



Module 7: Documenting and Testing APIs

Goal



API summary

ACME Banking API enables developers to build applications that make use of the information from resource methods implemented in the API.

This API contains functionality that allows developers to retrieve and manipulate *customer*, *account* and *transaction* information.

Expires:

```

type: datetime
description: |
  Sets a date in RFC 1123 format from which the cached resource should no longer be consi
  If both the Expires header and max-age in the Cache-Control header are set, max-age will
example: Tue, 17 Jul 2017 09:30:41 GMT
format: rfc2616
  
```

```

12 /customers:
13   get:
14     description: Retrieve a list of customers
15     displayName: Get all customers
16     headers:
17       Accept?:
  
```

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

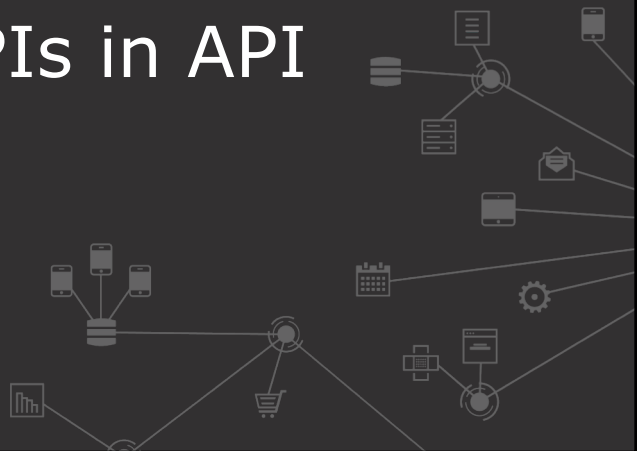


- Add documentation and description nodes to RAML definitions
- Use the mocking service to create API endpoints
- Use the API console to test API endpoints

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Documenting APIs in API designer



Documenting APIs using Anypoint Platform



- Three ways to document APIs
 - Provide documentation and description nodes in the RAML API definition
 - This will be added to the API console
 - Exchange portal (covered in module 8)
 - API Notebook (covered in module 8)

Creating documentation in RAML 1.0

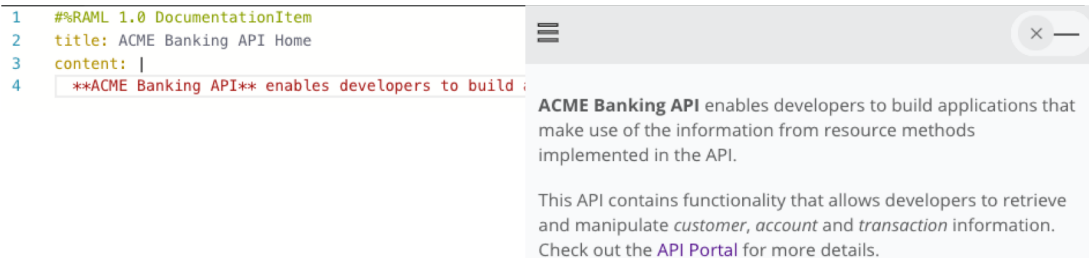


- Documentation can be
 - Added inside the RAML API definition
 - Referenced as another RAML file outside the API definition, as a fragment
- A documentation fragment consists of a title and content node
 - Serves as a user guide and reference for the API
 - Explains how the API works by providing technical and business context
- Multiple documentation fragments can be referenced inside a RAML API definition

Walkthrough 7-1: Add a documentation fragment to a RAML API definition



- Create a documentation fragment
- Link the documentation fragment to the main RAML definition file
- Link multiple documentation fragments to the documentation node in the RAML API definition



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Adding description and displayName nodes to API definitions



- A description node
 - Is a substantial, human-friendly description of a resource, method, datatype, etc.
 - Can be a string and can be formatted using Markdown
- A displayName node
 - Is an alternate, human friendly name for a resource
 - It can be used with resource methods, example and type nodes too

```

12  /customers:
13    get:
14      description: Retrieve a list of customers
15      displayName: Get all customers
16    headers:
17      Accept?:
    
```

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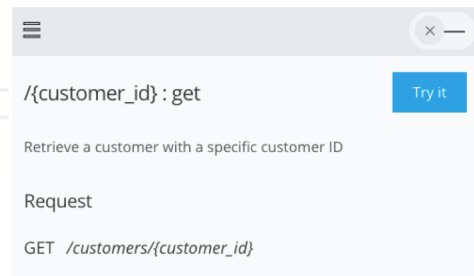
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Walkthrough 7-2: Add description nodes to resource methods



- Add descriptions to resource methods
- Add displayName to resource methods
- Add descriptions to URI parameters
- Add description and example nodes to request and response headers

```
12 /customers:  
13 get:  
14     description: Retrieve a list of customers  
15     displayName: Get all customers  
16     headers:  
17         Accept?:
```



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Testing APIs in API designer



Enabling the mocking service



- Mocking service is a part of the API console
- Creates a mocking server to test API endpoints using the API console
- When the mocking service is turned on, a baseUrl node is appended to the RAML API definition
 - It forms the base of the URLs of each of the API resources
 - baseUrl can contain the mock server URL or actual API implementation URL

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Walkthrough 7-3: Use the mocking service in API console to test an API



- Enable the mocking service in the API console
- Test the resource methods in the API console to see the response information

The screenshot shows the MuleSoft API console interface. On the left is a sidebar with a menu icon and a 'Mocking Service' button. The main area displays a '200 OK' status and a response time of '334.72 ms'. Below this, a JSON response is shown for a customer with ID '8f19cb50-3f57-4d38', first name 'John', last name 'Doe', and address details.

customerID	8f19cb50-3f57-4d38
firstName	John
lastName	Doe
displayName	John Doe
address(Object)	
addressLine1	1234 Lane
addressLine2	Apt.#620
city	San Francisco
state	California

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Summary



Summary



- There are several ways of documenting APIs – Exchange portals, API Notebook and adding documentation fragments in API definition
- Documentation added to the RAML definition appears in the API console
- Documenting allows key stakeholders to give valuable feedback during API lifecycle design
- API console and mocking service allows rapid prototyping of the API design