

What is a web service?

- A web service is any service that is available over the internet, uses a standardized XML messaging system, and is not tied to any one operating system or programming language.
- A web service is a piece of business logic, located somewhere on the internet, that is accessible through standard-based Internet protocols such as HTTP or SMTP.

Why need web services?

Technical perspective

- open technology
 - XML
 - internet protocol

Business perspective

- application is not locked into particular business partner

How to provide remote procedure access on the web in a multi-platform way?

- Use lowest-common denominator technology
- Transmission protocol: HTTP
- Specialized XML languages:
 - SOAP (Simple Object Access Protocol)
 - Calls a web services and returns results, encoding parameters, return values, etc. in XML
 - WSDL (Web Services Description Language)
 - Says what a web service offers
 - UDDI (Universal Description, Discovery and Integration)
 - Yellow pages

Characteristics

- XML-based
 - Data transferred
 - service description
 - “make” files used to create the programs that implement the service.
- Loosely coupled (like the browser-server relationship)

Service-oriented architecture

- service provider
- service requestor
- service registry