SSH Access to Server

We highly recommend using JupyterHub to manage your code and experiments, as notebooks and terminals can essentially solve any problem. Please also be aware that to prevent confusion, regular users are **unable to use pip** for self-installing libraries. Therefore, if you have specific requirements on the base or virtual environments, you will need to contact the administrator. Moreover, due to the limitations of the file system, the working directory accessed through SSH is **independent from that on Jupyterhub**, which may cause inconvenience and additional storage overhead.

In case you prefer to use SSH for remote operations or utilize code editors like VSCode to improve the experience of writing `.py` files, this tutorial provides a brief guide on how to connect to the server.

SSH remote connection can directly be realized by executing the following command in terminal:

```
ssh username@ip
```

Here the username has already been sent to your email, and the IP address is either 137.189.75.114 or 137.189.75.115. Then you will be asked to input the password. An example is:

```
C:\Users\64116>ssh qiansiqihu@137.189.75.115
qiansiqihu@137.189.75.115's password:
Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 5.15.0-100-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

  System information as of Sun Apr  7 05:02:41 PM UTC 2024

  System load:  0.0               Temperature:              25.0 C
  Usage of /:   18.0% of 97.87GB  Processes:                747
  Memory usage: 0%                Users logged in:          1
  Swap usage:   0%                IPv4 address for enp3s0f0: 137.189.75.115

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

8 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

1 additional security update can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm


*** System restart required ***
qiansiqihu@user:~$
```

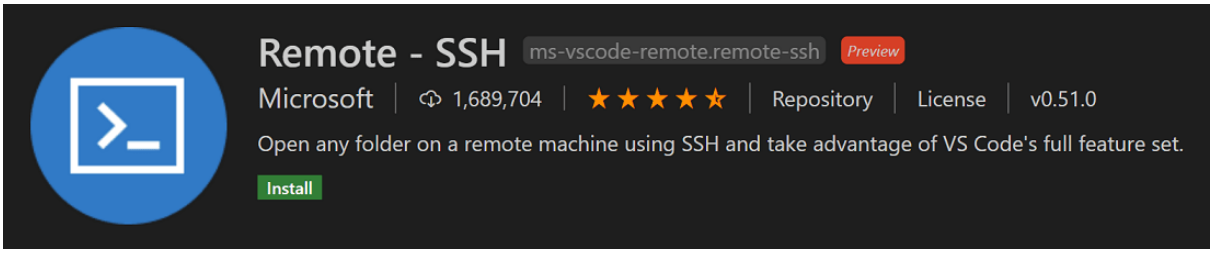
Remote Connection Using VSCode

IMPORTANT: This tutorial may not cover everything. You can ask Google / GPT for more detailed instructions.

Reference: https://code.visualstudio.com/docs/remote/ssh-tutorial

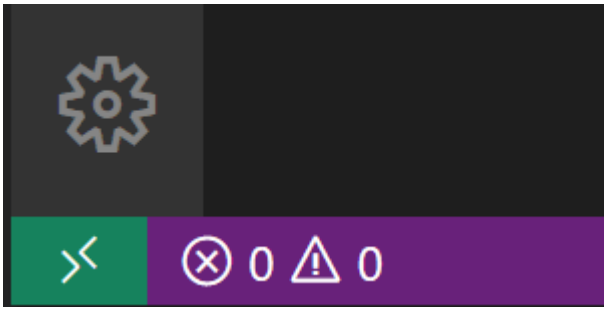
Install the Extension

Remote - SSH is used to connect to SSH hosts. You can find and install it in the extensions of VSCode.

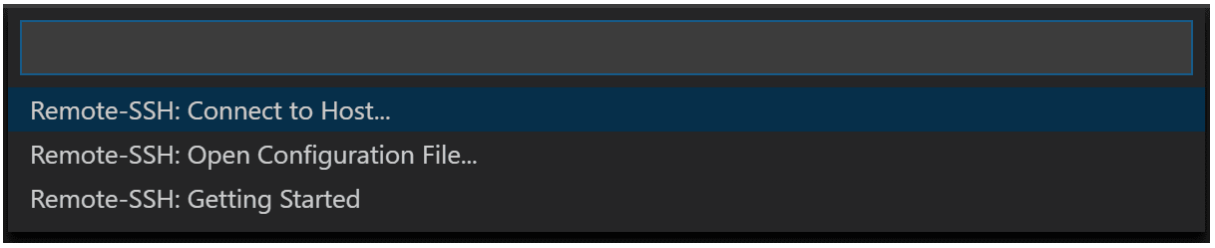


Remote - SSH

With the Remote - SSH extension installed, you will see a new Status bar item at the far left.



The Remote Status bar item can quickly show you in which context VS Code is running (local or remote) and clicking on the item will bring up the Remote - SSH commands.



You can add a new SSH host as follows.

The extension will guide you to modify the default file of SSH configuration. Then you may find that the Remote - SSH extension also contributes a new icon on your Activity bar, in which there is a list of remote servers that have been registered in SSH configuration. By clicking the “→” icon, you will be asked to provide password and then select the platform. Remember to select `linux` for both 137.189.75.114 and 137.189.75.115.

With access to server, you should open the correct directory, which enjoys more storage space and is located at `/mnt/disk*/username-dot-ssh` .