

Placement Empowerment Program Cloud Computing and DevOps Centre

Set Up a Virtual Machine in the CloudCreate a free-tier AWS, Azure, or GCP account. Launch a virtual machine and SSH into it.



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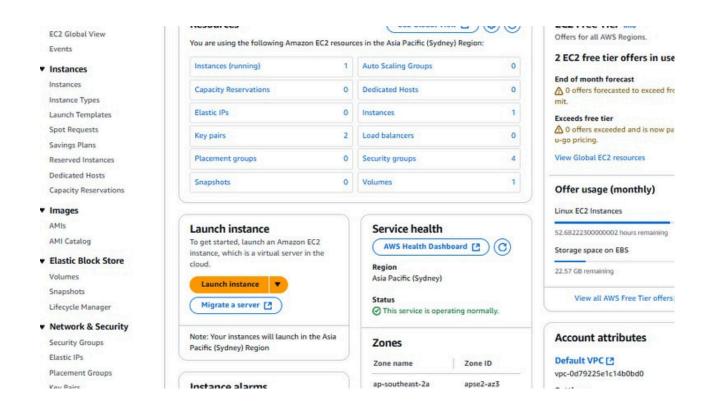


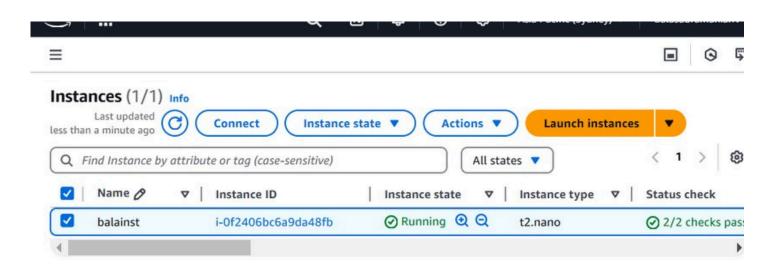
Introduction: AWS (Amazon Web Services) offers a Free Tier that allows users to create and use virtual machines (EC2 instances) at no cost for up to 750 hours per month. This guide will walk you through setting up an EC2 instance and connecting to it using SSH.

Step 1: Create a Free-Tier AWS Account Go to AWS Free Tier.

- Click "Create an AWS Account."
- Enter your email, create a password, and choose an AWS account name.
- Provide billing information (AWS requires a credit card but will not charge you under the Free Tier).
 Verify your phone number.
- Select "Basic Support Free" and complete the setup.
 - Sign in to the AWS Management Console.

Step 2: Launch an EC2 Virtual Machine (Instance)





• Open the AWS Management Console and go to EC2 by searching for it in the search bar. Click "Launch • instance." Set up the instance: Name: Enter a name for your instance (e.g., "MyFirstVM"). AMI • (Amazon Machine Image): Choose Amazon Linux 2 (free-tier eligible). Instance type: Select t2.micro • (1 vCPU, 1GB RAM, free-tier eligible). Create a Key Pair (For SSH Access) Click "Create a new key • pair." Name it (e.g., "my-key-pair"). Choose RSA as the key type. Click "Create key pair" (it will download a .pem file). Keep this .pem file safe; you will need it to connect via SSH. Security Group Configuration: Select "Create new security group." Allow SSH traffic by adding a rule: Type: SSH Protocol: TCP Port Range: 22 Source: Your IP (recommended) or Anywhere (0.0.0.0/0) Launch the instance by clicking "Launch Instance." Go to EC2 Dashboard > Instances, and wait for the instance to show the status "Running."

Name and tags Info

Name

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▼ Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application s required to launch your instance. Search or Browse for AMIs if you don't see what you are look

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▼ Instance type Info | Get advice

Instance type



Additional costs apply for AMIs with pre-installed software

▼ Summary Number of instances Info Software Image (AMI) Canonical, Ubuntu, 24.04, amd6...read more ami-09e143e99e8fa74f9 Virtual server type (instance type) Firewall (security group) New security group Storage (volumes) 1 volume(s) - 8 GiB Cancel Launch instance Preview code Create key pair Key pair name Key pairs allow you to connect to your instance securely. The name can include up to 255 ASCII characters. It can't include leading or trailing spaces. Key pair type 🐧 RSA ED25519 RSA encrypted private and public key ED25519 encrypted private and public key pair Private key file format o .pem For use with OpenSSH O .ppk For use with PuTTY ⚠ When prompted, store the private key in a secure and accessible location on your computer. You will need it later to connect to your instance. Learn more 🛂

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Step 3: Connect to Your Virtual Machine via SSH

- For Windows (Using PowerShell or Git Bash)
- Open a terminal (PowerShell or Git Bash).
- Navigate to the folder where your .pem key file is saved.
- Run the following command to connect:
- sh
- CopyEdit

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\Users\ASUS> ssh -i "my-key-pair.pem" ec2-user@your-public-ip

- Replace my-key-pair.pem with your key file name.
- Replace your-public-ip with the Public IPv4 address from the EC2 instance details

Step 4: Verify Connection

If the connection is successful, you should see a prompt like:

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\Users\ASUS> [ec2-user@ip-192.168.0.0432 ~]\$

- Next Steps
- Install software using yum or apt (depending on the OS).
- Set up a web server (Apache, Nginx).
- Configure firewall settings.

Conclusion:- Setting up a virtual machine on AWS Free Tier is a straightforward process that allows users to explore cloud computing at no cost. By following the

outlined—creating an steps **AWS** account, launching an EC2 instance, configuring SSH access, and connecting via the terminal—you now have a **filmis**tional cloud-based server. virtual machine can be used for various applications, such as web hosting, development, or data processing. As a next step, consider securing your instance, installing necessary software, and optimizing its performance for your specific use case. AWS provides a scalable environment, making it easy to upgrade or expand your infrastructure as needed. Happy cloud computing!