf is not found on the PATH, and AUTOCONF  
is not set.
```

```
You need autoconf to be able to generate a  
runnable configure script.
```

```
You might be able to fix this by running  
'sudo apt-get install autoconf'.
```

```
Error: Cannot find autoconf
```

```
$ sudo apt-get install autoconf
```





```
$ bash configure
```

```
...
```

```
Using autoconf at /usr/bin/autoconf
```

```
checking for basename... /usr/bin/basename
```

```
checking for dirname... /usr/bin/dirmame
```

```
checking for file... no
```

```
configure: error: Could not find required tool  
for FILE
```

```
configure exiting with result code 1
```

```
$ sudo apt-get install file
```





```
$ bash configure
```

```
...
```

```
checking for gmake... [not found]
```

```
checking for make... [not found]
```

```
configure: error: Cannot find GNU make 3.81 or  
newer! Please put it in the path, or add e.g.  
MAKE=/opt/gmake3.81/make as argument to  
configure.
```

```
configure exiting with result code 1
```

```
$ sudo apt-get install make
```





```
$ bash configure
```

```
...
```

```
checking what type of tar was found... gnu  
checking that grep (/usr/bin/grep) -Fx handles  
empty lines in the pattern list correctly... yes  
checking for unzip... [not found]
```

```
configure: error: Could not find required tool  
for UNZIP
```

```
configure exiting with result code 1
```

```
$ sudo apt-get install unzip
```





```
$ bash configure
```

```
...
```

```
checking that grep (/usr/bin/grep) -Fx handles  
empty lines in the pattern list correctly... yes
```

```
checking for unzip... /usr/bin/unzip
```

```
checking for zip... [not found]
```

```
configure: error: Could not find required tool  
for ZIPEXE
```

```
configure exiting with result code 1
```

```
$ sudo apt-get install zip
```





```
$ bash configure
```


```
...
```


```
checking for java... [not found]
```

```
configure: Could not find a valid Boot JDK.  
OpenJDK distributions are available at  
http://jdk.java.net/.
```

```
configure: This might be fixed by explicitly  
setting --with-boot-jdk
```

```
configure: error: Cannot continue  
configure exiting with result code 1
```





```
$ bash configure --with-boot-jdk=/opt/jdk-24
...
configure: Using default toolchain gcc (GNU
Compiler Collection)
checking for gcc... [not found]
configure: error: Could not find a C compiler.
You might be able to fix this by running
'sudo apt-get install build-essential'.
configure exiting with result code 1

$ sudo apt-get install build-essential
```




```
$ bash configure --with-boot-jdk=/opt/jdk-24
```

```
...
```

```
checking how to link with libstdc++... static
```

```
checking for ALSA... checking for
```

```
alsa/asoundlib.h... no
```


```
configure: error: Could not find alsa! You might  
be able to fix this by running
```

```
'sudo apt-get install libasound2-dev'.
```

```
configure exiting with result code 1
```


```
$ sudo apt-get install libasound2-dev
```






```
$ bash configure --with-boot-jdk=/opt/jdk-24
...
checking for which harfbuzz to use... bundled
checking for cups/cups.h... no
checking for cups/ppd.h... no
configure: error: Could not find cups! You might
be able to fix this by running
'sudo apt-get install libcups2-dev'
configure exiting with result code 1

$ sudo apt-get install libcups2-dev
```

```
$ bash configure --with-boot-jdk=/opt/jdk-24
...
checking for cups/cups.h... yes
checking for cups/ppd.h... yes
checking for fontconfig/fontconfig.h... no
configure: error: Could not find fontconfig! You
might be able to fix this by running
'sudo apt-get install libfontconfig1-dev'.
configure exiting with result code 1

$ sudo apt-get install libfontconfig1-dev
```



```
$ bash configure --with-boot-jdk=/opt/jdk-24
...
checking for X... no
configure: error: Could not find X11 libraries.
You might be able to fix this by running
'sudo apt-get install libx11-dev libxext-dev
libxrender-dev libxrandr-dev libxtst-dev
libxt-dev'.
configure exiting with result code 1

$ sudo apt-get install <toutes les libs>
```





```
$ bash configure --with-boot-jdk=/opt/jdk-24
```

```
...
```

Configuration summary:

```
* Name:                linux-x86_64-server-release
* Debug level:         release
* HS debug level:      product
* JVM variants:        server
* JVM features:        server: 'cds compiler1
compiler2 epsilon gc g1gc jfr jni-check jvmti
jvmti management parallelgc serialgc services
shenandoahgc vm-structs zgc'
```





Quelques paramètres

`--with-boot-jdk=/opt/jdk-24`

`--with-vendor-name=Antoine`

`--with-version-string=24+36`

`--with-debug-level=fastdebug`

Tout est documenté dans le fichier
`doc/building.md`





```
$ make images
```

```
Building target 'images' in configuration  
'linux-x86_64-server-release'
```

```
...
```

```
Finished building target 'images' in  
configuration 'linux-x86_64-server-release'
```



```
$ cd build/linux-x86_64-server-release/jdk/bin/
```

```
$ ./java --version
```

```
openjdk 24-internal 2025-03-18
```

```
OpenJDK Runtime Environment (build 24-internal-  
adhoc.root.jdk)
```

```
OpenJDK 64-Bit Server VM (build 24-internal-  
adhoc.root.jdk, mixed mode)
```





En résumé

- C'est très simple
- On installe tout ce dont Java a besoin
 - Java fournit même les commandes à taper
- 5 minutes pour installer toutes les dépendances
- 5 minutes pour builder Java
- Facile de créer un environnement tout prêt

Merci pour votre écoute



Antoine DESSAIGNE – Software Architect at AXWAY



Slides



Antoine DESSAIGNE – Software Architect at AXWAY

