

- **Postman components for authentication to AdaptiveWork:**
  - Username & Password
    - Not used in today's class, steps to authenticate in this method are in the class materials.
  - API Key
    - Requires a user in AdaptiveWork configured as an 'Integration User' and an API Key set. See class materials to complete this configuration.
- **Postman application must be installed:**
  - Sign up for a free account at <https://postman.com>
  - Install Postman on your workstation.
  - Additional information located in the class materials.

Global Permissions

User Type: \_\_\_\_\_ Full

Super User: \_\_\_\_\_

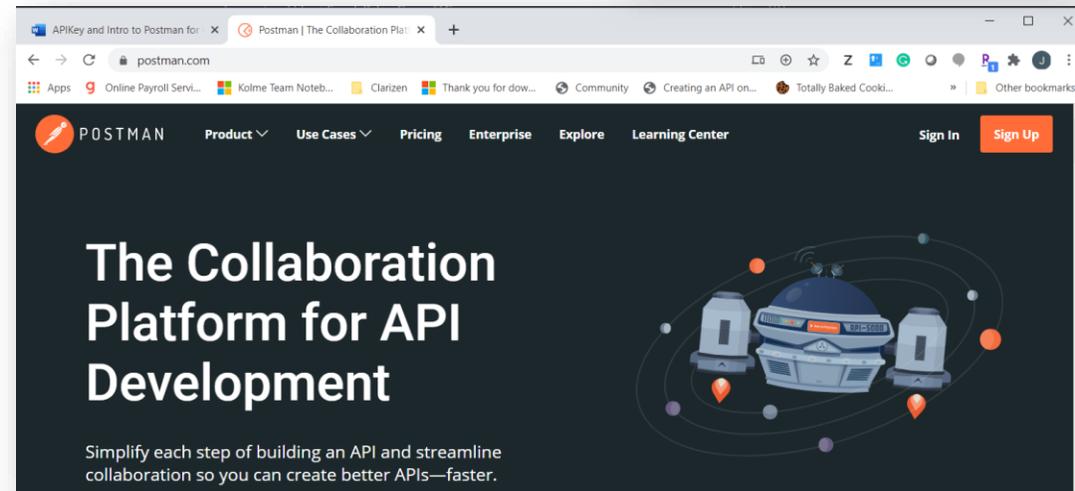
Integration User: \_\_\_\_\_

Manage API Keys

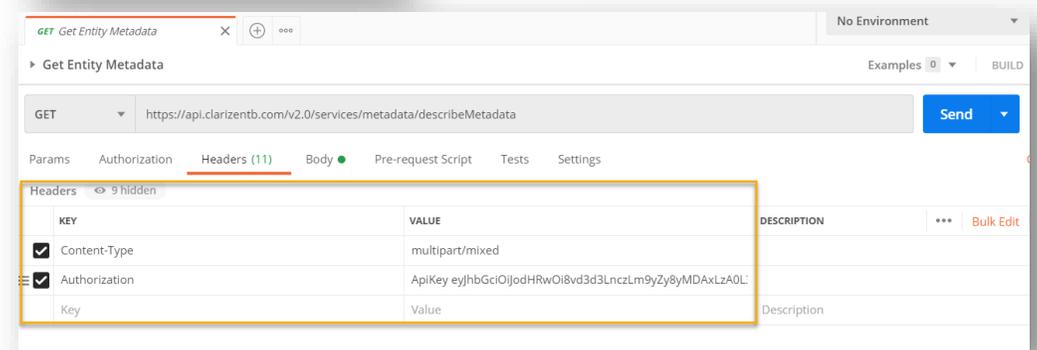
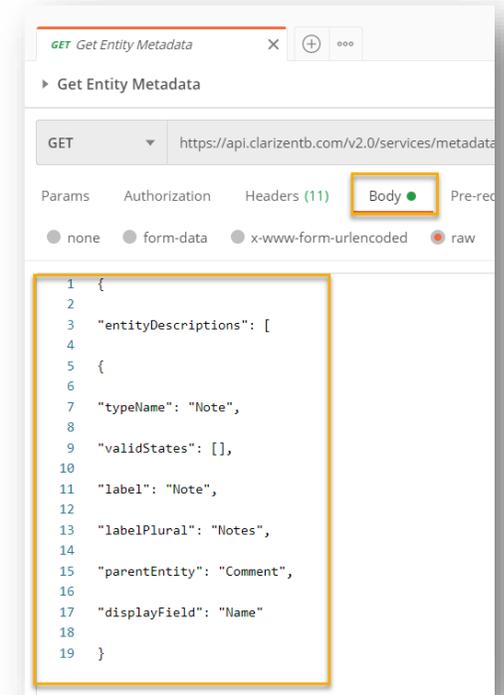
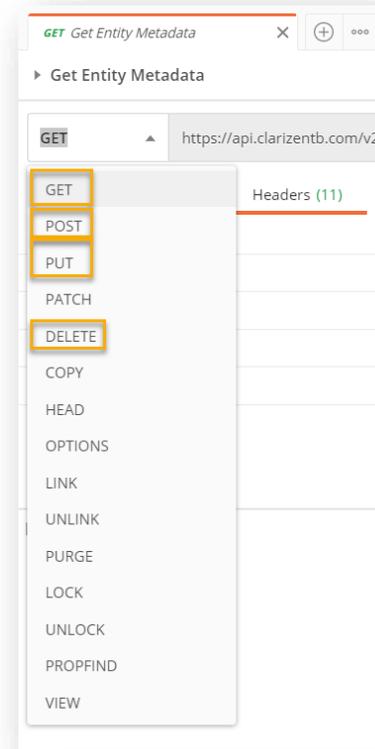
Generate API keys and copy to use in other applications. You can revoke a key at any time. After you revoke a key, the application using the key will lose access to the Clarizen One API.

Primary *expires on March 25, 2021*  
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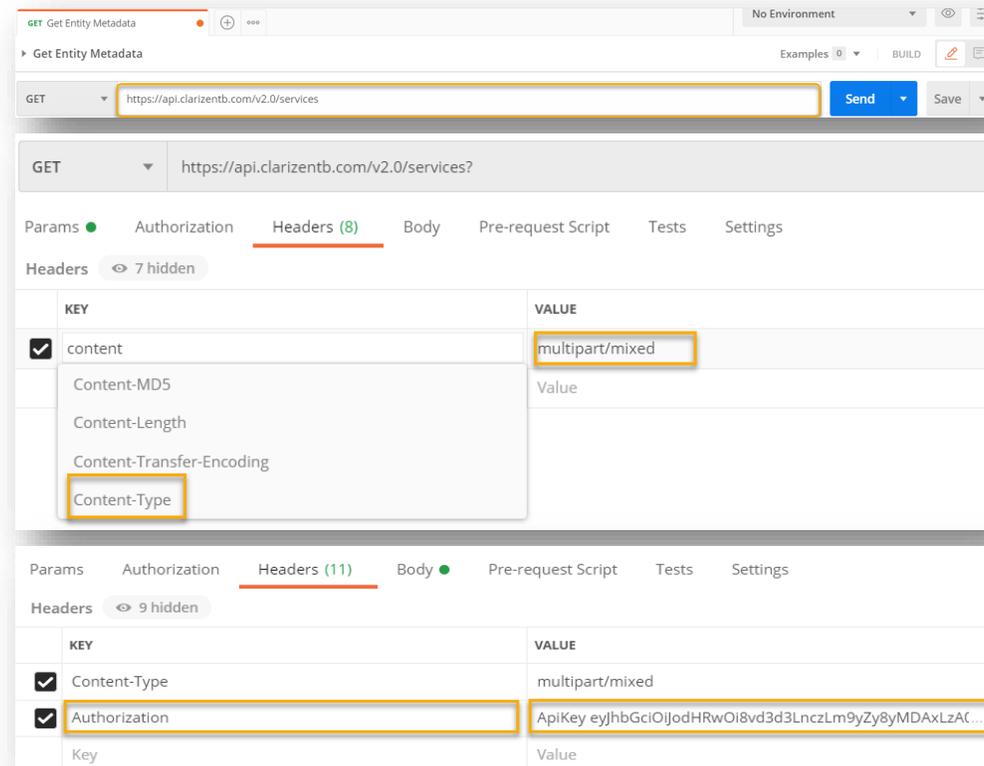
Secondary  
\_\_\_\_\_



- API Query Basics
  - API Methods used in this class
    - Get – Read (MetaData, Authentication (U&P))
    - Put – Insert
    - Post – Update
    - Delete – Used to delete based on Body statement
  - Headers - Content-Type & Authorization
  - Body - Field values, Queries, formatting of data.
  - AdaptiveWork API Services
    - **Authentication** - Provides the basic calls to authenticate with the REST API, get session information and access the correct data center where your organization is located.
    - **Metadata** - Provides information about the AdaptiveWork data model including supported entities, entity fields and data types, as well as relations between entities.
    - **Data** - Provides the calls to create, update, retrieve and delete objects in AdaptiveWork as well as to query and search for objects.
    - **Bulk** - Allows clients to perform bulk operations. (Not covered in this course)

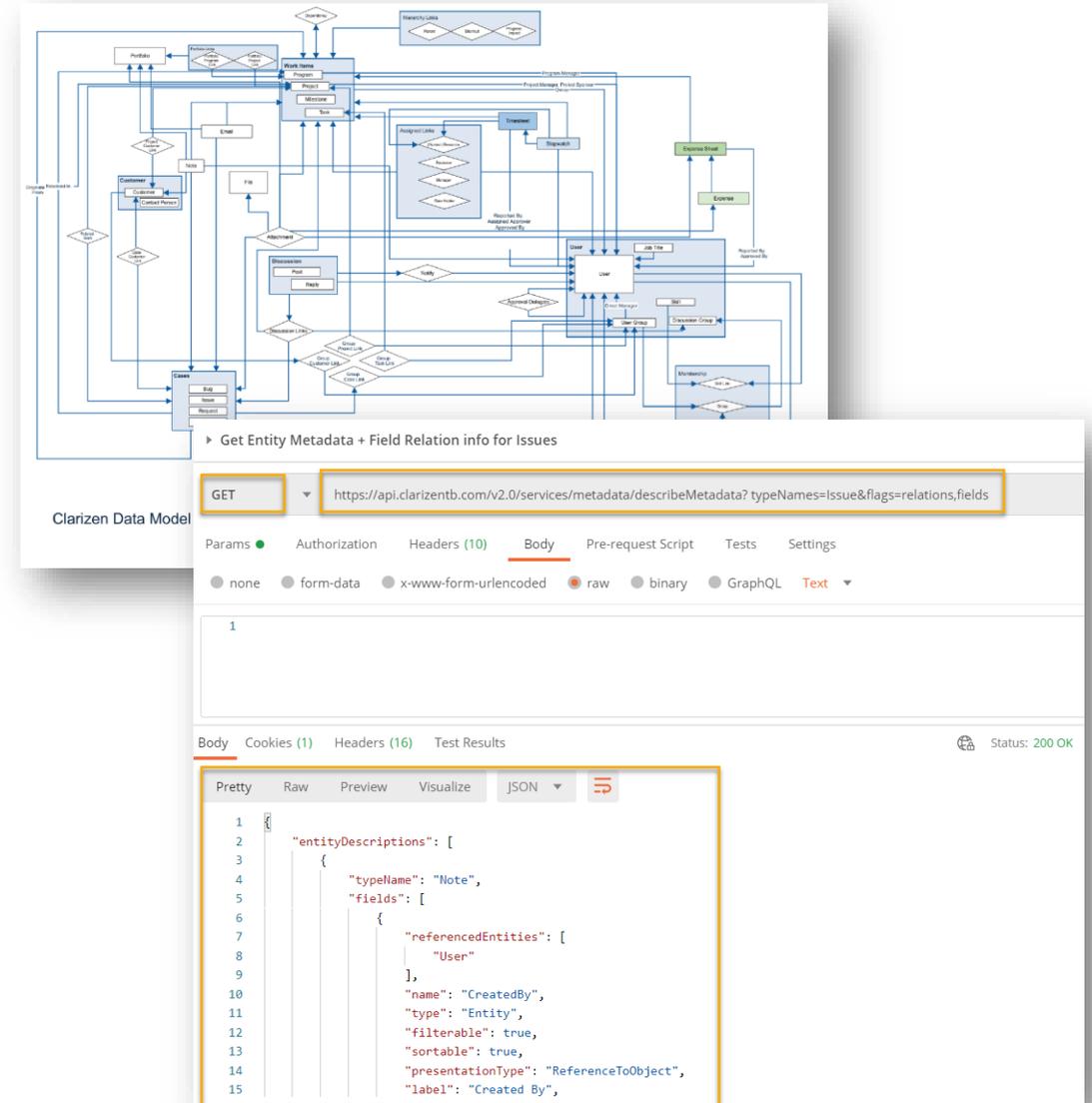


- **Base AdaptiveWork URL's**
  - Production AdaptiveWork API URL  
<https://api.clarizen.com/v2.0/services>
  - Sandbox AdaptiveWork API URL  
<https://api.clarizentb.com/v2.0/services>
- **Configure Postman headers to authenticate to the AdaptiveWork API.**
  - Enter the AdaptiveWork base url
  - Create header keys
    - Create a 'Content-Type' key and select 'Multipart/mixed' from the value column
    - Create a 'Authorization' key and add 'ApiKey xxxx' where xxx equals your ApiKey created in AdaptiveWork.





- **AdaptiveWork Data Model**
  - <https://success.planview.com/@api/deki/pages/158040/pdf/Data%2bModel.pdf?stylesheet=default>
- **Using the API to retrieve entity information from AdaptiveWork**
  - API Method: Get
  - List of entities with no details
    - Production AdaptiveWork  
<https://api.clarizen.com/v2.0/services/metadata/listentities>
    - Sandbox AdaptiveWork  
<https://api.clarizentb.com/v2.0/services/metadata/listentities>
  - List of entities with all details
    - Production AdaptiveWork  
<https://api.clarizen.com/v2.0/services/metadata/describeMetadata>
    - Sandbox AdaptiveWork  
<https://api.clarizentb.com/v2.0/services/metadata/describeMetadata>
  - List of entities filtered for Work Items & Issues
    - Production AdaptiveWork  
<https://api.clarizen.com/v2.0/services/metadata/describeMetadata/describeEntities?TypeNames=WorkItem,Issue>
    - Sandbox AdaptiveWork  
<https://api.clarizentb.com/v2.0/services/metadata/describeMetadata/describeEntities?TypeNames=WorkItem,Issue>
  - Filter for type Issue with relations and fields
    - Production AdaptiveWork  
<https://api.clarizentb.com/v2.0/services/metadata/describeMetadata/describeEntities?TypeNames=Issue&flags=relations,fields>
    - Sandbox AdaptiveWork  
<https://api.clarizentb.com/v2.0/services/metadata/describeMetadata/describeEntities?TypeNames=Issue&flags=relations,fields>



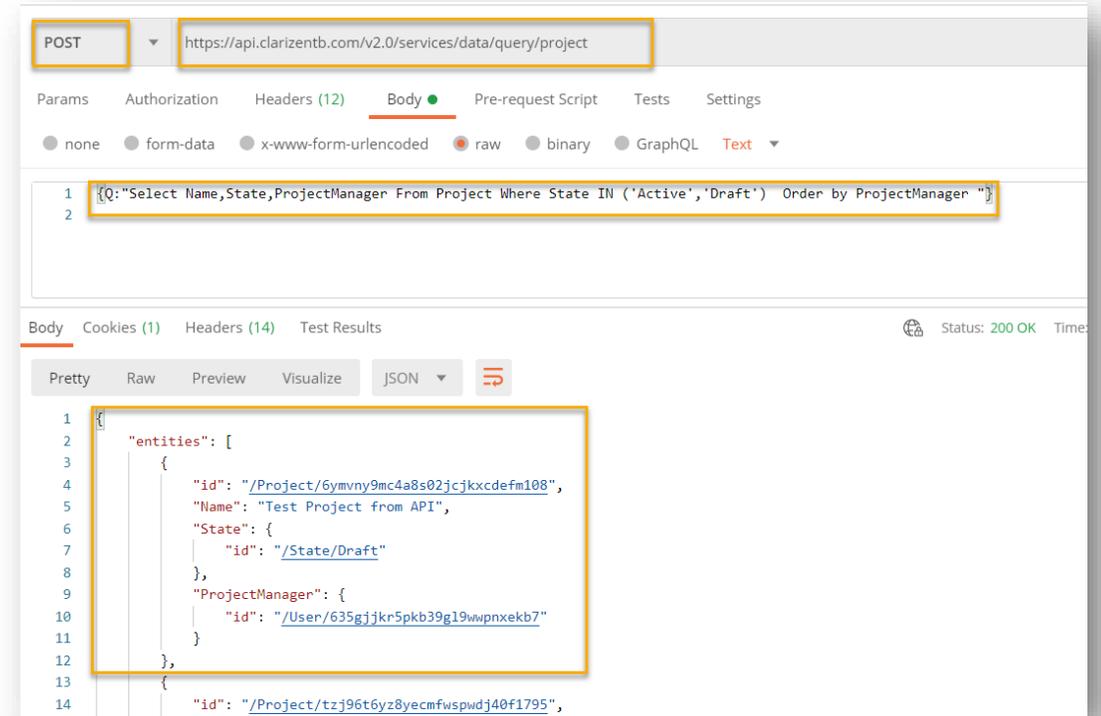
The image shows a complex diagram of the AdaptiveWork Data Model at the top, illustrating various entities like Product, Work Item, Program, and their relationships. Below the diagram is a screenshot of a REST client (Postman) showing a GET request to the API endpoint: `https://api.clarizentb.com/v2.0/services/metadata/describeMetadata? typeNames=Issue&flags=relations,fields`. The response body is displayed in JSON format, showing the structure of the returned data:

```

1 {
2   "entityDescriptions": [
3     {
4       "typeName": "Note",
5       "fields": [
6         {
7           "referencedEntities": [
8             "User"
9           ],
10          "name": "CreatedBy",
11          "type": "Entity",
12          "filterable": true,
13          "sortable": true,
14          "presentationType": "ReferenceToObject",
15          "label": "Created By",

```

- **API Query Basics with defined Body**
- Using the API to retrieve data
  - Query Basics
    - API Method Change : Post
    - Production AdaptiveWork  
<https://api.clarizen.com/v2.0/services/data/query/>
    - Sandbox AdaptiveWork  
<https://api.clarizentb.com/v2.0/services/data/query/>
    - Body Change: The “Body” of the Postman configuration is used to define the query for data to be returned from AdaptiveWork.
  - Query for list of projects
    - Body content: {Q:"Select Name From Project"}
  - Query for projects returning specific fields with specific values.
    - Body content: {Q:"Select Name,State From Project Where State IN ('Active','Draft') "}
  - Query for projects returning specific fields with specific values and in a defined order.
    - Body content: {Q:"Select Name,State,ProjectManager From Project Where State IN ('Active','Draft') Order by ProjectManager"}

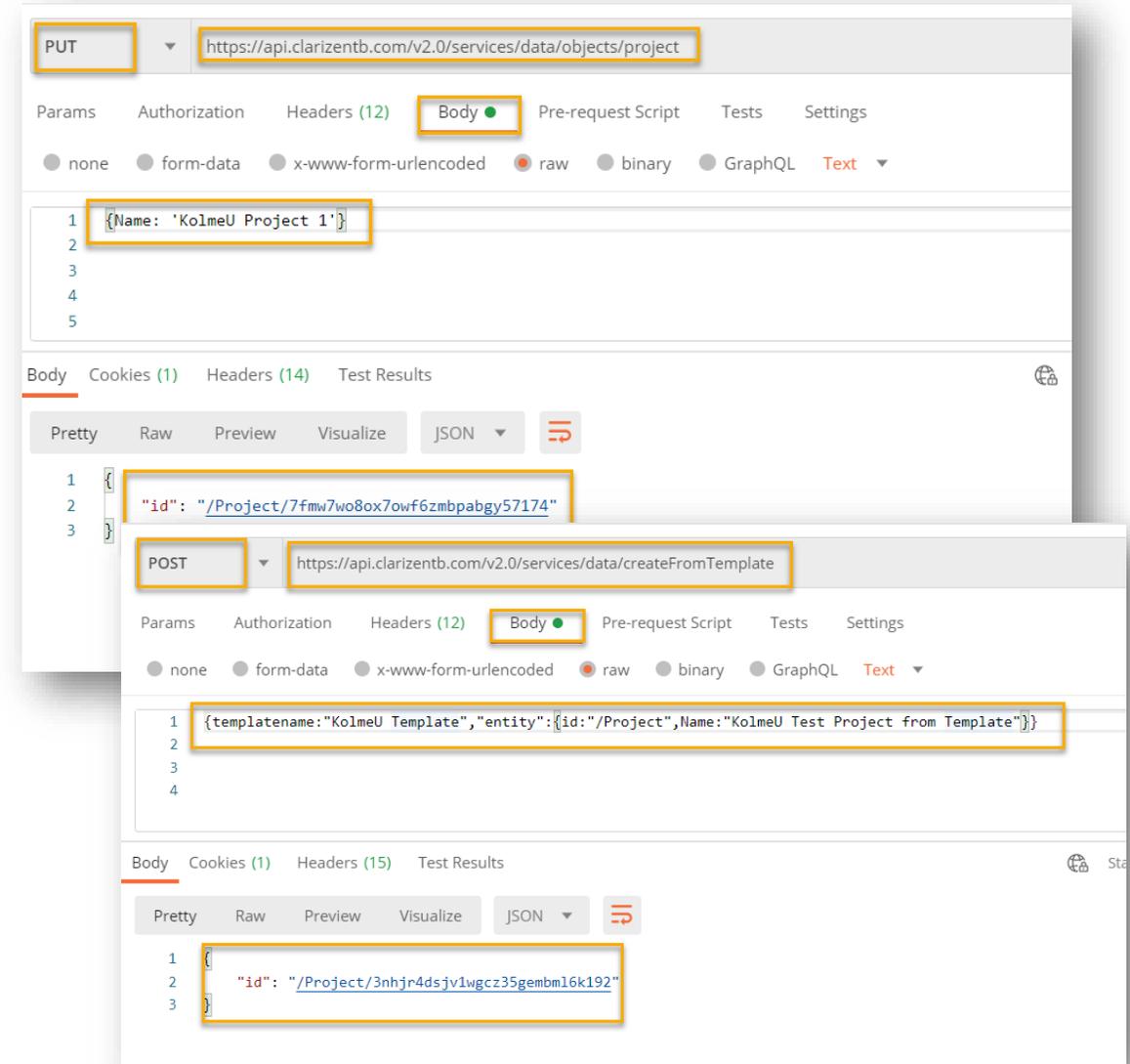


- **Inserting Data Basics**

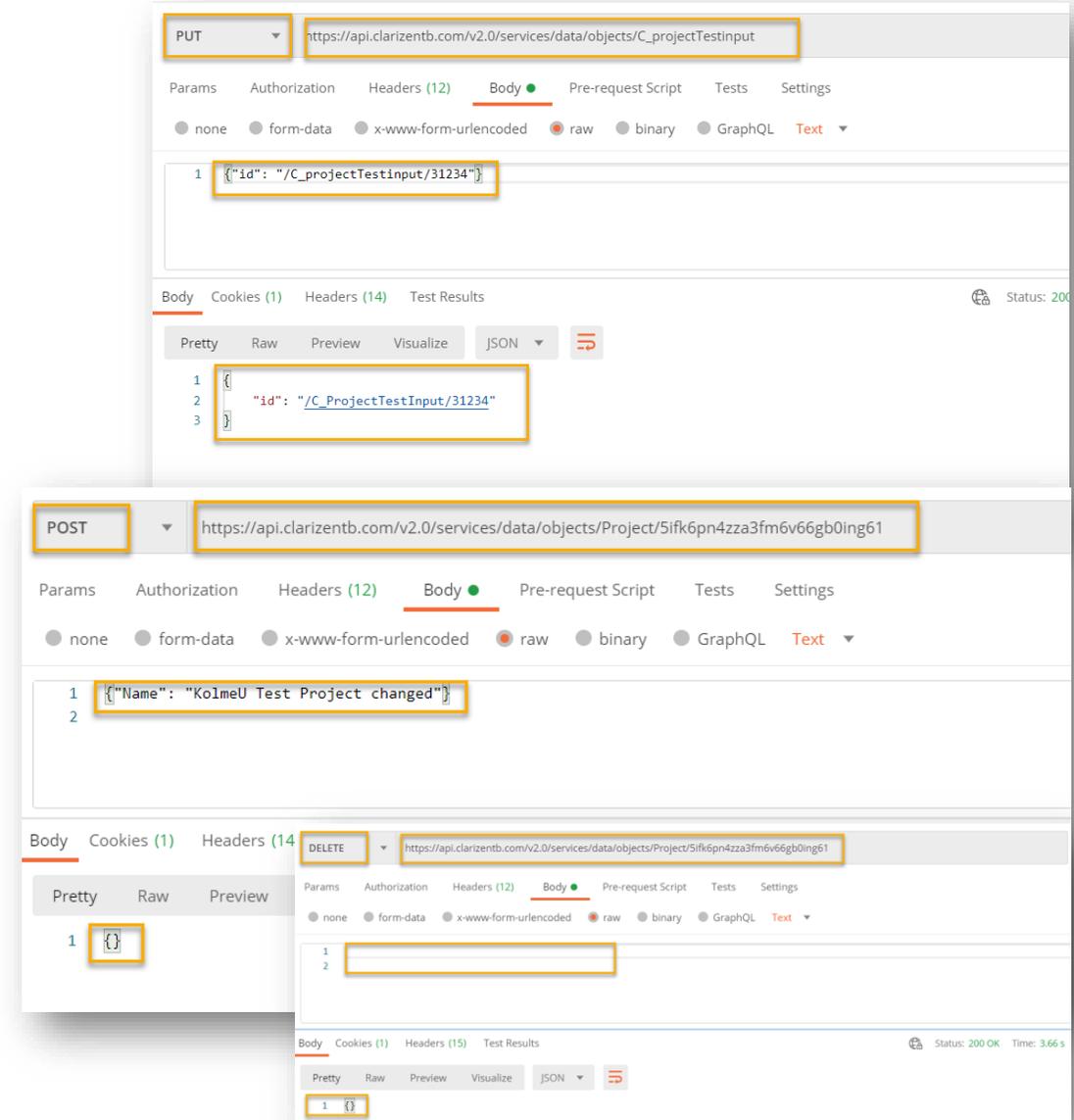
- API Methods : Put, Post
- Production Change  
[https://api.clarizen.com/v2.0/services/data/\\*itemtype\\*](https://api.clarizen.com/v2.0/services/data/*itemtype*) (IE. Project)
- Sandbox Change  
[https://api.clarizentb.com/v2.0/services/data/\\*itemtype\\*](https://api.clarizentb.com/v2.0/services/data/*itemtype*) (IE. Project)
- Body Change: The “Body” of the Postman configuration is used to define the data to be sent to AdaptiveWork.

- **Using the API to insert data**

- Create a new project in AdaptiveWork
  - API Method Change: Put
  - Production AdaptiveWork <https://api.clarizen.com/v2.0/services/data/objects/project>
  - Sandbox AdaptiveWork <https://api.clarizentb.com/v2.0/services/data/objects/project/>
  - Body Content: {Name:'KolmeU Project 1'}
- Create a new project in AdaptiveWork with a template.
  - API Method Change: Post
  - Production AdaptiveWork <https://api.clarizen.com/v2.0/services/data/createFromTemplate>
  - Sandbox AdaptiveWork <https://api.clarizentb.com/v2.0/services/data/createFromTemplate>
  - Body Content: {templatename:"KolmeU Template", "entity":{id:"/Project",Name:"KolmeU Test Project from Template"}}



- Using the API to update data
  - Add a value to a picklist** API Method Change: Put
    - Production AdaptiveWork  
[https://api.clarizen.com/v2.0/services/data/objects/\\*Changeme\\*](https://api.clarizen.com/v2.0/services/data/objects/*Changeme*)
    - Sandbox AdaptiveWork  
[https://api.clarizentb.com/v2.0/services/data/objects/\\*Changeme\\*](https://api.clarizentb.com/v2.0/services/data/objects/*Changeme*)
    - Body Content: Change value to Picklist name and value to {"id": "/PicklistAPIName/NewValue"}
    - Please NOTE!** The URL needs the API Name of the Pick List whereas the body of the query needs its **Class API Name**.
      - For Example: If trying to modify a Pick List called *Risk Class* on the Risk object. The API Name is \$C\_RiskClass, the **Class API Name** is \$C\_RiskRiskClass.
  - Change a project name**
    - API Method Change: Post
    - URL Change: Get the External ID of the Project to rename, replace the below ID.
    - Production AdaptiveWork  
<https://api.clarizen.com/v2.0/services/data/objects/Project/5ifk6pn4zza3fm6v66gb0ing61>
    - Sandbox AdaptiveWork  
<https://api.clarizentb.com/v2.0/services/data/objects/Project/5ifk6pn4zza3fm6v66gb0ing61>
    - Body Content: Replace the value after the : with the new name. {"Name": "KolmeU Test Project Updated"}
- Using the API to Delete data
  - Deleting a project**
    - API Method Change: Delete
    - URL Change: Get the External ID of the Project to rename, replace the below ID.
    - Production AdaptiveWork  
<https://api.clarizen.com/v2.0/services/data/objects/Project/ea49867f-b2dc-4fd2-8f84-522c0084e105>
    - Sandbox AdaptiveWork  
<https://api.clarizentb.com/v2.0/services/data/objects/Project/ea49867f-b2dc-4fd2-8f84-522c0084e105>



The image displays three screenshots of a REST client interface, likely Swagger Client, showing API requests and their bodies.

**Top Screenshot (PUT):** Shows a PUT request to `https://api.clarizen.com/v2.0/services/data/objects/C_projectTestInput`. The body is `{"id": "/C_projectTestInput/31234"}`.

**Middle Screenshot (POST):** Shows a POST request to `https://api.clarizentb.com/v2.0/services/data/objects/Project/5ifk6pn4zza3fm6v66gb0ing61`. The body is `{"Name": "KolmeU Test Project changed"}`.

**Bottom Screenshot (DELETE):** Shows a DELETE request to `https://api.clarizentb.com/v2.0/services/data/objects/Project/5ifk6pn4zza3fm6v66gb0ing61`. The body is `{}`.