

Q.1 What is SOAP ?

→ SOAP is an acronym for simple object Access Protocol. It is an XML-based messaging protocol for exchanging information among computers. SOAP is an application of the XML specification. you can transmit SOAP messages in any way that the appl<sup>n</sup> require, as long as both the client and the server use the same method.

Q.2 What is the message format used in SOAP ?

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- SOAP is based on message exchanges.
  - Messages are seen as envelopes where the appl<sup>n</sup> encloses the data to be sent.
  - A SOAP message consists of an <Envelope> element containing an optional <Header> and a mandatory <Body> element.
  - The contents of these elements are appl<sup>n</sup> defined and not a part of the SOAP specification.
  - A SOAP <Header> contains blocks of information relevant to how the message is to be processed. This helps pass information in SOAP messages that is not for the appl<sup>n</sup> but for the SOAP engine.
  - The SOAP <Body> is where the main end-to-end information conveyed in a SOAP message must be carried.

Q.3 What are the steps taken in SOAP processing model ?

→ SOAP sender - It is a node that transmits the message received by the receiver.



**SOAP receiver** - It is a node that receives or accepts the message passed by the user.

**SOAP message path** - is a node that sets the path to make it easy for the messages to go along the reach its destination.

**Initial SOAP sender** - is also called as originator and it sends the messages at the starting point of the messages path and saves the setting there.

**SOAP intermediary** - is a in bet<sup>n</sup> the SOAP receiver and SOAP sender that contains the SOAP message. It processes the header blocks that forward the SOAP message to the receiver.

**Ultimate SOAP receiver** - is the node where the message gets received finally. This is responsible for the processing of the contents used by SOAP body and the SOAP header also included in it.

Q. 4 What is the use of having SOAP messages with tech attachments?

→ You can send and receive SOAP messages that include binary data (such as PDF files or JPEG images) as attachments. Attachments can be referenced (that is, represented explicitly as message parts in the service interface) or unreferenced (in which arbitrary nos and types of attachments can be included).

- MTOM - (message Transmission optimization mechanism) - A method that IBC recommends to use for transferring binary data in SOAP messages.
- SWA (SOAP with attachments, also known as MIME for web service) - A MIME-based attachments mechanism for SOAP/HTTP. SOAP UI supports plain SWA as well as swa:Refs attachments in accordance with the ws-I Attachments profile.
- SOAP UI also supports specifying file names inline to insert binary contents from a file into a message body

Q.5 What is the difference bet<sup>n</sup> SOAP and other remote access techniques ?

SOAP	CORBA
SOAP is simple to use & it is non symmetrical unlike DCOM	CORBA is highly popular and usually have complexity in them
SOAP provides greater platform independent with the language independence unlike DCOM	CORBA doesn't provide any of these.
SOAP identify the object other than stateless and it is hard to maintain that.	It is not hard to maintain in case of other remote access techniques



Q.10 Give advantages and disadvantages of SOAP?

- Advantage of SOAP -
- Simplicity
  - Portability
  - Firewall friendliness
  - Use of open standards
  - Interoperability
  - Universal acceptance

Disadvantages of SOAP -

- Too much reliance on HTTP
- Statelessness
- Serialization by value and not by reference.

Q.11 Explain in short Apache Axis environment?

→ Apache axis is an implementation of the SOAP. SOAP is lightweight protocol for enhancing structured information in a decentralized distributed environment.

It is an XML based protocol. Apache axis is an open source. it consists of a Java and C++ implementation of SOAP server and various utilities and API's for generating and deploying web service application.

Q.12 "SOAP" fault is caused due to client or server failure state

→ True.



Q. 6 Give the use of SOAP actor attribute ?

→ SOAP actor element is specially used to address the header element to a specific endpoint. This attribute is used to annotate an extension element.

Q. 7 What do you mean by wire protocol & transport protocol.

→ It generally refers to communication protocol higher than the physical layer. In contrast to transport protocol at the protocol level (like TCP or UDP), the term wire protocol is used to describe a common way to exchange information at the application level.

Q. 8 What is SOAP message path.

→ It is the set of SOAP nodes through which a single SOAP message passes, including the initial SOAP sender, zero or more SOAP intermediaries and an ultimate SOAP receiver.

Q. 9 Give the use of SOAP must understand attribute.

→ To indicate whether a header entry is mandatory or optional for the recipient to process.