GOOGLE/BING MAPS API KEY

CONFIGURATION GUIDE

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1. OBTAINING GOOGLE MAPS API KEY

To use the Google Maps functionality within BVI, the user must generate a Google Maps API key from the developer console. This document outlines the process to generate the key and use it with BVI.

Note: This process requires billing to be enabled on the associated Google account to function; this involves submitting a credit card to Google. By default, this card is never charged unless automatic billing is manually configured on the account. Google requires this to prevent bots from using the API.

1. Ensure the BVI software is not running.
2. In a web browser, navigate and log in to: https://console.developers.google.com/
3. At the top, there will be a banner that prompts the user to activate a Free Trial. Click **Activate** (see Figure 1).
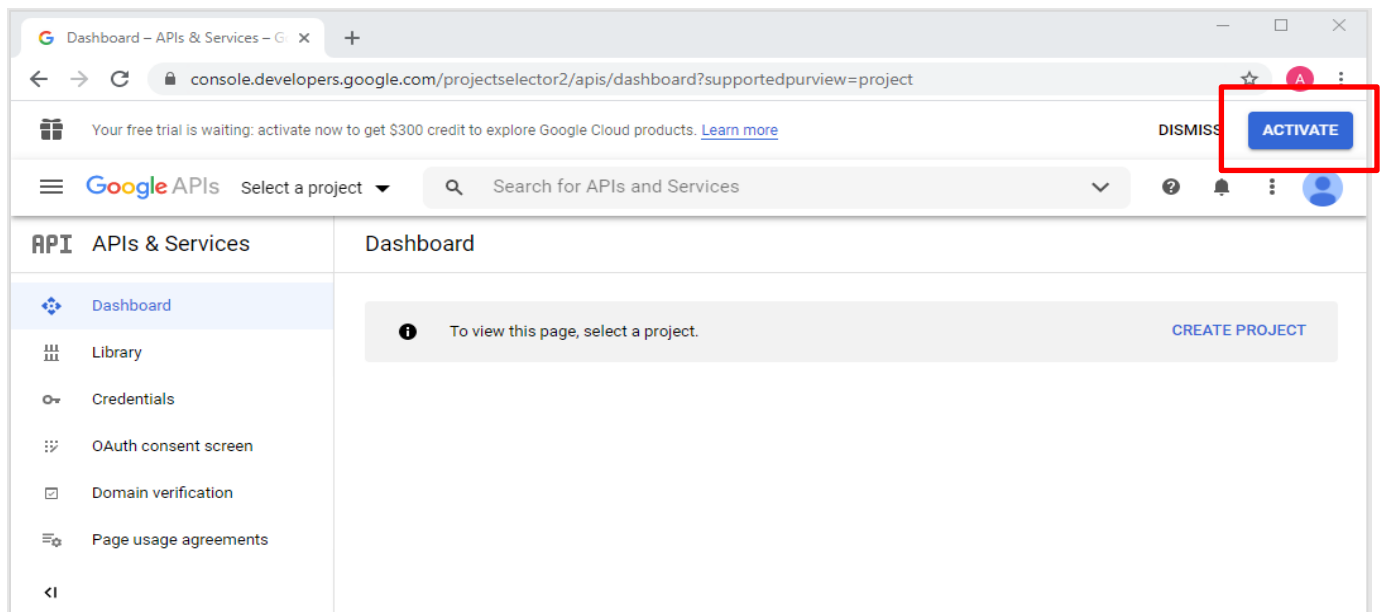

Figure 1 Google Console Landing Page

4. Accept the Terms of Service.
5. Accept Google Cloud Platform Free Trial Terms of Service (see Figure 2).

Figure 2 Enabling Cloud Platform Free Trial
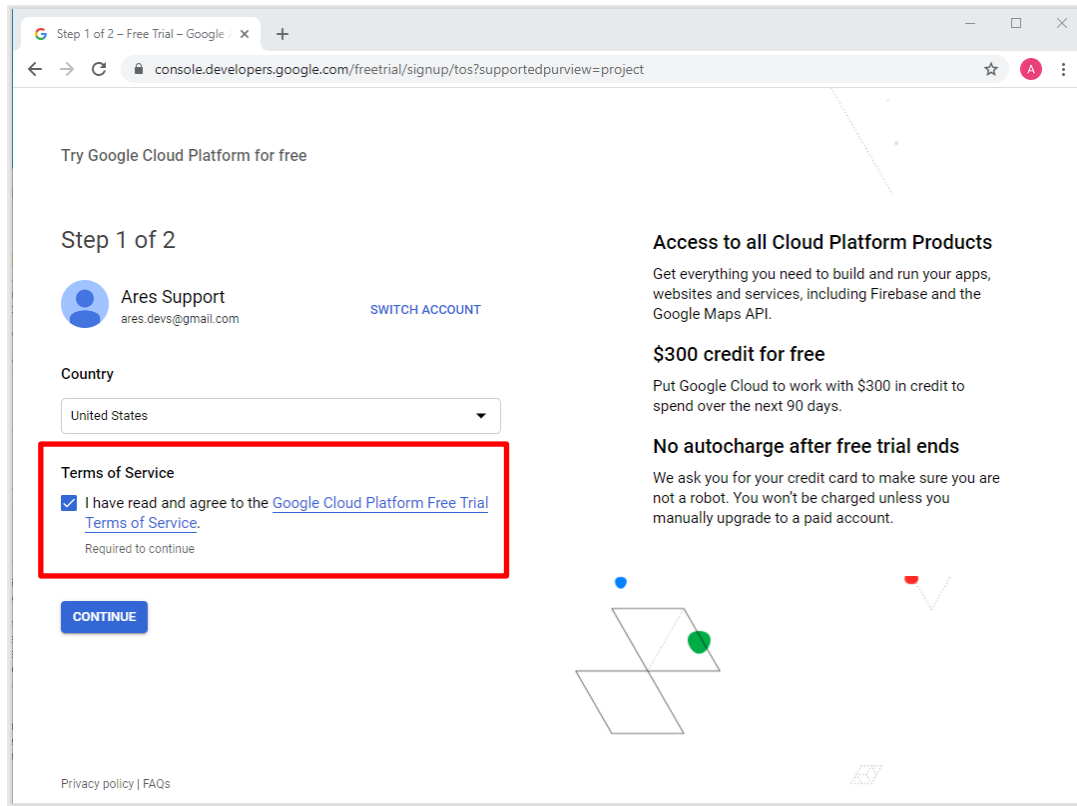
6. Press **Continue**, then enter billing information.

Note: the credit card entered will never be charged unless the user manually configures the account for automatic payments. This step is to eliminate robot accounts from generating Google API keys.

After entering payment information and submitting, the user will be forwarded to the console's landing page (see Figure 3).
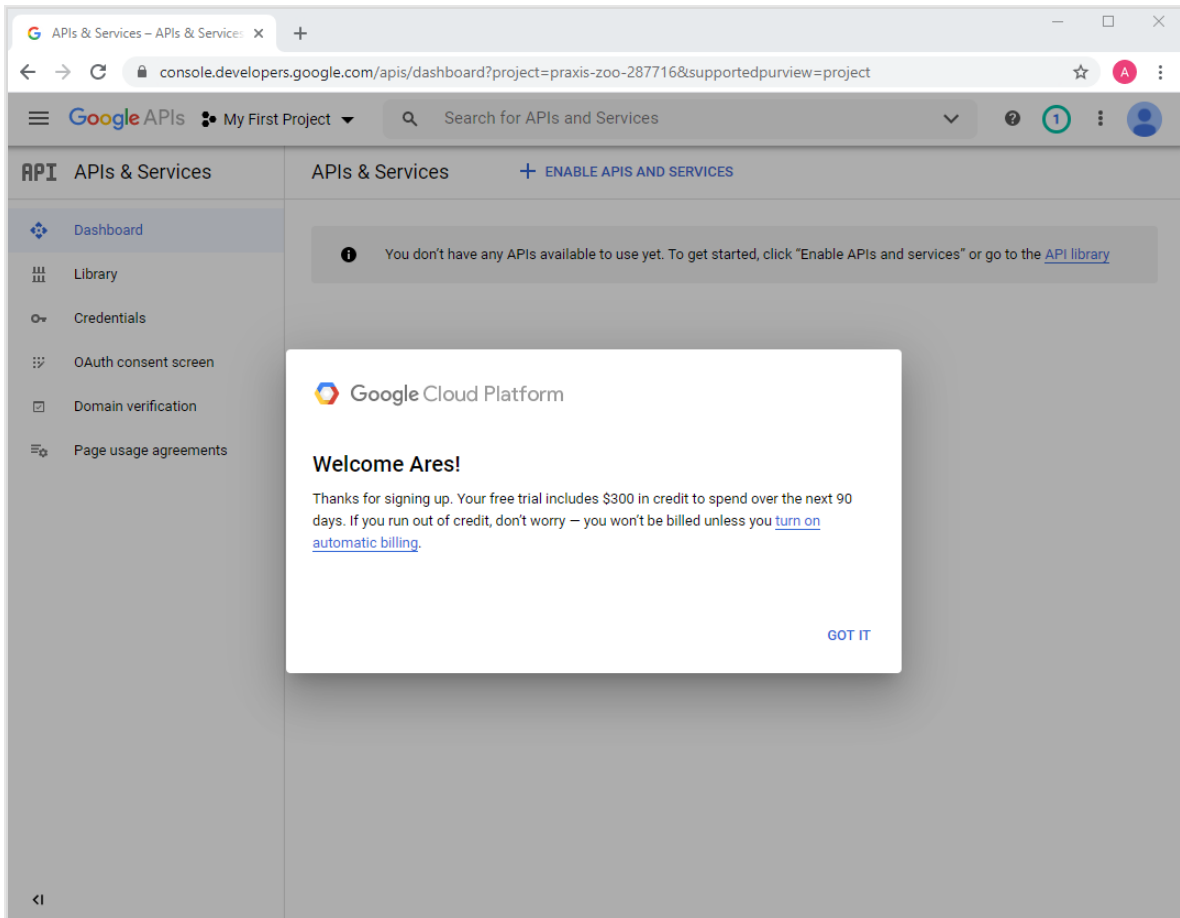
Figure 3 Confirmation Page

7. Click **GOT IT**, then click **ENABLE APIS AND SERVICES** at the top of the page
8. Click **Maps** on the left-side of the page (see Figure 4):
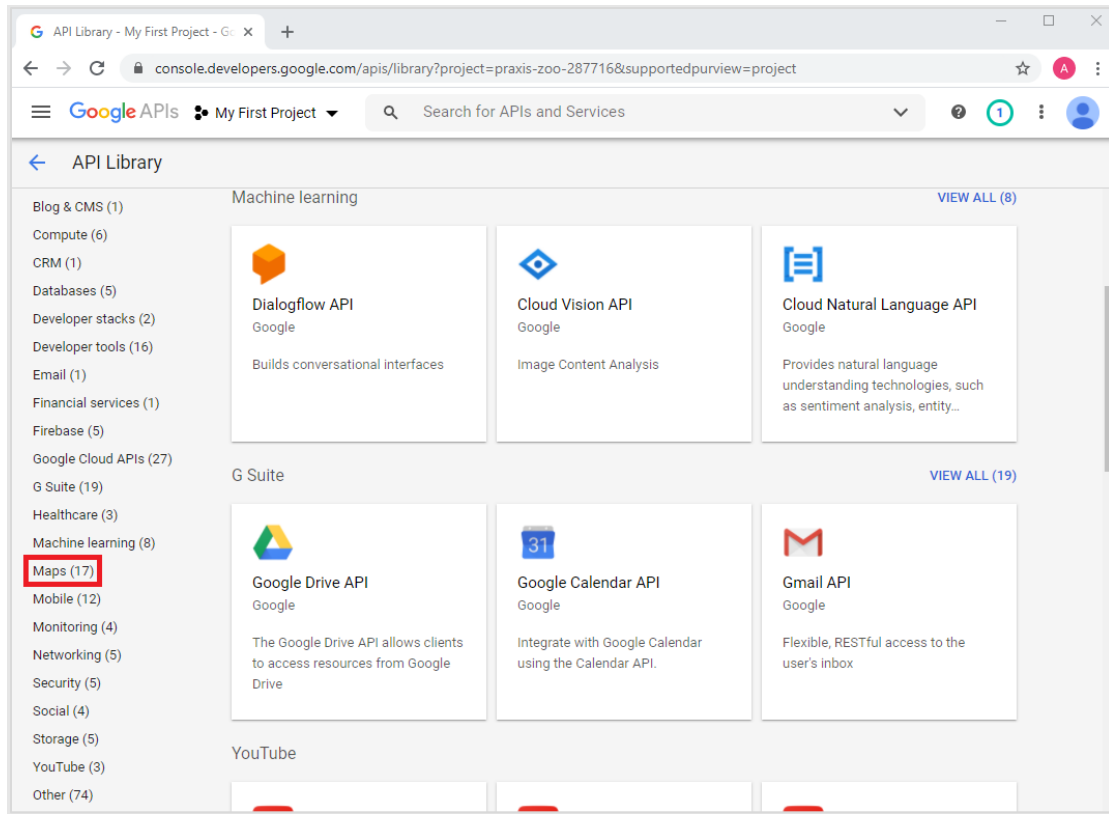
Figure 4 APIs and Services Page

9. Click **Maps JavaScript API** (see Figure 5):

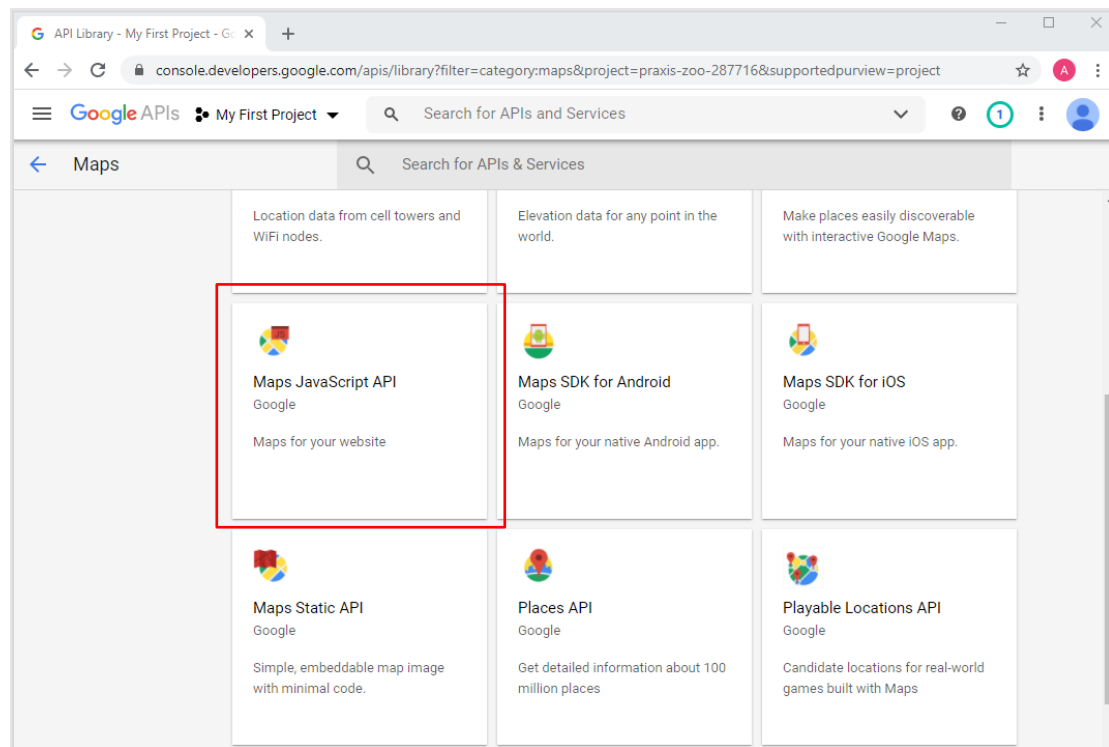**Figure 5 View of Available APIs**

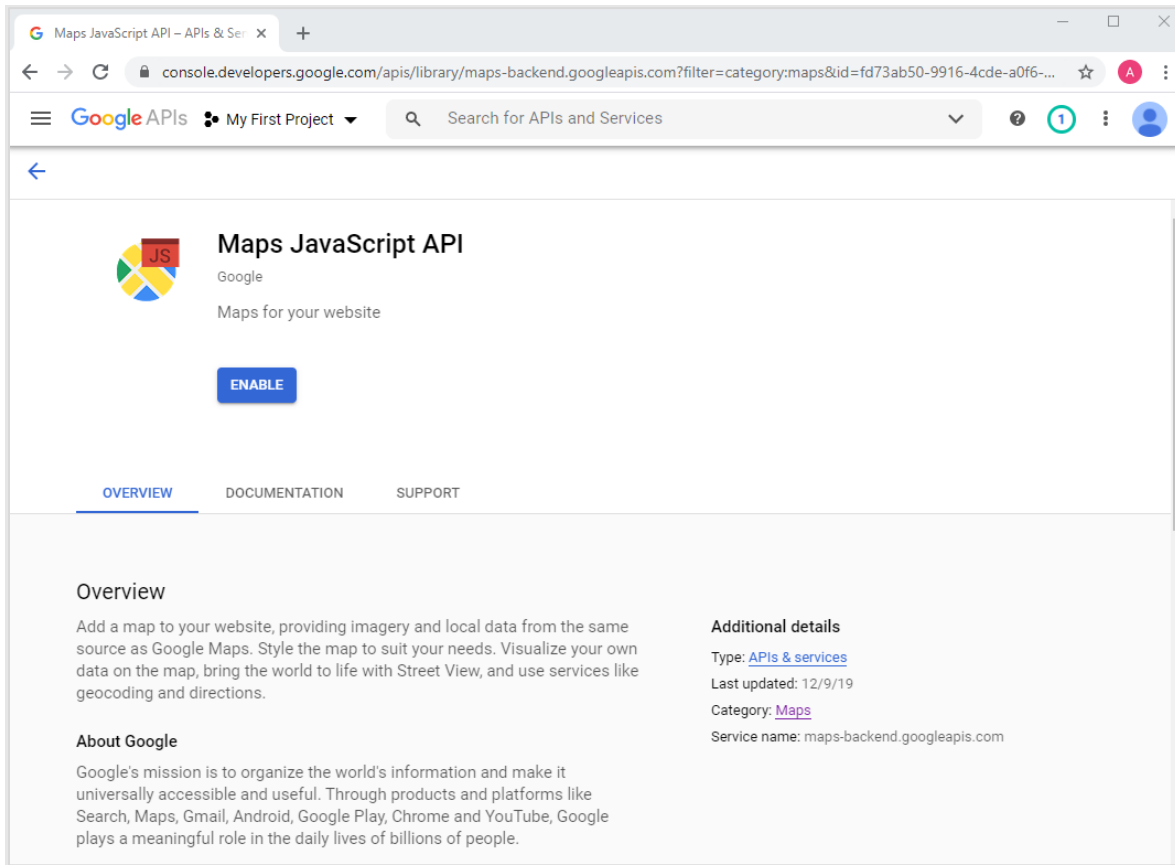10. Click "**Enable**" (see Figure 6):

Figure 6 Enabling JavaScript API

11. From the next page, click the **menu** button on the top-left.
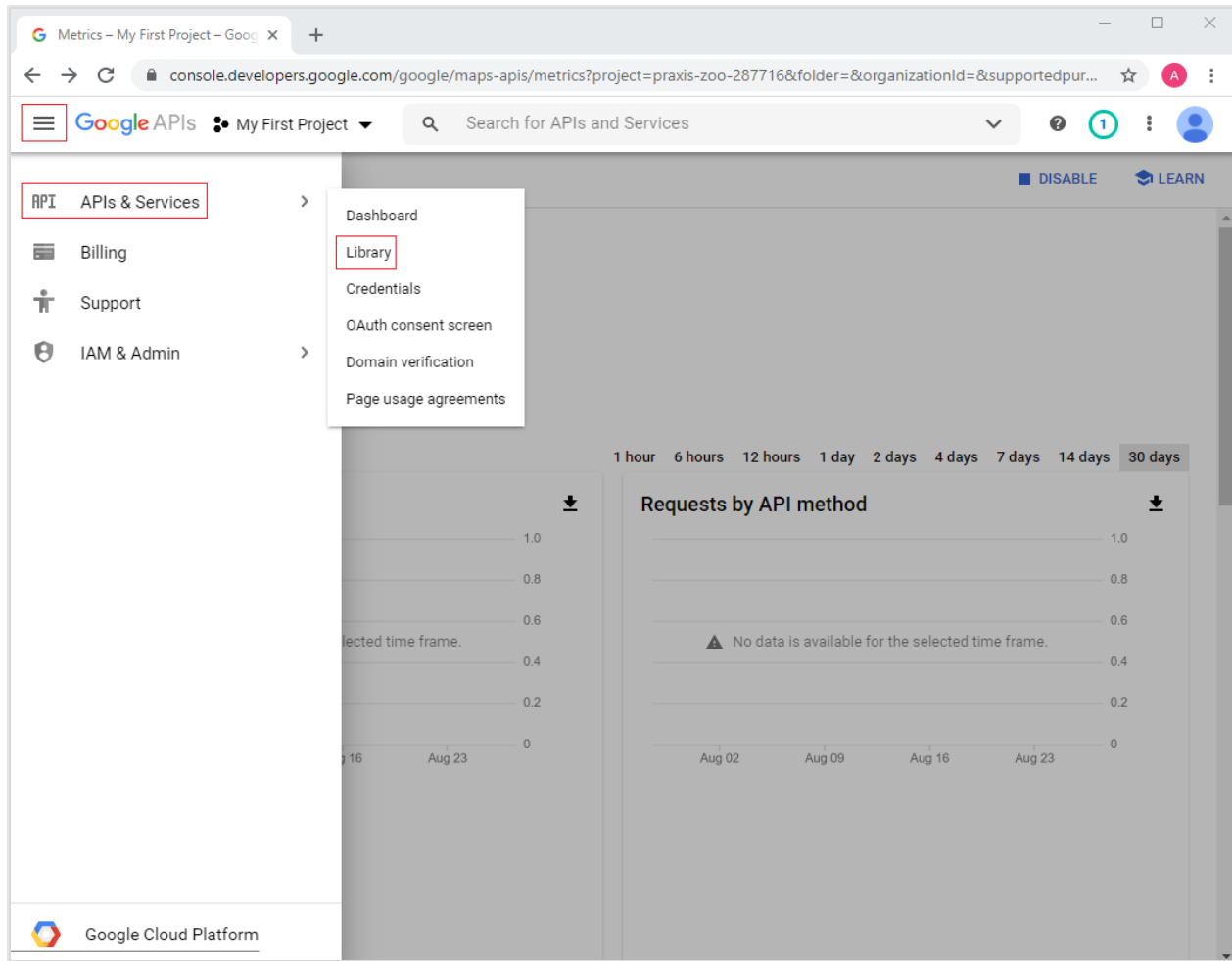12. Hover over **APIs & Services** and click **Library** (see Figure 7):

Figure 7 Navigating Back to API Library

13. In the search bar, type **Maps Static API** (see Figure 8):
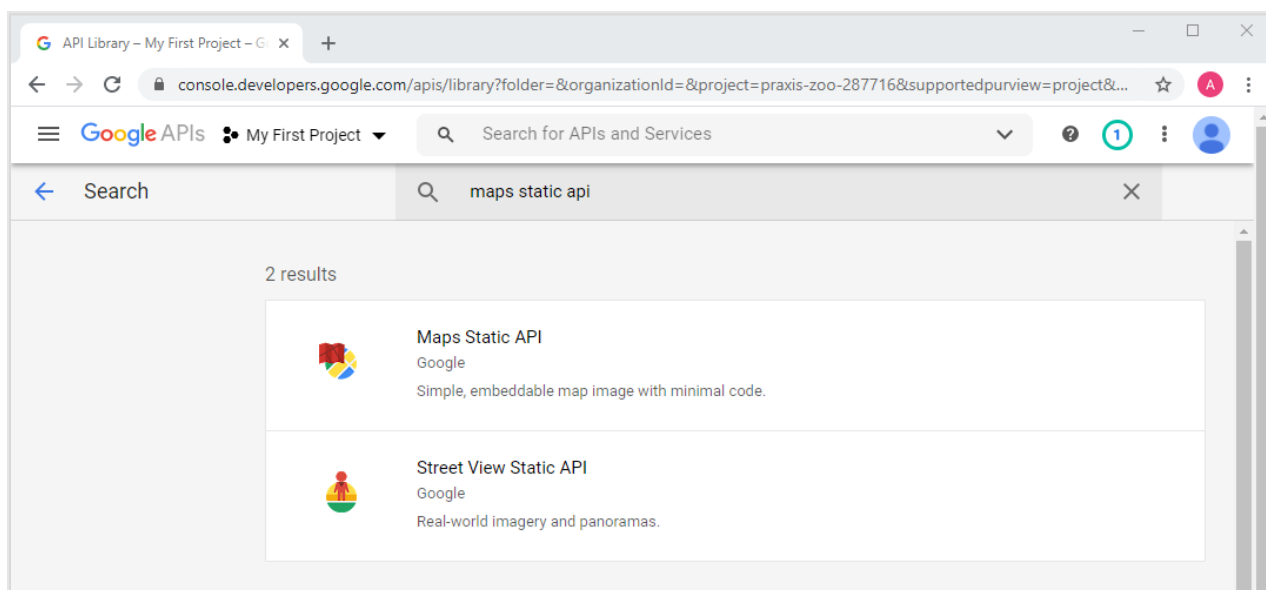
Figure 8 Searching for Maps Static API

14. Click **Maps Static API**, then click **Enable.**
15. From the next page, click the **menu** button in the top left.
16. Hover over **APIs & Services** and click **Library** (see Figure 7).
17. In the search bar, type **Places API** (see Figure 9).

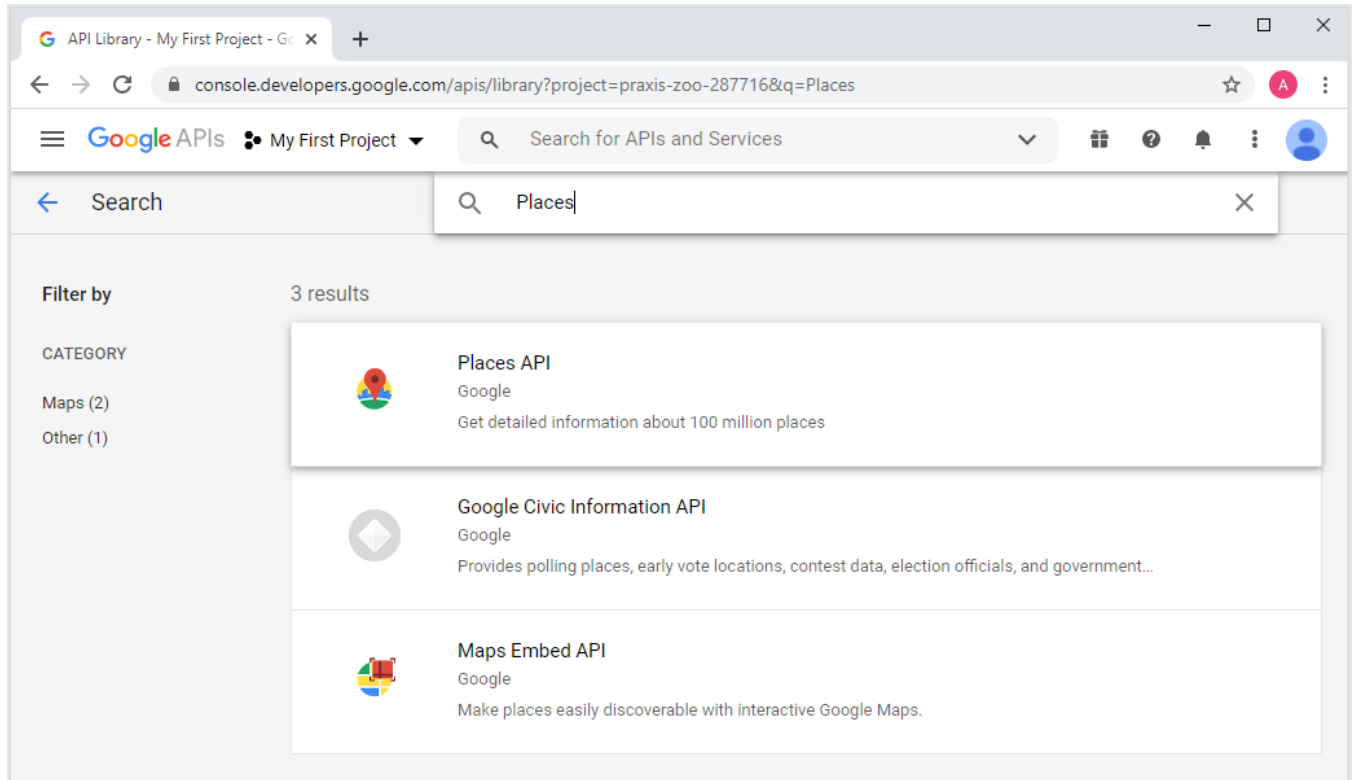**Figure 9 Places API**

18. Click **Places API**, then click **Enable**.
19. On the next page, click the **menu** button.
20. Hover over **APIs & Services** and click **Credentials** (see Figure 10):

No CUI – Not Approved for Public Release
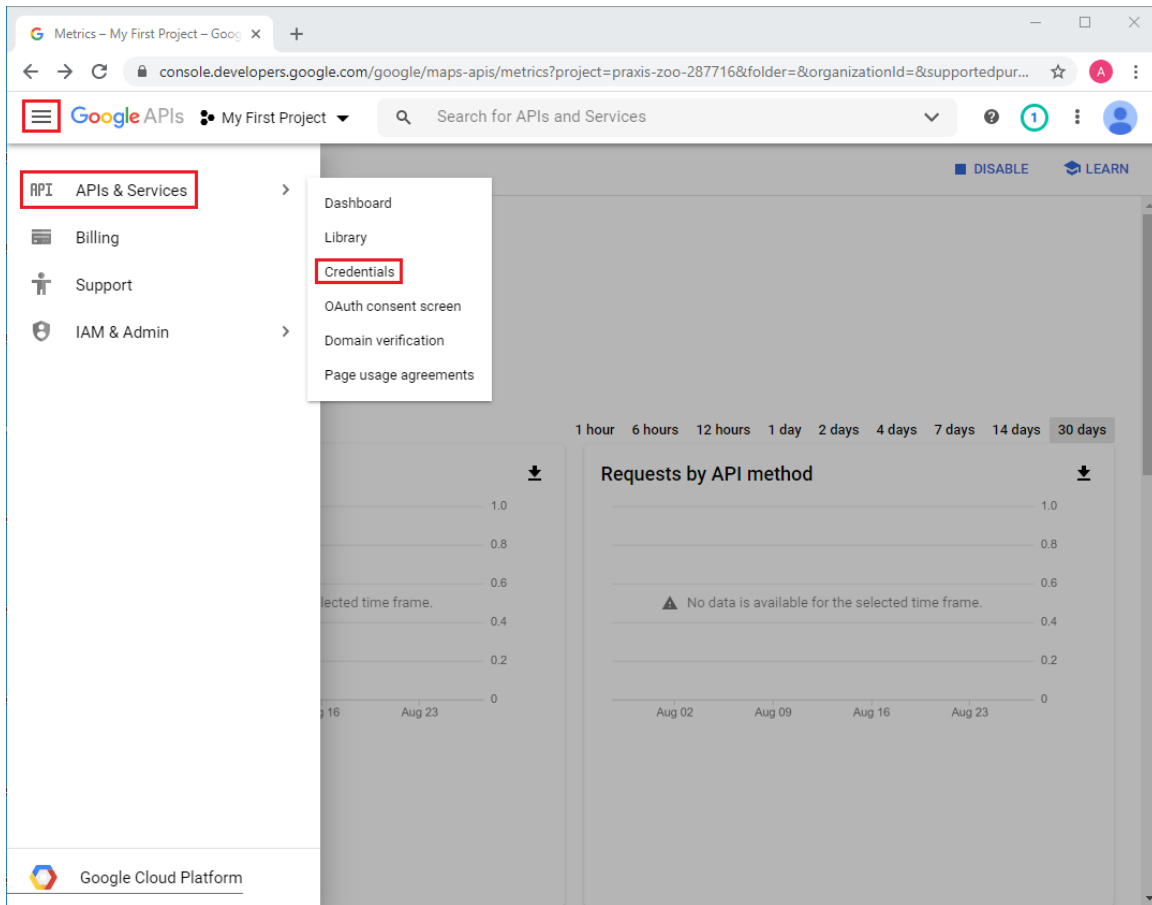
Figure 10 Navigating to Credentials Page

21. Click **CREATE CREDENTIALS** at the top of the page, then click **API key** (see Figure 11).

Figure 11 Creating an API Key

22. Click the **Copy** ( ) button on the right side of the **Your API key** field (see Figure 12).

Figure 12 Copying the Created API Key

- If a **Windows** version of BVI is being used, continue with section *2 Configuring Google Maps API Key for Windows*.
- If a **dockerized** version of BVI is being used, continue with section *3 Configuring Google Maps API Key for Dockerized BVI*.

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2.   CONFIGURING GOOGLE MAPS API KEY FOR WINDOWS

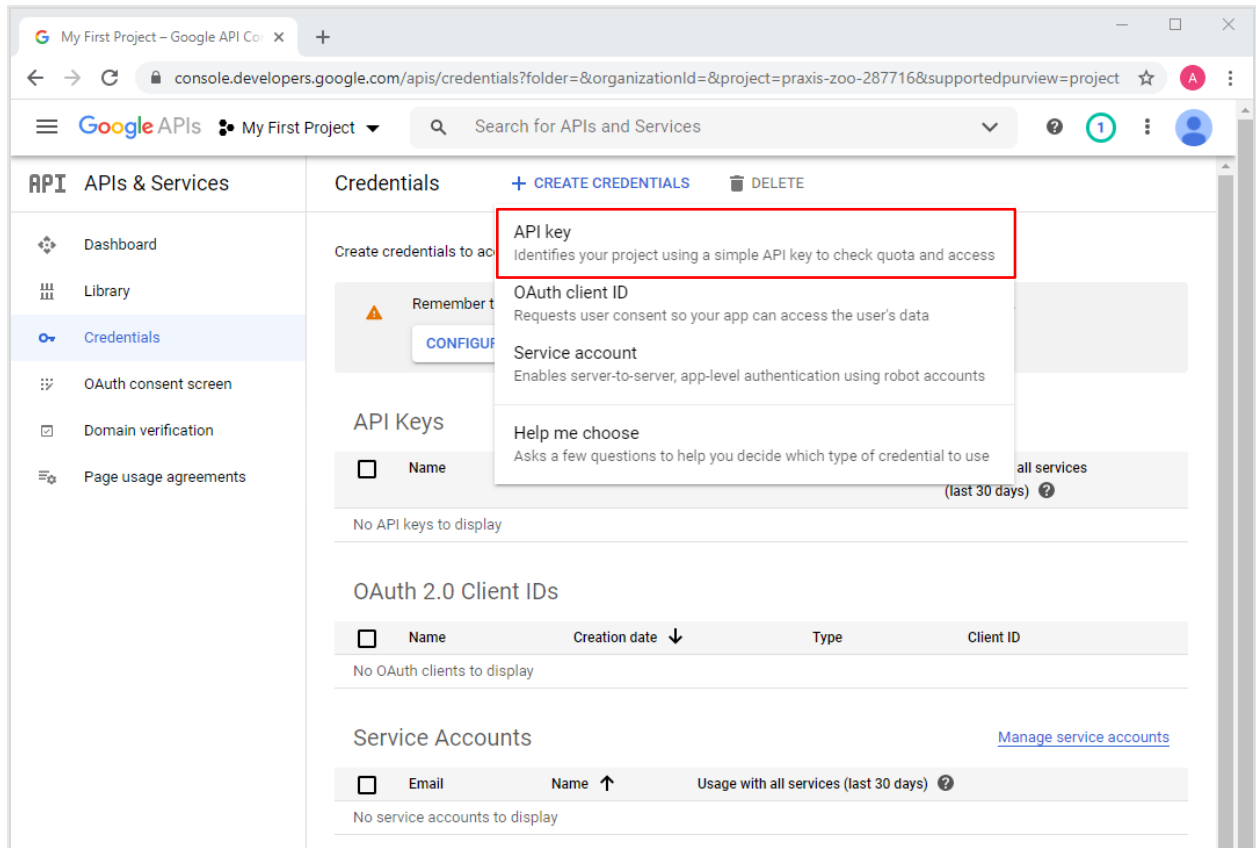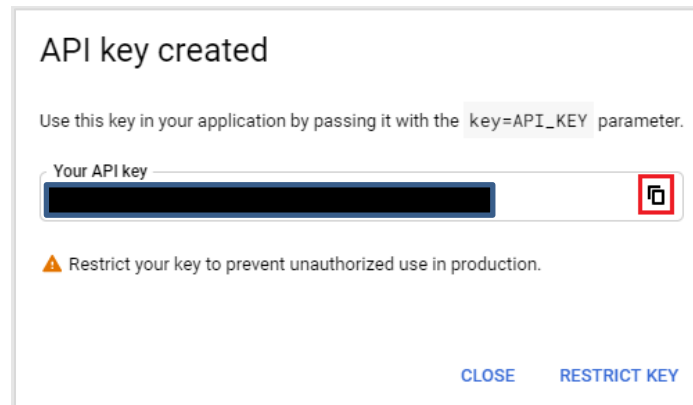Once a Google Maps API key is obtained, it will need to be configured for the BVI software. To configure the Google Maps API key for **Windows**, follow the steps below:

1. Open a file explorer and navigate to (see Figure 13):
    C:\Program Files\ARES\<BVI_Version>\ares.manager\config
2. Right-click and open the **env.yml** file using a text editor (e.g., Notepad, Notepad++).
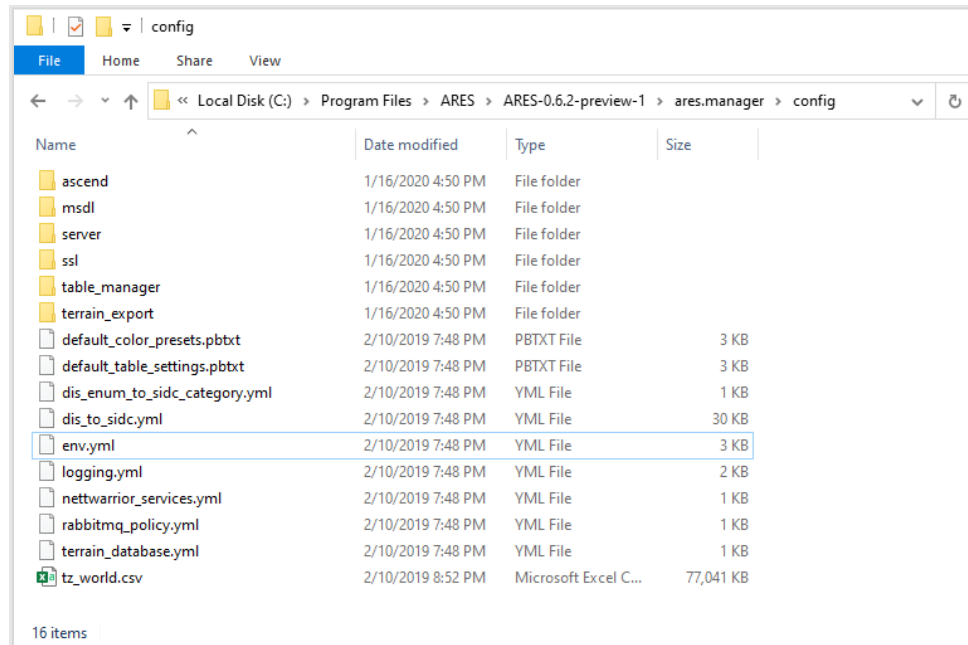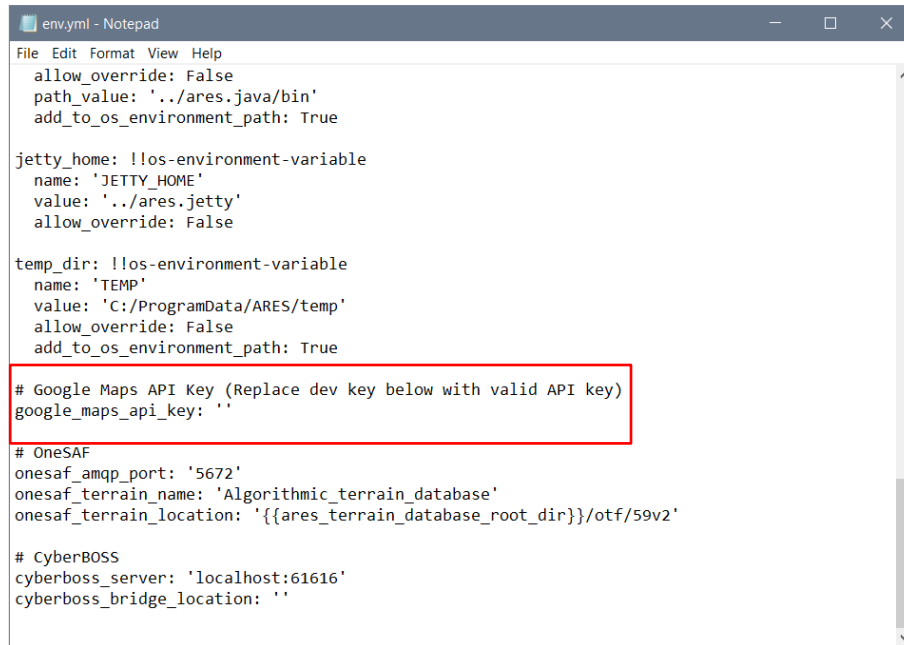

Figure 13 Location of env.yml

3. Scroll to the end of the file and paste the API key between the single quotes next to
    google_maps_api_key: '<Paste API key here>'
4. Once finished editing, click **File → Save**.
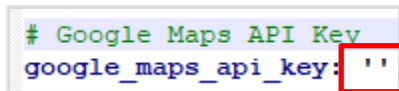
Figure 14 Where to enter API key

5. Launch the BVI software.

Terrain templates can now be created using the Google Maps functionality.

3. CONFIGURING GOOGLE MAPS API KEY FOR DOCKERIZED BVI

Once a Google Maps API key is obtained, it will need to be configured for the BVI software. To configure the Google Maps API key for the **dockerized version of BVI**, follow the steps below:

1. Open a file explorer and navigate to the directory of the extracted dockerized BVI baseline, then into the **\ares.manager\config** folder (e.g., **D:\Ares\<BVI-server_version>\ares.manager\config**).
2. Right-click and open the **env.yml** using a text editor (e.g., Notepad, Notepad++).
3. At the bottom of the file, paste the API key between the single quotes next to **google_maps_api_key: '<Paste API key here>'** (see Figure 15):

Figure 15 Table_manager.env

4. Once finished editing, click **File → Save**.
5. Return to Docker and select **Containers / Apps**.
6. Select the drop-down arrow next to **ares** to display the Containers.
7. Select the **ares_manager** container, then select **Inspect**.
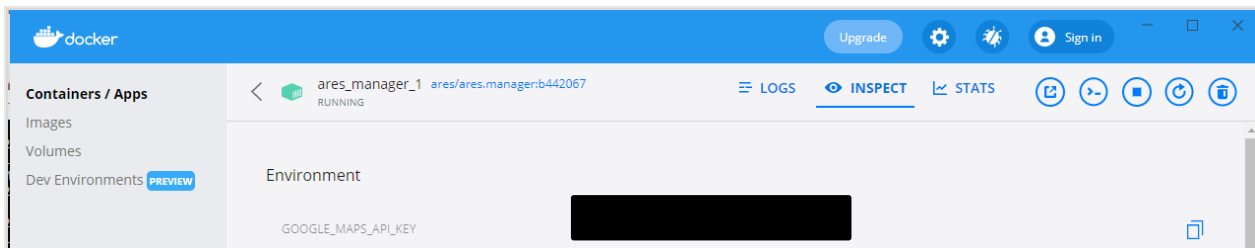8. Under **Environment**, the Google Maps API key will be listed (see Figure 16).

Figure 16 Verify Google Maps API Key in Docker

9. Launch the BVI software.

Terrain templates can now be created using the Google Maps functionality.

4. OBTAINING BING MAPS API KEY

To use the Bing Maps functionality within BVI, the user must generate a Bing Maps API key from the developer console of the browser. This section outlines the process to generate the Bing Maps key and use it with BVI.

1. Ensure the BVI software is not running.
2. In a web browser, navigate and log in to: https://www.bingmapsportal.com/.The "Bing Maps Dev Center" appears and a user account will need to be created from this page.
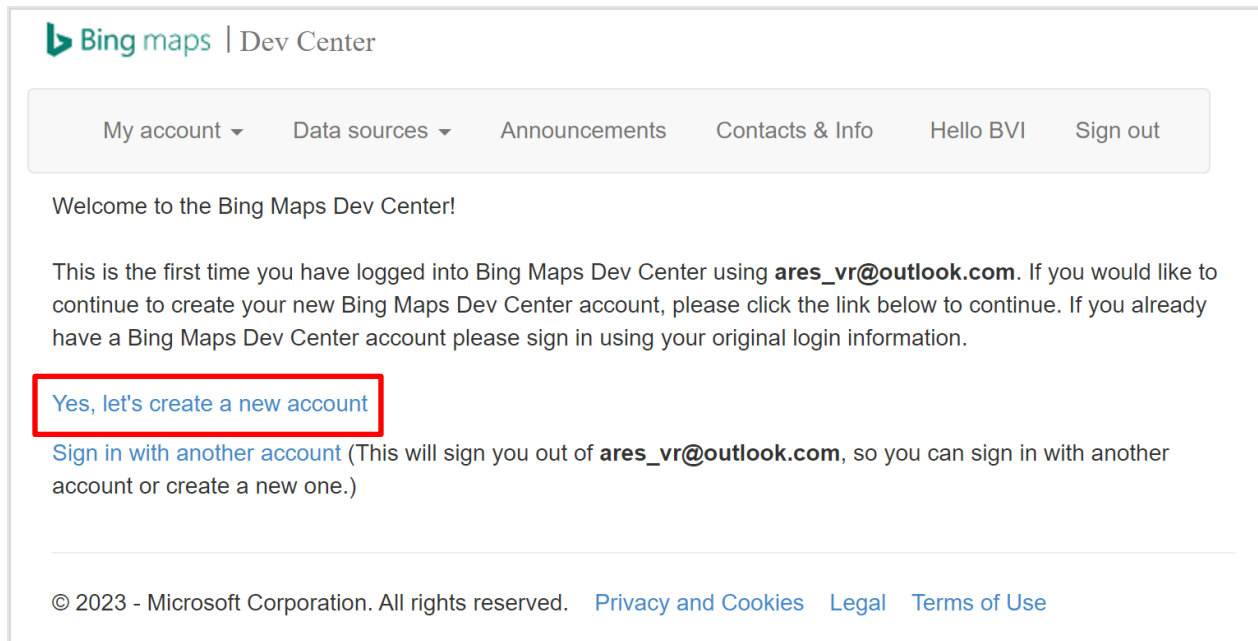3. Select **Yes, let's create a new account** (see Figure 17).

Figure 17 Create New Bing Maps Dev Center Account

4. Enter only the following account details, then select **Create** (see Figure 18):
   a. **Account Name**
   b. **Email Address**

Figure 18 Required Bing Maps Account Details

The Bing Maps key will display in **My account** -> **My Keys**.

5. (Optional) To ensure the Bing Maps key can be easily accessed for future releases, save the Bing Maps key to the desktop:
    c. Open a **text editor** (i.e., Notepad).
    d. Copy the Bing Maps Key from **My Keys**.
    e. Paste the Bing Maps Key into the text editor.
    f. Name the file **Bing_Maps_Key**.
    g. Save the file to the desktop.

    Note: This will help with configuring the Bing Maps Key for future versions.

5.   CONFIGURING BING MAPS KEY FOR BVI

Once a Bing Maps key is obtained, it must be configured with the BVI software to be used for the following modalities:

- BVI XR
- Web Tactical Planner (WTP)
- Mobile Tactical Planner (MTP)

5.1   CONFIGURING BING MAPS KEY FOR BVI XR

To configure the Bing Maps key for **BVI XR**, follow the steps below:

1. Start **BVI XR**.
2. In a browser, navigate to: **<IP address of the machine running BVI>:4321**
3. In the XR Preferences, expand the **Bing Maps** preference
4. Enter the **Bing Maps key** in the Bing Maps key preference and press **Enter** to accept changes (see Figure 19).
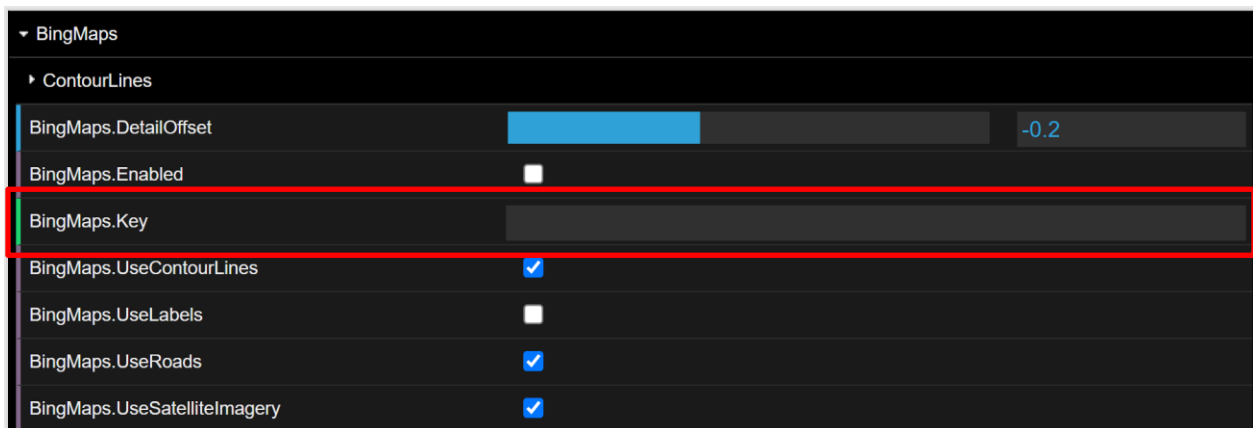

Figure 19 BVI XR Bing Maps Preferences

BVI XR is now able to leverage Bing Map data.

5.2 CONFIGURING BING MAPS KEY FOR WTP

Note that, at minimum, one terrain must be installed on the BVI machine in order to leverage Bing Maps in WTP. To configure the Bing Maps key for **Web Tactical Planner**, follow the steps below:

1. Ensure the BVI software is not running.
2. Open a **File Explorer** and navigate to:
    C:\ProgramData\ARES\terrain_databases\shared\<terrain_name>\webveritas
3. Right-click and open the **terrainConfig.json** file in a **text editor** (e.g., Notepad++).
4. Under the **imagery** section, copy and paste the following Bing-Aerial information – replace <Bing_Maps_key> with the Bing Maps key obtained in *section 4* Obtaining Bing Maps API Key:

```
"Bing-Aerial": {
  "url": "https://dev.virtualearth.net",
  "implementation": "BingMaps",
  "key":"<Bing_Maps_key>",
  "mapStyle": "Aerial"
}
```

Note: the terrainConfig.json entry must follow the same format as the rest of the syntax (see Figure 20). If any syntax is missing (i.e., commas or quotes are missing), then the terrain will fail to load in WTP.

```
3    "imagery": {
4        "Bing-Aerial": {
5            "url": "https://dev.virtualearth.net",
6            "implementation": "BingMaps",
7            "key":"<Bing_Maps_Key>",
8            "mapStyle": "Aerial"
9        },
```

Figure 20 terrainConfig.json Imagery Section

5. Under the **terrains** section, **copy and paste** the following Bing-Aerial information:

```
"Bing-Aerial": {
    "imagery": [
      "Bing-Aerial"
    ]
},
```

Note: The terrainConfig.json must be formatted correctly (see Figure 21).

```
40     "terrains": {
41        "Bing-Aerial": {
42           "imagery": [
43              "Bing-Aerial"
44           ]
45        },
```

Figure 21 terrainConfig.json Terrains Section

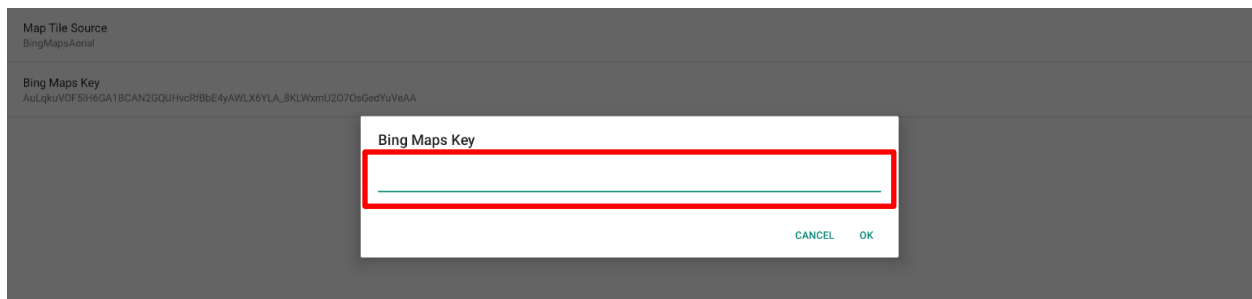6. **Save** the terrainConfig.json file.

Web Tactical Planner is now able to leverage Bing Map data.

5.3   CONFIGURING BING MAPS KEY FOR MTP

To configure the Bing Maps key for **BVI MTP**, follow the steps below:

1. Start **BVI MTP**.
2. Connect to the table running BVI.
3. Select the Ellipsis icon on the top right of the green menu bar.
4. Select Settings
5. Select Map Tile Settings
6. Select the Big Maps Key option.
7. **Type** or **Paste** the Bing Maps Key obtained in *section 4* Obtaining Bing Maps API Key and select OK (see Figure 20)
8. Select **Map Tile Source**
9. Select **BingMapAerial**

Mobile Tactical Planner is now able to leverage Bing Map data.

Map Tile Source
BingMapsAerial

Bing Maps Key
AuLqkuVOFSlH6GA1BCAN2GQUHvcRfBbE4yAWLX6YLA_8KLWxmU2O7OsGedYuVeAA

Bing Maps Key

CANCEL   OK

6.   CONTACTS

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