

Representational State Transfer (REST)

Representational State Transfer (REST) is a software architectural style that defines a set of constraints to be used for creating Web services

Snippet from *Wikipedia*: [Representational state transfer](#)

Representational state transfer (REST) is a software architectural style which uses a subset of HTTP. It is commonly used to create interactive applications that use Web services. A Web service that follows these guidelines is called *RESTful*. Such a Web service must provide its Web resources in a textual representation and allow them to be read and modified with a stateless protocol and a predefined set of operations. This approach allows interoperability between the computer systems on the Internet that provide these services. REST is an alternative to, for example, SOAP as way to access a Web service.

"Web resources" were first defined on the World Wide Web as documents or files identified by their URLs. Today, the definition is much more generic and abstract, and includes every thing, entity, or action that can be identified, named, addressed, handled, or performed in any way on the Web. In a RESTful Web service, requests made to a resource's URI elicit a response with a payload formatted in HTML, XML, JSON, or some other format. For example, the response can confirm that the resource state has been changed. The response can also include hypertext links to related resources. The most common protocol for these requests and responses is HTTP. It provides operations (HTTP methods) GET, HEAD, POST, PUT, PATCH, DELETE, CONNECT, OPTIONS and TRACE.

By using a stateless protocol and standard operations, RESTful systems aim for fast performance, reliability, and the ability to grow by reusing components that can be managed and updated without affecting the system as a whole, even while it is running.

The term *representational state transfer* was introduced and defined in 2000 by Roy Fielding in his doctoral dissertation. Fielding's dissertation explained the REST principles that were known as the "HTTP object model" beginning in 1994, and were used in designing the HTTP 1.1 and Uniform Resource Identifiers (URI) standards. The term is intended to evoke an image of how a well-designed Web application behaves: it is a network of Web resources (a virtual state-machine) where the user progresses through the application by selecting resource identifiers such as <http://www.example.com/articles/21> and resource operations such as GET or POST (application state transitions), resulting in the next resource's representation (the next application state) being transferred to the end user for their use.

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