

Remote Container: HOWTO

CS305 TA team

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Intro

Remote contains are provided to help you focus on your implementation without being troubled by setting up developing environment. You can regard a remote container as a remote server of your own. Each remote container is for a group, so it has three users:

username: passwd

- student1: network305
- student2: network305
- student3: network305

Among them, user *student1* is a sudoer. Each user has his own home directory.

How to connect to a remote container

Connect via terminal

Once requested, you will receive a reply email telling you which container is assigned to your group and its IP address <IP> and port number <port>.

Upon receiving, you can try ssh to the container via a terminal (# means a number, like 1, 2, or 3):

```
ssh student#@<ip> -p <port>
```

For example, if you want to use the sudoer *student1* to log in, and the IP is 10.10.20.20 with port 52305, you should run:

```
ssh student1@10.10.20.20 -p 52305
```

You are expected to receive the following prompt:

```
The authenticity of host '[10.10.20.20]:52305 ([10.10.20.20]:52305)' can't be established.
```

```
ED25519 key fingerprint is SHA256:zGEBhzhe/6wnTGf12x4GXbHvj02A  
XiKPZbeAmAnR+po.
```

```
This host key is known by the following other names/addresses:  
  ~/.ssh/known_hosts:32: [10.10.20.20]:52305  
Are you sure you want to continue connecting (yes/no/[fingerprint])?
```

Type yes , then enter your initial passwd: *network305*

You will be able to enter the server:

```
Welcome to Ubuntu 20.04.5 LTS (GNU/Linux 5.4.0-131-generic x86_64)
```

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

```
This system has been minimized by removing packages and content that are  
not required on a system that users do not log into.
```

```
To restore this content, you can run the 'unminimize' command.
```

```
The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.
```

```
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.
```

```
student1@858722bca915:~$
```

You can change your initial password using

```
sudo passwd student1
```

Connect via vscode

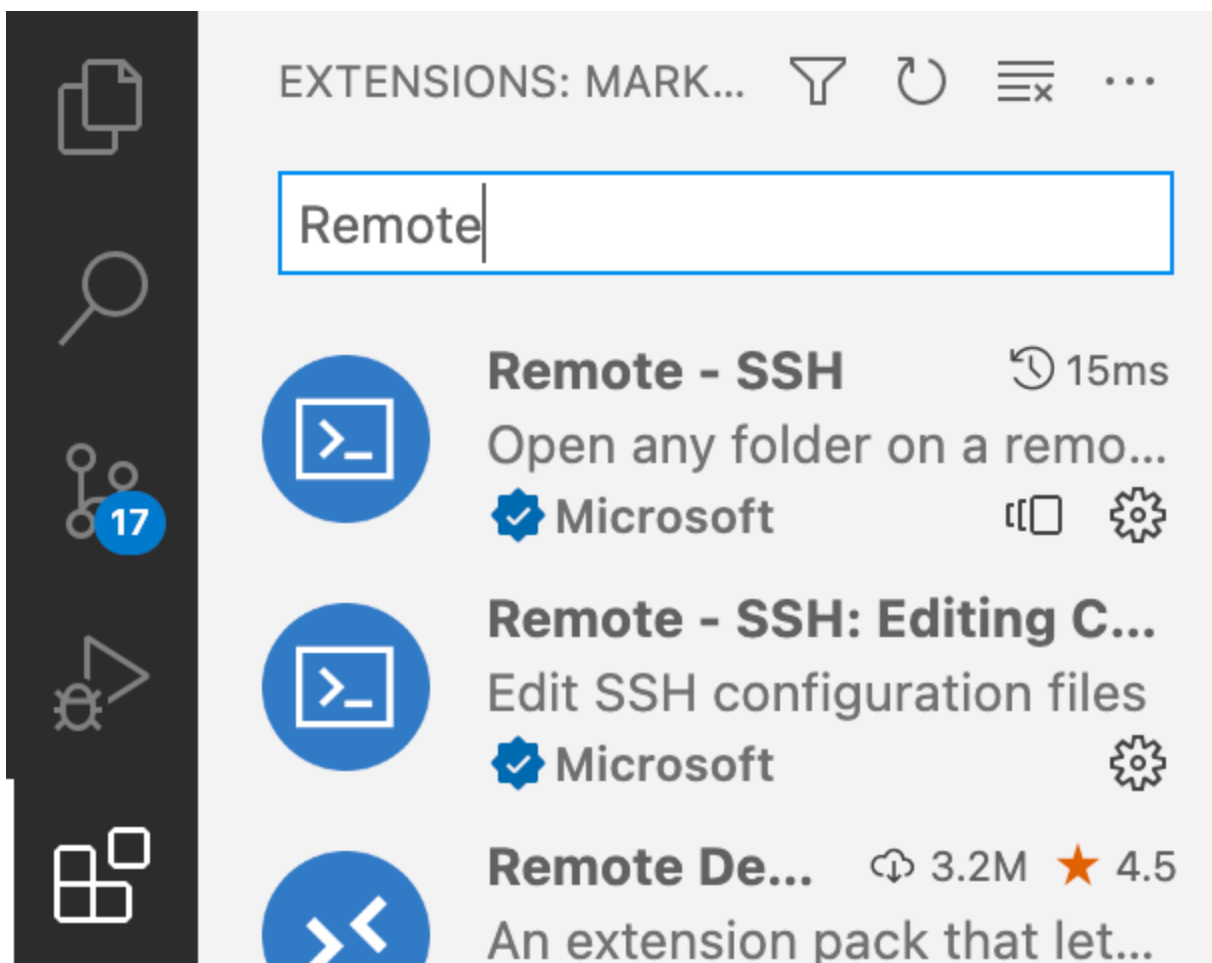
You won't be willing to write codes in terminal, I bet. Several programming tools like Pycharm and VScode provide convenient tool to do programming remotely. We will walk you through how to set up remote containers on VScode, for IDEs like Pycharm, please use google to search for tutorial.

Step 0: Install VScode

If you have not installed VScode, you can visit their website to download [Visual Studio Code - Code Editing. Redefined](#)

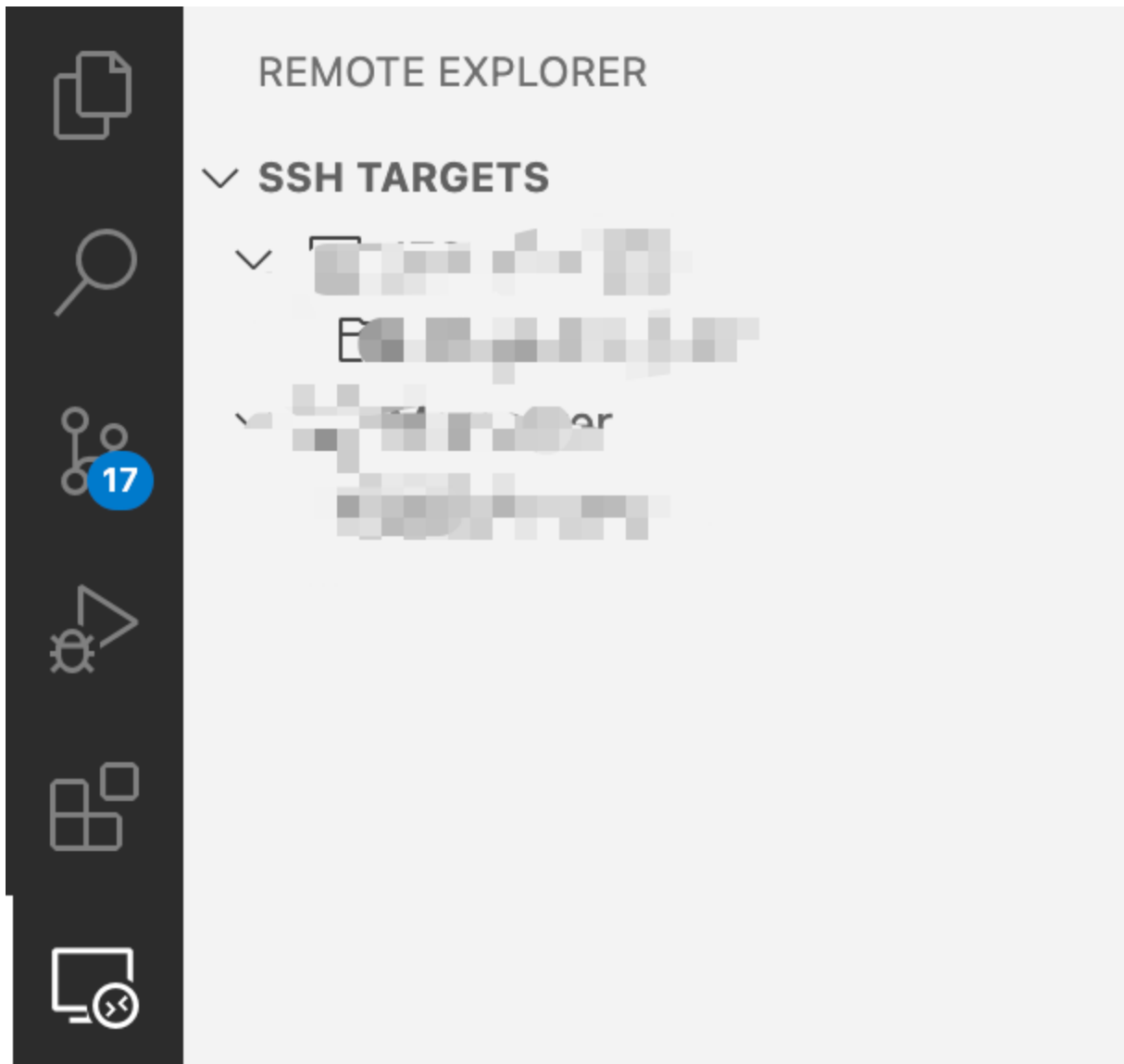
Step1: Install Remote-SSH Extention

Search for "remote-ssh" in the extension market in vscode (the extension market is by default in the toolbar on the left)



Remote-SSH in the extension market

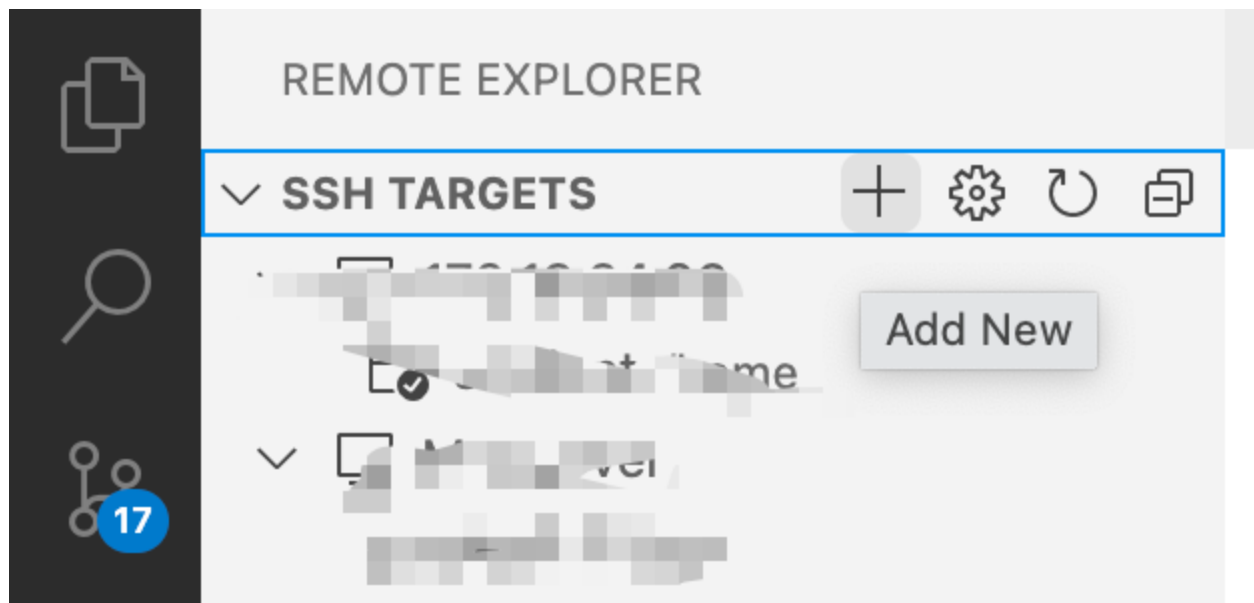
After installing, you will see a “Remote-Explorer” in the toolbar



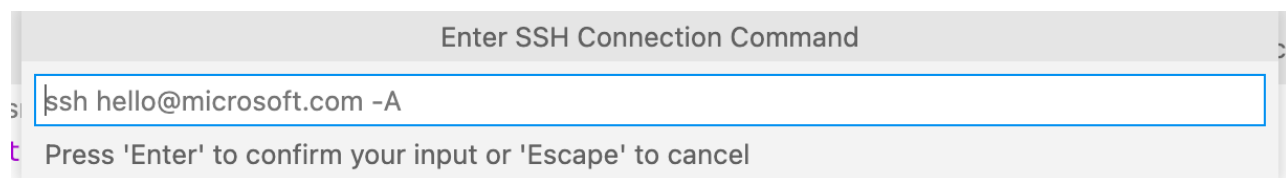
Remote Explorer

Step 2: Add a new SSH target

In the remote explorer, you will see a “+” icon:



Click that and a prompt will appear from the top:



Enter you command from above:



Enter, and you will be able to program remotely with VScode.

Enjoy!