

Updated: Oct 25, 2023

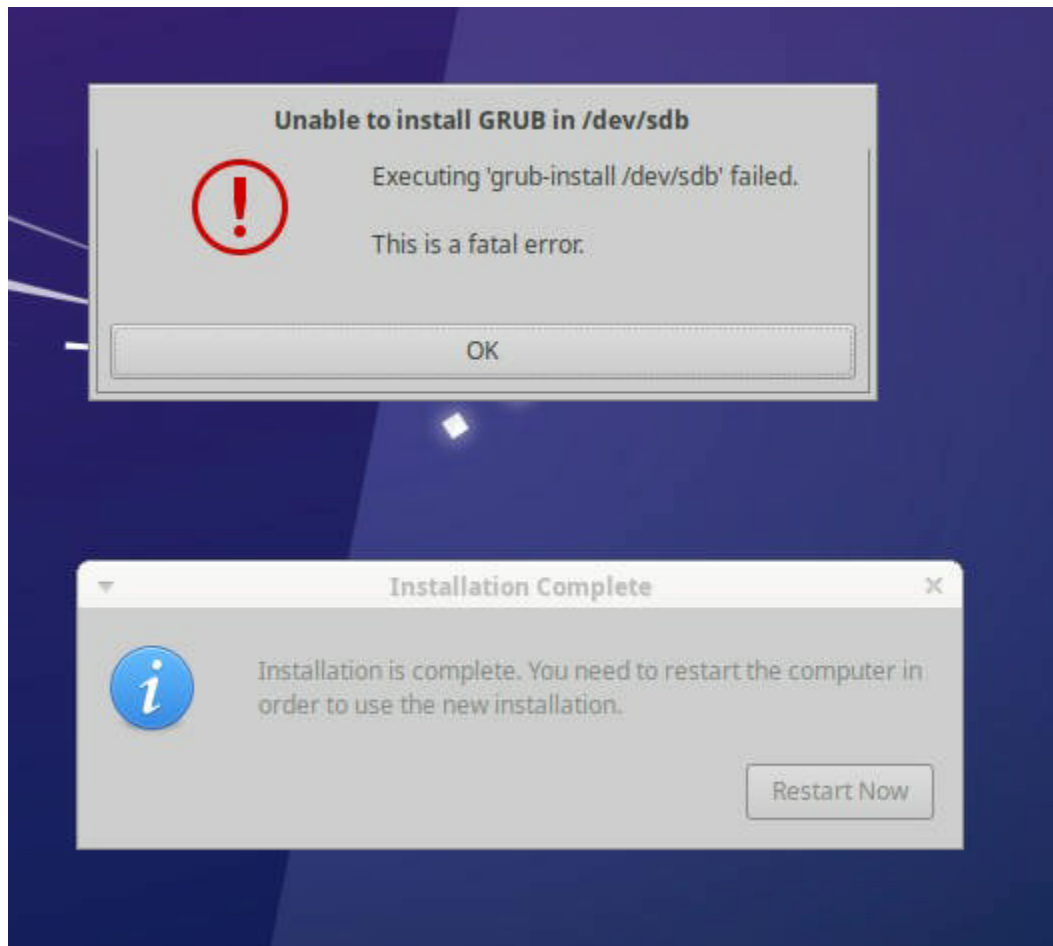
IPMI IP: 192.168.7.163

USER: ADMIN

PASS: IVBAIFYJKP

USER XUB: goblin

PASSWORD: gammadoppler



SYS-350 Milestone 8 - OpenStack Host

🔥 Rather than wiping and rebuilding our esxi servers, we are going to use spare SuperMicro servers to build an xubuntu based virtualization host.

We are using a GUI on xubuntu as many of the single host tools only listen on localhost and it's nice to have a browser available to usesys on the host.

This is a partner Lab: Pair up and we will assign you a SuperMicro to use

Consult the OpenStack Assignments [sheet](#) to see which host you are getting. Your job will be to install xubuntu 22.04 desktop on your assigned host.

Task 1: Prepare USB Installer

Download xubuntu-22.04 Desktop iso from:

- 192.168.7.240/isos OR
- 192.168.7.241/isos

Create bootable usb with [RUFUS](#) defaults, 16kb block size

Task 2: Prepare Super for installation

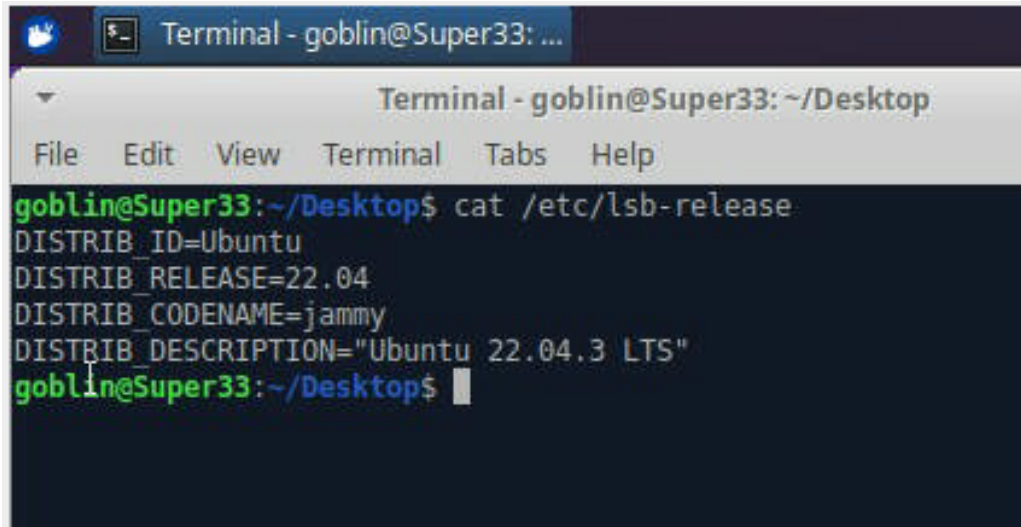
1. Work with Instructors to get IPMI IP address
2. Acquire IPMI password from sticker on front of Super
3. Update instructors with password info so it can be recorded
4. Connect USB to Super
5. Connect to super via IPMI
6. Launch iKVM

Task 3: Install Xubuntu on Super

1. Reboot Super and use f11->boot menu, boot from UDISK (USB)
2. Install Ubuntu
 - Don't upgrade Ubuntu
3. Configure networking per assignment and make sure it has network access
4. Install Chrome Remote Desktop so you can access from Workstation

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Deliverable 1. Provide a Screenshot that Shows the CRD Banner and the running version of xubuntu similar to the screenshot below

A screenshot of a terminal window titled "Terminal - goblin@Super33: ~/Desktop". The terminal shows the command "cat /etc/lsb-release" being executed, resulting in the following output: "DISTRIB_ID=Ubuntu", "DISTRIB_RELEASE=22.04", "DISTRIB_CODENAME=jammy", and "DISTRIB_DESCRIPTION='Ubuntu 22.04.3 LTS'". The prompt "goblin@Super33:~/Desktop\$" is visible at the bottom of the terminal.

```
Terminal - goblin@Super33: ~/Desktop
File Edit View Terminal Tabs Help
goblin@Super33:~/Desktop$ cat /etc/lsb-release
DISTRIB_ID=Ubuntu
DISTRIB_RELEASE=22.04
DISTRIB_CODENAME=jammy
DISTRIB_DESCRIPTION='Ubuntu 22.04.3 LTS'
goblin@Super33:~/Desktop$
```

Task 4: Install OpenStack

Once your Xubuntu server has network access and CRD - you are ready to install OpenStack

1. Install MicroStack from the beta channel:

Unset

```
sudo snap install microstack --devmode --beta
```

2. When the installation process has finished you should see something like the following message on the terminal:

Unset

```
microstack (beta) ussuri from Canonical✓ installed
```

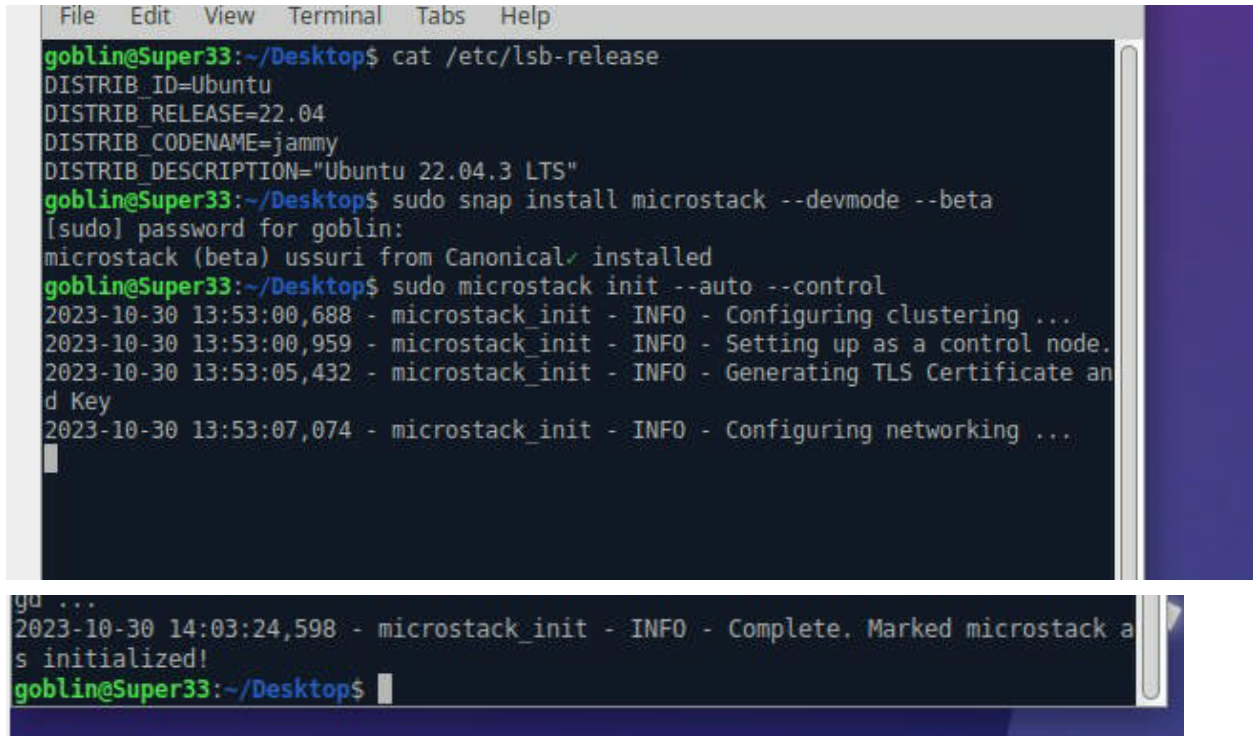
3. MicroStack needs to be initialised, so that networks and databases get configured. To do this, run:

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Unset

```
sudo microstack init --auto --control
```

4. Once this completes (15 - 20 minutes) your OpenStack cloud will be up and running!



```
File Edit View Terminal Tabs Help
goblin@Super33:~/Desktop$ cat /etc/lsb-release
DISTRIB_ID=Ubuntu
DISTRIB_RELEASE=22.04
DISTRIB_CODENAME=jammy
DISTRIB_DESCRIPTION="Ubuntu 22.04.3 LTS"
goblin@Super33:~/Desktop$ sudo snap install microstack --devmode --beta
[sudo] password for goblin:
microstack (beta) ussuri from Canonical✓ installed
goblin@Super33:~/Desktop$ sudo microstack init --auto --control
2023-10-30 13:53:00,688 - microstack_init - INFO - Configuring clustering ...
2023-10-30 13:53:00,959 - microstack_init - INFO - Setting up as a control node.
2023-10-30 13:53:05,432 - microstack_init - INFO - Generating TLS Certificate and Key
2023-10-30 13:53:07,074 - microstack_init - INFO - Configuring networking ...
goblin@Super33:~/Desktop$
2023-10-30 14:03:24,598 - microstack_init - INFO - Complete. Marked microstack as initialized!
goblin@Super33:~/Desktop$
```

Task 5: Accessing OpenStack

To interact with your cloud via the web UI visit <http://10.20.20.1/>.

1. The password for the `admin` user can be obtained with

Unset

```
sudo snap get microstack config.credentials.keystone-password
```

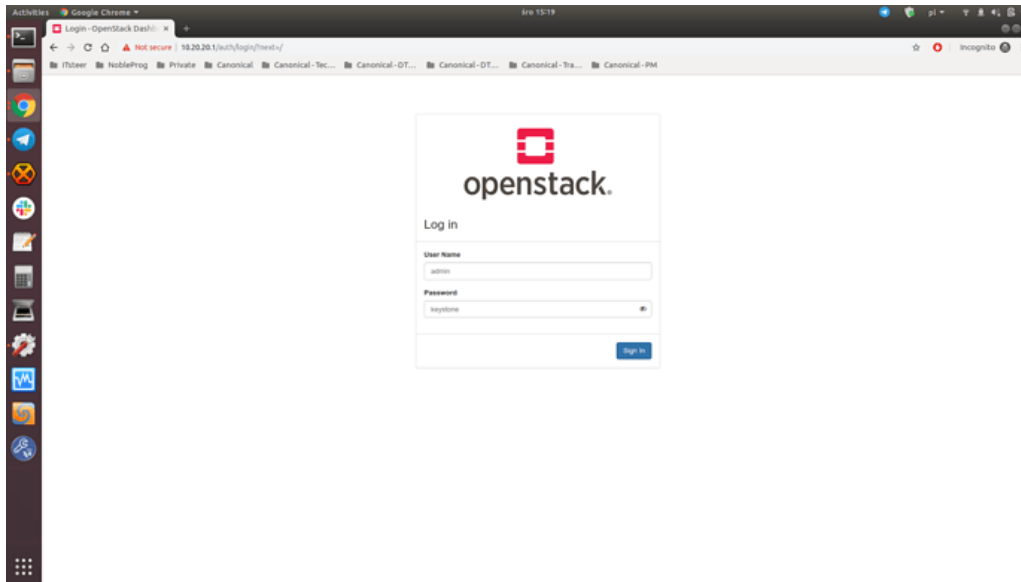
2. Sample output:

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Unset

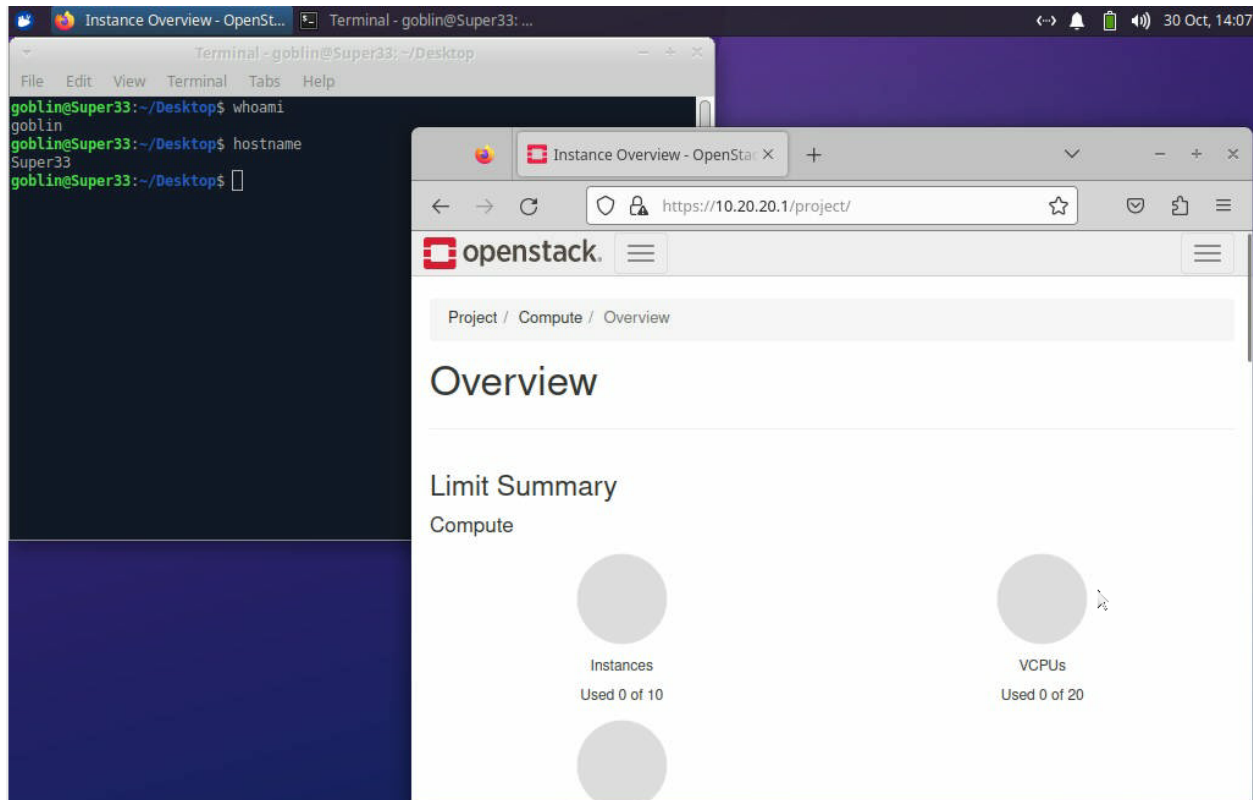
0AEHxLgCBz7Wz4usvo1AA61TrDUz6zz

3. Open <https://10.20.20.1> in the xubuntu browser. Login with “admin” and the password



4. You should see a landing page like:

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5. Browse to Compute-Images and you should see that an image of the CirrOS OS was added during the build. CirrOS is a very lightweight Linux distro that we can use for testing
6. Launch your first OpenStack instance (VM) called “test” based on that CirrOS image,

Unset

```
microstack launch cirros --name test
```

7. The resulting output should provide the information you need to SSH to the instance:

Unset

```
Access it with `ssh -i  
/home/ubuntu/snap/microstack/common/.ssh/id_microstack  
cirros@10.20.20.123`
```

8. Note that the IP address of the instance is likely different. Connect to the instance from your xubuntu terminal. **NOTE: If needed, the default cirros password is “gocubsgo”**

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Unset

```
ssh -i /home/ubuntu/snap/microstack/common/.ssh/id_microstack  
cirros@10.20.20.123
```

```
goblin@Super33:~/Desktop$ ssh cirros@10.20.20.130  
The authenticity of host '10.20.20.130 (10.20.20.130)' can't be established.  
ECDSA key fingerprint is SHA256:GWza44L15wcCE+XQP7d0sL8ZW57/dtHpvMwbnPWfYrw.  
This key is not known by any other names  
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes  
Warning: Permanently added '10.20.20.130' (ECDSA) to the list of known hosts.  
cirros@10.20.20.130's password:
```

9. Now that you are connected to the instance you can use normal Linux commands. Note that the CirrOS image provides a minimalist operating system! For example:

Unset

```
$ uptime  
14:51:42 up 4 min, 1 users, load average: 0.00, 0.00, 0.00
```

```
$ uptime  
19:18:22 up 8 min, 1 users, load average: 0.00, 0.00, 0.00  
$
```

10. You can also view the instance from the web UI. Go to <http://10.20.20.1/> and click on the “Instances” tab on the left:

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The screenshot shows the OpenStack dashboard interface. The browser tabs at the top include 'Images - OpenStack Dashboard' and 'test-dave - OpenStack Dashboard'. The address bar shows the URL 'https://10.20.20.1/project/instances/f6f8e7fb-c420-48dc-a7b2-6659c72ac979'. The OpenStack logo and 'admin' user name are visible in the top navigation bar. The left sidebar contains a menu with categories: Project, API Access, Compute, Overview, Instances (highlighted), Images, Key Pairs, Server Groups, Volumes, Network, Admin, and Identity. The main content area shows the breadcrumb 'Project / Compute / Instances / test-dave' and the instance name 'test-dave'. A 'Create Snapshot' button is located in the top right. Below the instance name are tabs for 'Overview', 'Interfaces', 'Log', 'Console', and 'Action Log'. The 'Overview' tab is active, displaying a table of instance details. Below this is a 'Specs' section showing flavor information, and an 'IP Addresses' section at the bottom.

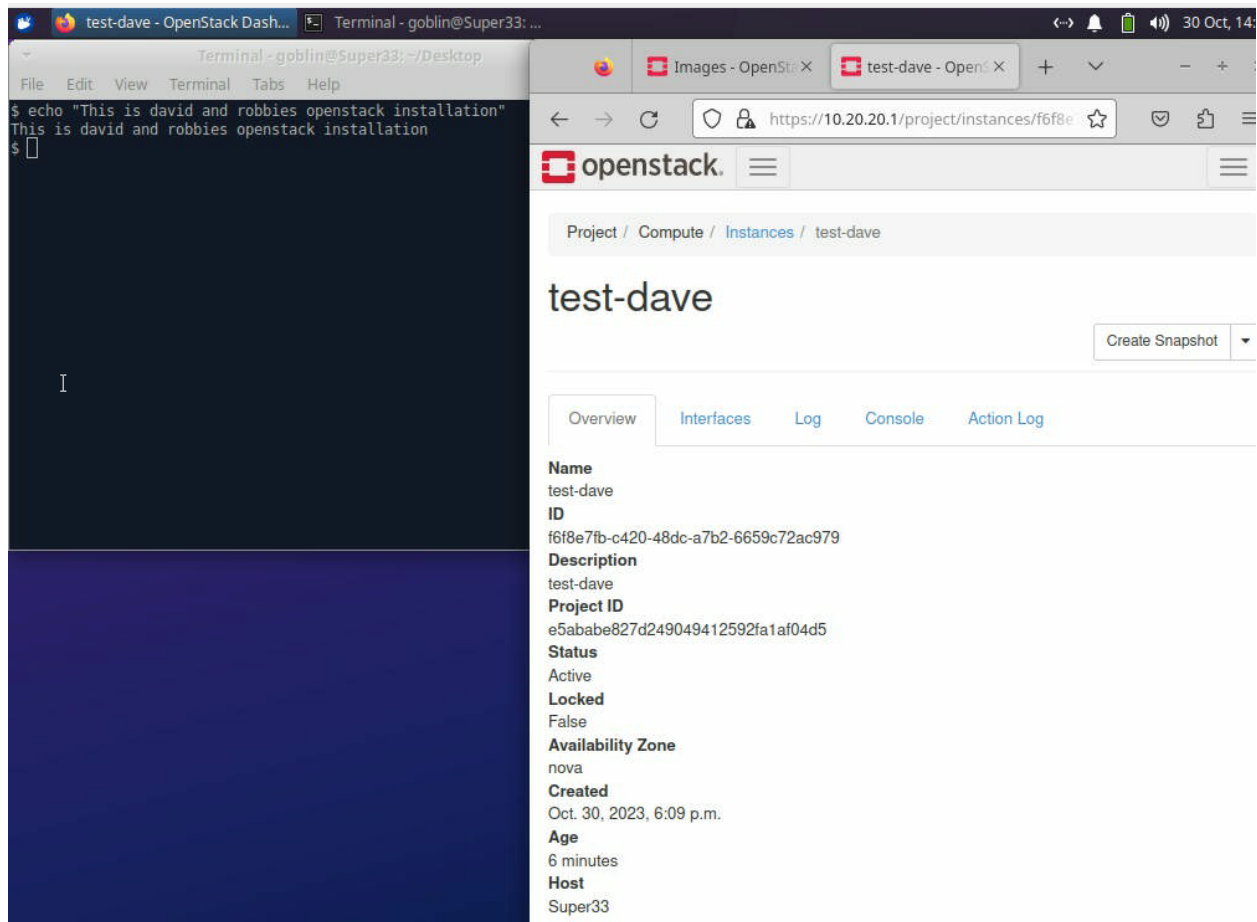
Name	test-dave
ID	f6f8e7fb-c420-48dc-a7b2-6659c72ac979
Description	test-dave
Project ID	e5ababe827d249049412592fa1af04d5
Status	Active
Locked	False
Availability Zone	nova
Created	Oct. 30, 2023, 6:09 p.m.
Age	6 minutes
Host	Super33

Flavor Name	m1.tiny
Flavor ID	1
RAM	512MB
VCPUs	1 VCPU
Disk	1GB

IP Addresses

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Deliverable 2. Provide screenshots that shows your running OpenStack Dashboard similar to the one below that includes your running instance **and has identifying information about your group!**



Deliverable 3. Tech Journal - Basic Documentation
Make sure to clearly document your Basic OpenStack Server Network Information and the commands that you used to install OpenStack.

Reference Tutorial: <https://discourse.ubuntu.com/t/get-started-with-microstack/13998>

Another Helpful Tutorial:

<https://dev.to/donaldsebleung/introduction-to-openstack-with-microstack-1f5j>