J2EE and Web Services for Managers

Understanding the Hype

P. O. Box 80049
Austin, TX 78708
Fax: +1 (801) 383-6152

information@middleware-company.com • +1 (877) 866-JAVA
Motivation for Web Services

- What are the challenges with B2B integration?

Diagram:
- Dell
  - Intel
  - 3com
  - Middleware Company
  - JP Morgan
Problems with the world before web services

- Component wars
- Language wars
- Firewalls
- No agreement on interoperability
Web services defined

- **Paradigm:**
  - Service-oriented architecture
  - "Assembly line" concept

- **Technology is XML over (typically) HTTP**
  - XML: Because businesses agree on it
  - HTTP: Because it gets through firewalls
What is a web service?

Web Service Definition:

- A **web service** is simply a remote procedure call (RPC) over the web that uses XML as the calling format.

- Not unlike some of the other RPC mechanisms…

Diagram:

- XML
- IIOP
- CORBA
- RMI
- EJB
Web services technologies

- Typical web services technologies:
  - UDDI: Used to **lookup** a web service
  - WSDL: Used to **describe** a web service
  - SOAP: Used to **call** a web service (XML/HTTP)
  - ebXML: Used to conduct complex business conversations and flow on top of SOAP
How web services work

1: Publish web service (WSDL)
2: Lookup web service
3: Invoke web service (SOAP)

Application Server
Application

SOAP, UDDI, WSDL implementation

Client

UDDI Registry
Web services "hype"

- Smart
- Vendors agree on all technologies
- Dynamic discovery
- Silver bullet
The Middleware Company's "Reality View" of web services

- Smart? **Not yet**
- Vendors agree on all technologies? **Not yet**
- Dynamic discovery? **No**
- Silver bullet? **Hell No!**
The Middleware Company's "Reality View" of web services

- Web services are old technologies wearing a funny new hat
  - You can get XML/HTTP today with sockets
  - You can describe services with IDL or interfaces
  - You can register services via JNDI or Active Directory
- So why will web services succeed?
  - It is simple
  - People agree on it
  - All major vendors are pushing for web services
  - People are excited about them
  - People are beginning to use them in projects
The real benefits of web services

- **Paradigm benefits**
  - Loose application coupling
  - Independent application evolution

- **Interoperability**
  - 'Component wars' and 'Languages wars' don't matter
  - Standardization of integration technologies

- **B2B**
  - Leverages Internet - Cheaper than VANs
  - Extensible

- **EAI**
  - Non-intrusive integration
The web services challenge

- Why was EJB / COM+ technology so popular?
  - Because even one vendor can benefit from it

- Why is Jini not taking off as fast?
  - Because you need collaboration.
  - Results in chicken-and-egg.

- Web services for B2B have the same challenge
  - Who's going to be the first?
The web services challenge

- Predictions:
  - Web services for EAI will spawn marketplace
    - EAI is useful for even one vendor
    - General industry agreement on web services, unlike Jini
  - Web services for B2B will happen more slowly
    - Requires collaboration