

# Proyecto TIC: Desarrollo e implantación

SOAP Web Services  
Java EE.

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**1.Introduction.**

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# SOAP WS. Introduction.

Java API for XML Web Services (JAX-WS) is a technology for building web services and clients that communicate using XML. JAX-WS allows developers to write message-oriented as well as Remote Procedure Call-oriented (RPC-oriented) web services.

# SOAP WS. Introduction.

Web services describes a standardized way of integrating Web-based applications using the XML, SOAP, WSDL and UDDI open standards over an Internet protocol backbone. XML is used to tag the data, SOAP is used to transfer the data, WSDL is used for describing the services available and UDDI is used for listing what services are available.

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# SOAP WS. SOAP.

SOAP, originally an acronym for Simple Object Access Protocol, is a protocol specification for exchanging structured information in the implementation of web services in computer networks.

The SOAP specification defines the envelope structure, encoding rules, and conventions for representing web service invocations and responses. These calls and responses are transmitted as SOAP messages (XML files) over HTTP.

# SOAP WS. SOAP.

Although SOAP messages are complex, the JAX-WS API hides this complexity from the application developer. It is the JAX-WS runtime system that converts the API calls and responses to and from SOAP messages.



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# SOAP WS. WSDL.

The Web Services Description Language is an XML-based interface definition language that is used for describing the functionality offered by a web service. The acronym is also used for any specific WSDL description of a web service (also referred to as a WSDL file), which provides a machine-readable description of how the service can be called, what parameters it expects, and what data structures it returns. It thus serves a purpose that corresponds roughly to that of a method signature in a programming language.

# SOAP WS. WSDL

## Part of the WSDL

- **Service:** Contains a set of system functions that have been exposed to the Web-based protocols.
- **Endpoint:** Defines the address or connection point to a Web service. It is typically represented by a simple HTTP URL string.

# SOAP WS. WSDL

- **Binding:** Specifies the interface and defines the SOAP binding style (RPC/Document) and transport (SOAP Protocol). The binding section also defines the operations.
- **Interface:** Defines a Web service, the operations that can be performed, and the messages that are used to perform the operation.

# SOAP WS. WSDL

- **Operation:** Defines the SOAP actions and the way the message is encoded, for example, "literal." An operation is like a method or function call in a traditional programming language.
- **Types:** Describes the data. The XML Schema language (also known as XSD) is used (inline or referenced) for this purpose

- **Message:** a message corresponds to an operation. The message contains the information needed to perform the operation. Each message is made up of one or more logical parts. Each part is associated with a message-typing attribute. The message name attribute provides a unique name among all messages. The part name attribute provides a unique name among all the parts of the enclosing message. Parts are a description of the logical content of a message.

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# SOAP WS. UDDI.

Universal Description, Discovery and Integration (UDDI) is a platform-independent, Extensible Markup Language (XML)-based registry by which businesses worldwide can list themselves on the Internet, and a mechanism to register and locate web service applications.