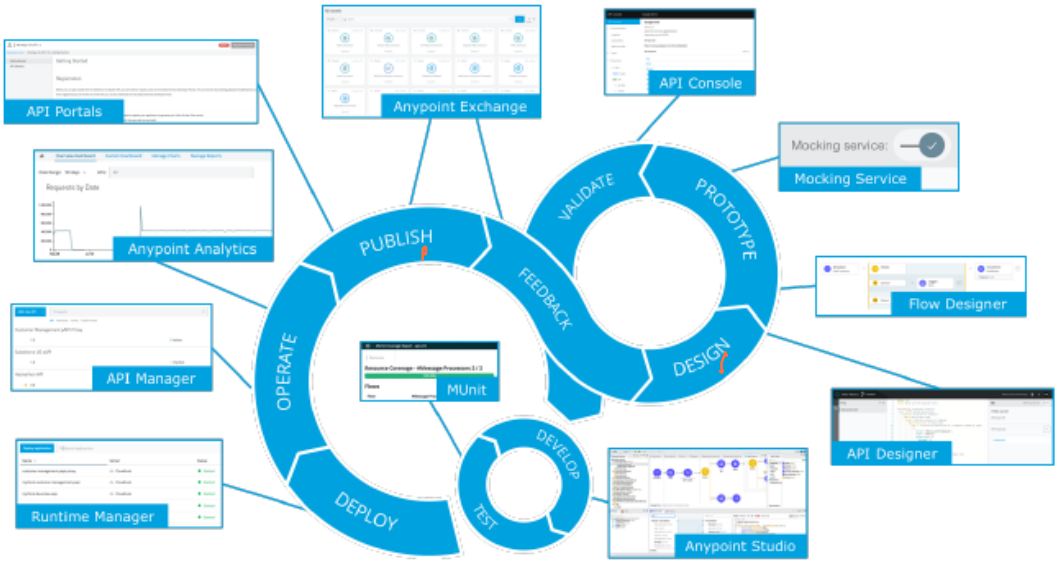
API Lifecycle



1. Requirement and analysis phase - The API journey begins with a business problem. A team or organization identifies a need for integration to achieve a specific goal. They've already documented their requirements through high-level design (HLD) and data mapping sheets.

2.Design - API Designer is a web-based tool that streamlines the design of RESTful API interfaces. It empowers you to visually craft your API's specifications, ensuring they align perfectly with your project's requirements.

3. Prototype -

- Flow Designer - Flow Designer is a web-based tool within MuleSoft Design Center that empowers you to create simple API implementations without diving into code. This makes it ideal for two key scenarios: Proof of Concept (POC) Development and Lightweight Integrations

- Mock Service - The Design Center's Mock Service acts as a powerful tool for validating your API specifications before actual development. It essentially creates a simulated version of your API, allowing developers to: Test API Behavior, Explore functionality and refine design

4. API Console - The API Console is a valuable tool for validating your API specifications with external parties like vendors or clients. It plays a crucial role after API development using Anypoint Studio with RAML definitions.

All the above steps are recursive - Iterate on RAML design, mock, and validate with clients until API is approved for development.

5,6 .Develop and test - Anypoint Studio acts as your command center for building and testing Mule applications. This IDE offers a streamlined development experience, including direct RAML download from design center, visual development with drag and drop development for integrations and integrated unit testing tool called munit.

7. Deploy - MuleSoft Runtime Manager deploys your Mule applications onto engines (Mule Runtime) in the cloud (CloudHub) or on-premises. It acts as a central hub for managing both deployment and the runtime environment itself.

8.Operate -

- API manager - API Manager in Anypoint Platform safeguards your APIs. It controls access with pre-built policies or lets you create custom ones. This central hub secures and restricts API usage for your organization.

-API Analytics - Dive deeper into API usage with Anypoint Analytics, a built-in feature within API Manager. It empowers you to understand how your APIs are performing, We can monitor analytics like number of requests by date, number of request by location, number of requests by application name many other analytics.

8. Publish - We publish the APIs to make our APIs discoverable. There are two ways to do it -

- API exchange - Using API exchange we can publish the APIs along with its specification with the nice UI of API console using which user can know what all different methods and resources this API support. We can also define documentation for that particular API. Once the API is published to exchange , other teams or users within the organization can see and interact with APIs and make a decision whether they can reuse this API in any of their business requirements, so it promotes reusability as well.

- API Portal - API portal is also similar to API exchange with the only difference being, APIs are discoverable to the external user also which are published to API portal.

API lifecycle continues with next iteration based on the feedback received from project stakeholders.