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Scala: A serious alternative to Java on the Java Virtual Machine (JVM)

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During the recent years, partly induced by the slower evolution of the JVM core language Java, several alternative languages producing Java byte code have emerged. Among a multitude of languages which fight for developer and business attention, Scala –a scalable statically typed object-functional language developed at EPFL in Lausanne / Switzerland –has emerged as one of the most serious contenders.

Scala is already used for mission critical high performance systems and is surrounded by a very active community and an ever growing ecosystem of tools and libraries. It is time to have a closer look and explore Scala's practicability for real-life projects.

During the talk, first the core language features of Scala, its differences with Java and the surrounding tool chain will be presented. The Play framework for fast web application development and architectural concerns like how to design your Scala application to profit from dependency injection without the need for third-party frameworks will also be discussed. To follow up, the reactive programming concept alongside the Akka framework facilitating the development of highly scalable concurrent and distributed applications are introduced.

At last, as a proof of concept and to allow the auditors to see a real-life use case, a small web application using the power of Scala and the Play Framework, backed by a NoSQL MongoDB instance will be discussed step by step. Core concepts like initial project setup with the Scala build tool (sbt), configuring Play, and interfacing with client side view technologies (e.g. HTML5, JavaScript) will be demonstrated.

Author: JANKE, Jan (CERN)

Presenter: JANKE, Jan (CERN)

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