

# Native Image u okviru projekta GraalVM

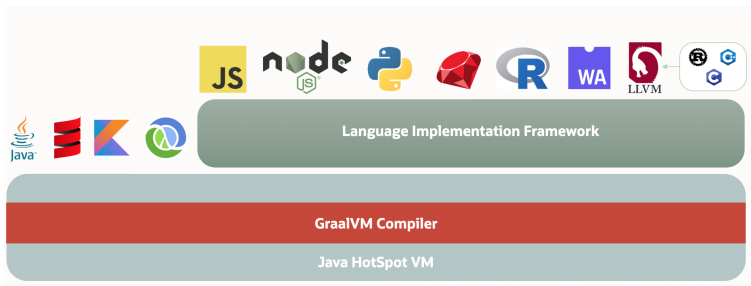
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# Uvod

- Motivacija
- GraalVM komponente
  - JIT kompajler
  - AOT kompajler(Native Image)
  - Truffle



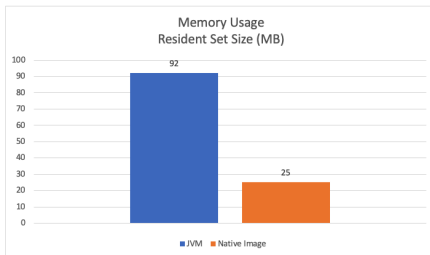
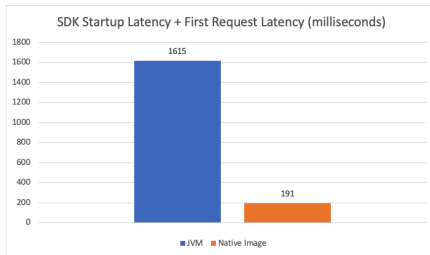
# Native Image

- Princip zatvorenog sveta
- Faze izgradnje i izvršavanja
- Izgradnja slike:
  - Analiza pokazivača
  - Izvršavanje inicijalizacija
  - Kreiranje slike hip-a

# Problemi

Problem	Rešenje
Refleksija	Konfiguracioni fajlovi
Dinamičnost jezika	Substitucije
Komunikacija izmedju faza	Image Singleton

# Performance



# Zaključak

- Bolje performanse jezika
- Ekonomičnost pre svega u Cloud primeni
- Integracija
- Nema alternativa

# Literatura

- <https://www.infoq.com/articles/native-java-graalvm/>
- <https://docs.oracle.com/en/graalvm/>
- Christian Wimmer, Codrut Stancu, Peter Hofer, Vojin Jovanović, Paul Wogerer, Peter B. Kessler, Oleg Pliss, Thomas Wurthinger. *Initialize Once, Start Fast: Application Initialization at Build Time*, 2019.
- <https://engineering.purdue.edu/Cetus/Documentation/>
- <https://www.graalvm.org/22.0/reference-manual/native-image/>
- <https://build-native-java-apps.cc/developer-guide/substitution/>
- <https://aws.amazon.com/blogs/developer/graalvm-native-image-support-in-the-aws-sdk-for-java-2-x/>
- <https://www.inner-product.com/posts/benchmarking-graalvm-native-image/>