

Web Services Theme: Overview

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Imperial College London

CERN School of Computing, 2005
Geneva, Switzerland

Content Map

What will be covered

Overview

Web Services &
Review of Distributed Computing

Related Technologies

XML

SOAP

WSDL

Developing Web Services

Writing Consumers

Writing Producers

Advanced Issues

UDDI

WS-Security

Summary

Future Trends

The subjects covered are grouped in Lectures as follows:

- 1 Introduction to Web Services
- 2 Consuming, Providing & Publishing WS
- 3 Advanced Issues & Future Trends

Scheduling

- The theme takes place on Friday, the 24th of February 2005.
- First lecture starts at 9:00am and last one finishes at 12:25pm.
- Lectures last for 50mins.
- Some might take a bit more time, others less.
- All depends on your interests, participation & caffeine levels.

Contents	Lecture 1	Lecture 2	Lecture 3
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Distributed Computing	■		
Web Services			
XML		■	
SOAP			
WSDL		■	
Writing Consumers			
Writing Providers		■	
UDDI			■
WS-Security			
Future Trends			■
Questions & Wrap up			■

Objectives

What we should be aiming for

Upon completion of this theme you should be able to:

- Understand and create an XML document.
- Understand the Simple Object Access Protocol (SOAP).
- Be able to describe a Web Service using a WSDL file.
- Write a Web Services Consumer using the Apache Axis toolkit.
- Provide a Web Service using Tomcat and Axis.
- Know where to look details of more advanced topics.
- Understand the future technological trends emerging from the use of Web Services.

Prerequisites

Stating the assumptions

The whole theme builds from the ground up so there are no special knowledge requirements.

Nevertheless you'd benefit the most if

- you have programmed in an Object Oriented Language, especially Java, and
- have attended the Advanced Software Development & Engineering lectures.

The Lecturer

Academic Qualifications

- A First class BSc Graduate in Computer Science from the University of Kent at Canterbury.
- A postgraduate student on the Advanced Computing Master's course offered by Imperial College in London.
- A prospective PhD student at the Computing Laboratory in Cambridge, starting in October 2005.

The Lecturer

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Work Experience

- Worked for Sun Microsystems in California member of the Advanced Development Group.
- At CERN during the summer of 2004, member of ATLAS Online Software Group.
- Various smaller jobs in the UK, Greece and Cyprus.

Contacting me

During the iCSC

- I'll try to make myself available during the three days; if you want to ask something just come and talk.
- Out of hours I will be regularly checking email so for anything urgent send me an email at the following address

`ioannis.baltopoulos@gmail.com`

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After the iCSC

- Again the best way would be to send me an email at the address above.
- For other ways of communication ask me directly or check my personal website when it's online (more information to come).

Materials

- **Lecture Slides**

All the slides will be provided from the iCSC website (and my personal one when it goes online).

- They come in 1up format, and
- contain extra slides for transition effects, section dividers and global navigation.

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- **Web Services Template Project**

Towards the end of the iCSC I'll be publishing a Web Services template project for Eclipse. It will contain a basic automation script for use with ant, as well as other helpful batch files and examples.

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A few things about you

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- How many people know how to describe a Web Service using WSDL?
- How many people have used Axis before for creating a provider or a consumer?
- How many people consider themselves well versed in Web Services?