SOA Module Course Outline

Practicals

1. Create a REST Service using JAXRS and CXF. Deploy in Tomcat and/or WSO2 App Server
   1. Test with Curl and AJAX
2. Create a JAXWS Service using JAXWS and deploy
   1. Test with SOAP UI
3. Create a client to the SOAP service
4. Secure it
5. Using a Registry to look up endpoints at runtime
6. Using an ESB intermediate the client and publish an event to a topic
7. Use an ESB to map from REST to SOAP
8. Use a BPEL server to orchestrate
9. API management? BAM

Lectures (not yet completely ordered)

1. Overview on SOA model, evolution of integration, loose coupling, drivers
2. Evolution of MoM to Web Services, SOA, Contracts, XML, XSD, WSDL, WS-\* Standards. SOAP examples, WS-Security examples, WS-RM, WS-Addressing
3. REST Architecture, REST examples, JSON and XML, WADL, maybe
4. REST and SOAP compared and contrasted
5. JAX-RS
6. JAX-WS
7. WS-Security
8. SOA in practice: PEPPOL, Netflix, Amazon
9. ESBs and Enterprise Integration Patterns
10. Composition, BPEL 2.0, BPMN, Amazon Simple Flow Service
11. Governance, Lifecycle, Dependency Management
12. SOA and Cloud interactions, iPaaS

Notes

1. Labs are good, but probably best to move over to Eclipse / CXF / Tomcat (and maybe some WSO2!) given my skills.
2. My personal preference is to remove the semantic web, UML and CORBA aspects and add focus on ESBs, Governance/Registries, web APIs/web API management and how SOA & Cloud fit together
3. Replace SIF example with some examples from Netflix, Amazon and PEPPOL (REST and SOAP examples), and a WSO2 case study.
4. Understand the requirement better? How much academic, theory, vs real-life and practical?

Work plan

1. Get source files for all existing presentations?
2. Create an Public Git for the practicals resources.
3. Create a shared dropbox for the presentations.

Milestone plan

July – Agree course outline, work plan

End of July – Practicals 1, 2, 3, 4, 5 complete

- Agree class booklist and resources

End of September – Remaining Practicals complete

- Assignment ready

End of October – First draft of lectures

End of November – Final lectures ready

Review process / status updates?