

Setting Up GCP VSCode for SSH

Overview

These are the instructions for a simple way to SSH into the GCP VM through VS Code.

Using this way you should be able to run the different local projects such as grading_feature and scoring_page in our Github.

Prerequisites

Before starting, make sure you have the following:

- Make sure you are connected to UW Madison VPN (Global Protect)
- VS Code installed and running
- Remote SSH extension within VS Code installed
- Your GCP VM username (ex: user_wisc_edu)
- VM's external IP address

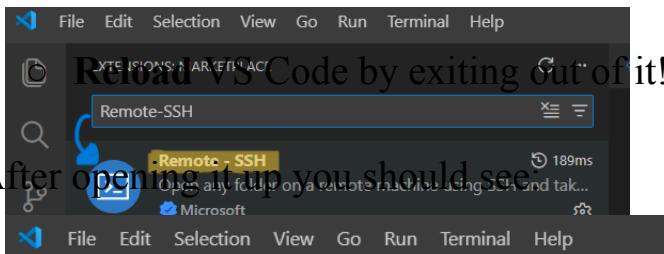
Steps for Prerequisites

Step 1: Installing VS Code

Download here: <https://code.visualstudio.com/>

Step 2: Install Remote-SSH Extension

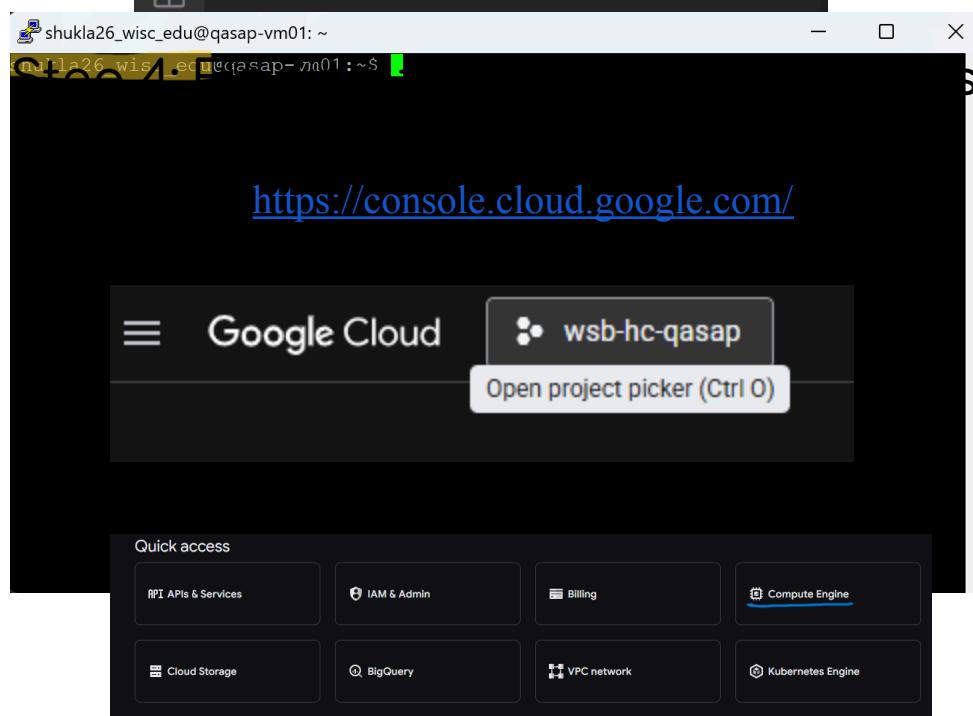
- Look up “Remote SSH” on the extensions search function, install the first one that shows up like below:



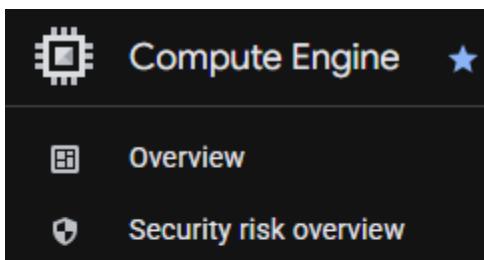
- After opening it up you should see

Step 3: Seeing Your GCP Username

- Follow the steps to open a Google Cloud SDK Shell from docs/gcloud_sdk_setup
- After logging into the GCP VM you should be able to see this:
 - The highlighted part before the '@' is the username



- Go into VM Instances



- Go to your specific VM and there's the external IP Address

Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input checked="" type="checkbox"/>	qasap-vm01	us-east4-c	💡 Save \$47 / mo		10.4.0.2 (nic0)	34.85.213.190 (nic0) 	SSH 

Related actions 

Create an SSH Key (if you don't already have one)

Everyone connecting to the VM must have their own SSH keypair.

Generate a keypair on your laptop

Run this command in your terminal (Mac/Linux) or PowerShell (Windows):

```
ssh-keygen -t rsa -b 4096 -f ~/.ssh/google_compute_engine
```

- Press **Enter** for all prompts
- This will create:
 - **Private key:** `~/.ssh/google_compute_engine`
 - **Public key:** `~/.ssh/google_compute_engine.pub`

 *Never share the private key.*

Add Your Public Key to the GCP VM

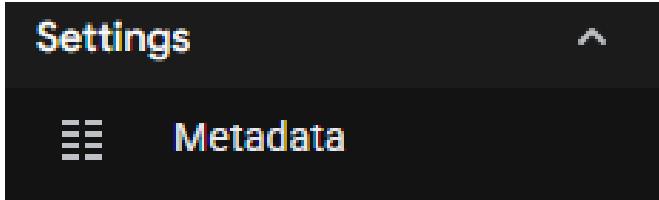
Open your public key

- `cat ~/.ssh/google_compute_engine.pub`
- **Copy** the full line, it starts with `ssh-rsa`

Add Key into Metadata GCP

- Head to the “Compute Engine” page

- Scroll down the left panel and go into “Metadata”



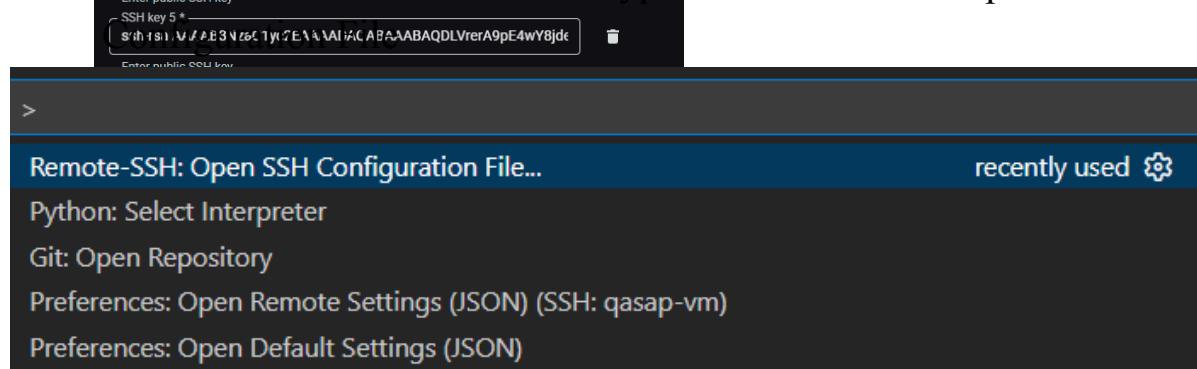
- After pressing Metadata, you see all of the ssh keys → Press “Edit”

A screenshot of a "SSH Keys" edit screen. At the top, there are buttons for "Edit" and "Refresh". Below this, a message states "All instances in this project inherit these SSH keys. [Learn more](#)". The main area contains five entries, each consisting of a public SSH key string and a trash can icon for deletion. The entries are labeled "SSH key 1", "SSH key 2", "SSH key 3", "SSH key 4", and "SSH key 5".

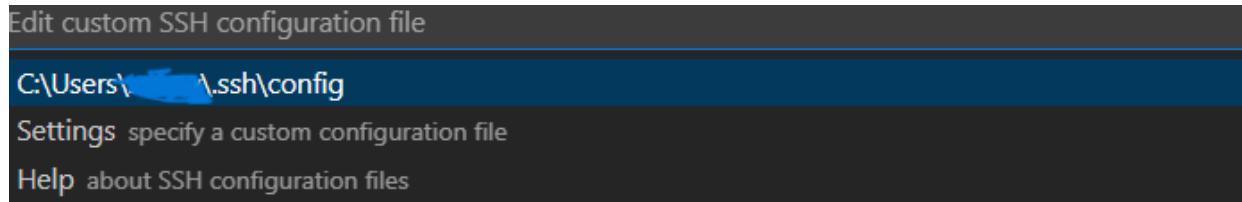
Connect through VS Code

Step 1: Open Config File

- In the bottom left corner of VS Code, click on the "File" icon and type in Remote SSH: Open



- Click into the first one that looks like this:



- After this add this into the top of the config file:
 - Make sure to have your IP address and username from the steps above

```
1 Host qasap-vm
2   HostName <VM_EXTERNAL_IP>
3   User <your_vm_username>
4   IdentityFile ~/.ssh/google_compute_engine
5   IdentitiesOnly yes
6
```

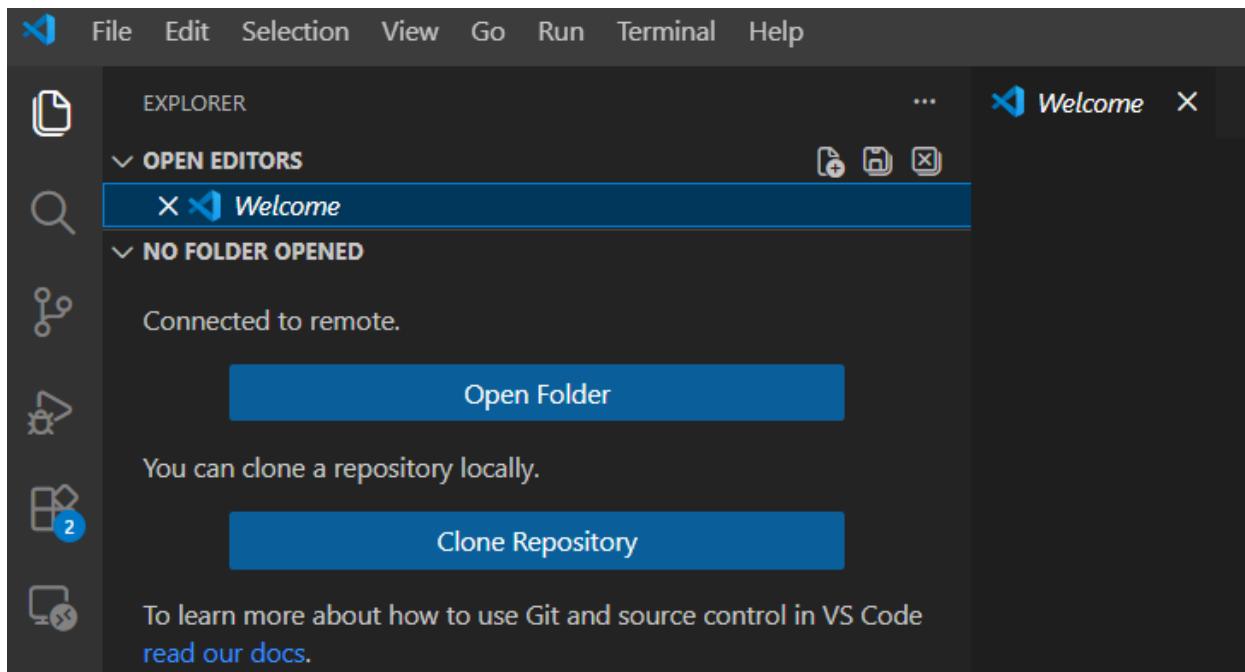
Step 2: SSH into the VM

- Expand the SSH dropdown, and then connect using either the 2 icons on the right



Step 3: Open Specific Folder in the VM after connecting

- Click the Folder tab and then open the specified folder!



All Connected!

Note: If any issues arise, use Gen AI to solve them.