

AWS – Elastic Cloud Compute – EC2

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Amazon EC2 (Elastic Cloud Compute)

- Resizable compute instances in the cloud
- Provision 1 or many instances
- Pay for what you use; no minimum commitment
- Familiar operating systems, with cloud benefits
- This is a Virtual Machine on AWS.

Amazon EC2 Instances - Families

- Compute-Optimized
- General Purpose
- Micro Instances
- Storage-Optimized
- GPU Instances
- Memory-Optimized

Amazon EC2 Instances - Generations

- C1/CC2/C3
- M1/M3
- T1/T2/T3
- M5d/m5/m4
- C5d/c5/c4
- G2/g3
- R5d/r4/r5
- And Many More.....

Some Amazon EC2 Benefits

- Elastic/Flexible
 - Use as much as you want and terminate whenever you want
- Completely Controlled
 - Log on as root (Linux) / Administrator (Windows)
 - Create an AMI (Amazon Machine Image)
- Reliable → Use multiple Availability Zones (AZs)
- Secure
 - Secured premises, Storage, Network Access
 - Secured Users , Logins,
- Inexpensive
 - Eg: -- On-demand Instance at 0.02/hr.

Create an simple EC2 instance

- Select an image (OS Image, **ITS NOT AN ISO FILE**)
 - AWS marketplace
 - AWS images
 - Custom images
- Select the instance type . (CPU, RAM and Network Speed)
 - Based on the CPU and RAM size.
 - Custom option is not available, for eg: 3 CPU, 5 GB RAM cannot be configured, instead we would need to select the nearest pre defined types.
- Configure Instance Details
 - Number of Instances
 - Networking
 - Hardware Type (Shared, Dedicated and Dedicated Host)
 - Scale Up feature
 - Terminate Protection

Create an simple EC2 instance

- Configure Instance Details
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 - Scale Up feature
 - Terminate Protection → Enable/Disable
 - Configure Network adapter with auto-assign or static private IPv4 and public IPV6.
 - Also has option for additional Network adapter

Create an simple EC2 instance

- Storage Allocation
 - Increase or Decrease the root volume.
 - Type of Disk
 - General Purpose
 - Provisional
 - Magnetic
 - Select the IOPS
 - Enable or Disable “Delete on Termination”
 - This option is “**NOT**” Changeable once the VM(EC2) is created.

Create an simple EC2 instance

- Add Tags → For better manageability.
- Security Groups
 - To provide inbound and outbound Traffic rules for the EC2 instance
- Key Generation
 - It creates an Private and Public key.
 - The private key is downloadable only **ONCE** and AWS does not store it.
 - **Username is default for every IMAGE we select.**

Troubleshooting instance Issues

Contents

[Troubleshooting Instance Launch Issues](#)

[Troubleshooting Connecting to Your Instance](#)

[Troubleshooting Stopping Your Instance](#)

[Troubleshooting Terminating \(Shutting Down\) Your Instance](#)

[Troubleshooting Instance Recovery Failures](#)

[Troubleshooting Instances with Failed Status Checks](#)

[Getting Console Output and Rebooting Instances](#)

[Booting from the Wrong Volume](#)

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instance-troubleshoot.html>