

Web Services and SOA

Beyond the Hype

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Beyond the Hype?

- Not about...
 - WS frameworks
 - WS design methodologies
 - SOAP / REST
- About...
 - Getting things done

Agenda

- The Metro Web Services Stack
- Demo: Bottom Up / Top Down Web Service - Simple Calculator
- Demo: Amazon S3 Client
- SOAP & REST
- Demo: Producing and Consuming a REST Web Service
- Q&A

Metro Web Services Stack

Part of Glassfish Project Components

- JAX-WS / JSR-224 RI
 - XML Binding
 - Annotations
 - SOAP
 - WSDL
 - WS-I Profile Compliance
 - ...
- JAX-RS / JSR-311 RI (coming soon)
- Web Services Interoperability Technology (WSIT)
 - WS-* like WS-Security, WS-Trust, etc.
 - .NET Interop

Web Service Design Methodologies

- Code First
 - Already have Business logic implemented
 - Quick start
 - Annotate your code, use wsgen
- Contract First
 - Developing from scratch
 - Need to conform to standards (WSDL, XML Schema)
 - Create WSDL, use wsimport

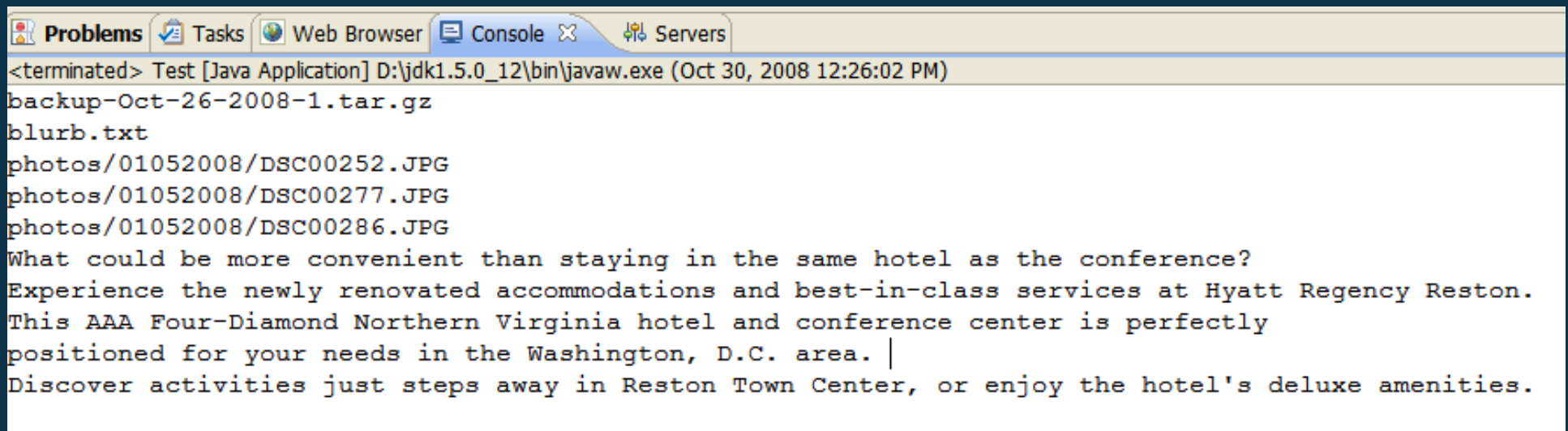
Demo: Bottom Up Calculator

Demo: Top Down Calculator



Demo: Amazon S3 Client

- Cheap storage service - \$0.15 / GB / month
- Accessible via SOAP and REST API
- Store information in "buckets" using keys
- Objects stored using "keys", no directories



The image shows a screenshot of an IDE's console window. The window title bar includes tabs for 'Problems', 'Tasks', 'Web Browser', 'Console', and 'Servers'. The 'Console' tab is active, displaying the output of a Java application. The output text is as follows:

```
<terminated> Test [Java Application] D:\jdk1.5.0_12\bin\javaw.exe (Oct 30, 2008 12:26:02 PM)
backup-Oct-26-2008-1.tar.gz
blurb.txt
photos/01052008/DSC00252.JPG
photos/01052008/DSC00277.JPG
photos/01052008/DSC00286.JPG
What could be more convenient than staying in the same hotel as the conference?
Experience the newly renovated accommodations and best-in-class services at Hyatt Regency Reston.
This AAA Four-Diamond Northern Virginia hotel and conference center is perfectly
positioned for your needs in the Washington, D.C. area. |
Discover activities just steps away in Reston Town Center, or enjoy the hotel's deluxe amenities.
```

SOAP & REST

SOAP Request

SOAP Request Envelope:

```
- <soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"  
  xmlns:q0="http://bottomup.genuitec.com/" xmlns:xsd="http://www.w3.org/2001/XMLSchema"  
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">  
- <soapenv:Body>  
- <q0:add>  
  <arg0>10</arg0>  
  <arg1>20</arg1>  
</q0:add>  
</soapenv:Body>  
</soapenv:Envelope>
```

REST Request

```
http://localhost:8080/restdemo/service/add/10/20  
GET /restdemo/service/add/10/20 HTTP/1.1  
Host: localhost:8080  
User-Agent: Mozilla/5.0 (windows; U; windows NT 6.0; en-US; rv:1.9.0.3)  
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8  
Accept-Language: en-us,en;q=0.5  
Accept-Encoding: gzip,deflate
```

Demo: Producing and Consuming a REST Web Service



Q & A

