

Nicole Wozniak
4/16/2026
ITWP 2600 O1201 2026WI

Written Exercise 8, Chapter 9

In about 200 words, outline the difference between the Simple Object Access Protocol (SOAP) and the Representational State Transfer (REST) principle as they are used in the creation of Web services. In your answer, discuss the advantages and disadvantages of each.

Simple Object Access Protocol (SOAP) uses XML or HTML to send mark-up data from one application to another across the network. SOAP API's expose the operations/methods so another application can call functions like 'createCustomer' that would manipulate data. It is known to be more complex, large and more rigid but it also stores the state between requests, which uses an increased amount of memory and bandwidth. SOAP comes with more built-in security standards to keep a high-integrity environment. It's more designs for larger enterprise-based applications in mind. Compared to REST, SOAP is more secure and reliable, with built-in error handling logic.

Meanwhile, Representation State Transfer (REST) is an architectural style that is more lightweight as well as stateless. It uses methods like GET, POST, PUT, and DELETE to manipulate data. Unlike SOAP, REST can use different formats of data such as JSON, XML, or plain text even; while JSON is the most used. REST is stateless, so it doesn't keep previous request data as it treats each request as if they are new and independent. This makes REST less complex and bulky compared to SOAP as it considers mobile device data transfer in mind. REST exposes URL calls like '/customers' and a POST, GET, PUT, DELETE to manipulate that specific data. Due to being less complex, REST is considered much faster and efficient and is considered more scalable.

Resources

Schneider, Gary P. (2017, 2015). Electronic Commerce (12th ed.). Cengage Learning US.

<https://www.geeksforgeeks.org/websites-apps/difference-between-rest-api-and-soap-api/>

<https://www.ibm.com/docs/en/wasdtfe?topic=applications-soap>

<https://aws.amazon.com/compare/the-difference-between-soap-rest/>