Practical Aspects of Enterprise Application Development

EAR

Winter Term 2017

Contents

Speakers

Petr Aubrecht

- Lead developer at StringData,
- 15+ years of experience in server-side application development,
- Technologies
  - C/C++, Java, Java EE
  - JSP, JSF
  - Relational databases
  - Agile Methodologies
  - Web Services

Roman Kunovský

- Lead Java developer at Baader Computer,
- 15+ years of experience in Java development,
- Technologies
  - Java
  - Spring, Hibernate
  - Relational databases
  - Application servers (Tomcat, IBM WebSphere)
  - Sencha ExtJS

Baader Computer

- Member of the international group „Kirchhoff Datensysteme Group"
- 120 employees (30 developers in CR)
- 6 locations (Mainz, Erfurt, Praha, České Budějovice, Šumperk, Bangalore)
- Two areas:
    - Java (mostly automotive/individual development)
        - Web applications
        - Java, Spring, Hibernate, Sencha ExtJS, Tomcat/TomEE, Oracle, MSSQL, PostgreSQL
        - We participate on projects for: Škoda Auto, SEAT, PSA, Jaguar/Land-Rover
    - .Net
        - Own product Poly.ERP
- www.bcpraha.cz
- Trainee program for students

Rudolf Vlk

- Software developer at DataVision,
- 10+ years of development experience,
- Technologies
  - C/C++, Java, Java EE
  - C# and .Net
  - Relational databases
  - Test driven development
  - ZK Framework, Angular

DataVision

- Small company (25 employees, mostly programmers)
- Two areas of expertise
  - Vision systems – quality assurance & robot guidance applications
    - C#, HALCON, Microsoft stack, Visual Studio
    - We participate on projects for: Volkswagen, Škoda, Michelin, SICK
  - Information systems / web applications
    - Java, Java EE, Spring, Angular, ZK Framework, IntelliJ Idea
    - We participate on projects for: Creditas, SICK
- www.datavision.cz
- We're hiring!

Topics

Practical Experience with Application Development

- SCRUM
- Agile Methodologies
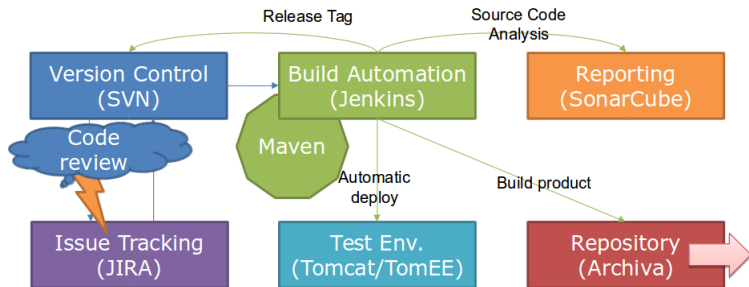- Continuous Integration
- Deployment

Roman Kunovský

Agile Methodologies

- SCRUM
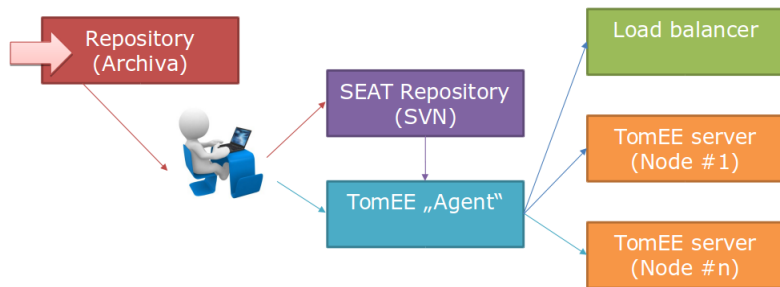- Extreme Programming
- Test Driven Development (TDD)

Continuous Integration

Roman Kunovský

Deployment (SEAT Germany – application servers environment)

- Windows Server 2012
- TomEE configuration repository (including WAR artifacts)
- TomEE "deploy" Agent (SEAT proprietary solution)
- Deployment $\rightarrow$ automatic update of Windows TomEE services

Rudolf Vlk

- On trying to be Agile
    - Be ready to compromise (when the customer is not interested)
    - Set up feedback loops
    - Automate everything
    - Have a plan
    - Don't neglect maintainability
        - Refactoring to a good design is integral part of TDD

Java EE vs. Spring

- Standardization vs Dynamic evolution
- Security, caching, scalability
- Full Java EE vs Java EE Web Profile

Roman Kunovský

Used Spring modules

- Core Container
- AOP and Instrumentation
- Data Access/Integration
- Web
- Test
- Security

Rudolf Vlk

- Seems mostly like a choice of personal preference
- Both are leaky abstractions
- Java EE customized security is a pain
- Java EE (theoretical) portability vs Spring's lock-in
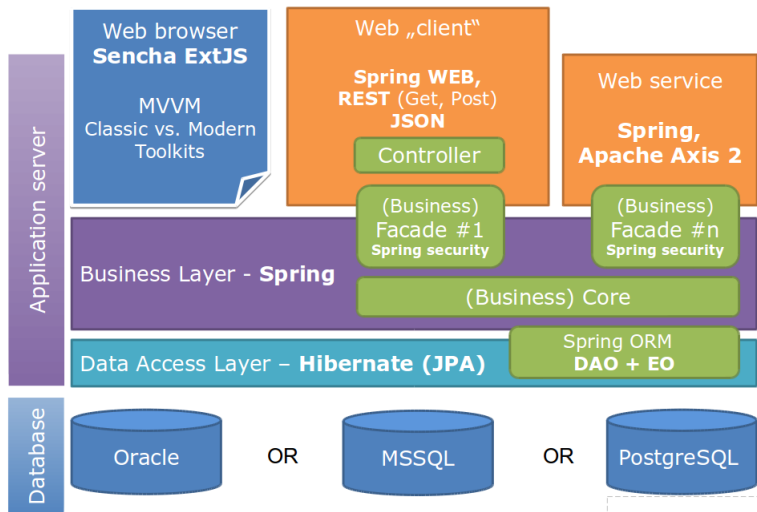- Spring Boot and Microservices

Alternative Technologies

Alternatives to

- PostgreSQL
- Eclipselink (JPA)
- Spring
- REST API
- ReactJS

Roman Kunovský

Rudolf Vlk

- PostgreSQL: Oracle, MySQL, MongoDB (NoSQL)
- JPA: JOOQ
- REST API: GraphQL, JSON API, gRPC
- ReactJS: ZK Framework, Angular, WebAssembly

Open Discussion

Java in the age of NodeJS