

# AWS – Elastic Cloud Compute – EC2

**VISHWANATH M S**

**[VISHWACLOUDLAB.ORG](http://VISHWACLOUDLAB.ORG)**

# 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 such as you want and terminate when ever 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

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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

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