

# Elastic IP Address

Jun 2017

## Introduction

This guide assumes that you know a few basic things about AWS, that you have logged in and created an instance, and can navigate the AWS menus. If you have not created an instance, check this out: [Creating an Amazon AWS EC2 Instance](#)

### From Amazon:

<sxh [text], gutter: false; highlight: 0-0;> An Elastic IP address is a static IPv4 address designed for dynamic cloud computing. An Elastic IP address is associated with your AWS account. With an Elastic IP address, you can mask the failure of an instance or software by rapidly remapping the address to another instance in your account.

An Elastic IP address is a public IPv4 address, which is reachable from the Internet. If your instance does not have a public IPv4 address, you can associate an Elastic IP address with your instance to enable communication with the Internet; for example, to connect to your instance from your local computer. </sxh>

When you create an instance, you are associated an IP Address from a pool of Amazon public addresses. When/if you stop that instance, and restart it you, chances are you will get a different IP Address (as is normal with any DHCP system, depending on lease times of course.)

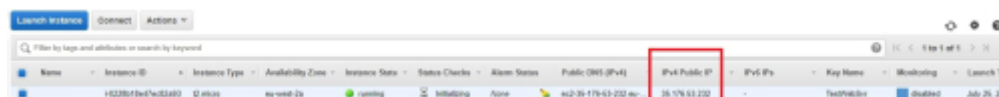
To avoid this we can use a feature called Elastic IP Address. If you are in your first year of free access, you can get the your first Elastic IP Address for free (and I think it stays free, but you have to pay for the instance after one year (or create another account (ssh)).

Your Elastic IP Address has a fixed IP. So no matter how many times you stop/start/restart your instance, you will always have the same Public IP Address, brilliant if you have mapped that to a Domain Name.

**WARNING!!! The Elastic IP Address is only FREE if you USE it!** If you stop your instance, you start to be charged by the hour for any unused Elastic IP Addresses, so if you don't want to pay for them, release them immediately.

## Setup

If your instance is running, it will currently have a dynamic IP Address assigned by Amazon.



| Name                  | Instance ID | Instance Type | Availability Zone | Instance State | Status Checks | Alarm Status | Public IPv4 (IPv4)    | IPv4 Public IP | IPv4 IPy | Key Name    | Monitoring | Launch Time   |
|-----------------------|-------------|---------------|-------------------|----------------|---------------|--------------|-----------------------|----------------|----------|-------------|------------|---------------|
| i-2380f8ed/nc2380f8ed | i-2380f8ed  | m4.xlarge     | eu-west-2a        | running        | initializing  | None         | ec2-35-176-63-232.eu- | 35-176-63-232  | -        | test@ubuntu | disabled   | July 26, 2017 |

If your instance is running, you have to stop the instance to allow the DHCP address to return to the Amazon pool, and to allow assignment of an [Elastic IP Address](#).

Navigate to the [AWS Console](#).

The screenshot shows the Amazon EC2 Dashboard. The left sidebar has a menu with 'EC2 Dashboard' highlighted. The main content area is titled 'Resources' and lists the following counts for the EU West (London) region:

- 0 Running Instances
- 0 Dedicated Hosts
- 1 Volumes
- 1 Key Pairs
- 0 Placement Groups
- 0 Elastic IPs (highlighted with a red box)
- 0 Snapshots
- 0 Load Balancers
- 2 Security Groups

Below the resource counts, there is a 'Create Instance' section with a 'Launch Instance' button. To the right, there is a 'Service Health' section showing 'EU West (London):' with a green checkmark and 'This service is operating normally'. Further right, there is a 'Scheduled Events' section showing 'EU West (London):' with 'No events'.

Select the **Elastic IPs** Option.

The next page shows your allocated **Elastic IPs** (you probably won't have any.)

The screenshot shows the Amazon EC2 Elastic IP Addresses page. The left sidebar has a menu with 'EC2 Dashboard' and 'Elastic IPs' highlighted. The main content area has a header with 'Allocate new address' and 'Actions' buttons. Below the header, there is a search bar with the text 'Filter by attributes or search by keyword'. The main content area displays the message: 'You do not have any Addresses in this region. Click the Create Address button to create your first Address.' Below this message, there is a blue button labeled 'Allocate new address' (highlighted with a red box).

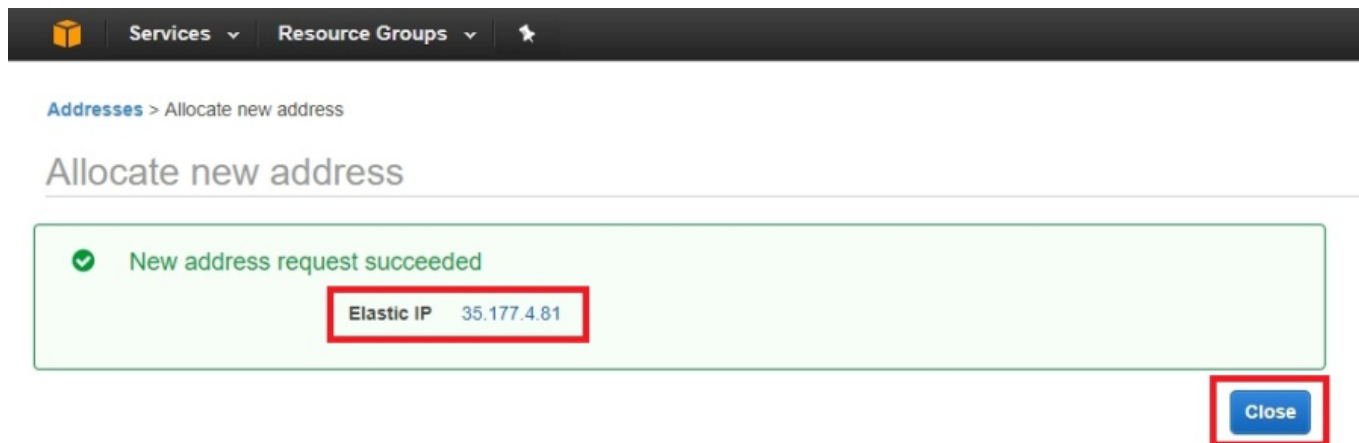
Select **Allocate New Address**.

The next page seems a bit unnecessary.

The screenshot shows the 'Allocate new address' page. The breadcrumb trail at the top reads 'Addresses > Allocate new address'. The main heading is 'Allocate new address'. Below the heading, there is a sub-heading: 'Allocate a new Elastic IP address by selecting the scope in which it will be used'. At the bottom of the page, there is a form with a 'Required' label. On the right side of the form, there are two buttons: 'Cancel' and 'Allocate' (highlighted with a red box).

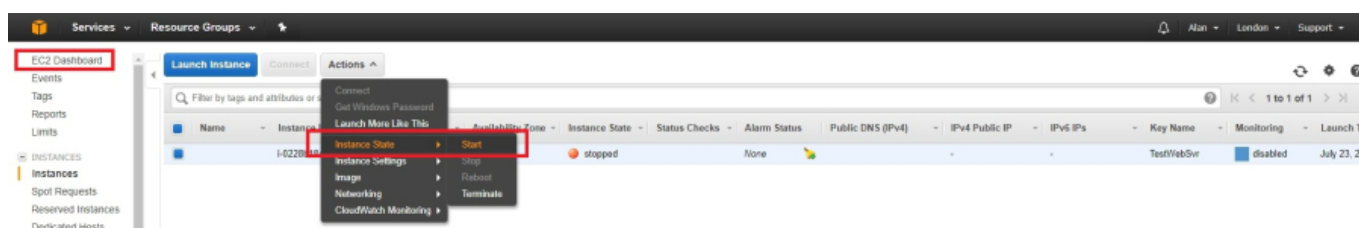
Select **Allocate**.

Next you will see a confirmation page.



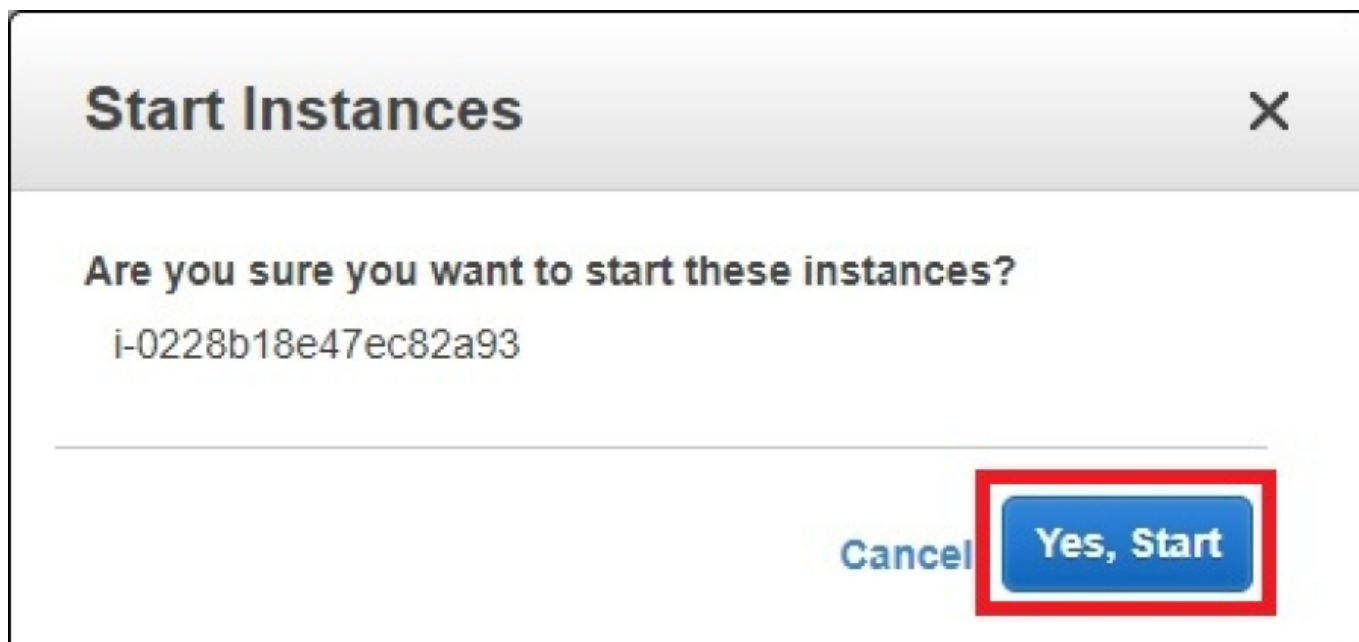
Here you can see the Public **Elastic IP Address** you have been allocated (this is not associated with your instance yet.) Select **Close**.

Once back at the EC2 Console. You need to start your instance.



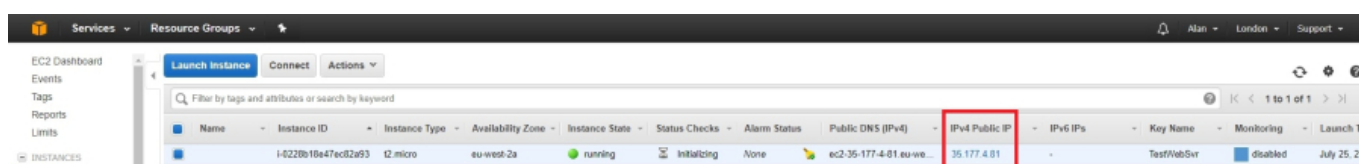
Select **Actions**, **Instance State** then **Start**.

You will get a prompt asking if you wish to start the instance.



Click

Back at the EC2 Console you will see your started instance.



The IP Address should match the Elastic IP Address you were allocated when you created it.

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