

SOAP vs REST

Abstract

SOAP and REST comprise most of the communication architectures present on the web. REST being a simple web communication API over HTTP and SOAP being a communication protocol not constrained to HTTP. This paper will discuss the differences between the two.

Our project group have decided to implement a client-server system that utilizes the REST-protocol and the exact same system but with the SOAP-protocol. This is done to execute both and observe specific metrics we want to further investigate.

Reference Summary 1

This scientific article compares SOAP(Simple Object Access Protocol) with REST(Representational State Transfer Protocol) by Indirect and direct forms of metrics. The data is collected through searching through other articles that analyze differences in SOAP and REST in any way. The direct metrics such as cost, lines of code, execution speed and indirect metrics such as complexity, maintainability and efficiency etc. results in the conclusion that depending on the nature of the system either can be the better choice of protocol.(1)

Reference Summary 2

This article gives a simple explanation of the two different protocols and how they differ from each other. REST being a lightweight protocol that is easy to understand and SOAP being older than REST is more complex and standardized. One could describe the difference in the protocols by comparing REST to a postcard and SOAP to an envelope, postcards being easy to read and envelopes needing to be opened and unwrapped. Both protocols have pros and cons and choosing on over the other depends on the use case.(2)

References

- (1) Tihomirovs, Juris, and Jānis Grabis. "Comparison of soap and rest based web services using software evaluation metrics." *Information Technology and Management Science* 19.1 (2016): 92-97.
- (2) <https://www.soapui.org/learn/api/soap-vs-rest-api.html>