

# Launching & Connecting to Deep Learning Instances in AWS

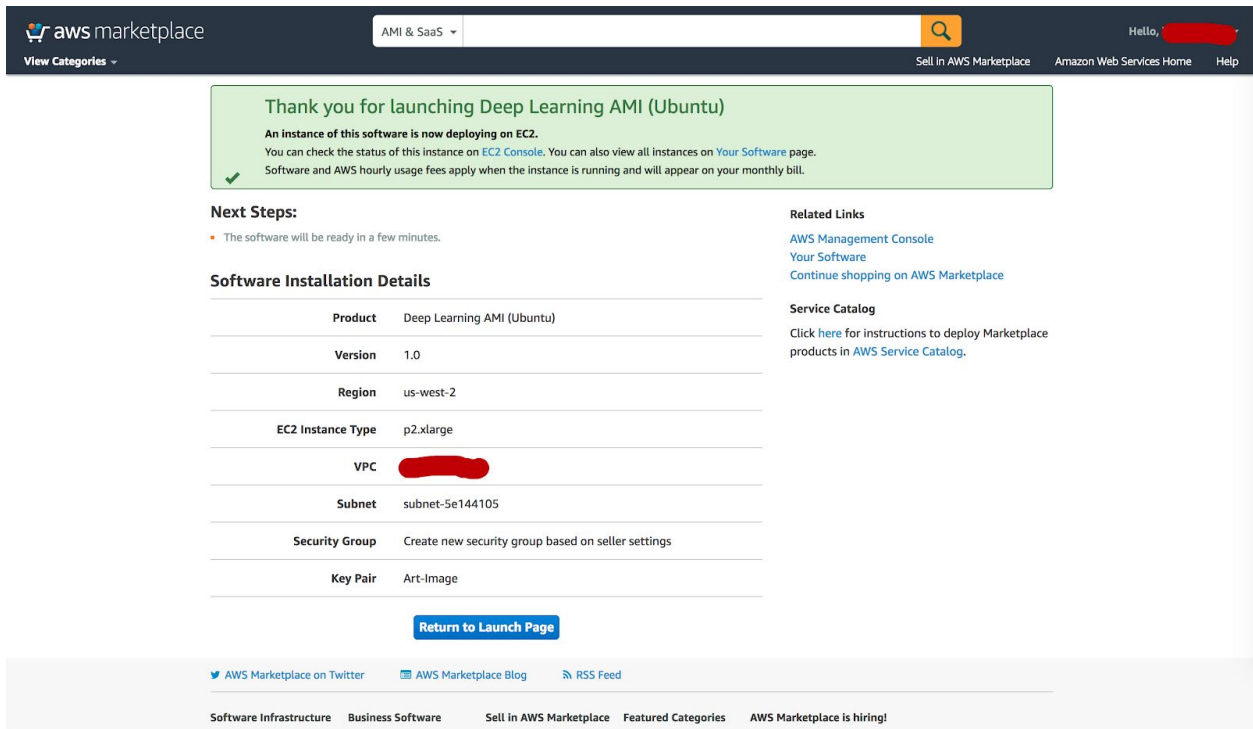
Author: [www.github.com/BryanBo-Cao](https://www.github.com/BryanBo-Cao)

Thu May 17, 2018

Local computer environment: macOS Sierra version 10.12.6

Choose one option and subscribe:

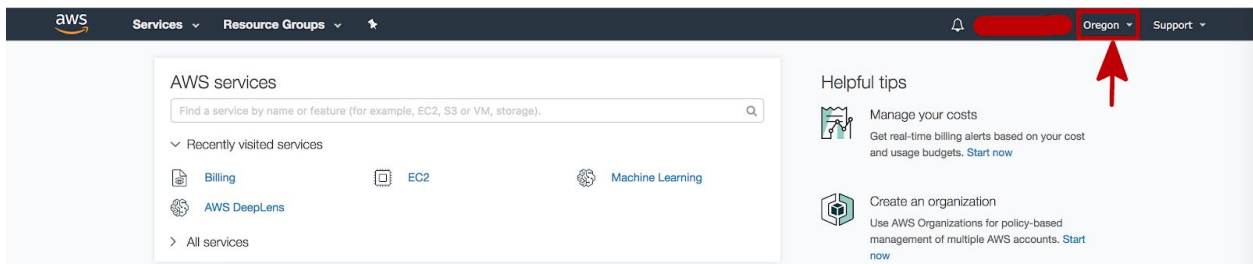
<https://aws.amazon.com/marketplace/pp/B077GCH38C>



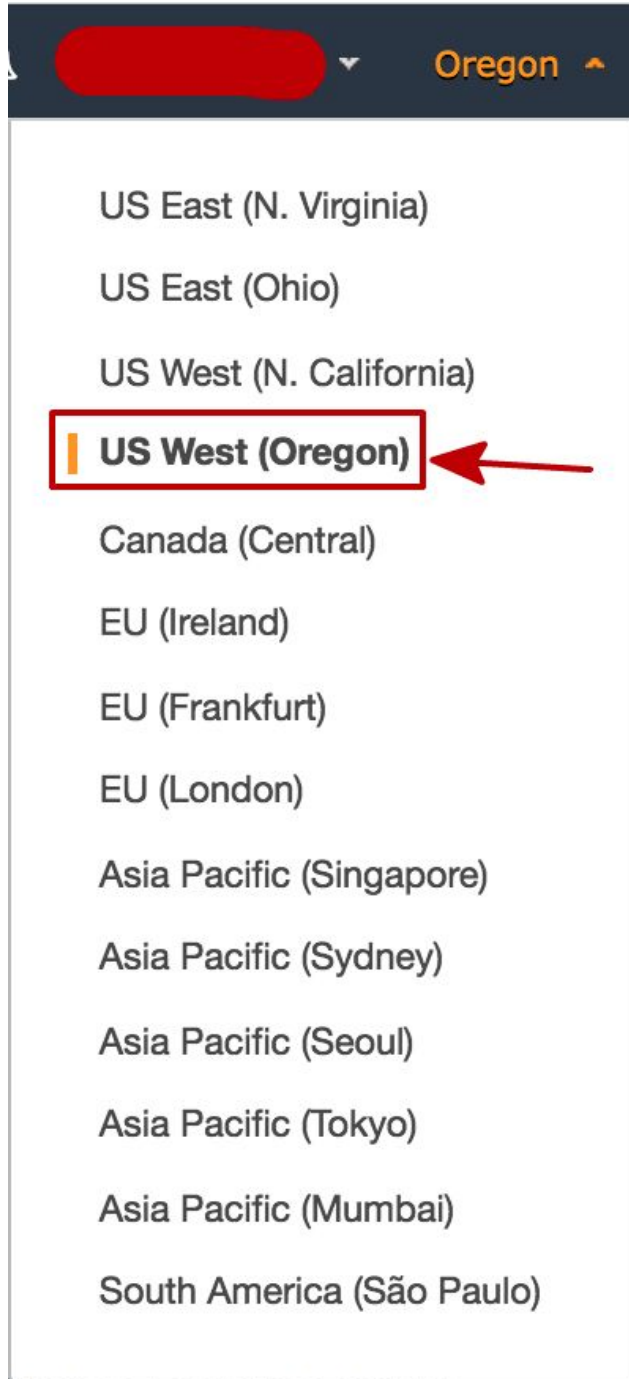
The screenshot shows the AWS Marketplace page for the 'Deep Learning AMI (Ubuntu)'. The page has a dark header with the AWS Marketplace logo, a search bar, and navigation links. A green banner at the top says 'Thank you for launching Deep Learning AMI (Ubuntu)' and provides instructions on how to check the instance status. Below this, the 'Next Steps' section indicates that the software will be ready in a few minutes. The 'Software Installation Details' section is a table with the following information:

Product	Deep Learning AMI (Ubuntu)
Version	1.0
Region	us-west-2
EC2 Instance Type	p2.xlarge
VPC	[REDACTED]
Subnet	subnet-5e144105
Security Group	Create new security group based on seller settings
Key Pair	Art-Image


Below the table is a 'Return to Launch Page' button. To the right of the table, there are 'Related Links' and a 'Service Catalog' section. The footer of the page includes links to AWS Marketplace on Twitter, the AWS Marketplace Blog, and an RSS Feed, as well as navigation links for Software Infrastructure, Business Software, Sell in AWS Marketplace, Featured Categories, and a hiring notice.

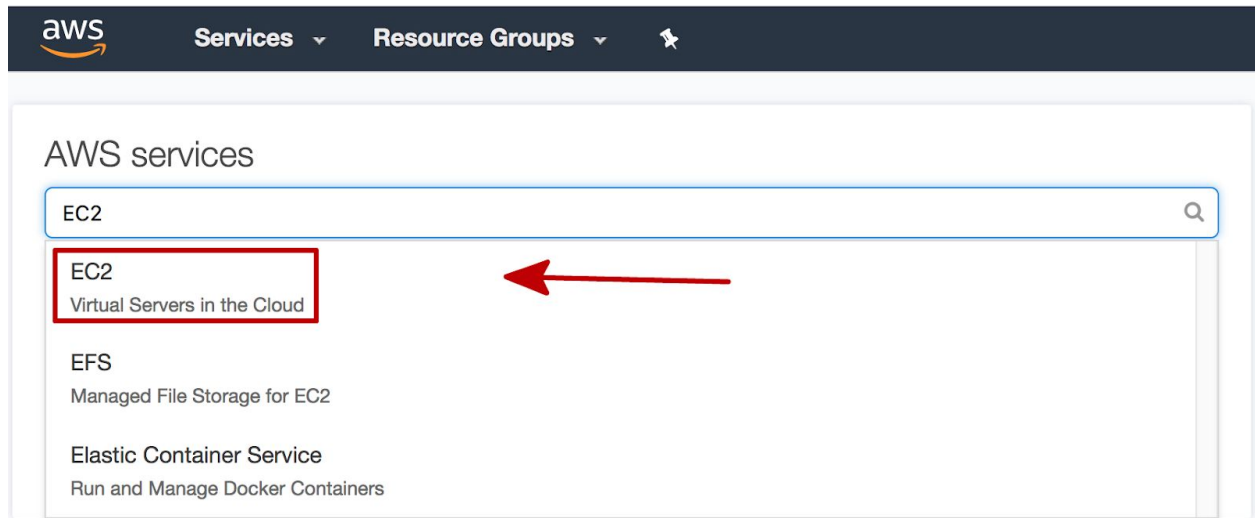


The screenshot shows the AWS Management Console. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and a search bar. On the right side of the navigation bar, the 'Oregon' region is selected, indicated by a red arrow. Below the navigation bar, the 'AWS services' section is visible, showing a search bar and a list of recently visited services: Billing, EC2, and Machine Learning. The 'Helpful tips' section on the right provides information on managing costs and creating an organization.

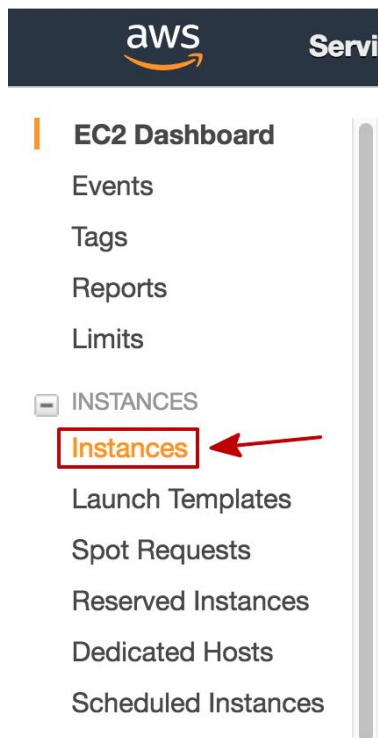


At this point, the server with Deep Learning frameworks are in US West (Oregon), so choose this region.

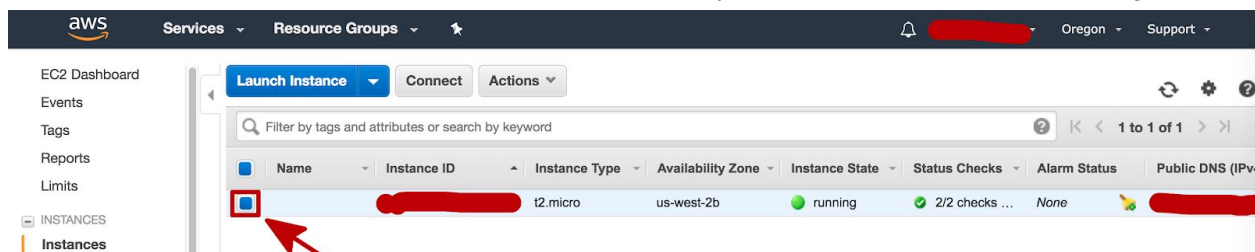
Click the  icon on the top-left corner, search “EC2” in the search bar and select “EC2”.



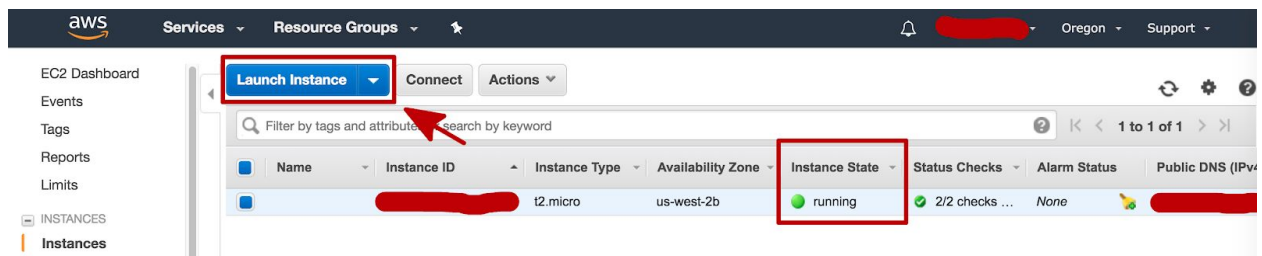
Select "instances"



Click the square box at the left side of an instance that you created for the deep learning task:



Click “Launch Instance” button, and wait until the “Instance State” turns to “running”:

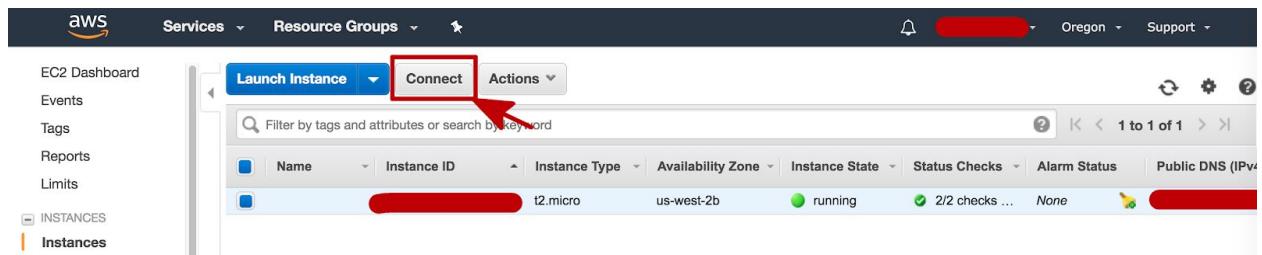


Assume you have generated and downloaded the private key “**Art-Image.pem**” in a directory called “**aws-key**” on your local computer. If not, you may create a pair key.

Reference:

<https://github.com/BryanBo-Cao/neuralnets-deeplearning/blob/master/Launching%20%26%20Connecting%20to%20an%20AWS%20Instance.pdf>

Then select the instance that you would like to use, click “Connect” button:



Copy the command with pulic DNS:

```
ssh -i "Art-Image.pem" ubuntu@ec2-*.us-west-2.compute.amazonaws.com
```

## Connect To Your Instance

I would like to connect with

☒ A standalone SSH client  
☐ A Java SSH Client directly from my browser (Java required)

To access your instance:

1. Open an SSH client. (find out how to [connect using PuTTY](#))

2. Locate your private key file (Art-Image.pem). The wizard automatically detects the key you used to launch the instance.

3. Your key must not be publicly viewable for SSH to work. Use this command if needed:  

```
chmod 400 Art-Image.pem
```

4. Connect to your instance using its Public DNS:  

```
ec2-*.us-west-2.compute.amazonaws.com
```

Example:

```
ssh -i "Art-Image.pem" ubuntu@ec2-*.us-west-2.compute.amazonaws.com
```

Please note that in most cases the username above will be correct, however please ensure that you read your AMI usage instructions to ensure that the AMI owner has not changed the default AMI username.

If you need any assistance connecting to your instance, please see our [connection documentation](#).

Close

Open your terminal(here I use iTerm), navigate (cd) to "aws-key" directory and make sure your private key is in this directory.

Enter

```
ssh -i "Art-Image.pem" ubuntu@ec2-*.us-west-2.compute.amazonaws.com
```

When you see the screen below, then you are connected to this instance:

```

→ aws-key ls
Art-Image.pem
→ aws-key pwd
/Users/Gundam00/Documents/aws-key
→ aws-key ssh -i "Art-Image.pem" ubuntu@ec2-██████████.us-west-2.compute.amazonaws.com
=====
      _| _|_ )
      _| (   /   Deep Learning AMI (Ubuntu)
      __|__|__|
=====

Welcome to Ubuntu 16.04.3 LTS (GNU/Linux 4.4.0-1039-aws x86_64v)

Please use one of the following commands to start the required environment with the framework of your choice:
for MXNet(+Keras1) with Python3 (CUDA 9) _____ source activate mxnet_p36
for MXNet(+Keras1) with Python2 (CUDA 9) _____ source activate mxnet_p27
for TensorFlow(+Keras2) with Python3 (CUDA 8) _____ source activate tensorflow_p36
for TensorFlow(+Keras2) with Python2 (CUDA 8) _____ source activate tensorflow_p27
for Theano(+Keras2) with Python3 (CUDA 9) _____ source activate theano_p36
for Theano(+Keras2) with Python2 (CUDA 9) _____ source activate theano_p27
for PyTorch with Python3 (CUDA 8) _____ source activate pytorch_p36
for PyTorch with Python2 (CUDA 8) _____ source activate pytorch_p27
for CNTK(+Keras2) with Python3 (CUDA 8) _____ source activate cntk_p36
for CNTK(+Keras2) with Python2 (CUDA 8) _____ source activate cntk_p27
for Caffe2 with Python2 (CUDA 9) _____ source activate caffe2_p27
for base Python2 (CUDA 9) _____ source activate python2
for base Python3 (CUDA 9) _____ source activate python3

Official conda user guide: https://conda.io/docs/user-guide/index.html
AMI details: https://aws.amazon.com/amazon-ai/amis/details/
Release Notes: https://aws.amazon.com/documentation/dlami/latest/devguide/appendix-ami-release-notes.html

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

Get cloud support with Ubuntu Advantage Cloud Guest:
http://www.ubuntu.com/business/services/cloud

62 packages can be updated.
34 updates are security updates.

ubuntu@ip-██████████:~$ █

```

If permission denied, append “sudo” to the front of the command like

```
sudo ssh -i "Art-Image.pem" ubuntu@ec2-*.us-west-2.compute.amazonaws.com
```