

# 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 containing to flexibility.

The poster aims to convey the conclusions we came to when investigating how SOAP and REST handle change in API. The main point of this study is to see how well these styles handle this situation and what techniques are used to handle these changes.

In our search we found that for REST API the common way of maintaining changes is through versioning of the API and for SOAP a XML file is used to describe how to communicate with the server. Our poster will illustrate how these two methods differ and what advantages or disadvantages they have.

## 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.

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(2) <https://www.soapui.org/learn/api/soap-vs-rest-api.html>