Using Vert.x to build a consistent, bank-wide, toolchain for modern application development at the Royal Bank of Scotland

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Speakers

Raj Dasoar
- RBS Principal Engineer
- Leads the teams building the RBS’ Route To Live
- Revolutionising the Engineering Experience
- Open Source Advocate

Sam Marland
- Solution Architect supporting the Royal Bank of Scotland
- Former developer
INTRODUCTION TO RBS
Royal Bank of Scotland

- UK Centric Bank with many different brands.
  - Natwest (Retail)
  - Coutts (Private Banking)
  - Natwest Markets (Investment)
- ~ 70,000 Employees
- Partially government owned due to bailout.
- Digital Engineering Services provide digital services to other parts of the bank.

- Red Hat customer for over 10 years.
- Consuming a wide range of technology from Red Hat.

- Working in an ever changing market, where digital innovation is critical.
- Moving to challenge new, emerging banks disrupting the space.
- Embracing the public cloud with a hybrid strategy.
BUILDING A MODERN & DYNAMIC SDLC
Asynchronous Development: Vert.x

‘We want to build simplified, standardised micro services with scalability in the cloud’

Current state

Enabling our Engineers to build at pace

- Create a standard how we do development in the bank.
- Integrated Framework into our tooling capabilities.
- A mechanism to development with a route to live concept – Value.

Future state

Wide Scale Adoption for performant applications

- An Open Source community able to contribute to our micro service offerings
- A mature ‘DevOps’ culture through the use of automated processes.
- Reduction of our cost footprint in the cloud to scale only when absolutely necessary
Framework ...
Standards ...

- **Web Development**
  - UI Components
  - Web Applications

- **Platform Offerings**
  - Spring Based Frameworks
    - Synchronous (Tomcat)
    - Asynchronous (vertx)

- **Automation & Release Management**
  - Ansible
  - Audit
  - Traceability
Performance vs Synchronous ...

Performance Testing

- Sync
- Vert.x
- Async

Average Response Time (ms)

No of concurrent requests

- 6
- 10
- 15
- 373
- 4648
Demo

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