

# Jupyter Notebooks and Heat

A Jupyter Notebook is an interactive document allowing you to develop, run, visualize, and share data science experiments. Heat is an OpenStack project which helps facilitate and automate multi-step tasks.

The combination of the two will allow you to begin working with Jupyter very quickly in the Rapid Access Cloud.

## Deploying Jupyter in the Rapid Access Cloud

1. Login to the Rapid Access Cloud at [cloud.cybera.ca](https://cloud.cybera.ca). If you do not have an account, register at [rac-portal.cybera.ca](https://rac-portal.cybera.ca)
2. [Create a volume](#) to be attached to the new instance. Click on the "+ Create Volume" button on the left hand side under [Compute Volumes](#). All Jupyter data will be saved in this volume.



If you previously walked through this tutorial and you already have a volume with your data, you do not need to create a new volume. You can use your existing volume and you will have access to your existing work.

3. [Create a Key Pair](#). If you already have a key pair, you can skip this step.
4. Click on the "+ Launch Stack" button under [Orchestration Stacks](#).

### Select Template



#### Template Source \*

File

#### Template File ?

[Choose File](#) rstudio-ubuntu1604.yaml

#### Environment Source

File

#### Environment File ?

[Choose File](#) No file chosen

#### Description:

Use one of the available template source options to specify the template to be used in creating this stack.

Cancel

Next

5. Select **URL** in the drop-down menu for **Template Source**. In the **Template URL** field, paste the following url:

```
https://raw.githubusercontent.com/cybera/rac-heat-templates/master/jupyter-ubuntu1804.yaml
```

You do not need to input an **Environment File**. Click **Next** to continue.

6. Enter parameters for the new stack. For **Password for user**, enter your Rapid Access Cloud account password. For "**Create password for Jupyter**", enter a password for the Jupyter application of your choice.

### Launch Stack

Stack Name \* ?

jupyter

Creation Timeout (minutes) \* ?

60

☐ Rollback On Failure ?

Password for user "jtopjian" \* ?

\*\*\*\*\*

Administrator email \* ?

my.email@gmail.com

Flavor ?

m1.small

Create password for Jupyter Notebook \* ?

\*\*\*\*\*

Key name \* ?

cybera

Volume \* ?

jupyter

Description:  
Create a new stack with the provided values.

Cancel

Launch

7. Click Launch
8. The stack will complete in just a minute or two. However, you will need to wait an additional 5 minutes for the entire process to complete internally.

## Using Jupyter

You can access your Jupyter environment either via IPv4 or IPv6.

IPv6 is preferable. To check and see if you are on an IPv6-enabled network, see [here](#).

If you aren't on an IPv6 network, you will need to [Associate a floating IP address](#) to your Jupyter vm.

Once you have confirmed if you have IPv6 or if you associated a floating IP, the next step is to find the DNS name of your instance. To do this, click on the [Compute Instances](#) menu item. Your Jupyter instance should be the first item in the Instances / Virtual Machines table, and includes the name `jupyter-`. Click on the instance to view its details.

On the details page, look for the **Metadata** section. In this section, you'll find the **dns** setting:

## Metadata

Key Name	cybera
Image Name	Ubuntu 18.04
Image ID	7e5640f2-53fc-4474-bc77-d3666495218e
dns	1a9e9.yyc.cybera.ca

Copy and paste the value into your web browser, using https. For example, the above DNS setting would translate to <https://1a9e9.yyc.cybera.ca>.

You should see a login screen for Jupyter. Type in the password you set during the initial creation wizard.

At this point, you should be logged in and can now proceed to use Jupyter!