

Setting up a Red5 streaming server on Amazon's AWS

Introduction:

This document has been prepared to assist in setting up the Streaming Recorder (<http://streamingrecording.denniehoopingarner.com>).

For more information about the Streaming Recorder, contact the author at dhoopingarner@gmail.com. For more information about AWS, contact Amazon.

Amazon's AWS is a commercial service, you will have to pay Amazon to use the AWS service.

No warranty is implied, and the user bears all responsibility for his actions.

The Big Picture:

1. Create a server on AWS
2. Create an administrative account on your server
3. Install Red5
4. Create an "application" in Red5
5. Deploy the Red5 application to your application space
6. Restart Red5

The Big Picture Step 1: Create a server on AWS

Go to aws.amazon.com.

Log in to your account:



My e-mail address is:

I am a new user.

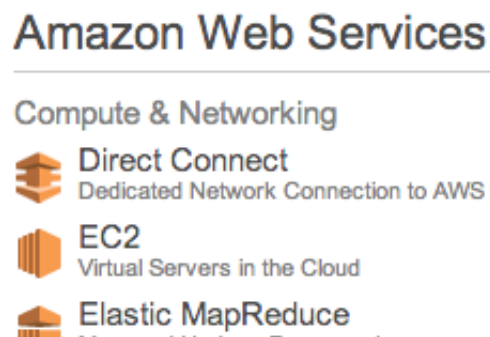
I am a returning user and my password is:

[Sign in using our secure server](#)

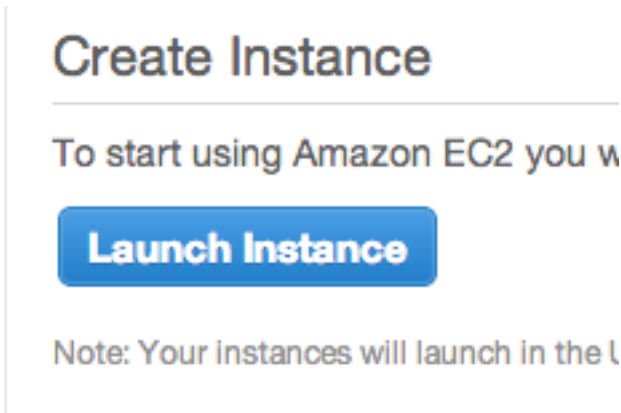
[Forgot your password?](#)

[Has your e-mail address changed?](#)

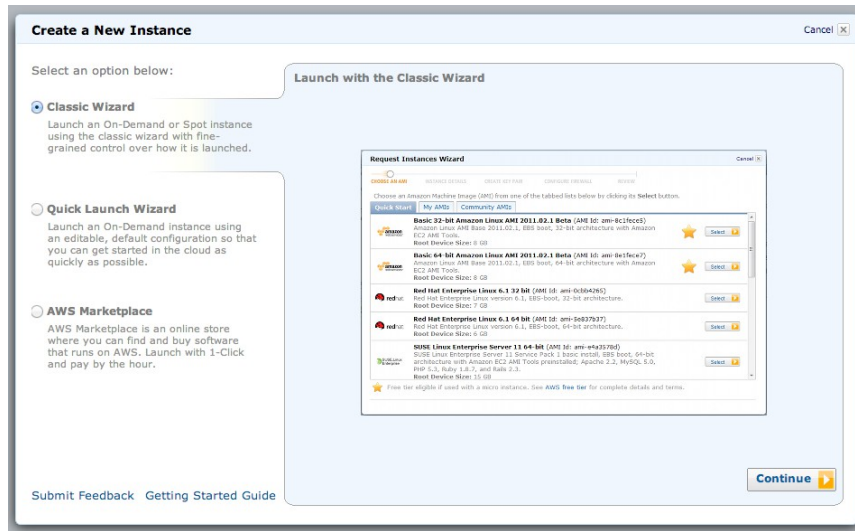
After logging in, click the "EC2" link:



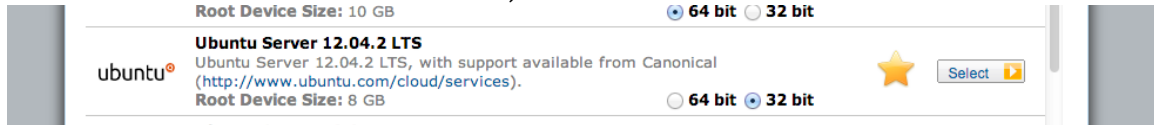
Click the "Create Instance" link



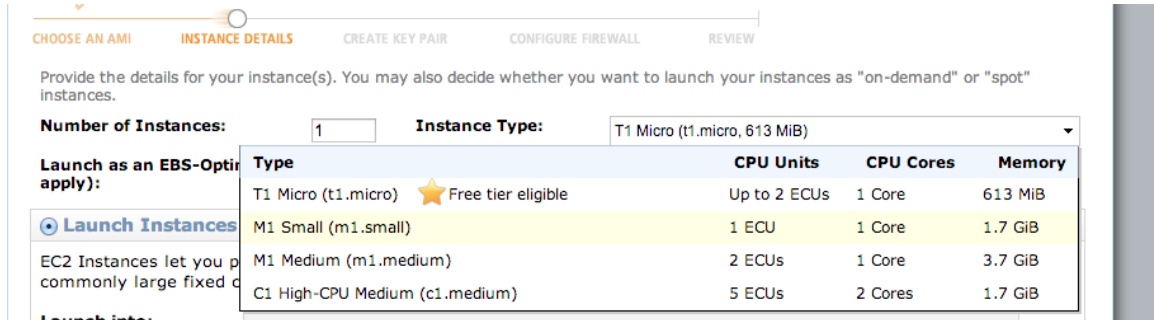
Choose the Classic Wizard:



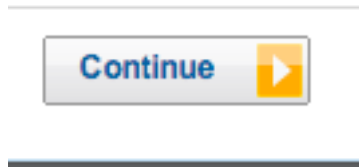
Select the Ubuntu Server 12.04.2 LTS, 32-bit:



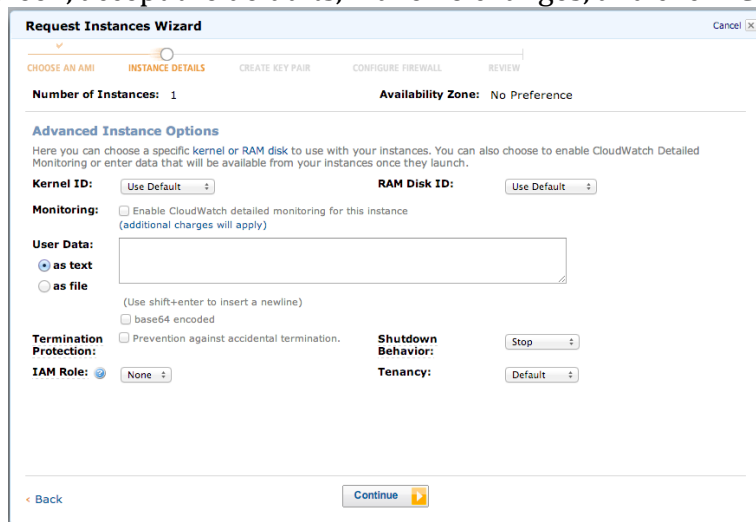
Choose a M1 Small instance:



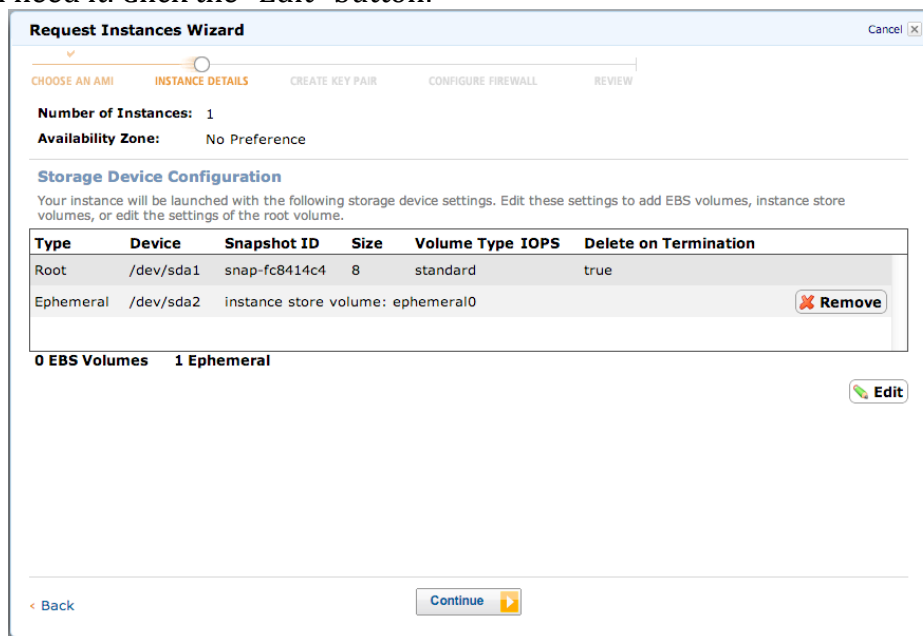
Click "Continue"



On the next screen, accept the defaults, make no changes, and click "Continue:"



You can increase the size of the hard drive, to give more storage space, if you think you will need it. Click the "Edit" button:



Increase the Volume Size, and click the "Save" button:

Request Instances Wizard Cancel

CHOOSE AN AMI **INSTANCE DETAILS** CREATE KEY PAIR CONFIGURE FIREWALL REVIEW

Number of Instances: 1
Availability Zone: No Preference

Storage Device Configuration
 Your instance will be launched with the following storage device settings. Edit these settings to add EBS volumes, instance store volumes, or edit the settings of the root volume.

Root Volume EBS Volumes Instance Store Volumes

Optionally, edit the root volume of your instance and then click Save.

Volume Size: 40 GiB **Volume Type:** Standard **IOPS:** 100

Device: /dev/sda1 **Delete on Termination:**

Type	Device	Snapshot ID	Size	Volume Type	IOPS	Delete on Termination
Root	/dev/sda1	snap-fc8414c4	40	standard		true
Ephemeral	/dev/sda2	instance store volume: ephemeral0				<input checked="" type="button" value="Remove"/>

0 EBS Volumes **1 Ephemeral**

[Back](#)

Don't do anything on this screen, click "Continue:"

Request Instances Wizard Cancel

CHOOSE AN AMI **INSTANCE DETAILS** CREATE KEY PAIR CONFIGURE FIREWALL REVIEW

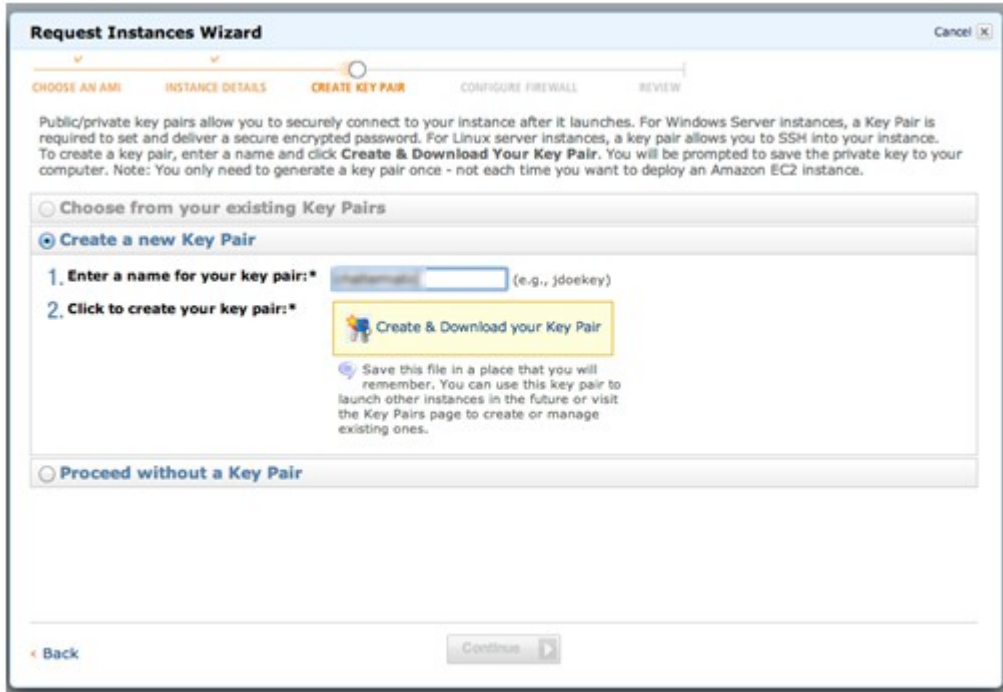
Add tags to your instance to simplify the administration of your EC2 infrastructure. A form of metadata, tags consist of a case-sensitive key/value pair, are stored in the cloud and are private to your account. You can create user-friendly names that help you organize, search, and browse your resources. For example, you could define a tag with key = Name and value = Webservers. You can add up to 10 unique keys to each instance along with an optional value for each key. For more information, go to [Tagging Your Amazon EC2 Resources](#) in the *EC2 User Guide*.

Key (127 characters maximum)	Value (255 characters maximum)	Remove
Name		<input checked="" type="button" value="Remove"/>
		<input checked="" type="button" value="Remove"/>

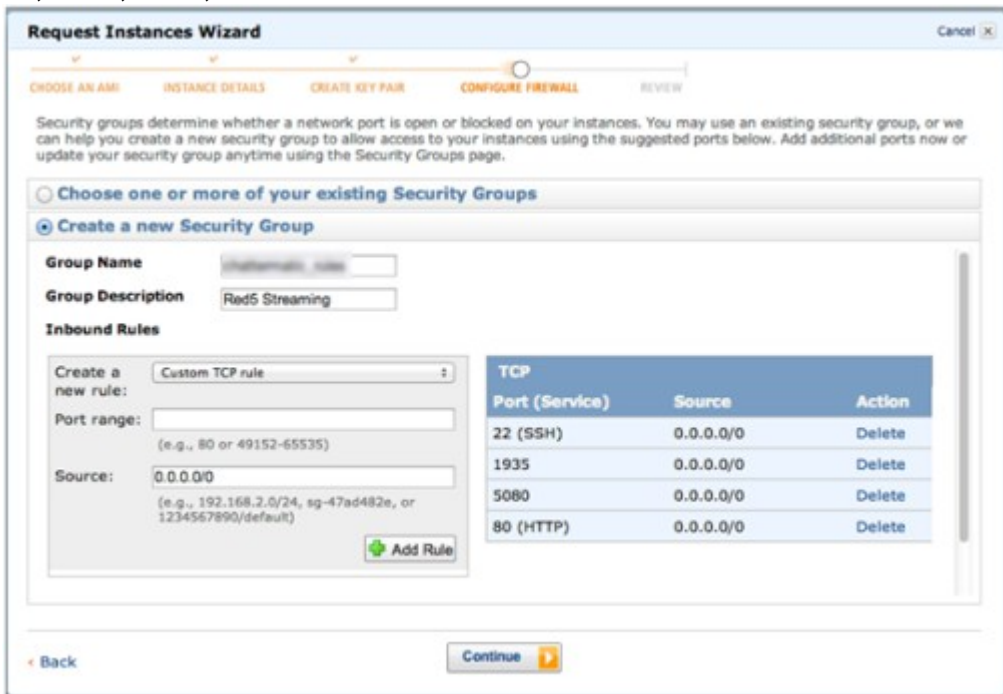
[Add another Tag.](#) (Maximum of 10)

[Back](#)

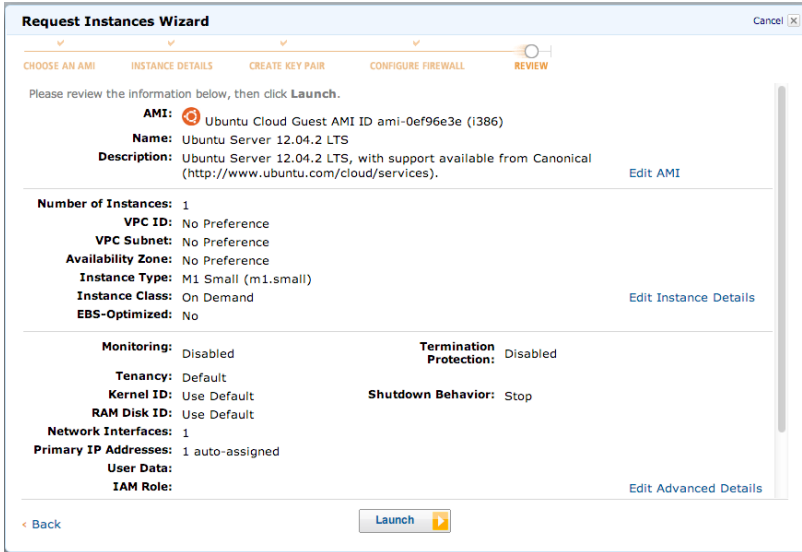
Create a Key Pair and download it. This file is the "pem file" that will be needed to log in to the server later.



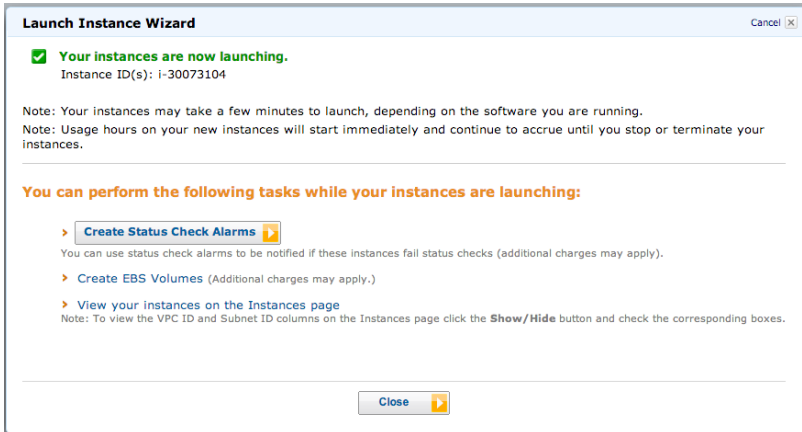
Create a Security Group to allow network traffic in and out of the server. Open ports 22, 1935, 5080, and 80:



Click "Launch" to start the server:



Click "Close"



Monitor the server status:



This screen shows the details of the server. Important is the domain name: `ec2-****.compute.amazonaws.com`

The screenshot displays the AWS Management Console interface for an EC2 instance. At the top, there is a navigation bar with 'Viewing: All Instances' and a search box. Below this is a table listing instances. The instance 'empty' is selected, showing its ID 'i-30073104', AMI ID 'ami-0ef96e3e', root device 'ebs', type 'm1.small', state 'running', and status checks 'initializing...'. Below the table, a summary card for the selected EC2 instance is shown, including its name 'empty', ID 'i-30073104', and public DNS name 'ec2-****.compute.amazonaws.com'. The 'Description' tab is active, showing various instance attributes in two columns.

Name	Instance	AMI ID	Root Device	Type	State	Status Checks	Alarm Status	Monitoring	Security Groups
<input checked="" type="checkbox"/>	empty	i-30073104	ami-0ef96e3e	ebs	m1.small	running	initializing...	none	basic

1 EC2 Instance selected.

EC2 Instance: i-30073104

ec2-****.compute.amazonaws.com

Description | Status Checks | Monitoring | Tags

AMI:	ubuntu/images/ebs/ubuntu-precise-12.04-i386-server-20130411.1 (ami-0ef96e3e)	Alarm Status:	none
Zone:	us-west-2b	Security Groups:	sg-****, sg-****, view
Type:	m1.small	State:	running
Scheduled Events:	No scheduled events	Owner:	136278542357
VPC ID:	vpc-a55842cd	Subnet ID:	subnet-a75842cf
Source/Dest. Check:	enabled	Virtualization:	paravirtual
Placement Group:		Reservation:	r-cb6927ff
RAM Disk ID:	-	Platform:	-
Key Pair Name:	****	Kernel ID:	aki-fa37baca
Monitoring:	basic	AMI Launch Index:	0
Elastic IP:	-	Root Device:	sda1
Root Device Type:	ebs	Tenancy:	default
IAM Role:	-	Lifecycle:	normal

The server is now built, and is running. Now you can log in to it and continue configuration. **The Big Picture Step 2: Create an administrative account on your server**

Use SSH to connect to the server

Get the Domain Name of the server from the AQS status window.

```
ec2-****.compute.amazonaws.com
```

Before logging in, you have to change permissions on the pem file. From the terminal, type this command:

```
chmod 600 mypem.pem
```

Connect to the server from a terminal window:

```
ssh -i mypem.pem ubuntu@ec2-****.compute.amazonaws.com
```

change to super user

```
sudo -s
```

install emacs

```
apt-get install emacs
```

Create an administrative account with credentials:

```
Username: administrator
```

```
Password: @dm!n!str@t0r
```

```
sudo useradd -d /home/ administrator -m administrator
```

```
sudo passwd administrator
```

Make the administrator account a super user:

```
visudo
```

Add a line under the root permissions:

```
# User privilege specification
```

```
root ALL=(ALL:ALL) ALL
```

```
administrator ALL=(ALL:ALL) ALL
```

Save and exit

Allow the administrative account to log in without the pem file

Use Emacs to edit the sshd config file

```
sudo emacs /etc/ssh/sshd_config
```

edit line 51

```
PasswordAuthentication no
```

Change to

```
PasswordAuthentication yes
```

Restart ssh server:

```
service ssh restart
```

Now you can log in to the server thusly:

```
ssh administrator@ ec2-****.compute.amazonaws.com
```

Change default shell from sh to bash

```
emacs /etc/passwd
```

Look for line:

```
administrator:x:1001:1001::/home/administrator:/bin/sh
```

Change to:

```
administrator:x:1001:1001::/home/administrator:/bin/bash
```

Save, log out, log back in.

Install apache web server

```
sudo apt-get install apache2
```

The Big Picture Step 3: Install Red5

(Do this as superuser. Enter superuser mode by typing `sudo -s`)

1. Add repositories

```
emacs /etc/apt/sources.list
```

uncomment lines 33-36

```
deb http://us.archive.ubuntu.com/ubuntu/ precise multiverse
deb-src http://us.archive.ubuntu.com/ubuntu/ precise multiverse
deb http://us.archive.ubuntu.com/ubuntu/ precise -updates multiverse
deb-src http://us.archive.ubuntu.com/ubuntu/ precise -updates multiverse
```

Uncomment line 52

```
deb http://archive.canonical.com/ precise partner
```

2. Update repositories

```
apt-get update
```

3. Install Java

```
apt-get install openjdk-7-jdk
```

4. Download and install Red5

```
cd ~
wget http://red5.org/downloads/red5/1_0/red5-1.0.0-RC1.tar.gz
tar xvfz red5-1.0.0-RC1.tar.gz
mv red5-1.0.0 red5
mv red5 /usr/share/
```

5. Test run

```
cd /usr/share/red5
sh red5.sh &
```

Last line of output should be:

```
[INFO] [Launcher:/installer] org.red5.server.service.Installer - Installer service
created
```

Should be able to see the test page [http:// ec2-****.compute.amazonaws.com:5080](http://ec2-****.compute.amazonaws.com:5080)

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Red5 Commands:

Must be run as root or in superuser mode

Start Red5:

```
cd /usr/share/red5/  
./red5.sh &
```

Stop Red5:

```
cd /usr/share/red5/  
./red5-shutdown.sh
```

The Big Picture Step 4: Create an “application” in Red5

Create application space in Red5.

```
cd /usr/share/red5/webapps
mkdir slimrecorder
```

NOTE: slimrecorder is the name of the application in this example. You can choose to name your application anything that you like.

Give administrator account permission on the application directories

```
chown -R administrator slimrecorder
```

The Big Picture Step 5: Deploy the Red5 application to your application space

Copy Red5 application files to the application space

If you chose to name your Red5 application space something other than "slimrecorder," follow these two steps:

1. Rename the JAR file: Change name of WEB-INF/lib/slimrecorder.jar to the name of the new Red5 application
2. Edit WEB-INF/red5-web.properties and WEB-INF/web.xml. Change each occurrence of the word "slimrecorder" to the name of the new Red5 application.

The Big Picture, Step 6: Restart Red5

Stop Red5:

```
cd /usr/share/red5/
./red5-shutdown.sh
```

Start Red5:

```
cd /usr/share/red5/
./red5.sh &
```

You will see a lot of status messages as Red5 initializes. One of the messages will be "slimrecorder 1.7 initialized." If you see that, your application is ready.