



Guide: OpenNebula Sandbox on AWS

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Abstract

This is a guideline document to show how to deploy a hosted private cloud on AWS. The aim is to illustrate the internals of a cloud infrastructure and the view of the administrator.

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Requirements

- **First you should have followed the Guide “First Access to AWS”.** It is assumed you already have an AWS account and a key pair, and you are familiar with the AWS EC2 environment.

1. Spin up EC2 instance

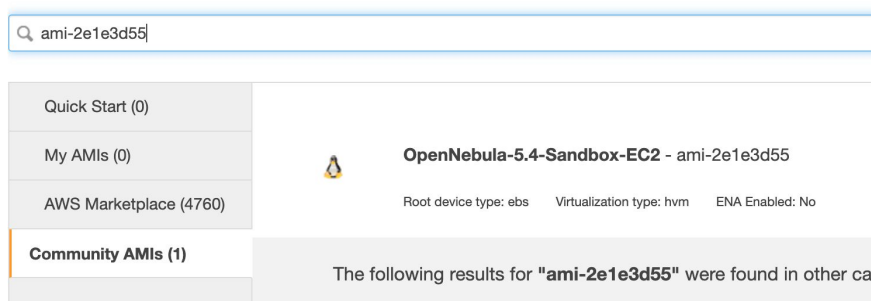
- Ensure you are in the **US-East-1 (North Virginia)** region from the dropdown in the top right of the AWS console.



- From “Security Groups” on the left side of the EC2 Console, you should create a new security group (`opennebula`) to open inbound access to the following ports:
 - SSH: Port Range: 22, Source: Anywhere
 - Custom TCP Rule: Port Range: 9869, Source: Anywhere
 - Custom TCP Rule: Port Range: 29876, Source: Anywhere
- Create a new EC2 instance. The free tier `t2.micro` is sufficient.
- In the AMIs tab, change the view filter to the **community images** and search for AMI `ami-2e1e3d55`.

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) or Marketplace; or you can select one of your own AMIs.

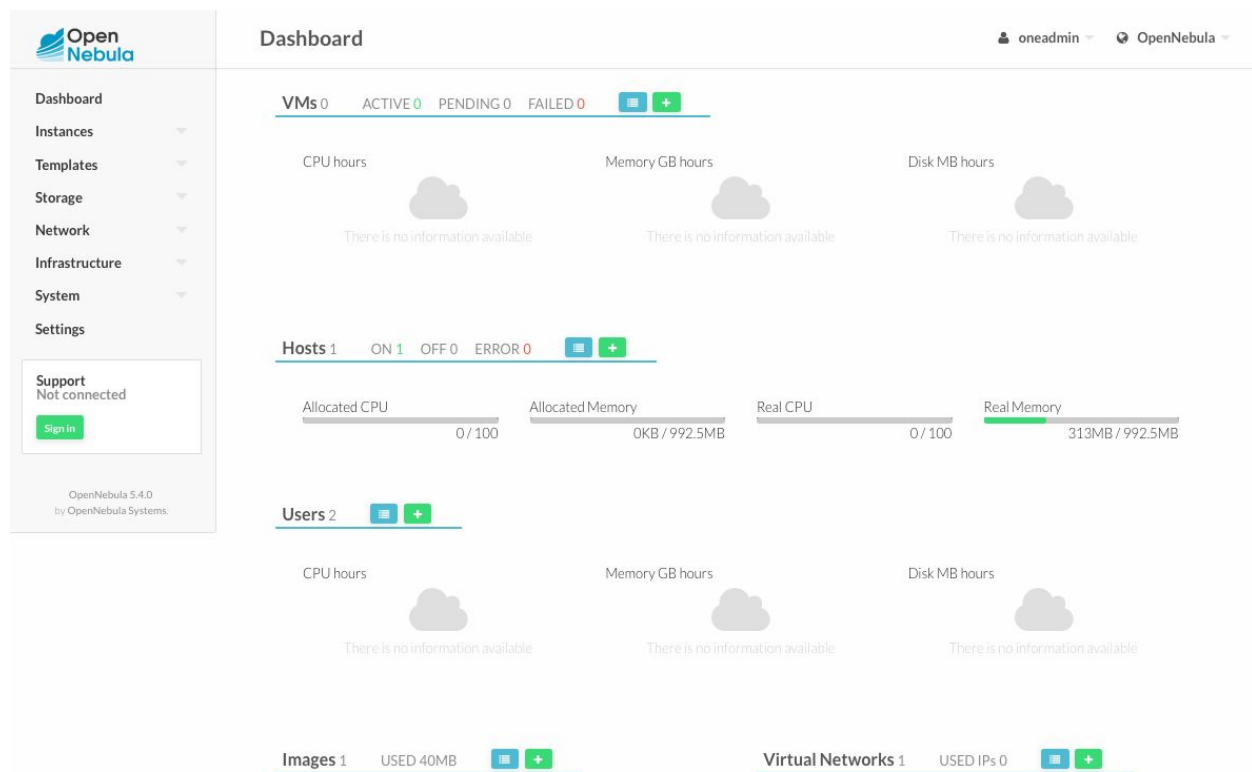


- Click “Review and Launch”. On the following page, click “Edit security groups”. Select “Select an existing security group” and select the security group you just created (`opennebula`) and launch the instance
- The sandbox is a Ubuntu 14.04 virtual machine image with a pre-configured OpenNebula 5.4.0 front-end, a virtualization host using QEMU ready to execute virtual machines, and prepared images to offer a complete and rich cloud experience. Users are able to log into an OpenNebula cloud, peer the managed resources, and launch instances of virtual machines without the hassle of configuring a physical infrastructure.



2. Try the Admin View in the Sunstone GUI

- The first thing we're going to do is to log in as oneadmin to take a look at the Admin View of Sunstone, which has more options than the other Sunstone views for a regular users.
- To login to Sunstone open your browser at `http://<< ip >>:9869` where ip is the Public IPv4 of your new EC2 instance.
- The login information is:
Login: oneadmin
Password: opennebula
- Take a look at all the already bootstrapped resources in the Sandbox



3. Try the Cloud View

- With the Admin View you can do anything in OpenNebula. Switch to the Cloud View (oneadmin-->Views-->cloud) to see how a final user will see OpenNebula



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- The Cloud View interface is much simpler and targeted at end users
- Create a new Virtual Machine by clicking the '+' button. Select the only available template and click 'Create'
- After clicking create you will be taken to the dashboard where you can see your running VMs.

- You can click on your VM and manage it: access it through VNC, Save its state, Reboot it, etc:



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VNC Connected (unencrypted) to: QEMU (one-0)



```
> hostname: ttylinux_host

/dev/hda1: clean, 744/10200 files, 9468/40792 blocks
root file system checked ..... [ OK ]
file systems checked ..... [ OK ]
mounting local file systems ..... [ OK ]
setting up system clock (Tue Nov 28 17:47:04 UTC 2017) ..... [ OK ]
mount: mounting /dev/hdc on /mnt/context failed: No such device or address
umount: can't umount /mnt/context: Invalid argument
initializing random number generator ..... [ OK ]
startup klogd ..... [ OK ]
startup syslogd ..... [ OK ]
bringing up loopback interface lo ..... [ OK ]
bringing up Ethernet interface eth0 ..... [ OK ]
set up default gateway ..... [ OK ]
/etc/rc.d/rc.startup/10.network: line 78: ./ifup-eth0.template: No such file or
directory
startup dropbear ..... [ OK ]
startup inetd ..... [ OK ]

ttylinux ver 9.0 [RC1]
i486 class Linux kernel 2.6.20 (tty1)
The initial root password is "password".
ttylinux_host login:
```

- Clicking on the Console icon will let you login into the VM. The credentials are:
Login: root
Password: password

Stop your instances when are done for the day to avoid incurring charges
Terminate them when you are sure you are done with your instance