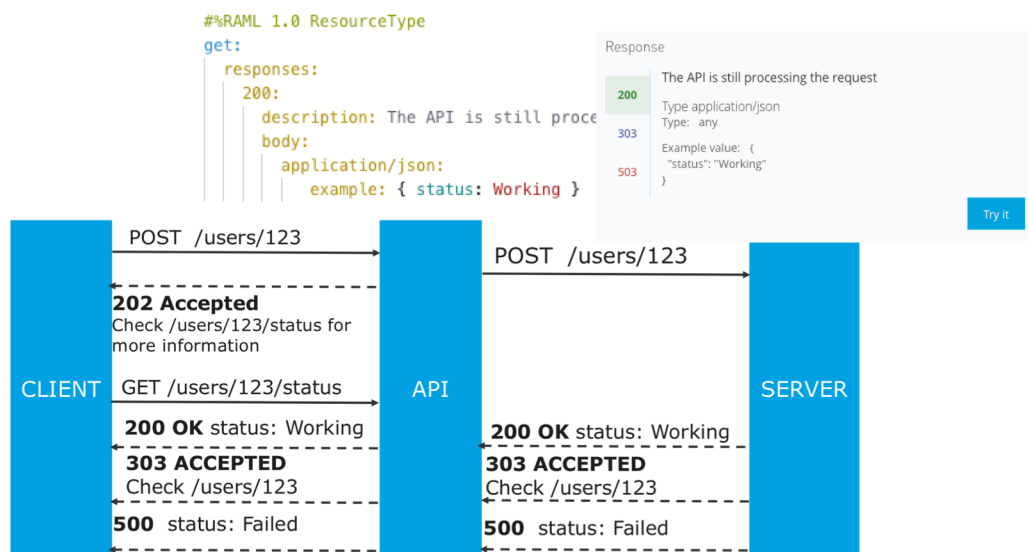




# Module 12: Enhancing API Responses using Hypermedia

## Goal



At the end of this module, you should be able to

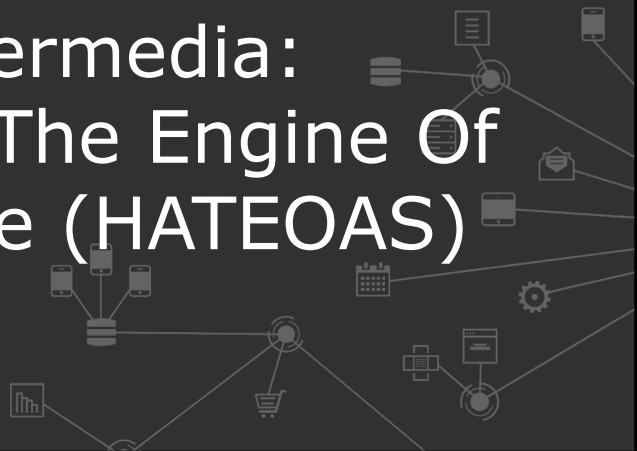


- Describe hypermedia
- Simplify API discoverability using hypermedia
- Use hypermedia to enhance API responses
- Modify API definitions to generate state-specific client responses

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## Introducing hypermedia: Hypermedia as The Engine Of Application State (HATEOAS)



## Introducing hypermedia



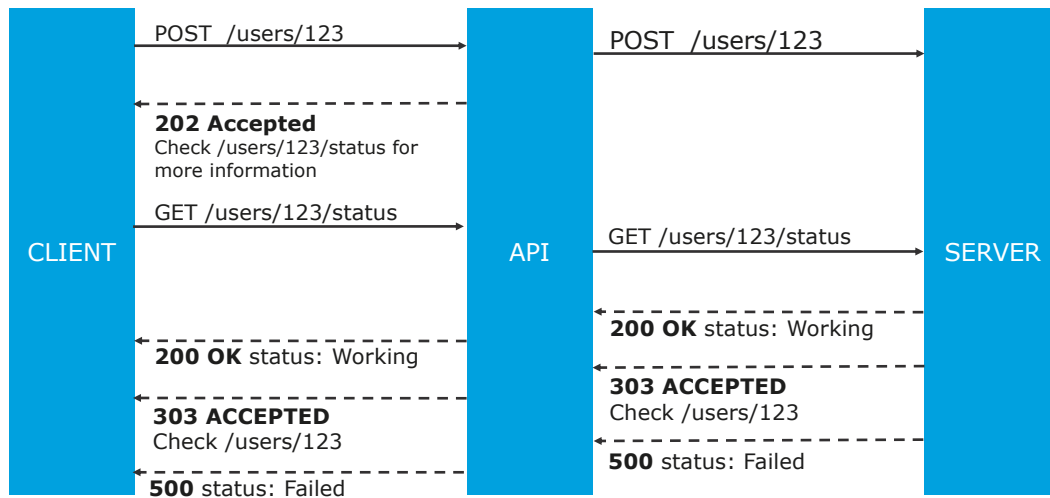
- Hypermedia helps giving information about an object's state
  - Core principle for RESTful APIs
  - Adding hyperlinks to data returned, providing means of linking a newly created object or linking the where the status of a posted information can be tracked helps API consumers understand the state of the data being returned
- Hypermedia was introduced to address the fact that not all objects might be in the same state at a given point of time
  - For every object(datatype) in an API, there are possible actions that can be applied to it
  - For example, in the ACME Banking example, not all bank customers have confirmed their personal information like email or address, some of them might be standard customers, others just a member of a joint account, some might be new customers who are still not registered in the system completely and so on

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# Simplifying discoverability and enhancing responses using Hypermedia



## Enhancing responses by providing links to check status of processing



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## Walkthrough 12-1: Modify an API definition to implement state-specific client responses



- Create an HTTP 202 post body response with necessary headers
- Add a new resource to track the state of post requests that are under processing
- Add necessary HTTP methods with responses to give meaningful information back to the API consumers

```

#%RAML 1.0 ResourceType
get:
  responses:
    200:
      description: The API is still processing
      body:
        application/json:
          example: { status: Working }
  
```

### Response

200 The API is still processing the request  
 Type application/json  
 Type: any  
 303 Example value: {  
 "status": "Working"  
 }  
 503

Try it

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# Summary



## Summary



- Hypermedia was originally designed to increase discoverability
- Adding hyperlinks makes redirection to endpoints and resources easier
- To achieve asynchronous communication between client and server, it is critical to keep the client informed about the state of the information