The Oracle Story: Dynamic Services

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Strongest "Out of Box" Solution

- **Oracle may have the best pre-packaged solution**
  - *".NOW Web Services Software"*
  - Provides more than just access mechanisms
  - Has needed to go its own way to get there
    - Initial work predates SOAP/WSDL/UDDI
    - Very Oracle-centric
      - Fits in well with Oracle's environment, but...
- **Is rolling in support for the developing standards as they come up to scratch**
  - There is a logical correspondence between Oracle's initial technology and the current standards activities and technologies
    - support flows through from old to new easily
- **Treats WebServices as simply another access technology**
  - a common stance

- ● Also available for 8.1.6.2/8.1.7
- ● Oracle XML Developer's Kit for Java contains Oracle SOAP v2.0
  - – most of SOAP v1.1

InfoWorld.com 8/8/01

The Redwood Shores, Calif.-based database giant plans to impart the same "integrated everything" approach that it applies to all its products, from databases to enterprise applications, toward Web services as well, according to John Magee, Oracle's senior director of 9i product marketing.

"Oracle has not hyped Web services to the extent that Microsoft has. But we view it as an evolutionary necessity for using the Internet for business," Magee continued.

http://otn.oracle.com/products/dynamic_services/content.html

Marketing Blurb

- **What can Oracle Dynamic Services do for you?**
  - Define services with XML for uniform access, and web and wireless deployment
  - Combine & conditionally execute services to provide complete and personalized information
  - Monitor system and business events, and user profiles to automatically customize service responses
  - Define failover to alternative services for high availability
  - Implement dynamic or static caching to tune service response
  - Use the Oracle Internet Directory to centrally manage, and reuse services with scaleable deployment
  - Upgrade, replace, duplicate, and relocate services without application changes
  - Communicate service requests & responses via HTTP, HTTPS, JDBC/SQL, SMTP, Custom protocols
  - Publish services as portlets automatically using Oracle9*i*AS Portal to reduce development time
  - Administer services with the Dynamic Services Manager

- Late to the party
  - At least, the standards-based party
  - Even though it has earlier technology
    - Mindshare is important
      - Especially in the integration world
- 9*i* Dynamic Services are a lot more standards-compliant than earlier offering
- Not communicating its WebServices vision effectively
  - Yet?!

"Web services is like XML and Java; it's not a feature set like your spell-checker and a dictionary. It's an approach, a strategy."
— Ron Schmelzer, ZapThink

- **SOAP**
  - Oracle utilizes various *adapters*
    - I/O
      - XSLT transformations to pre/post process data packets into digestible XML
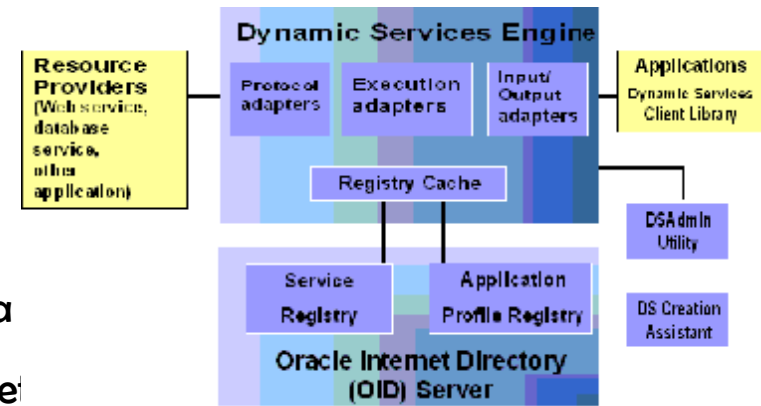   - Protocol
      - Plug-in support for direct Java method calls, PL/SQL calls, HTTP, HTTPS, JMS messages, et
    - Execution
      - Support for flow of control: conditional, sequential, compound, failover, etc.
  - developers can use the *Oracle Dynamic Services Java client APIs*
    - provide a level of abstraction over the actual communication protocol

- **WSDL**
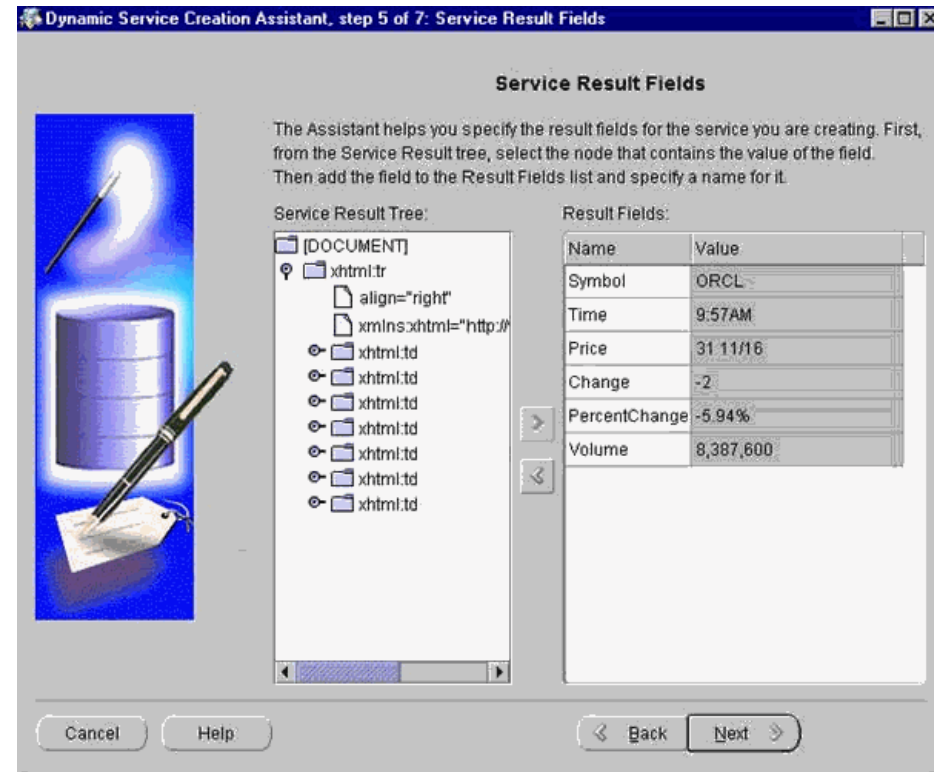 - Oracle uses XML-based *dynamic service descriptors*

- **UDDI**
  - Oracle uses the *Oracle Internet Directory LDAP server* for the same purpose as UDDI

- **Packages everything into *service packages***
  - Comparable to J2EE-style web applications

Dynamic Services Engine

Resource Providers (Web service, database service, other application)

Protocol adapters | Execution adapters | Input/ Output adapters

Applications Dynamic Services Client Library

Registry Cache

DSAdmin Utility

Service Registry | Application Profile Registry

DS Creation Assistant

Oracle Internet Directory (OID) Server

- # Dynamic Services Creation Assistant

  - ## Java-based wizard
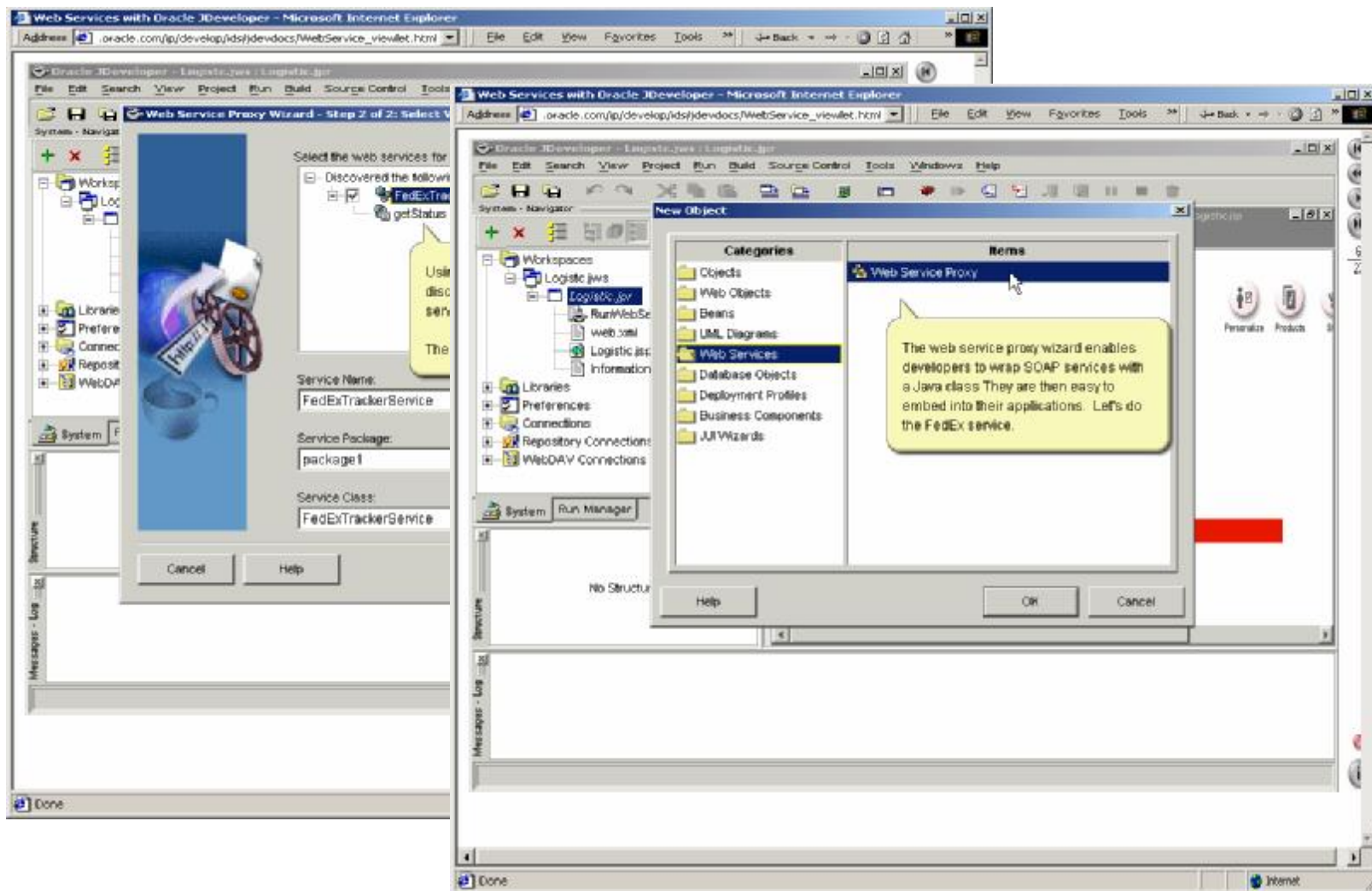
    - produces an XML service descriptor

- # Dynamic Services Administration Utility

  - ## registering services; creating new service categories, browsing registered services, executing registered services for testing, and managing access control lists

    - Command-line; GUI version to come

- **Will support all Web Services standards**
  - **SOAP, WSDL and UDDI**
    - http://www.oracle.com/ip/develop/ids/jdevdocs/WebService_viewlet.html

- **Can publish a Dynamic Service as a portlet**
  - Every registered service is shown as a new portlet
  - Service gets a good support environment
    - Access through many applications
    - Centralized service management
    - Information aggregation
      - Aggregating compound services as portlets
    - Session management
    - Security for access and delivery
    - Persistent auditing, logging, triggers, and notification
    - Reliable service delivery
    - Scalable architecture