Voice-Vault VM Setup Guide

These instructions will be to create a virtual machine in Google Cloud Platform.

1. Go to https://console.cloud.google.com/welcome and create an account.
2. Search for “compute engine” and enable the api.
3. Search for “compute engine” and click on create instance.
4. Instead of “General purpose” select GPUs
5. Select an NVIDIA L4 GPU
6. Select 20GB of persistent storage
7. Change OS from Debian to Ubuntu 20.04 LTS
8. Click on Create. This step will take a few minutes
9. Once your VM is created, ssh into it
10. Once you are in the VM, we need to run a few setup commands.
    a. Download docker: follow instructions from official documentation https://docs.docker.com/engine/install/ubuntu/
    b. Install Nvidia drivers:
        i. sudo apt update && sudo apt upgrade -y
        ii. sudo apt autoremove nvidia* --purge
        iii. sudo apt install ubuntu-drivers-common -y
        iv. sudo ubuntu-drivers autoinstall
        v. sudo apt install nvidia-driver-535
    c. Test that nvidia drivers are installed correctly with: nvidia-smi
    d. Install CUDA:
        i. sudo apt install nvidia-cuda-toolkit -y
11. Next step is to set up TLS for security purposes. Follow these steps:
    a. From the VM, do:
        i. sudo apt install nginx -y
        ii. sudo mkdir -p /etc/ssl/private
        iii. sudo openssl req -x509 -nodes -days 365 -newkey rsa:2048 -keyout /etc/ssl/private/selfsigned.key -out /etc/ssl/certs/selfsigned.crt
        iv. When prompted, CN=<your-VM-public-ip> and every other field can be default or empty
        v. Make a new file with ‘sudo vim /etc/nginx/sites-available/flask_https’ and paste this into it:

```
server {
    listen 443 ssl;
    server_name _;

    ssl_certificate /etc/ssl/certs/selfsigned.crt;
    ssl_certificate_key /etc/ssl/private/selfsigned.key;
```

```
        location / {
            proxy_pass http://localhost:6000;
            proxy_set_header Host $host;
            proxy_set_header X-Real-IP $remote_addr;
        }
    }
```

vi. sudo ln -s /etc/nginx/sites-available/flask_https /etc/nginx/sites-enabled/
vii. sudo nginx -t
viii. sudo systemctl restart nginx
ix. Enable HTTPS traffic under Firewalls in your VM instance

12. Now setup is completed. Now you just follow instructions found in your selected model and you have a working VM with a GPU to run your selected model.