

GraalVM Advisory Board | November 2020

- Project updates & upcoming release (Alina Yurenko)
- GraalVM Developer survey (Alina Yurenko)
 - The survey is available [here](#), please share;
- Security Group update (Roxana Bradescu)
 - the mailing list has been set up;
- Red Hat Feedback
 - Foivos, Red Hat: “I would personally like you to bring up how happy I (or "we" if others feel the same) am with all the help they have been providing in various issues and PRs I have opened recently. I personally feel they often go out of their way (by not just reviewing but also suggesting solutions and alternatives) to help.”
 - Stuck issues (Max, Red Hat)
 - 175 days since last update: <https://github.com/oracle/graal/pull/2067> - [C2 style range check smearing](#)
 - Thomas: has been updated; the best is to ping the person working on it;
 - Still seeing things go into master with zero context, for example <https://github.com/oracle/graal/commit/2d5eee0>
 - Can GraalVM team give status on Public PR workflow ?
 - we will check;
 - Improve trackability of issues/work related to past versions
 - <https://oss.oracle.com/pipermail/graalvm-dev/2020-November/000093.html>
 - we discussed it internally and will follow up;
 - Project roadmap items ?
 - <https://github.com/oracle/graal/projects> is more worklists; any way to tag or target epics/roadmap style items ? highlevel wiki doc ?
 - to-do: share the list of more high-level that we prepared for native image;
 - Added: <https://github.com/oracle/graal/issues/2762>
 - Arch64 - on github action move
 - get access to an AArch64 GH runner in the graalvm-org team (this would benefit both oracle/graal and graalvm/mandrel repos when it comes to testing on Aarch64)
 - we are a bit short on ARM testing resources; could probably use help in this area;
 - Fabio: in theory we can integrate our OSS solution into travis.com;
 - Roxana: we would need an ARM runner somewhere;
 - Security concerns? Running a merged PR should be fine;

- Thomas: we look into this on our side to get those resources;
- Project Leyden
 - Can GraalVM team give update on Project Leyden and what (if any) plans around it ? (Max, Red Hat)
 - no news at the moment;
- Sanhong Li, Alibaba Feedback
 - <https://bugs.openjdk.java.net/browse/JDK-8255616>, AOT/Graal have been disabled since OpenJDK16. It would be helpful to give us any guidance on the future development on AOT/Graal, how we can align these independent projects with OpenJDK?
 - Thomas: our position is the best solution for Java AOT compilation is native image;
 - regarding native image working with dynamic class loading etc - there could be a way via having Java implemented as a Truffle language; there are plans to have dynamic class loading on SVM;
 - Will each release of GraalVM do the 'full' test on AOT/Graal features after the integration with OpenJDK base? e.g run all OpenJDK related jtreg test cases?
 - How does the GraalVM evolve towards Metropolis & Leyden project? do you have any update on this front?
 - regarding project Metropolis - with the approach mentioned above we will have kind of a "Java on Java" VM; Long-term vision here is to be able run Java on GraalVM like you would run e.g. JavaScript on GraalVM.
 - (Alan Hayward) Is Graal in OpenJDK16+ still supported at all? If not, how should Graal be tested with jtreg?
 - we are working on supporting the latest version of JDK;
 - Alan: will it still be possible to integrate GraalVM compiler into the latest JDK?
 - yes, since JVMCI stays;
 - Issues follow-up
 - <https://github.com/oracle/graal/pull/2730> , target next release ?
 - Thomas: we are happy about this contribution and want to contribute it soon; we are also waiting for changes to be made;
- Sébastien Deleuze: VMware feedback
 - Switch Netty to runtime init by default and sync with those are using it with build time init, see <https://github.com/netty/netty/issues/10797#issuecomment-727888871>
 - Netty is still using build-time init; not very consistent with GraalVM defaults; need to ask for the default change;
 - Sébastien Deleuze: Is there a global bigger footprint on Java 11 compared to Java 8 issue to tackle?
 - Max: we also see it; <https://github.com/oracle/graal/issues/2129>
 - would be good to collaborate on this and resolve

- as more classes are added this also doesn't scale well;
 - there's an option that should help with that:
<https://github.com/oracle/graal/issues/2384> - let us know if that's still a problem
 - Analysis & compilation times could be improved too - there are plans how to make it happen; Also frameworks could help
 - Sébastien Deleuze: Looking for feedback on Project Leyden as well
- Alan Hayward: Autovectorisation
 - What are the current vectorisation plans for CE post the merge of the RangeCheckElimination patch (<https://github.com/oracle/graal/pull/2153>). Not sure if <https://github.com/oracle/graal/issues/2703> is still in progress.
 - we have plans to add it, most likely in 21.X;
 - Thomas: would be good to coordinate with our team on this;
 - there's also an issue from Red Hat about it;
 - Any other BCE work in progress or planned?
 - Thomas: there was an issue that is closed; there's one more in progress; needs more investigation;
- Uma Srinivasan: Twitter requests/proposals
 - Co-ordinate Graal releases with Oracle & OpenJDK update releases every quarter.
 - also what kind of testing is done before the releases?
 - Thomas: we have our LabsJDK on 11; our intention is to keep it in sync with OpenJDK; we test heavily with LabsJDK. Can Mandrel help with this? No, since it doesn't use the Graal compiler.
 - We are testing GraalVM builds and making sure JVMCI works;
 - Max: we follow the OpenJDK cadence;
 - Uma: are those published? Max: the best would be to ping the team;
 - Gilles: if you want to know which versions of LabsJDK are tested, there's a file in the repo specifying that;
 - We depend on "mx" for builds and tests, any reason this repo is not branched & released like the "graal" repo?
 - mx should be compatible, so are fixing the version of `mx` used for certain builds;
 - Ran into test failures with OpenJDK 11.0.7+GraalVM version 20.1, had to backport fixes from 20.2. Would be great to understand test versions being used and a list of known test failures with the testing done associated with a release.
 - This line contains the LabsJDK version used to build the GraalVM:
 - JDK8:
<https://github.com/oracle/graal/blob/master/common.json#L5>, the corresponding tag can be found in <https://github.com/graalvm/graal-jvmci-8>. Right now for example we have version "8u272+10-jvmci-20.3-b05" and the tag is jvmci-20.3-b05

- JDK11:
<https://github.com/oracle/graal/blob/master/common.json#L11>, the corresponding tag can be found in <https://github.com/graalvm/labs-openjdk-11>, Right now for example we have version "ce-11.0.9+10-jvmci-20.3-b05" and the tag is jvmci-20.3-b05
- For the mx version used to build/test:
- It is available in the common.hocon file but this is only set on release branches. For example on the 20.3 branch:
- <https://github.com/oracle/graal/blob/release/graal-vm/20.3/common.hocon#L17>
- (On master the version is set to "HEAD" which means just the latest version from the mx repo)