Azure API management service is a fully managed service that enables organizations to publish, secure, transform, maintain, and monitor APIs. Additionally, APIM acts both as the backend & frontend service for applications. Components of APIM includes API gateway, API developer portal and security and access. This documentation will detail the configuration of two separate API set ups: one for our ArcGIS application and OpenAI GPT.

## **ArcGIS API Management Configuration**

### **ArcGIS**

* ArcGIS is software that allows the wusm team to create, manage, analyze, and visualize spatial data and geographic information.
* Our ArcGIS application is hosted on virtual machine hosted within the **i2-rdc-dev-arcgis-rg** resource group in the **I2 - RDC 2.0 Azure POC – Dev** subscription.

### **ArcGIS APIM Configuration:**

* ArcGIS API is currently configured in the **i2-api-gw-dev**, APIM development environment, which is hosted in the **wusm-api-gw-dev** resource group within the **I2 - RDC 2.0 Azure POC – Dev** subscription.
* Additionally, these configurations consist of Private, Public IP addresses and Virtual network.
  + The Public address allows external clients out of our wusm network to access our APIs.
    - This address can later be use by the Azure App gateway for additional features such as load balancing.
    - This public Address is not currently been used or access by any resource.
  + The private IP address is the address behind the FDQN ([**https://icsapi.dev.i2rdc3.wustl.edu**](https://icsapi.dev.i2rdc3.wustl.edu)**).** 
    - <https://icsapi.dev.i2rdc3.wustl.edu/gis/usa/findAddressCandidates?f=json> is the front-end configuration of the ArcGIS API that is access by resources or individual within the WUSM network such as Databricks to communicate or send data to ArcGIS.
  + The **i2rdc3-dev-vnet01** virtual network is used by APIM to establish communication between **i2rdc-arcgis-dev,** ArcGIS virtual machine, and the API management service.

## OpenAI GPT APIM Configuration

### Open AI GPT

* OpenAI GPT is a natural language processing model that generates text based on the input it receives.
* Our OpenAI GPT is hosted on an Azure Webapp Service within the **rg-i2db-chat-sandbox** resource group in the **I2 - RDC 2.0 Azure POC – Prod** subscription.

### Open AI GPT APIM Configuration:

* OpenAI GPT API is also configured in the **i2-api-gw-dev**, APIM development environment, which is hosted in the **wusm-api-gw-dev** resource group within the **I2 - RDC 2.0 Azure POC – Dev** subscription.
* Additionally, these configurations consist of Private, Public IP addresses and service endpoint.
  + The Public address allows external clients out of our wusm network to access our APIs.
    - This address can later be use by the Azure App gateway for additional features such as load balancing.
    - This public Address is not currently been used or access by any resource.
  + The private IP address is the address behind the FDQN ([**https://icsapi.dev.i2rdc3.wustl.edu**](https://icsapi.dev.i2rdc3.wustl.edu)**).**
* **https://icsapi.dev.i2rdc3.wustl.edu/oai/deployments/chat-gpt-35-turbo/chat/completions?api-version=2023-05-15** is the front-end configuration of the OpenAI GPT API that is access by resources or individual within the WUSM network.
* The Service endpoint, <https://i2db-chat-sandboxaizehuif2whye3c.openai.azure.com/>, has been used by the APIM service to communicate with Open AI GPT service.