

Elastic IP Address

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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.)

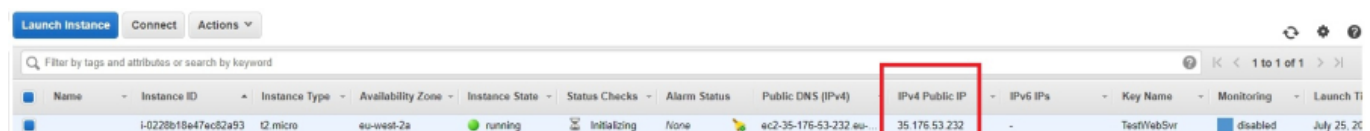
To avoid this we can use a feature called Elastic IP Address. If you are in your first year of free access, you can get the your first Elastic IP Address for free (and I think it stays free, but you have to pay for the instance after one year (or create another account (ssh)).

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.



The screenshot shows the AWS Management Console interface. At the top, there are buttons for 'Launch Instance', 'Connect', and 'Actions'. Below these is a search bar. The main table lists EC2 instances. The columns are: Name, Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, Public DNS (IPv4), IPv4 Public IP, IPv6 IPs, Key Name, Monitoring, and Launch Time. The first instance listed is 'i-0228b18e47ec82a53', type 't2.micro', in 'eu-west-2a' availability zone, with state 'running'. The 'IPv4 Public IP' column for this instance shows '35.176.53.232', which is highlighted with a red box.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name	Monitoring	Launch Time
	i-0228b18e47ec82a53	t2.micro	eu-west-2a	running	Initializing	None	ec2-35-176-53-232.eu-...	35.176.53.232	-	TestWebSvr	disabled	July 25, 2016

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 displays the Amazon EC2 Dashboard. On the left, the navigation menu includes 'EC2 Dashboard' (highlighted with a red box), 'Events', 'Tags', 'Reports', 'Limits', 'INSTANCES', 'IMAGES', 'ELASTIC BLOCK STORE', and 'NETWORK & SECURITY'. The main content area, titled 'Resources', shows the following counts for the EU West (London) region:

Resource Type	Count
Running Instances	0
Dedicated Hosts	0
Volumes	1
Key Pairs	1
Placement Groups	0
Elastic IPs	0
Snapshots	0
Load Balancers	0
Security Groups	2

Below the resource counts, there is a promotional banner for Amazon Lightsail. Further down, the 'Create Instance' section provides a 'Launch Instance' button. The 'Service Health' section indicates that the EU West (London) service is operating normally. The 'Scheduled Events' section shows no events.

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