



# Spring Framework 7

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Beginner to Guru

Richardson Maturity Model: Steps Towards the Glory of REST



## Richardson Maturity Model (RMM)

- Established by Leonard Richardson in a 2008 Q-Con Presentation
- A model used to describe the maturity of RESTful services
- Unlike SOAP, there is no formal specification for REST
- RMM is used to describe the quality of the RESTful service





## RMM Levels

Level 3: Hypermedia Controls

Level 2: HTTP Verbs

Level 1: Resources

Level 0: The Swap of POX





## Core Technologies

HYPERMEDIA

HTTP

URI





## Level 0: Swamp of POX

- POX - Plain Old XML
- Uses implementing protocol as a transport protocol
- Typically uses one URI and one kind of method
- Examples - RPC, SOAP, XML-RPC





## Level 1: Resources

- Uses Multiple URIs to identify specific resources
- Examples:
  - <http://www.example.com/product/1234>
  - <http://www.example.com/product/5687>
- Still uses a single method (ie GET)





## Level 2: HTTP Verbs

- HTTP Verbs are used with URIs for desired actions
- Examples:
  - GET /products/1234 - to return data for product 1234
  - PUT /products/1234 (with XML body) to update data for product 1234
  - DELETE /products/1234 to delete product 1234
- Most common in practical use





## Level 3: Hypermedia

- Representation now contains URIs which may be useful to consumers
- Helps client developers explore the resource
- No clear standard at this time
- Spring provides an implementation of HATEOS





## Summary

- Level 1 - breaks large service into distinct URIs
- Level 2 - Introduces Verbs to implement actions
- Level 3 - provides discoverability, making the API more self documenting



