



Universal Description, Discovery and Integration

UDDI Frequently Asked Questions (FAQ)

November 14, 2001

UDDI FAQ

Who, what, when, where, why

Q: What is UDDI? What does UDDI stand for?

A: UDDI stands for Universal Description, Discovery and Integration. The UDDI Project is an industry initiative that is working to enable businesses to quickly, easily, and dynamically find and transact with one another. UDDI enables a business to (i) describe its business and its services, (ii) discover other businesses that offer desired services, and (iii) integrate with these other businesses.

Q: Why is UDDI important?

A: UDDI enables companies to publish how they want to conduct business on the web, potentially fueling growth of business-to-business (B2B) electronic commerce. UDDI will benefit businesses of all sizes by creating a global, platform-independent, open architecture for describing businesses and services, discovering those businesses and services, and integrating businesses using the Internet.

Q: Is UDDI a standards body?

A: UDDI is not a standards body. UDDI is a joint initiative of concerned businesses that want to advance Internet-based computing. The UDDI member companies have come together to develop an open specification and implementations of a universal business registry that is capable of integrating electronic commerce sites. This specification will be submitted to a formal standards body.

The UDDI specification takes advantage of World Wide Web Consortium (W3C) and Internet Engineering Task Force (IETF) standards such as Extensible Markup Language (XML), HTTP, and Domain Name System (DNS) protocols. Additionally, the UDDI specification addresses cross platform programming features by adopting the proposed SOAP messaging specifications found at the W3C web site.

Q: Who “runs” UDDI?

A: The UDDI project is not “run” by any one company. UDDI is currently being guided by a group of industry leaders that are spearheading the early creation and design efforts. A complete list of the UDDI community can be found at www.uddi.org/community.

Q: What is the timeline / roadmap for UDDI?

A: The roadmap for the UDDI project will be determined by the organizations that have committed to developing and enhancing the UDDI specification. Once it

has reached a reasonable level of maturity, uddi.org intends to submit the UDDI specification to a standards body (or bodies).

Version 1 Open Draft of the UDDI specification was announced and published on September 6, 2000. The UDDI community will create two subsequent versions of the specification over a short period of time. These two additional versions will take about nine months each and will be completed prior to the transition to a standards body.

Q: What problem is UDDI solving?

A: Some of the problems UDDI addresses include:

- Today organizations find it difficult to find a business that offers services that best fit their needs. UDDI makes it possible for organizations to quickly discover the right business out of the millions that are currently online.
- Once an organization finds a potential business partner, there's no standard mechanism to figure out how to conduct electronic business with this partner. UDDI makes it possible for organizations to programmatically describe their services and specify how they prefer to conduct business, so that partners can quickly and easily begin trading.

Q: What benefits does UDDI provide?

A: Some of the immediate benefits of UDDI include:

- UDDI can give a business visibility on a global scale by providing a means for an organization to advertise its business and services in a global registry.
- UDDI can help a business develop new e-business partnerships, by enabling businesses to quickly and dynamically discover and interact with each other on the Internet.
- UDDI enables businesses to programmatically describe their services and business processes and their preferred methods for conducting business.
- UDDI can simplify the effort of integrating disparate business processes.
- In short, UDDI can help an organization expand markets, improve efficiency, and reduce costs by easing the way into the global Internet economy.

Q: How can I get more information on UDDI?

A: Current information can be found by visiting www.uddi.org. Information at the uddi.org web site includes both information on the UDDI specification, (including Executive and Technical white papers, feedback mechanisms, news related items, technical specifications, discussion forums, and other related information) as well as a list of Operators for the UDDI Business Registry.

The UDDI Business Registry

Q: What is the UDDI Business Registry?

A: The UDDI Business Registry is the implementation of the specification developed by uddi.org. The UDDI Business Registry is a core element of the infrastructure that supports web services. The UDDI Business Registry provides

a place for a company to register its business and the services that it offers. People or businesses that need a service can use this registry to find a business that provides the service.

Q: Who runs the UDDI Business Registry?

A: The UDDI Business Registry is operated as a distributed service. Currently, IBM and Microsoft operate registry nodes. Additional operators will bring more nodes online in the future. HP has signed an agreement to operate another registry node. An Operator's Council sets policy and quality of service guidelines for the operators.

Q: What is a UDDI Business Registry “node operator”?

A: A “node operator” is a company that runs an instance of the public UDDI Business Registry. The operators replicate the registrations across all nodes on a regular basis thus resulting in a complete set of registered records available to all. The operators all support a common set of APIs that will ensure the integrity and availability of the information provided.

Q: Why are the operators doing this?

A: The UDDI Business Registry is a cornerstone of the web services infrastructure. These businesses are committed to the success of web services.

Q: What is a UDDI Business Registry “registrar”?

A: A “registrar” is a company that performs UDDI registration services on behalf of other companies. A registrar can help a business compose its registry information, including its list of services and the models that describe those services. Please check the uddi.org web site for more information about current registrars.

Q: What information gets registered in the UDDI Business Registry?

A: The UDDI Business Registry contains information about businesses and the services they offer. The information is organized as follows:

- *Business Entity.* A business entity represents information about a business. Each business entity contains a unique identifier, the business name, a short description of the business, some basic contact information, a list of categories and identifiers that describe the business, and a URL pointing to more information about the business.
- *Business Service.* Associated with the business entity is a list of business services offered by the business entity. Each business service entry contains a business description of the service, a list of categories that describe the service, and a list of pointers to references and information related to the service.
- *Specification Pointers.* Associated with each business service entry is a list of binding templates that point to specifications and other technical information

about the service. For example, a binding template might point to a URL that supplies information on how to invoke the service. The specification pointers also associate the service with a service type.

- *Service Types.* A service type is defined by a tModel. Multiple businesses can offer the same type of service, as defined by the tModel. A tModel specifies information such as the tModel name, the name of the organization that published the tModel, a list of categories that describe the service type, and pointers to technical specifications for the service type such as interface definitions, message formats, message protocols, and security protocols.

Q: How do you use the UDDI Business Registry to find services?

A: Users can search the registry for businesses, services, or service types. The UDDI Business Registry offers both a web-based user interface and a programmatic interface. The UDDI Business Registry uses standard industry taxonomies, or classification schemes, to categorize businesses, services, and service types. Each business entity, business service, and tModel can be associated with a variety of identifiers and categories, enabling users to search the registry by industry, product category, and geographical location.

Q: What kind of services can be registered in the UDDI Business Registry?

A: Any kind of service can be registered in the UDDI Business Registry, such as manual services and electronic services, but the primary intent behind UDDI is to provide a global registry for web services.

Private Implementations of UDDI Registries

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What is a private implementation of a UDDI Registry?

Private implementations of UDDI registries are those that are compliant with the UDDI specification and reside within intranets, extranets or private networks on the Internet. They may offer functionality and services oriented or tailored for a specific set of authorized users.

Why should I implement a private registry?

Benefits of private UDDI registries vary for one entity to another. Some benefits include testing purposes, cataloging Web services within one's organization for internal use, and the discovery of Web services within private networks between business partners.

What solutions and tools are available to help me implement a private UDDI registry?

There are many solutions available to help with private UDDI registry implementation. They can be found at <http://www.uddi.org/solutions/>

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Web services and related industry efforts

Q: What is a web service?

A: A web service is a self-describing, self-contained, modular unit of application logic that provides some business functionality to other applications through an Internet connection. Applications access web services via ubiquitous web protocols and data formats, such as HTTP and XML, with no need to worry about how each web service is implemented. Web services can be mixed and matched with other web services to execute a larger workflow or business transaction.

Q: What is the difference between a web service and an e-service? And a dynamic service? And a smart service?

A: From uddi.org's perspective, all of these terms qualify as web services.

Q: How does SOAP relate to UDDI?

A: Access to and from the UDDI Business Registry is performed using the Simple Object Access Protocol (SOAP). However, a service registered in the UDDI Business Registry can expose any type of service interface.

Q: What is a service interface?

A: A service interface is the programmatic interface that is used to invoke the service. A web service interface can be implemented using an Internet protocol, such as SOAP, SOAP Messages with Attachments, ebXML Message Service, E-speak, XML-RPC, CORBA, Java RMI, and COM+.

Q: How do you describe a web service interface?

A: A tModel and a Binding Template point to specifications that describe the web service interface. UDDI does not dictate any specific technology or methodology to describe a web service interface. A web service interface can be described in a number of different ways. It can be described using simple prose, or it can be described using more formal description languages. An interface message format can be described using an XML schema. Or the interface can be described using a service interface description language, such as WSDL (Web Services

Description Language) or WSCL (Web Services Conversation Language). Please refer to the uddi.org for Best Practices documents that describe this process in more detail.

Q: How does UDDI relate to WSDL?

A: There is no formal relationship between UDDI and WSDL (Web Services Description Language), although the technologies are complementary. WSDL can be used to specify a web service interface. The tModel entry for the service type could point to a WSDL abstract description, and the binding template for a specific service could point to a WSDL concrete description.

Q: How does UDDI relate to WSCL?

A: There is no formal relationship between UDDI and WSCL (Web Services Conversation Language), although the technologies are complementary. WSCL can be used to specify a web service interface and to describe service interactions. The tModel entry for the service type and the binding template entry for a specific service could point to WSCL descriptions.

Q: How is UDDI different from other existing business and service directories on the Internet?

A: Most existing registries contain information about a particular business or group of businesses. The UDDI Business Registry is intended to serve as a global, all-inclusive listing of businesses and their services. The UDDI Business Registry does not contain detailed specifications about business services. It points to other sources that contain the service specifications. We anticipate that most businesses will continue to maintain detailed specifications in local registries and repositories, and that the UDDI Business registry will point to the specifications in these local registries and repositories.

Q: How does UDDI relate to LDAP?

A: There is no formal relationship between UDDI and LDAP. The two technologies are designed to do different things. UDDI is a specific-purpose registry that is intended to manage descriptions of web service types, business organizations, and the web services the businesses offer. LDAP is an extensible, general-purpose directory that is most often used to manage users and resources. New LDAP object classes could be defined for the things UDDI registers, but there isn't a global, public, LDAP directory system.

Q: Can a UDDI registry be built or based on LDAP?

A: The UDDI specification does not dictate registry implementation details. The UDDI specification defines an XML-based data model and a set of SOAP APIs to access and manipulate that data model. The SOAP APIs define the behavior a UDDI registry must exhibit. A UDDI implementation could be built on an LDAP directory as long as it conforms to the specified behavior. Thus far, all UDDI implementations have been built on relational databases.

Q: How does UDDI relate to the ebXML registry?

A: There is no formal relationship between UDDI and ebXML, although the technologies are complementary. Businesses that offer ebXML business services will want to register their businesses and their services in the UDDI Business Registry. The UDDI business services, service types, and specification pointers could point to the ebXML Registry and Repository for business and technical descriptions of the services.

Q: How does UDDI relate to the E-Services Village?

A: There is no formal relationship between UDDI and the E-Services Village, although the technologies are complementary. Businesses that offer E-Speak business services will want to register their businesses and their services in the UDDI Business Registry. The UDDI business services, service types, and specification pointers could point to the E-Services Village for business and technical descriptions of the services.

Q: How does UDDI relate to the BizTalk.org Registry?

A: There is no formal relationship between UDDI and BizTalk.org, although the services are complementary. Businesses that register their schemas and style sheets in BizTalk.org will want to register these business formats as service types in the UDDI Business Registry. The UDDI tModel specification pointers could point to these schemas and style sheets in BizTalk.org.

Q: How does UDDI relate to the OASIS xml.org Registry?

A: There is no formal relationship between UDDI and xml.org, although the services are complementary. Businesses that register their schemas and style sheets in xml.org will want to register these business formats as service types in the UDDI Business Registry. The UDDI tModel specification pointers could point to these schemas and style sheets in xml.org.

Q: How is UDDI different from a search engine?

A: The UDDI Business Registry is not a general-purpose search engine. A search engine uses a free-text queries to search unstructured data. The UDDI Business Registry has very structured data. A query against the UDDI registry can only retrieve data that are stored within the registry. Traditional search engines could use the UDDI Business Registry as a source when compiling their responses and results.

Q: How is UDDI different from a B2B marketplace?

A: The participants in an existing B2B Marketplace are typically invited into that particular ecosystem and they conform to the technology infrastructure the marketplace is currently running. There are hundreds of marketplaces today, many of which use different application technology. A supplier in one vertical marketplace may not be able to easily participate in a horizontal marketplace that

was implemented using a different enabling standard. The UDDI Business Registry will help businesses in different marketplaces determine which potential trading partners use the same technology they do, and it will encourage the creation of new web services to translate from one technology to another. This will help unify businesses and marketplaces through the use of a common set of specifications for description and integration.

Q: How is UDDI related to RosettaNet and similar industry organizations?

A: RosettaNet defines standard set of protocols and message formats for supply chain integration, called Partner Interface Processes (PIPs). The RosettaNet PIPs have been registered as service types in UDDI, and businesses can associate their services with these RosettaNet service types. Users can search the UDDI registry for businesses that support these PIPs. Other industry organizations can also register their service types in UDDI.

Scope

Q: Is UDDI available outside the U.S.?

A: UDDI is a global specification. Every company throughout the world is able, and encouraged to register and utilize the UDDI Business Registry.

Q: Who is committed to participate in UDDI?

A: Many organizations are committed to participate in the UDDI Project representing diverse industries and core competencies. The UDDI Project encourages additional participation by technical and business leaders. A list of early adopters and the current UDDI community can be found at www.uddi.org/community.

Q: Which types of organizations are going to use UDDI?

A: Any business, of any size, in any industry, in any location, offering any kind of service can register its business and services in the UDDI Business Registry. Companies can also be registered by third parties (known as registrars) such as marketplaces, exchanges, ISPs, ASPs, etc. We also expect programmers, ISVs, and standards bodies to register service types and service specifications that can be shared with other businesses.

A sampling of companies that we expect to use UDDI include:

- Large Organizations
 - Fortune 500, Global 2000, large manufacturers, international financial institutions, healthcare providers, etc.
- Small / Medium Enterprises
 - Regional distributors, services / consulting firm, local retailers of goods and services, restaurants and hospitality companies, etc.
- Independent Software Vendors (ISVs) and Integrators
 - ERP vendors, networking companies, Big-5 consulting firms, local software houses, etc.

- Marketplace Creators
 - Net market makers, horizontal marketplaces, corporate exchanges, etc.
- Industry and Standards Organizations
 - IT standards bodies and industry vertical organizations and associations.

Q: How many listings will be available in the UDDI Business Registry? Will it be comprehensive?

A: Any company or association worldwide will have the opportunity to register. In the fact, all the members of the UDDI Community have committed to register themselves and the services they provide in the UDDI Business Registry. As participation and adoption grow, the associated benefits for discovery and integration with grow as well. As a result, the discovery of other businesses should become significantly more meaningful.

Q: Which industries will benefit from UDDI?

A: All industries will benefit. This specification was not created to be industry-specific. Industries with complicated supply chains will benefit from the simplicity of dynamic systems integration. Industries with intense vendor relationships will enjoy increased access to systems and business information. Industries with dynamic systems will leverage the value of a single source for information.

Q: What are the efforts to make this an industry standard?

A: An initiative becomes an industry standard after there is mass adoption and utilization. Many businesses and technology leaders have already committed to adopt UDDI and implement their services via the UDDI Business Registry. As a result, the leading businesses, marketplaces, suppliers, systems integrators, and software companies that make up the UDDI project will all participate in the effort to extend the UDDI specification and turn it over to a standards body.

Registration Process

Q: When will I be able to register?

A: You can register now. For a current list of operators, visit www.uddi.org.

Q: What does it mean to register?

A: At a minimum, registering means that a business has listed publicly at least a definition of itself. Ideally, the business will populate the UDDI Business Registry with descriptions of the web services they support. UDDI will then assign a programmatically unique identifier to each service description and business registration and store them in the registry. Marketplaces, search engines, and business applications may query the registry to discover services at other companies in order to establish a business relationship.

Q: Why should I register my company?

A: The fundamental reason a company will want to register on the UDDI Business Registry is to be discovered by other organizations with which they are not currently doing business. Registered companies will also enjoy significantly easier integration with their business partners, which have also adopted the UDDI specification for web services integration.

Q: What does it cost for a business to register in the UDDI Business Registry?

A: Each Operator makes an independent decision whether or not to charge for registering. IBM and Microsoft have each decided not to charge a registration fee. In future implementations of the UDDI specification a certificate from a third party may be required for registration, which may require a fee.

Q: Is there a charge to access the registry?

A: There is no charge to access the UDDI Business Registry.

Q: How can I get my company listed on UDDI?

A: Registering is easy, but you'll want to have some technical information ready when you do. Once you're ready, just visit www.uddi.org and select one of the registration links. This will take you to one of the hosted mirrored, replicated, and distributed UDDI Business Registries.

From there, fill out the forms provided to sign up, and then begin filling in the appropriate business information such as company name, sales contacts, etc. After this basic information is captured, proceed to fill in the company's business services such as purchasing, shipping, ordering, etc. If you support web services that can accept electronic orders via the web, email, or even fax, include these on the registration form as well.

If you forget something, or your information changes, don't worry, you can always come back and update your data.

Alternatively, a third party such as a marketplace, ISP, and ASP that you do business with may register your company (with your permission) as a service. Check with your providers to see if they support the UDDI Business Registry.

Q: Where do I register?

A: Start by visiting www.uddi.org. This site will provide links that take you to the registration forms at the various distributed UDDI Business Registry nodes.

Q: If UDDI has many operator nodes, do I have to register my company in each one?

A: No. You should register at only one of the operator nodes. Your data will be automatically replicated to the other nodes. Once you register with an operator,

this operator node will be the custodian of your registration. You must use this same operator node to make changes to your registration.

Q: I'm already registered as a supplier on a marketplace today. Do I need to re-register my company on UDDI?

A: If you want your company to be visible outside of your chosen marketplace, you can use the UDDI Business Registry as a way to do this. If your marketplace provides you with a way of accepting electronic orders and other business documents, then you'll need to work with your marketplace provider in order to correctly describe your services. The specific marketplace with which you currently participate may programmatically register your organization with UDDI. Check with your marketplace for more details.

Q: My company provides two very different products and services for distinctly different industries. Do we need to register on UDDI twice, once for each product / industry?

A: That's the recommended way to manage large businesses right now. Registering a top-level record for each division or product line lets your customers find the appropriate division or product unit. It may make sense to appoint different individuals to register each component of the overall registration so that each person can manage the individual registered information.

Alternately, a single person can register all of the information, registering individual business service divisions within a single company registration. These registrations will be larger and thus harder to manage, but if you want to have a single registration entry, the UDDI Business Registry will allow for this.

Q: My company provides an online marketplace, and I already have 1,500 suppliers registered. How do I get these suppliers registered on UDDI?

A: One way to help your marketplace suppliers is to register all of the unique services and service types used within your marketplace and then provide these specifications to your suppliers. You might consider becoming a registrar. As a registrar, you can contact your suppliers and offer to sign them up based on the data you have already gathered. If they agree, you can register the data on their behalf – as long as you supply the supplier with the passwords to control their own data afterwards. Many companies are starting to deal with more than one marketplace, so it is important for the individual supplier to be in control of what goes into its record in the UDDI Business Registry. You might also consider contacting one of the UDDI operators to develop a more efficient way of registering a large set of data together.

Q: Will I be able to easily update my company's information in the UDDI Business Registry as my business changes?

A: Absolutely. All that is necessary is to go back to the UDDI Business Registry node where you originally registered your data, provide the access credentials

supplied when you signed up, and make changes using the easy to use on-line tools – right from your browsers. Alternately, you may prefer to use tools that interact directly with the UDDI registries using the XML SOAP message protocols defined to control your business entries.

Q: Who has the right and ability to change/edit an entry?

A: Only someone that knows the proper user credentials that match with the credentials used to create the registration can update the data, and then only at the same UDDI Business Registry node where the registration was originally made. In addition, review the privacy policy of your registry node.

Q: Do I need to know how to program in XML in order to register?

A: No. Most people will not know, or even care, that there is XML involved. Businesses will be able to use the registration forms at the various operator web sites.

Q: What information do I need to know to register my company?

A: To register your business, you just need some basic information about your business. If you're registering web services, you'll need to have a technical understanding of your web services and the way you register them in the UDDI Business Registry. The concepts are fairly straight forward and involve partitioning your information into logical services such as accepting purchase orders, invoices, shipping notices, etc, and then describing the physical locations of your actual technical services.

Q: Who is the right person to register your company?

A: There may not be one single person in a company who has all the information necessary to fully complete the registration for their particular organization. However, even though it may require some knowledge gathering from Operations Management, Information Technology, Purchasing, and Executive Management, discovering the information should not be a difficult task. What's more, it is possible to update an incomplete form at a later time once more information has been gathered in order to complete the process. In addition, it is anticipated that there will be third parties offering registration services for smaller companies or those who do not want to register themselves.

Searching

Q: How can I use UDDI to find other businesses?

A: You can search the UDDI Business Registry by business name, business location, business identifier, industry sector, service type, and other categories.

Q: How can I search the UDDI Business Registry? How can I do it within existing B2B and e-business applications?

A: Each of the UDDI Business Registry operators provides a search facility via their web-based user interfaces. You can also program UDDI search queries into business applications using SOAP-based programming interfaces.

Q: Will the same information be available at all of the UDDI Business Registry nodes?

A: Yes. All of the UDDI Business Registry nodes that are listed on www.uddi.org share copies of all of the base registration information.

Q: Who is allowed to search UDDI?

A: Anyone can search the UDDI Business Registry.

Q: Do I need to register my business in order to search UDDI?

A: It is not necessary to be registered in the UDDI Business Registry to take advantage of the search capabilities it offers.

Q: Where can searches be conducted?

A: Searches may be conducted on any of the UDDI Business Registry nodes.

Q: When can searches be conducted?

A: Any time, day or night.

Other

Q: Will my products and services be listed on UDDI?

A: An organization's catalog of products and available services will not be listed in the UDDI Business Registry. Companies will be able to discover each other by searching by known identifiers (ie: DUNS, Thomas Registry, etc.), standard taxonomies (ie: NAICS, UN/SPSC), or business services to name a few examples.

Technical

Q: Is the spec available?

A: Yes, the spec is available and is published on www.uddi.org.

Q: What other standards does this work with?

A: The UDDI specification takes advantage of World Wide Web Consortium (W3C) and Internet Engineering Task Force (IETF) standards such as Extensible Markup Language (XML), HTTP, and Domain Name System (DNS) protocols. Additionally, cross platform programming features are addressed by adopting early versions of the proposed SOAP messaging specifications found at the W3C web site.

Q: Is the User Interface the same on each registration site?

A: Most likely, the User Interface (UI) will be different on each of the UDDI Business Registries. The facilities to publish, perform searches, and generally

make use of the data are common goals – with strict compliance tests. However, each of the distributed registry nodes has free license to innovate around their interfaces and services offered above and beyond the core requirements outlined in the UDDI specification.