UDDI Overview

Web Services Registry
SOA Enabler
What Is UDDI?

- Universal Description, Discovery, and Integration
- Protocols for web services registry
- Public implementation of standard
- Part of web services stack, with SOAP, WSDL, etc.
Service-Oriented Architecture

- Model of enterprise software design and integration
- IT systems as flexible services, not static boxes
- Network-based, loosely coupled, business-focused components
- Implemented with web services standards
Why a Registry?

- Structure for otherwise ad hoc process of component interactions
- Location and invocation metadata for run-time binding
- Flexibility for business rules: security, transport, quality of service, etc.
Typical Registry Applications

- Publishing or finding web services (within an organization or across organizational boundaries) that meet arbitrary criteria
- Determining the security and transport protocols supported by a given web service
- Insulating applications (and providing fail-over) from failures or changes in invoked services
The UDDI Standard

• UDDI specifies protocols for:
  • Publishing and searching services registry
  • Controlling access to registry
  • Distributing and delegating to other registries

• Managed by OASIS standards body
The Public Registry

- The UDDI Business Registry (UBR):
  - Public reference implementation of standard
  - Directory of publicly available services
Key Functional Concepts

- UDDI data model
  - businessService, businessEntity, bindingTemplate, tModels (metadata)
- Hierarchy of registry instances
  - Nodes, registries, affiliated registries
- Key programmatic interfaces
  - Publish, search, replicate, subscribe, key management, authentication
- Multiple, flexible service taxonomies
## UDDI v3 History

<table>
<thead>
<tr>
<th>VERSION</th>
<th>YEAR</th>
<th>GOALS</th>
</tr>
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<tbody>
<tr>
<td>1.0</td>
<td>2000</td>
<td>Public registry foundation</td>
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<tr>
<td>2.0</td>
<td>2003</td>
<td>Web services alignment and extensible taxonomies</td>
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<td>3.0</td>
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<td>Flexible and secure registry interaction models</td>
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- Specification
- Technical notes
- Best practices
- Case studies
- Committee membership
OASIS

- Member-led, international, non-profit standards consortium
- Focuses on structured information and e-business standards
- Members include users, vendors, academics, and governments
- ebXML, SAML, WS-Security, BPEL, etc.