

# Install Jupyterhub

This guide documents the tasks associated with installing and configuring "The Littlest Jupyterhub" (TLJH) on Nimbus. It is assumed that you have already created an instance and are able to log on to it using ssh. The developer documentation for TLJH is available at <https://the-littlest-jupyterhub.readthedocs.io/en/latest/install/custom-server.html>.

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## Set up networking

Jupyterhub will require the standard HTTPS port and we also want to redirect HTTP to HTTPS, so we need to open these ports:

- From your Nimbus dashboard, under the "**Network**" section of the left-hand navigation bar, select "**Security Groups**", then click on "**Create Security Group**" on the right hand side:
  - **Name:** give it a meaningful name (e.g. **jupyterhub**)
  - **Description:** open ports to allow Jupyterhub to communicate

Once created, click on "**Manage Rules**" for that security group, then click on "**Add Rule**" in the top right, click **Rule** and then select **HTTP** from the drop-down menu.

- Repeat for **HTTPS**, then it should look like this:

Direction	Ether Type	IP Protocol	Port Range	Remote IP Prefix	Remote Security Group	Actions
<input type="checkbox"/> Egress	IPv4	Any	Any	0.0.0.0	-	Delete Rule
<input type="checkbox"/> Egress	IPv6	Any	Any	:::	-	Delete Rule
<input type="checkbox"/> Ingress	IPv4	TCP	80 (HTTP)	0.0.0.0	-	Delete Rule
<input type="checkbox"/> Ingress	IPv4	TCP	443 (HTTPS)	0.0.0.0	-	Delete Rule

- Under the "**Compute**" section of the left-hand bar, select "**Instances**", click the **Actions** menu to the right of your instance, then "**Edit Security Groups**" and add the "**jupyterhub**" security group.

## Install TLJH

1. ssh into the instance and check if Python 3, curl, and git are installed using the following command (should be installed by default with latest Ubuntu):

```
apt list python3 git curl
```

2. Download and run the installer using the following code, making sure to replace <admin username> with the username of the account that will act as administrator. If you have yet to create any accounts on the VM simply use "ubuntu". This process will take approximately 25 minutes.

```
curl https://raw.githubusercontent.com/jupyterhub/the-littlest-jupyterhub/master/bootstrap/bootstrap.py | sudo -E python3 --admin <admin username>
```

3. If everything runs as it should you'll see the following output with the final message being "Done!"



replacing `you@example.com` with your email address and `yourhub.yourdomain.edu` with your domain name.

2. You can check your config file with

```
sudo tljh-config show
```

3. Then reload the proxy to load the new configuration

```
sudo tljh-config reload proxy
```

At this point, the proxy should negotiate with Let's Encrypt to set up a trusted HTTPS certificate for you. It may take a moment for the proxy to negotiate with Let's Encrypt to get your certificates, after which you can access your Hub securely at <https://yourhub.yourdomain.edu>.