

Level 0 – Remote Procedure Invocation

Level 0 contains SOAP or XML-RPC sending data as **Plain Old XML (POX)**. Only the POST methods are used. This is the most primitive way of building SOA applications with a single POST method and using XML to communicate between services.

Level 1 – REST resources

Level 1 uses the POST methods and instead of using a function and passing arguments it uses the REST URIs. So, it still uses only one HTTP method. It is better than Level 0 as it breaks a complex functionality into multiple resources with the use of one POST method to communicate between services.

Level 2 – more HTTP verbs

Level 2 uses other HTTP verbs such as GET, HEAD, DELETE, and PUT along with the POST methods. Level 2 is the real use case of REST, which advocates using different verbs based on the HTTP request methods and the system can have multiple resources.

Level 3 – HATEOAS

Hypermedia as the Engine of Application State (HATEOAS) is the most mature level of Richardson's model. The responses to the client requests contain hypermedia controls, which can help the client decide what is the next action they can take.

Level 3 encourages easy discoverability and makes it easy for the responses to be self-explanatory. There is debate about whether HATEOAS is truly RESTful because the representation contains more information beyond just describing the resource.