

Compute Services

2019年2月10日 星期日 上午1:04

What is Elastic Compute Cloud (EC2)?

EC2

Simplified Definition:

Think of EC2 as your basic desktop computer.

AWS Definition:

"Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic."



AWS EC2

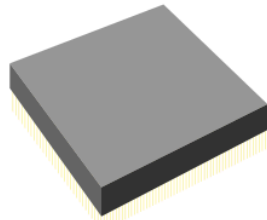
EC2 Basics (components):



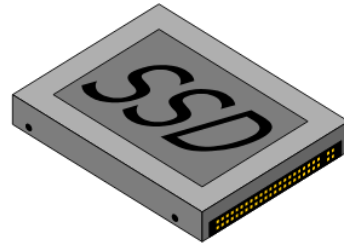
Basic Computer
Components



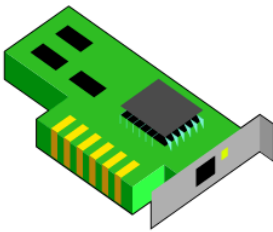
Operating System
(Linux or
Windows)



CPU
(Processing
Power)



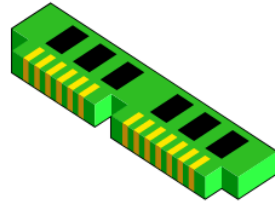
Hard Drive
(Local Storage)



Network Card
(Internet Access)



Firewall
(Security)



RAM

EC2 Basics (components):

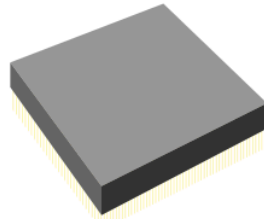


EC2 Instance Components

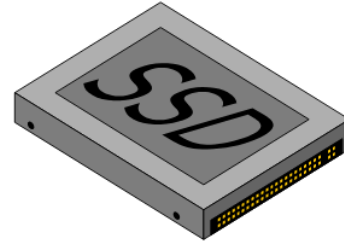
NOTE: This is an overly-simplified comparison.



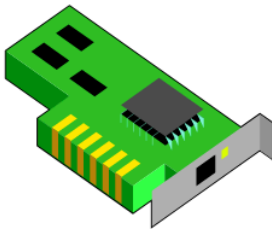
AMIs
(Linux or
Windows)



Instance Type
(Processing
Power)



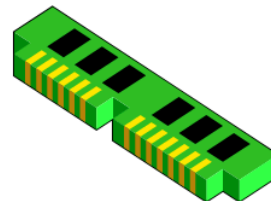
EBS
(Local Storage)



IP Addressing
(Internet Access)



Security Groups
(Security)



RAM

EC2 Basics (components):

AMI Options:

AMIs come in three main categories:

(1) Community AMIs:

-Free to use

-Generally, with these AMIs you are just selecting the OS you want.

(2) AWS Marketplace AMIs:

-Pay to use

-Generally comes packaged with additional, licensed software.

(3) My AMIs:

-AMIs that you create yourself

Instance Type Options:

(1) General purpose

(2) Compute optimized

(3) GPU optimized


(4) Memory optimized

(5) Storage optimized

Step 1: Choose an Amazon Machine Image (AMI)


Community AMIs

☐ Free tier only ⓘ

**Amazon Linux**
Free tier eligible

software packages through extras.


Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

**SUSE Linux**
Free tier eligible

SUSE Linux Enterprise Server 15 (HVM), SSD Volume Type - ami-06ea7729e394412c8

SUSE Linux Enterprise Server 15 (HVM), EBS General Purpose (SSD) Volume Type. Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled.


Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

**Red Hat**
Free tier eligible

Red Hat Enterprise Linux 7.6 (HVM), SSD Volume Type - ami-011b3ccf1bd6db744 (64-bit x86) / ami-0e3688b4a755ad736 (64-bit Arm)

Red Hat Enterprise Linux version 7.6 (HVM), EBS General Purpose (SSD) Volume Type


Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

**Ubuntu**
Free tier eligible

Ubuntu Server 18.04 LTS (HVM), SSD Volume Type - ami-0ac019f4cb7cb7e6 (64-bit x86) / ami-01ac7d9c1179d7b74 (64-bit Arm)

Ubuntu Server 18.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

**Amazon RDS**

Are you launching a database instance? Try Amazon RDS.

Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale your database on AWS by automating time-consuming database management tasks. With RDS, you can easily deploy **Amazon Aurora**, **MariaDB**, **MySQL**, **Oracle**, **PostgreSQL**, and **SQL Server** databases on AWS. [Aurora](#) is a MySQL- and PostgreSQL-compatible, enterprise-class database at 1/10th the cost of commercial databases. [Learn more about RDS](#)

[Launch a database using RDS](#)

Cancel and Exit

☐ 64-bit (Arm)

☒ 64-bit (x86)

☒ 64-bit (x86)

☐ 64-bit (Arm)

Step 1: Choose an Amazon Machine Image (AMI)

🔍 Search for an AMI by entering a search term e.g. "Windows"

Quick Start

My AMIs

AWS Marketplace

Community AMIs

Categories

All Categories

Infrastructure Software (2563)

Developer Tools (571)

Business Software (1059)

Find and buy software that runs in the AWS Cloud, software from trusted vendors like SAP, Zend, Microsoft, as well as n Marketplace AMI products. View Marketplace products you are currently subscribed to by visiting [Your Software](#) in the

Featured Software

<p>Barracuda CloudGen Firewall for AWS - ... Rating ★★★★★ By Barracuda Networks, Inc. Starting from \$0.60/hr or from \$4,599/yr (12% savings) for software</p>	<p>vSRX Next Generation Firewall By Juniper Networks \$0.55/hr or \$2,280/yr (53% savings) for software</p>	<p>Matillion ETL for Amazon Redshift Rating ★★★★★ By Matillion Starting from \$1.37/hr or from \$9,950/yr (17% savings) for software</p>	<p>Trend Micro Deep Security Rating ★★★★★ By Trend Micro Starting from \$0.01 per host/hr for software usage</p>
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Popular Software

<p>F5 BIG-IP Virtual</p>	<p>CentOS 7.2 LAMP</p>	<p>SoftNAS Cloud</p>	<p>F5 BIG-IP Virtual</p>
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EC2 Basics (buying options)

On-Demand:

On-demand purchasing allows you to choose any **instance type** you like and provision/terminate it at any time (on-demand).

- (1) Is the **most expensive** purchasing option.
- (2) Is the **most flexible** purchasing option.
- (3) You are only charged when the instance is running (and billed by the second).
- (4) You can provision/terminate an on-demand instance at any time.

Reserved:

Reserved purchasing allows you to purchase an instance for a **set time period** of one (1) or three (3) years.

- (1) This allows for a **significant price discount** over using on-demand.
- (2) You can select to pay upfront, partial upfront, no upfront.
- (3) Once you buy a reserved instance, you own it for the selected time period and are **responsible for the entire price** - regardless of how often you use it.

Spot:

Even x use, still pay

Spot pricing is a way for you to **"bid"** on an instance type and only pay for and use that instance when the spot price is **equal to or below** your "bid" price.

- (1) This option allows Amazon to sell the use of **unused instances**, for short amounts of time, at a **substantial discount**.

- (2) ***Spot prices fluctuate*** based on supply and demand in the spot marketplace.
- (3) You are ***charged by the second (but bid pricing based on and hourly rate)***
- (4) When you have an active bid, an instance is ***provisioned for you when the spot price is equal to or less than you bid price.***
- (5) Provisioned instances ***automatically terminate when the spot price is greater than your bid price.***

Full list of Instance Purchasing Options:

<https://aws.amazon.com/ec2/pricing/>