

AWS Website Deployment

❖ What We Are Doing

We will:

- Create a virtual server (EC2) on AWS
- Install a web server (Apache)
- Upload our website files
- Make the website publicly accessible

This is how real companies host websites on cloud servers.

STEP 1: AWS Account & Region Selection

What is AWS?

AWS (Amazon Web Services) is a cloud platform that provides servers, storage, databases, networking, and security on a pay-as-you-go model.

Create AWS Account

1. Open browser → <https://aws.amazon.com>
2. Click “Create an AWS Account” (top-right)

Enter Account Details

- Root Email: your email (e.g., lakshman@example.com)
- Password: strong password
- AWS Account Name: e.g., LakshmanAWS
- Click “Continue”

Account Type

- Choose Personal or Professional
- Enter full name, phone number, country, and address
- Click “Create Account and Continue”

Payment

- Enter credit/debit card (required for verification)
- Verify and continue

Identity Verification

- Enter phone number, receive OTP, verify

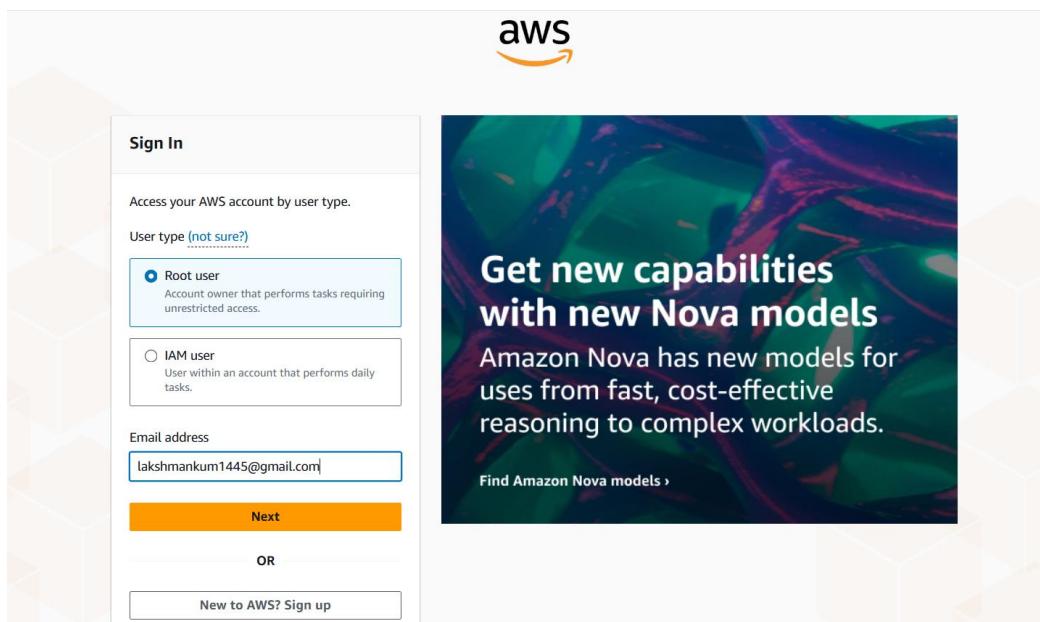
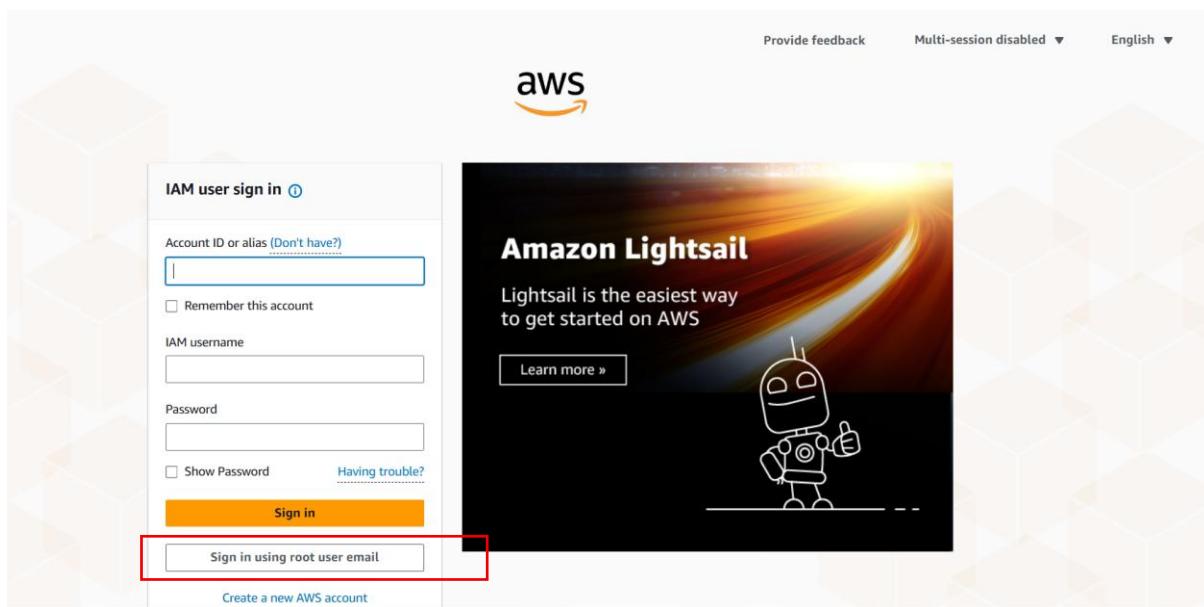
Support Plan

- Select Basic (Free) → Complete Sign Up ✓

STEP 2: Sign in to AWS Console

1. Go to <https://aws.amazon.com/console/>
2. Click **Sign In to Console** → Choose **Root User**
3. Enter **root email** → Next
4. Enter **password** → Sign In

Now you are inside **AWS Console**



STEP 3: Launch EC2 Instance (Virtual Server)

1. In AWS Console → Search **EC2** → Click **Launch Instance**

Instance Configuration

- **Name:** my-website-server
- **AMI:** Amazon Linux 2 (Free Tier)
- **Instance Type:** t2.micro (Free Tier)

Key Pair

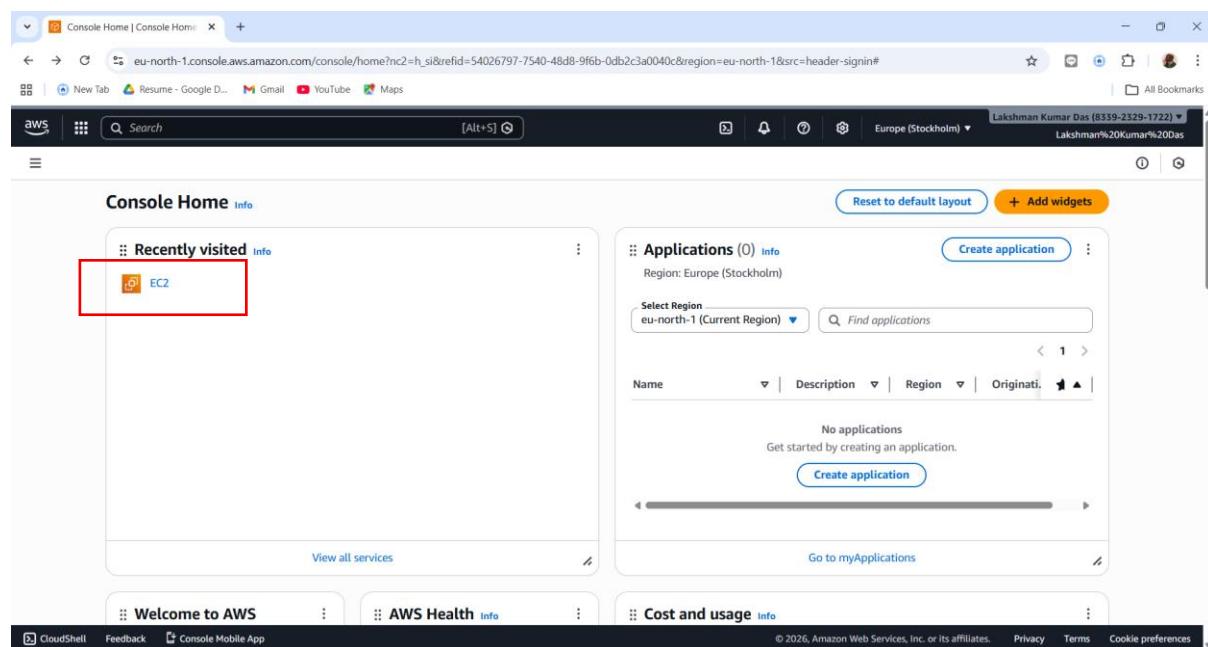
- **Create new key pair** → Name: website-key → Download .pem

Keep .pem safe, needed for SSH

Security Group (Firewall)

- Allow:
 - **SSH (22)** → My IP
 - **HTTP (80)** → Anywhere
 - **HTTPS (443)** → Anywhere

Click **Launch Instance**



The screenshot shows the AWS EC2 Dashboard for the Europe (Stockholm) Region. The left sidebar includes links for Dashboard, Instances (with sub-options like Instance Types, Launch Templates, and Capacity Reservations), Images, and Elastic Block Store. The main area displays 'Resources' with counts for Instances (running), Auto Scaling Groups, Capacity Reservations, Dedicated Hosts, Elastic IPs, Instances, Key pairs, Load balancers, Placement groups, Security groups, Snapshots, and Volumes. A central box titled 'Launch instance' contains a large orange 'Launch instance' button, which is highlighted with a red rectangle. Below it are 'Migrate a server' and a note about launching instances in the Europe (Stockholm) Region. To the right, sections for 'Service health' (AWS Health Dashboard), 'Account attributes' (Default VPC vpc-0a629a4f2840baed9), and 'EC2 cost' (Region: Global, Date range: Past 6 months, Credits remaining \$120 USD, Days remaining 181) are visible.

The screenshot shows the 'Launch an instance' wizard. Step 1: Name and tags. It asks for a name (lakshman) and provides an 'Add additional tags' option. Step 2: Application and OS Images (Amazon Machine Image). It shows a search bar and a grid of recent and quick start AMIs, including Amazon Linux (highlighted with a red rectangle), macOS, Ubuntu, Windows, Red Hat, SUSE Linux, and Debian. Step 3: Summary, showing 1 instance, the selected Software Image (Amazon Linux 2023.10), Virtual server type (t3.micro), Firewall (New security group), and Storage (1 volume(s) - 8 GiB). Buttons for 'Cancel', 'Launch instance', and 'Preview code' are at the bottom.

Create key pair

Key pair name
Key pairs allow you to connect to your instance securely.

Enter key pair name

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

- RSA
RSA encrypted private and public key pair
- ED25519
ED25519 encrypted private and public key pair

Private key file format

- .pem
For use with OpenSSH
- .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 ↗](#)

Cancel **Create key pair**

EC2 > Instances > Launch an instance

vpc-0a629a4f2840baed9

Subnet [Info](#)
No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)
Enable

Firewall (security groups) [Info](#)
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

We'll create a new security group called "Launch Wizard - 3" with the following rules:

- Allow SSH traffic from Anywhere 0.0.0.0/0
- Allow HTTPS traffic from the internet To set up an endpoint, for example when creating a web server
- Allow HTTP traffic from the internet To set up an endpoint, for example when creating a web server

Summary
Number of instances [Info](#)
1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.10... [read more](#)
ami-04233b5aecc009244

Virtual server type (instance type)
t3.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

Launch instance [Preview code](#)

The screenshot shows the AWS EC2 Instances landing page. It features several cards with different management options:

- Create billing usage alerts**: To manage costs and avoid surprise bills, set up email notifications for billing usage thresholds. Includes a "Create billing alerts" button.
- Connect to your instance**: Once your instance is running, log into it from your local computer. Includes a "Connect to instance" button.
- Connect an RDS database**: Configure the connection between an EC2 instance and a database to allow traffic flow between them. Includes a "Connect an RDS database" button.
- Create EBS snapshot policy**: Create a policy that automates the creation, retention, and deletion of EBS snapshots. Includes a "Create EBS snapshot policy" button.
- Manage detailed monitoring**: Enable or disable detailed monitoring for the instance. If you enable detailed monitoring, the Amazon EC2 console displays monitoring graphs with a 1-minute period. Includes a "Manage detailed monitoring" button.
- Create Load Balancer**: Create a application, network gateway or classic Elastic Load Balancer. Includes a "Create Load Balancer" button.
- Create AWS budget**: AWS Budgets allows you to create budgets, forecast spend, and take action on your costs and usage from a single location. Includes a "Create AWS budget" button.
- Manage CloudWatch alarms**: Create or update Amazon CloudWatch alarms for the instance. Includes a "Manage CloudWatch alarms" button.

A red box highlights the "View all instances" button at the bottom right of the page.

Step 4.

Right-click on your instance → You will see a menu with options like:

And then select connect

The screenshot shows the AWS EC2 Instances details page for an instance named "lakshman". The instance is listed as "Running" with the ID "i-0522c74560e5023fe" and type "t3.micro". A context menu is open over the instance row, with the "Connect" option highlighted by a red circle.

The instance details page also includes:

- Details** tab selected.
- Status and alarms**, **Monitoring**, **Security**, and **Networking** tabs.
- Instance summary** section with fields: Instance ID (i-0522c74560e5023fe), Public IPv4 address (51.21.195.63), and Instance state (Running).
- Actions** dropdown menu with options: Connect, Launch instances, Stop instance, Start instance, Reboot instance, Hibernate instance, Terminate (delete) instance, Instance diagnostics, Instance settings, Networking, Security, Image and templates, e IPv4 addresses, Storage, Monitor and troubleshoot.

The screenshot shows the EC2 Instance Connect dialog box for the instance "i-0522c74560e5023fe" (lakshman). The "EC2 Instance Connect" tab is selected. The "Connection type" section has "Connect using a Public IP" selected, with "51.21.195.63" listed as the IP address. The "Username" field contains "ec2-user". A note at the bottom states: "Note: In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username." The "Connect" button is highlighted with a red box.

STEP 5: Install Apache Web Server

1. sudo yum update -y
2. sudo yum install httpd -y
3. sudo systemctl start httpd
4. sudo systemctl enable httpd

Step 6: Deploy Your Website

1. Install Git:

```
sudo yum install -y git
```

2. Clone your GitHub repository:

```
git clone https://github.com/thebugbounter/preet-watches.git /var/www/html/
```

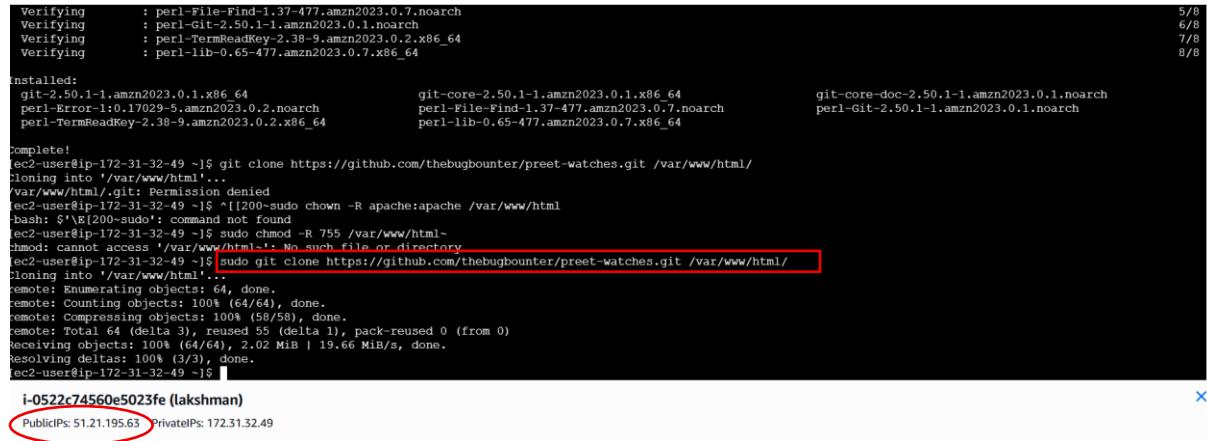
3. Adjust ownership and permissions:

```
sudo chown -R apache:apache /var/www/html
```

```
sudo chmod -R 755 /var/www/html
```

Step 8: Access Your Web Server

Open your web browser: Go to the public DNS address of your instance. You should see the content of your website deployed from the GitHub repository.



```
Verifying : perl-File-Find-1.37-477.amzn2023.0.7.noarch          5/8
Verifying : perl-Git-2.50.1-1.amzn2023.0.1.noarch                  6/8
Verifying : perl-TermReadKey-2.38-9.amzn2023.0.2.x86_64           7/8
Verifying : perl-lib-0.65-477.amzn2023.0.7.x86_64                 8/8

Installed:
git-2.50.1-1.amzn2023.0.1.x86_64                               git-core=2.50.1-1.amzn2023.0.1.noarch
perl-Error-1.10.17029-5.amzn2023.0.2.noarch                   perl-Git-2.50.1-1.amzn2023.0.1.noarch
perl-TermReadKey-2.38-9.amzn2023.0.2.x86_64                  perl-lib-0.65-477.amzn2023.0.7.x86_64

git-clone https://github.com/thebugbounter/preet-watches.git /var/www/html/
cloning into '/var/www/html'...
/var/www/html/.git: Permission denied
[ec2-user@ip-172-31-32-49 ~]$ sudo chown -R apache:apache /var/www/html
[ec2-user@ip-172-31-32-49 ~]$ sudo chmod -R 755 /var/www/html
[ec2-user@ip-172-31-32-49 ~]$ sudo git clone https://github.com/thebugbounter/preet-watches.git /var/www/html/
cloning into '/var/www/html'...
remote: Enumerating objects: 64, done.
remote: Counting objects: 100% (64/64), done.
remote: Compressing objects: 100% (58/58), done.
remote: Total 64 (delta 3), reused 55 (delta 1), pack-reused 0 (from 0)
receiving objects: 100% (64/64), 2.02 MiB | 19.66 MiB/s, done.
resolving deltas: 100% (3/3), done.
[ec2-user@ip-172-31-32-49 ~]$ i-0522c74560e5023fe (lakshman)

Public IPs: 51.21.195.63 Private IPs: 172.31.32.49
```

