UDDI is an XML-based standard for describing, publishing, and finding web services.

* UDDI stands for **Universal Description, Discovery, and Integration.**
* UDDI is a specification for a distributed registry of web services.
* UDDI is a platform-independent, open framework.
* UDDI can communicate via SOAP, CORBA, Java RMI Protocol.
* UDDI uses Web Service Definition Language(WSDL) to describe interfaces to web services.
* UDDI is seen with SOAP and WSDL as one of the three foundation standards of web services.
* UDDI is an open industry initiative, enabling businesses to discover each other and define how they interact over the Internet.

UDDI has two sections:

* A registry of all web service's metadata, including a pointer to the WSDL description of a service.
* A set of WSDL port type definitions for manipulating and searching that registry.

History of UDDI

* UDDI 1.0 was originally announced by Microsoft, IBM, and Ariba in September 2000.
* Since the initial announcement, the UDDI initiative has grown to include more than 300 companies including Dell, Fujitsu, HP, Hitachi, IBM, Intel, Microsoft, Oracle, SAP, and Sun.
* In May 2001, Microsoft and IBM launched the first UDDI operator sites and turned the UDDI registry live.
* In June 2001, UDDI announced Version 2.0.
* As the time of writing this tutorial, Microsoft and IBM sites had implemented the 1.0 specification and were planning 2.0 support in the near future.
* Currently UDDI is sponsored by OASIS.

Partner Interface Processes

Partner Interface Processes (PIPs) are XML based interfaces that enable two trading partners to exchange data. Dozens of PIPs already exist. Some of them are listed here:

* **PIP2A2** : Enables a partner to query another for product information.
* **PIP3A2** : Enables a partner to query the price and availability of specific products.
* **PIP3A4** : Enables a partner to submit an electronic purchase order and receive acknowledgment of the order.
* **PIP3A3** : Enables a partner to transfer the contents of an electronic shopping cart.
* **PIP3B4** : Enables a partner to query the status of a specific shipment.

Private UDDI Registries

As an alternative to using the public federated network of UDDI registries available on the Internet, companies or industry groups may choose to implement their own private UDDI registries.

These exclusive services are designed for the sole purpose of allowing members of the company or of the industry group to share and advertise services amongst themselves.

Regardless of whether the UDDI registry is a part of the global federated network or a privately owned and operated registry, the one thing that ties them all together is a common web services API for publishing and locating businesses and services advertised within the UDDI registry.

he UDDI technical architecture consists of three parts:

## UDDI Data Model

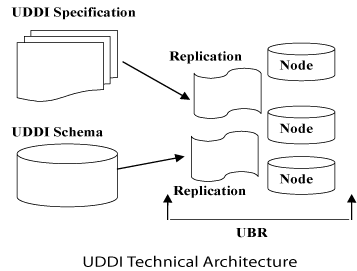
UDDI Data Model is an XML Schema for describing businesses and web services. The data model is described in detail in the "UDDI Data Model" chapter.

## UDDI API Specification

It is a specification of API for searching and publishing UDDI data.

## UDDI Cloud Services

These are operator sites that provide implementations of the UDDI specification and synchronize all data on a scheduled basis.



The UDDI Business Registry (UBR), also known as the Public Cloud, is a conceptually single system built from multiple nodes having their data synchronized through replication.

The current cloud services provide a logically centralized, but physically distributed, directory. It means the data submitted to one root node will automatically be replicated across all the other root nodes. Currently, data replication occurs every 24 hours.

UDDI cloud services are currently provided by Microsoft and IBM. Ariba had originally planned to offer an operator as well, but has since backed away from the commitment. Additional operators from other companies, including Hewlett-Packard, are planned for the near future.

It is also possible to set up private UDDI registries. For example, a large company may set up its own private UDDI registry for registering all internal web services. As these registries are not automatically synchronized with the root UDDI nodes, they are not considered as a part of the UDDI cloud.