ISEngineering

Technische Universität Berlin

Enterprise Computing: Exercise 2 – Web Services

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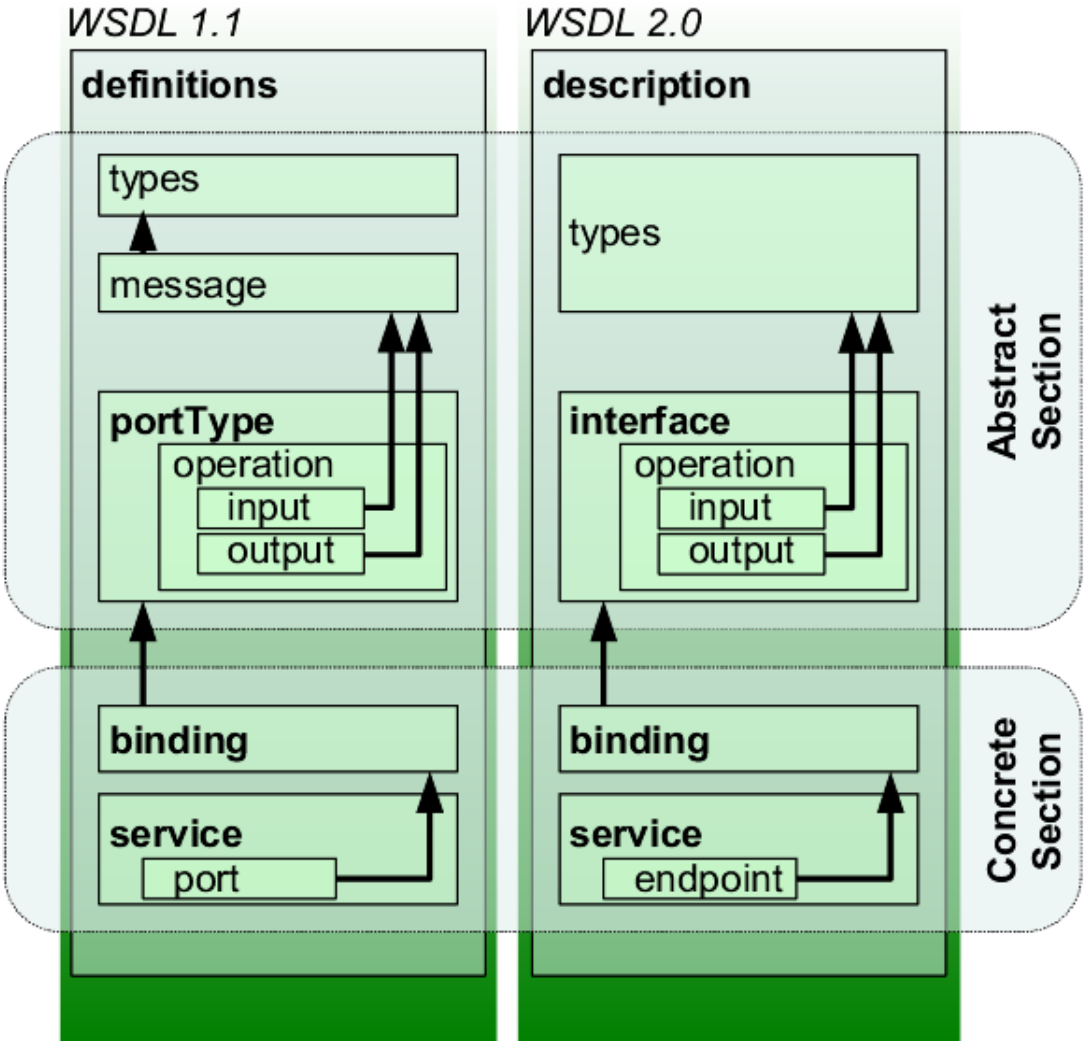
ISEngineering
Wirtschaftsinformatik –
Information Systems Engineering

Task 1 – Web Services



Source: http://en.wikipedia.org/wiki/Web_Services_Description_Language

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Task 1 – Web Services

- Take a look at a real-world WSDL file:
  - *http://s3.amazonaws.com/ec2-downloads/ec2.wsdl*
  - WSDL file for the Amazon EC2 API
  - 7654 lines of code

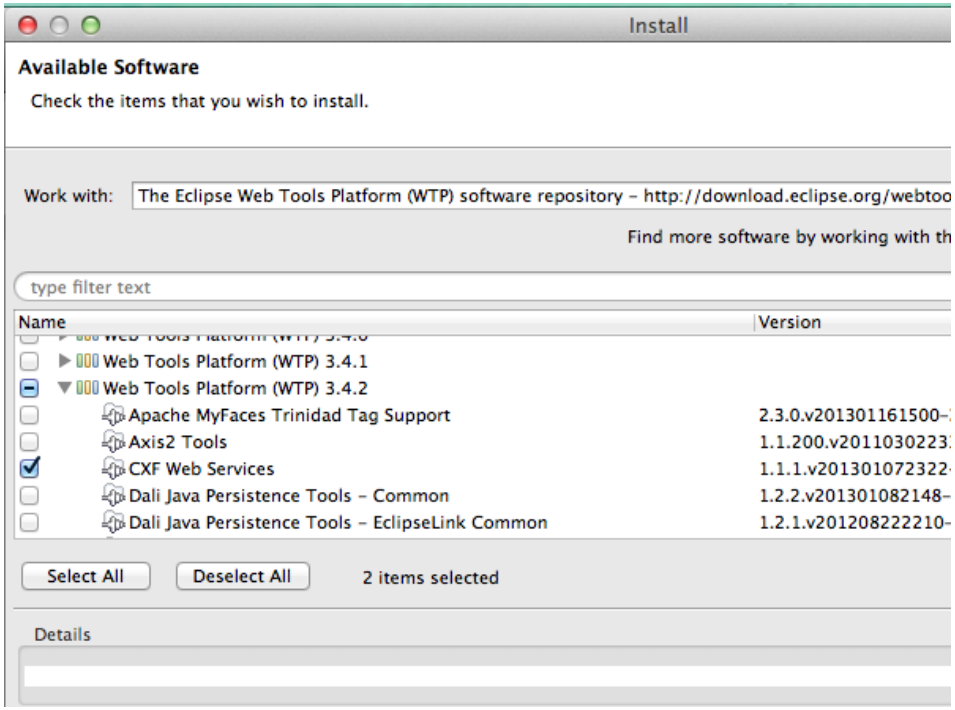
- You can visualize the file by opening it in Eclipse with the "WSDL Editor"

Task 1 – Web Services

- Which version of the WSDL specification is used for the EC2 Web Service?
- Which messages are sent when the `RunInstances` operation is called?
- To which address does the web service client send messages?

Task 1 – optional exercise: generate a Java Stub from WSDL

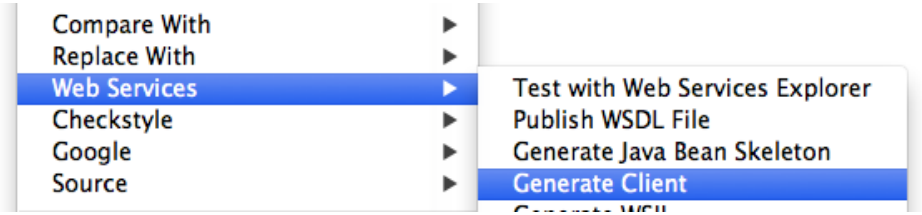
- Install “Eclipse Web Tools Platform (WTP)” > JAX-WS Tools

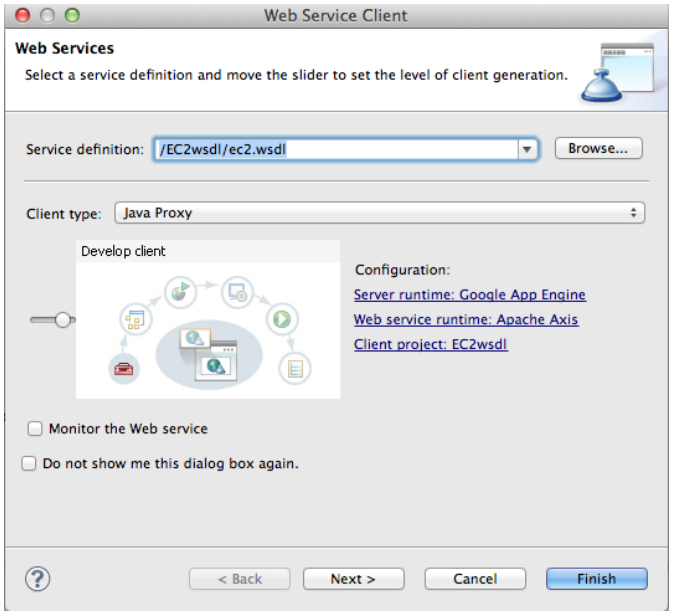


Reference:
http://help.eclipse.org/luna/index.jsp?topic=%2Forg.eclipse.jst.ws.cxf.doc.user%2Ftasks%2Fcreate_client.html

Task 1 – optional exercise: generate a Java Stub from WSDL

- Generate a Java client by right click on the WSDL file > “Web Services” > “Generate Client”





- What does the result look like? Is it the same as the AWS JDK source code?

Task 2 + 3 - Prerequisites

- Install the AWS plugin for Eclipse
  1. Open Help → Install New Software….
  2. Enter http://aws.amazon.com/eclipse in the text box labeled “Work with” at the top of the dialog.
  3. Select “AWS Toolkit for Eclipse” from the list below.
  4. Click “Next.” Eclipse guides you through the remaining installation steps.

Task 2 + 3 - Prerequisites

- Set your AWS credentials
  - Mac/Linux: write into the file

  ~/.aws/credentials

  - Windows: write into the file

  C:\Users\USERNAME\.aws\credentials

  - … the following content:

```
[default]
aws_access_key_id=enteryourkeyhere
aws_secret_access_key=enteryoursecrethere
```

(Replace the red text with your own information)

Task 2 – Amazon S3

```
// TODO create a bucket with name "ise-tu-berlin-exercise2-",
// followed by your nickname (e.g., silversurfer)
log.info("Creating a bucket (if it does not exist, yet)");
 …
// TODO Upload a text File object to your S3 bucket
// use the createSampleFile method to create the File object
log.info("Uploading an object");
 …
// TODO Download the file from S3 and print it out using the
// displayTextInputStream method.
log.info("Downloading an object");
…
```

Task 2 – Amazon S3

- Which HTTP method is used for the following AWS S3 operations?
  - createBucket
  - putObject
  - getObject
  - deleteObject

Hint: Launch the Java program with JVM option
"-Dlog4j.configuration=log4j.properties"
and log4j.properties setting "log4j.logger.org.apache.http=DEBUG"

Task 3 – Amazon SQS

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Rewrite the (unmodified) borrower/lender example from 3b) of the previous exercise 1 by replacing JMS with AWS SQS.

// SqsBorrower.java

… fill out the blanks …

// SqsLender.java

… fill out the blanks …