The Enterprise Open Source Support Company

2007 Webinar Series
Covalent is the Leading Provider of Support and Services for Apache Software Foundation Open Source Projects, Namely Tomcat, Geronimo, Roller, Axis, ActiveMQ & Apache, the World's Leading Web Server*

Covalent is One of the Few Sources of Full Commercial Support for Apache, Axis, Roller, Geronimo, ActiveMQ & Tomcat on a Global Basis

Covalent Currently Supports More Than 50% of Fortune 500 and 20% of Global 2000 Companies

*62% global Web server marketshare ~Netcraft April 2006 Web Server Survey
Axis to Axis2 : Seamless Migration using WSAS

Glen Daniels; Director of Java Platforms, WSO2
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WSO2 Product Platform

WSO2 introduction
- Open Source middleware company, funded by Intel Capital
- 50+ employees in US, UK and Sri Lanka
- Building a pure OSS SOA platform
  - Based on XML, WS-*, REST, Atom, etc
  - Apache License 2.0
- Offering support, services and training
  - Wide range of customers from SMB to Wall Street
WSAS - Web Services Application Server

- Java runtime for hosting services
  - Runs standalone or in conjunction with Apache Tomcat, IBM WebSphere, BEA WebLogic, JBossAS and more

- Supports full WS-* and REST
  - Including full WSDL 2.0 support

- Axis 1.X and Data Services support

- Easy to develop, deploy and manage services using lightweight AJAX admin console

- Superb IDE integration (Eclipse)

- High performance and high availability & scalability
  - 4-5x faster than Axis1 & >3000 tps on a dual-core
WSAS Architecture

**Web Services Application Server Core**

- **Hibernate** - ORM which simplifies the switching of the underlying database
- **Apache Derby** - Embedded database used for storing system & service information
- **Apache Axis2** - Web services engine
  - **Apache Rampart** - WS-Security & WS-SecureConversation implementation for Apache Axis2
  - **Apache Sandesha2** - WS-ReliableMessaging implementation for Apache Axis2
  - **Apache Rahas** - WS-Trust implementation for Apache Axis2
  - **Apache Addressing** - WS-Addressing implementation for Apache Axis2

**Jetty** - Embedded servlet container of the standalone edition

**Runtime Platform**

**Tomcat/JBoss/Geronimo** - Application servers supported out of the box (servlet edition)
Axis2

- Apache
- Ground-up rewrite of Axis
- Based around Axiom, streaming XML model for performance
- Module architecture for plug-ins
- More natural deployment model
- Full support for SOAP 1.2 / MTOM / WSDL 2.0
- JAX-WS support
Recent WSAS Features

- Eclipse IDE integration for easier development
- Data services – easily service enable relational data
- Backwards compatibility for Axis 1.x services
- Clustering and high availability support
- Access throttling
- Deploying EJB services
- Improved security including XKMS support
WSAS - Management Console

WSO2 Web Services Application Server

Message Flows

In Flow
- Transport
- Security
- PreDispatch
- Dispatch
- ClusteringReplication

Out Flow
- MessageOut
- Security
- ClusteringReplication

In Fault Flow
- PreDispatch
- Dispatch
- ClusteringReplication

Out Fault Flow
- MessageOut
- ClusteringReplication

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Oxygenating The Web Service Platform
Data Services

- Unlock legacy relational data into your SOA or Web 2.0 architecture
- Zero-code programming model allowing rapid development
- Ability to use full power of the WS-* security stack to ensure data security
Security Configuration

- Simple radio-button UI for selecting common security policies
- Eliminates need for explicit WS-SecurityPolicy
Backwards Compatibility for Axis 1.x

- Easily deploy any Axis 1.x service into WSAS
  - Even RPC

- Engage advanced WS-* protocols in front of legacy services
  - WS-RM, WS-Security, WS-Policy etc.
  - Earlier versions not as thoroughly researched / tested / performant
Axis2 Deployer Architecture

Configuration Repository

/services
/purchase.aar
/modules
/notarize.mar
/myStuff
/finances.csv
Axis Migration Deployer Architecture

- WSAS
- Deployment directory
- Axis2
- Axis MessageReceiver
- Axis
- WSDD
- HTTP transport

Diagram showcases the architecture with connections between WSDD, Axis2, Axis MessageReceiver, Axis, and WSAS, along with deployment directory and HTTP transport.
Deployment UI
Bonuses

- Module architecture, including standard modules
  - Performance
  - Testing / Interop
  - Use them with even RPC style services
- Evolutionary step
- Sessions
- WSAS Logging / Monitoring
- User Interface
- Ease of deployment
...and drawbacks

- Performance gain is only for some modules
  - Embedded Axis is still Axis 1.4

- Not everything will work
  - Attachments
  - MessageContext properties
Quick demo of Axis1 deployment in WSAS
WSO2 Offerings

- **Services**
  - Consultancy
  - Custom Development
  - Open Source Development Sponsorship

- **Training**

- **Support**
  - Development Support
  - Production Support
WSO2.org

- Developer Content
  - Articles
  - Tutorials
  - Presentations
  - Knowledge Base
  - Interviews
  - Podcasts

- Forge:
  - SVN
  - Jira
  - Mailing Lists
  - Forums
  - Wiki

- Tools
Summary

- WSAS supports deploying Axis1.X services
  - with a few caveats

- WSO2 supports you
  - with no caveats 😊

- Get involved
WSO2 Contacts

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- WSO2 Products - http://wso2.com/
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Thanks!

Questions?
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