

Tutorial VII. Web Service Deployment and Registry

Web services deployment

Web services registry

Web services discovery

1. Web services deployment

- If you are using TOMCAT/AXIS
 - Refactoring your package name to have a prefix such as “c408h0xx.OmniEditor”
 - `cd /u/yijun/axis/c408h0xx`
 - Copy your class files to `/u/yijun/deployed/c408h0xx`
 - Name your deployment file “`deploy.wsdd`”, and “`undeploy.wsdd`”
 - `../seawolf-deploy.sh`, `../seawolf-undeploy.sh` (for publish purposes), ask instructor if you can't do it (permission error)
 - For test purposes: `../skywolf-deploy.sh`, `../skywolf-undeploy.sh`, or `../local.sh`
 - Go to <http://seawolf.cdf.toronto.edu:8081/axis> to verify your web service is deployed

continued

- If you are using gSOAP
 - Modify the web server example to host your own web service
 - Let the server to listen to a port number 8xxx and deploy it to CDF

```
nohup /u/yijun/software/gsoap-2.7/soapcpp2/samples/webserver  
8xxx &
```

2. Web Services Repository

- UDDI Server: web services registry
 - A UDDI registry contains three kinds of information
 - White pages: Information such as the name, address, telephone number, and other contact information of a given business.
 - Yellow pages: Information that categorizes businesses. This is based on existing (non-electronic) standards
 - Green pages: Technical information about the Web services provided by a given business
 - jUDDI: <http://ws.apache.org/juddi>
 - a java implementation of UDDI specification
 - can be deployed and accessed through a UDDI browser to browse/search web services
 - jUDDI on CDF: <http://skywolf.cdf.toronto.edu:8081/juddi>

continued

- Inquire web services on UDDI server
 - jUDDI: publisher table in database

`mysql -h skywolf juddi -e 'select PUBLISHER_ID from PUBLISHER'`

PUBLISHER_ID	PUBLISHER_NAME	LAST_NAME	FIRST_NAME	MIDDLE_INIT	WORK_PHONE	MOBILE_PHONE	PAGER	EMAIL_ADDRESS	ADMIN	ENABLED
jdoe	John Doe	NULL	NULL	NULL	NULL	NULL	NULL	john.doe@apache.org	true	true
c408h001	Team One	NULL	NULL	NULL	NULL	NULL	NULL	c408h001@cdf.toronto.edu	true	true
c408h002	Team Two	NULL	NULL	NULL	NULL	NULL	NULL	c408h002@cdf.toronto.edu	true	true
c408h003	Team Three	NULL	NULL	NULL	NULL	NULL	NULL	c408h003@cdf.toronto.edu	true	true
c408h004	Team Four	NULL	NULL	NULL	NULL	NULL	NULL	c408h004@cdf.toronto.edu	true	true
c408h005	Team Five	NULL	NULL	NULL	NULL	NULL	NULL	c408h005@cdf.toronto.edu	true	true
c408h006	Team Six	NULL	NULL	NULL	NULL	NULL	NULL	c408h006@cdf.toronto.edu	true	true
c408h008	Team Eight	NULL	NULL	NULL	NULL	NULL	NULL	c408h008@cdf.toronto.edu	true	true
c408h009	Team Nine	NULL	NULL	NULL	NULL	NULL	NULL	c408h009@cdf.toronto.edu	true	true
c408h010	Team Ten	NULL	NULL	NULL	NULL	NULL	NULL	c408h010@cdf.toronto.edu	true	true
c408h011	Team 11	NULL	NULL	NULL	NULL	NULL	NULL	c408h011@cdf.toronto.edu	true	true
c408h012	Team 12	NULL	NULL	NULL	NULL	NULL	NULL	c408h012@cdf.toronto.edu	true	true
c408h014	Team 14	NULL	NULL	NULL	NULL	NULL	NULL	c408h014@cdf.toronto.edu	true	true
c408h015	Team 15	NULL	NULL	NULL	NULL	NULL	NULL	c408h015@cdf.toronto.edu	true	true

- HTML-based deployed web services

<http://seawolf.cdf.toronto.edu:8081/axis>

Web Services of CSC408H hosted at Apache Axis - Mozilla Firefox

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http://seawolf.cdf.toronto.edu:8081/axis/index.html

JUDDI Web Services ... IBM Innovation Grants OSU Physics Faq's: ... Web Services of CS... Set the DERBY_INST... The Protégé Ontolo... OpenOME, an ontol... University of Toront...

Deployed Web Services of CSC408H

Here is a list of published web services by the end of phase B:




- [Team 01 \(WSDL\)](#)
- [Team 02\(to be deployed, please change file permission of ~/software/gsoap-2.7/soapcpp2/samples/mayank/calc.wsdl to c408h002\)](#)
- [Team 03\(WSDL\)](#)
- [Team 04's home page\(WSDL\)](#)
- [Team 05's web service\(WSDL\)](#)
- [Team 06's web service \(WSDL\)](#)
- [Team 08's web service\(WSDL\)](#)
- [Team 09\(to be deployed, please change file permission of c408h009/deploy.wsdd and your wsdl files to c408h009\)](#)
- [Team 10's Home page\(WSDL\)](#)
- [Team 11's web service\(WSDL\)](#)
- [Team 12's web service\(WSDL\)](#)
- [Team 14's web service\(WSDL\)](#)
- [Team 15's web page\(WSDL\)](#)
- [View the list of Web services deployed at this Tomcat/Axis server](#)
- [Call a local endpoint](#) that list's the caller's http headers (or see its [WSDL](#)).

Validating Axis

- [Validate](#) the local installation's configuration
- [Administer Axis](#)
- [SOAPMonitor](#)

Resources

- See the [course home page](#) on [how to set up your web service](#).
- [Visit](#) the Apache-Axis Home Page If you have problems getting Axis to work, consult the Axis [Wiki](#) and then try the Axis user mailing list.

Done    Adblock


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http://seawolf.cdf.toronto.edu:8081/axis/servlet/AxisServlet

JUDDI Web Services ... IBM Innovation Grants OSU Physics Faq's: ... Web Services of CS... Set the DERBY_INST... The Protégé Ontolo... OpenOME, an ontol... University of Toront...

And now... Some Services

- AdminService ([wsdl](#))
 - AdminService
- OmniEdit ([wsdl](#)) 
 - move
 - find
 - mark
 - select
- c408h006.OMNIEditor ([wsdl](#))
 - makeConnection
 - disConnect
 - sendCommand
 - getFileState
- OmniEditor-c408h012 ([wsdl](#))
 - substring
 - find
 - list
 - upload
 - download
 - getCursorLocation
 - deleteChannel
 - deleteAll
- urn:omni-editor ([wsdl](#))
 - Upload
 - isMyQueueEmpty
 - Download
 - InsertText
 - Delete
 - TextSelected
 - Disconnect
- OMNIEditor ([wsdl](#))
 - list

Done

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http://seawolf.cdf.toronto.edu:8081/axis/services/OmniEdit?wsdl

jUDD1 Web Services ... IBM Innovation Grants OSU Physics Faq's: ... Web Services of CS... Set the DERBY_INST... The Protégé Ontolo... OpenOME, an ontol... University of Toront...

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
- <wsdl:definitions targetNamespace="urn:src">
- <wsdl:message name="moveResponse">
  <wsdl:part name="MoveReturn" type="xsd:string"/>
</wsdl:message>
- <wsdl:message name="selectResponse">
  <wsdl:part name="SelectReturn" type="xsd:string"/>
</wsdl:message>
- <wsdl:message name="selectRequest">
  <wsdl:part name="in0" type="xsd:string"/>
  <wsdl:part name="in1" type="xsd:string"/>
  <wsdl:part name="in2" type="xsd:string"/>
</wsdl:message>
- <wsdl:message name="markResponse">
  <wsdl:part name="MarkReturn" type="xsd:string"/>
</wsdl:message>
- <wsdl:message name="moveRequest">
  <wsdl:part name="in0" type="xsd:string"/>
  <wsdl:part name="in1" type="xsd:string"/>
  <wsdl:part name="in2" type="xsd:string"/>
</wsdl:message>
- <wsdl:message name="findRequest">
  <wsdl:part name="in0" type="xsd:string"/>
  <wsdl:part name="in1" type="xsd:string"/>
  <wsdl:part name="in2" type="xsd:string"/>
</wsdl:message>
- <wsdl:message name="findResponse">
  <wsdl:part name="FindReturn" type="xsd:string"/>
</wsdl:message>
- <wsdl:message name="markRequest">
  <wsdl:part name="in0" type="xsd:string"/>
  <wsdl:part name="in1" type="xsd:string"/>
  <wsdl:part name="in2" type="xsd:string"/>
</wsdl:message>
```

Done

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3. Publish and Discover Web Services

- UDDI4J: java implementation of UDDI client side
 - Provide API to interact with UDDI registry to:
 - Publish: How the provider of a Web service registers itself.
 - Find: How an application finds a particular Web service.
 - Bind: How an application connects to, and interacts with, a Web service after it's been found.
 - <http://www-124.ibm.com/developerworks/oss/uddi4j/>
- Public and private UDDI registry nodes
 - IBM UDDI Test Registry (providing “publish” and “discover”)
<http://uddi.ibm.com/testregistry>
 - Microsoft UDDI Test Registry (providing “publish” and “discover”)
<http://test.uddi.microsoft.com>
- UDDI browser: browse/search web services
 - An example of UDDI browser: <http://www.soapclient.com/uddisearch.html>

4. Use Web Services

- Find/Discover the WSDLs listed in a specific web registry
- Generate the corresponding client
 - AXIS: [wsdl2java](#)
 - gSOAP: [wsdl2h](#)
- OmniEditor project:
 - Analyze the variability of hosted web services, write a generic client to use several variants of the OmniEditor, find a way to adapt to the changes

Continued (OmniEditor)

– Supporting variability

- Compile time variability

- Macros (compile time)

- » #define WSDLURL “c408h001.OmniEditor.wsdl”

- » make -DWSDLURL=c408h001.OmniEditor.wsdl

- Java annotations

- Run-time variability: generative programming

- ```
<config>
```

- ```
  <service name=“c408h001.OmniEditor.wsdl”/>
```

- ```
</config>
```

- ```
wsdlURL = getXPath(“config.xml”, “/config/service/@name”);
```

- Java properties

- » wsdlURL = System.getProperty(“wsdlurl”);

- » java -Dwsdlurl=... client

- » client.properties

Continued(OmniEditor)

- Pick one of the editors
 - VIM
 - Eclipse
 - Emacs
 - jEdit
- Each web services is integrated by at least one client.
A system test may involve two instances of the clients