



Connecting to an AWS EC2 Instance – Mac OS X

Includes moving files into and out of an EC2 Instance

When you have created and launched an AWS Linux EC2 instance, you need to be able to connect to it from your computer using the SSH protocol. This will use the Mac Terminal window command line

Overview of the steps in this recipe:

- A. Prerequisites
- B. Connect to an EC2 instance
- C. Move data into an EC2 instance
- D. Move data out of an EC2 instance

A) Prerequisites

- a. You must have an AWS account. If you don't have an account, click [HERE](#) to create one.

Note: You will need to provide credit card information for your new account.

- b. You will need to create and launch a Linux EC2 instance to connect to. Instructions for this are found in the recipe titled "Create a Basic Elastic Cloud Compute (EC2) Instance."

B) Connect to an EC2 instance using SSH

1. In the AWS EC2 Management Console (Fig. 1), click on “Instances” in the left menu (1) under **EC2 Dashboard**.
 - a. Click on the “Connect” button (2) to open the “Connect To Your Instance” window (Fig. 2).
 - b. You will copy and paste information from this window to your Mac Terminal window later

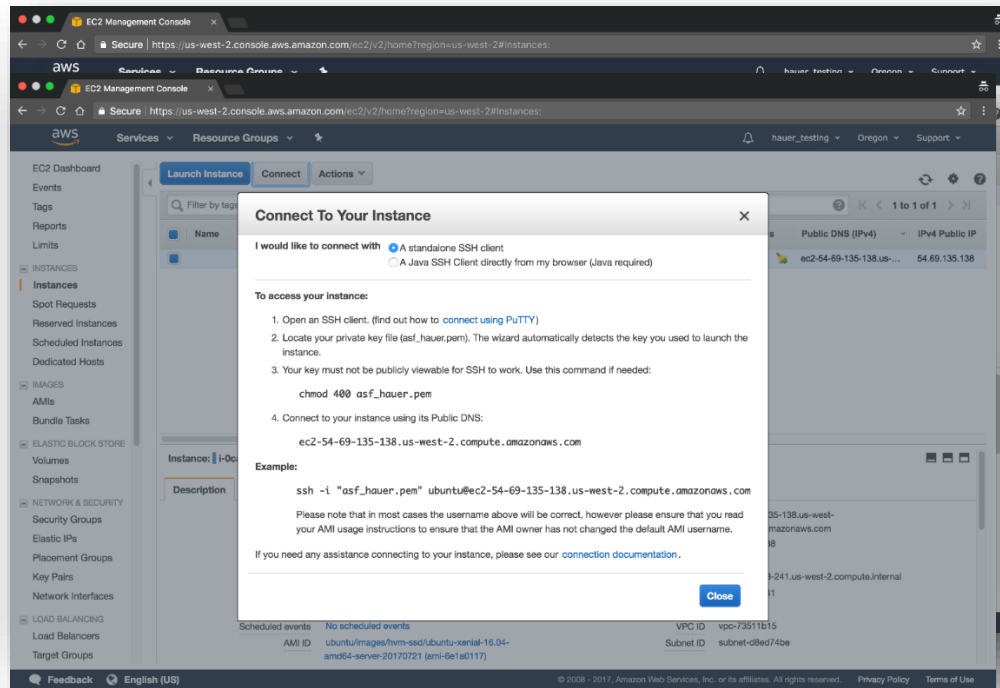



Figure 2

2. Next, open a Terminal  window on your Mac and navigate using the *cd* (*change directory*) command to the folder containing the *private key file* (.pem) created during the EC2 configuration process. This is usually the Downloads folder, unless you moved the file to another folder.

```
$ cd ~/<path to pem_folder>
```

Example: `$ cd ~/Downloads`

To view the contents of a directory:

```
$ ls -ltr
```

3. Change access permissions for the *private key file* (.pem)
 - a. At the Terminal prompt, type:

```
$ chmod 400 <filename.pem>
```

- b. Or copy the command (arrow **1**) from the “Connect To Your Instance” window (Fig. 3) and paste at the Terminal prompt
- c. Press <Enter>

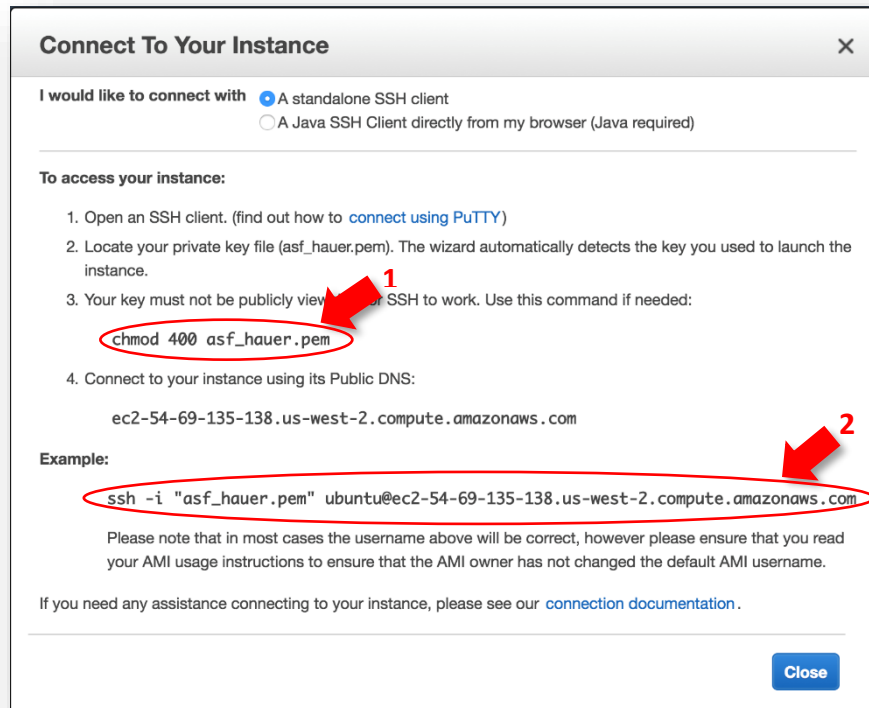


Figure 3

4. From the “Connect To Your Instance” window, copy the complete SSH command under **Example:** (arrow **2**).
 - a. This string includes your *filename.pem*, the username *ubuntu*, and the *Public DNS* of your EC2 instance
5. Paste the string at the Terminal prompt
 - a. Delete the double-quotes enclosing *filename.pem*
 - b. Press <Enter>
6. Type *yes* when prompted “Are you sure you want to continue connecting?”
 - a. Press <Enter>
 - b. A terminal window appears for your EC2 instance (Fig. 4).

```
aws.pem — ubuntu@ip-172-31-18-241: ~ — ssh -i asf_hauer.pem ubuntu@ec2-54-69-135-138.us-west-2.compute.amazonaws.com — 112x28
FBK-0D8GNM:aws.pem wehauer$ ssh -i asf_hauer.pem ubuntu@ec2-54-69-135-138.us-west-2.compute.amazonaws.com
Welcome to Ubuntu 16.04.2 LTS (GNU/Linux 4.4.0-1022-aws x86_64)

 * 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

0 packages can be updated.
0 updates are security updates.

Last login: Tue Oct 24 00:35:20 2017 from 137.229.29.136
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-18-241:~$
```

Figure 4. *You are now connected to your EC2 instance!*

C) Move data into an EC2 instance

Important: The commands described in Sections C and D are run from your Mac computer.

Move a file (for example, a file to be processed) *from your computer to your EC2 instance* Home directory of user **ubuntu** using SCP (secure copy protocol).

1. **At the Terminal prompt of your Mac OS computer:**

```
$ scp -i private.pem your_filename
ubuntu@EC2instance_public_DNS:/home/ubuntu/
```

- a. **Example** of moving file **S1A_EW_GRDM.zip** from your computer to your EC2 instance:

```
$ scp -i AWSrecipe.pem S1A_EW_GRDM.zip ubuntu@ec2-52-89-147-172.us-east-2.compute.amazonaws.com:/home/ubuntu/
```

- b. **Command syntax:** <indicates optional input>

```
$ scp -i pemfile.pem your_filename ubuntu@Public_DNS:/<path>/
```

D) Move data out of an EC2 instance

Move a file (for example a processing product) *from your EC2 instance* **ubuntu** directory to your computer using SCP (secure copy protocol).

1. **At the Terminal prompt of your Mac OS computer:**

```
$ scp -i private.pem ubuntu@Public_DNS:/home/ubuntu/filename ~/local_folder
```

- a. **Example** of moving file **F2_unw_phase.tif** from your EC2 Instance to your Mac computer Downloads folder:

```
$ scp -i asf_aws.pem ubuntu@ec2-52-89-147-172.us-east-2.compute.amazonaws.com:/home/ubuntu/PRODUCT/F2_unw_phase.tif ~/Downloads
```

- b. **Command syntax:** <indicates optional input>

```
$ scp -i pemfile.pem ubuntu@PublicDNS:/<path>/your_filename  
~/<path>/local_directory
```

Note: If you store your .pem file in a directory other than the directory you are working in, you must provide a path that directory in the SSH command.

Example

```
$ ssh -i ~/Documents/aws_pem/asf_hauer.pem ubuntu@ec2-54-69-135-138.us-west-2.compute.amazonaws.com
```

Note: If you **Stop** your instance using the EC2 Management Console (*Action > Instance State > Stop*), when you restart it you will be assigned a **new Public DNS**.

Use this new DNS to reconnect (see **Step 4**).

