

## For Amazon Linux Instance

```
root@ip-172-31-32-217: /home/ec2-user
login as: ec2-user
Authenticating with public key "imported-openssh-key"

#_
~\####_      Amazon Linux 2023
~~\#####\
~~\####|
~~\#/      https://aws.amazon.com/linux/amazon-linux-2023
~~V~'-'>
~~
~~.-.-.-
~~-/m/'-

[ec2-user@ip-172-31-32-217 ~]$ sudo su
[root@ip-172-31-32-217 ec2-user]# yum update -y
Last metadata expiration check: 0:02:47 ago on Fri Apr 14 08:23:11 2023.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-32-217 ec2-user]#
```

```
login as: ec2-user
Authenticating with public key "imported-openssh-key"

#_
~\####_ Amazon Linux 2023
~~\#####\
~~\###|
~~\#/ https://aws.amazon.com/linux/amazon-linux-2023
~~V~'-'>
~~~
~~.-.
~/m/'-/
```

```
[ec2-user@ip-172-31-32-217 ~]$ sudo su
[root@ip-172-31-32-217 ec2-user]# yum update -y
Last metadata expiration check: 0:02:47 ago on Fri Apr 14 08:23:11 2023.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-32-217 ec2-user]# yum install httpd -y
```

After the installation, Move to the web server html directory using `$cd /var/www/html`  
Create a file named **index.html** and store some text into it using `$echo "your_text" > index.html`

```
Verifying      : httpd-core-2.4.56-1.amzn2023.x86_64      8/12
Verifying      : apr-util-1.6.3-1.amzn2023.0.1.x86_64    9/12
Verifying      : mailcap-2.1.49-3.amzn2023.0.3.noarch    10/12
Verifying      : httpd-filesystem-2.4.56-1.amzn2023.noarch 11/12
Verifying      : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch 12/12

Installed:
apr-1.7.2-2.amzn2023.0.2.x86_64
apr-util-1.6.3-1.amzn2023.0.1.x86_64
apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64
generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
httpd-2.4.56-1.amzn2023.x86_64
httpd-core-2.4.56-1.amzn2023.x86_64
httpd-filesystem-2.4.56-1.amzn2023.noarch
httpd-tools-2.4.56-1.amzn2023.x86_64
libbrotli-1.0.9-4.amzn2023.0.2.x86_64
mailcap-2.1.49-3.amzn2023.0.3.noarch
mod_http2-2.0.11-2.amzn2023.x86_64
mod_lua-2.4.56-1.amzn2023.x86_64

Complete!
[root@ip-172-31-32-217 ec2-user]# cd /var/www/html
[root@ip-172-31-32-217 html]# echo "Welcome to my web page" > index.html
[root@ip-172-31-32-217 html]#
```

Start the web server using `$service httpd start`

To start httpd service whenever machine is restarted, run `$chkconfig httpd on`

```
Installed:
apr-1.7.2-2.amzn2023.0.2.x86_64
apr-util-1.6.3-1.amzn2023.0.1.x86_64
apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64
generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
httpd-2.4.56-1.amzn2023.x86_64
httpd-core-2.4.56-1.amzn2023.x86_64
httpd-filesystem-2.4.56-1.amzn2023.noarch
httpd-tools-2.4.56-1.amzn2023.x86_64
libbrotli-1.0.9-4.amzn2023.0.2.x86_64
mailcap-2.1.49-3.amzn2023.0.3.noarch
mod_http2-2.0.11-2.amzn2023.x86_64
mod_lua-2.4.56-1.amzn2023.x86_64

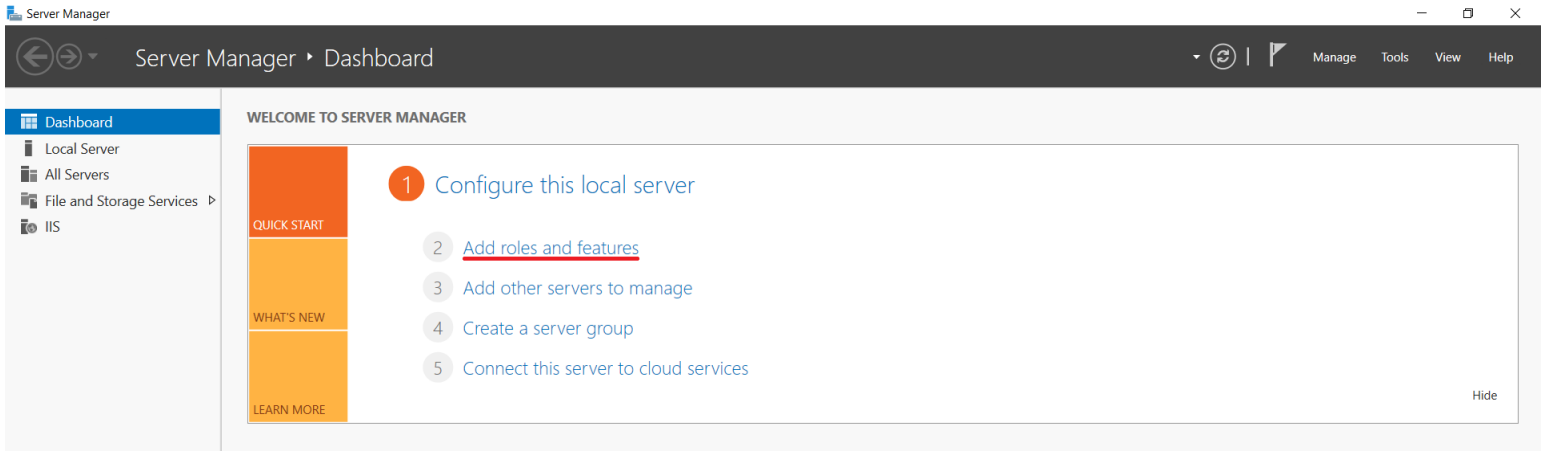
Complete!
[root@ip-172-31-32-217 ec2-user]# cd /var/www/html
[root@ip-172-31-32-217 html]# echo "Welcome to my web page" > index.html
[root@ip-172-31-32-217 html]# service httpd start
Redirecting to /bin/systemctl start httpd.service
[root@ip-172-31-32-217 html]# chkconfig httpd on
Note: Forwarding request to 'systemctl enable httpd.service'.
Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/systemd/system/httpd.service.
[root@ip-172-31-32-217 html]#
```

Your Amazon Linux EC2 Instance is now hosting a web server.

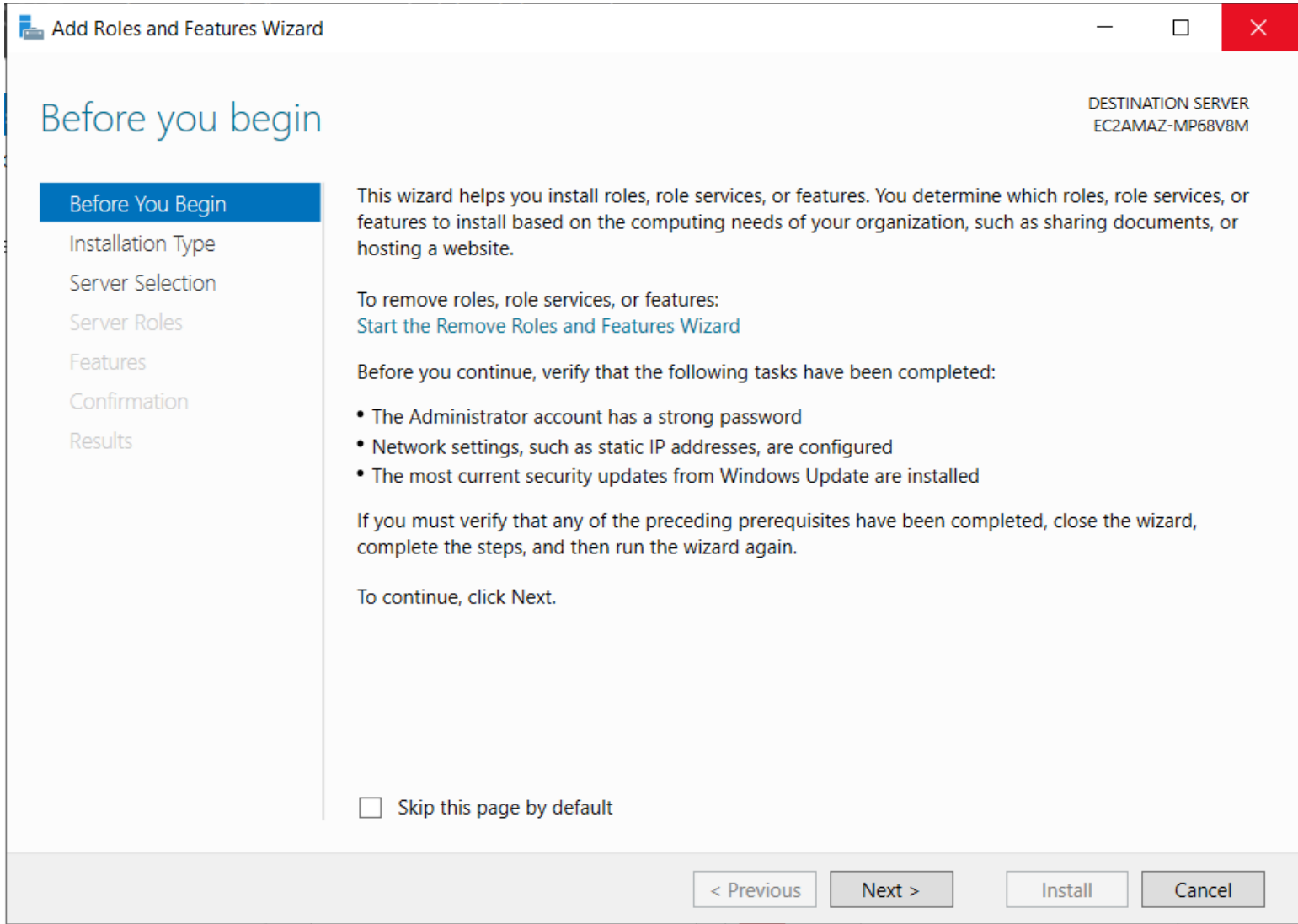
# For Windows Instance

## Launch your Windows Instance

### Open Server Manager from the Start Menu



### Click on Add roles and features



### Click on Next 3 times

In the **Server Roles** page, scroll down and select **Web Server (IIS)**

Add Roles and Features Wizard

Select server roles

DESTINATION SERVER  
EC2AMAZ-MP68V8M

Before You Begin

Installation Type

Server Selection

**Server Roles**

Features

Confirmation

Results

Select one or more roles to install on the selected server.

Roles

☐ Active Directory Domain Services

☐ Active Directory Federation Services

☐ Active Directory Lightweight Directory Services

☐ Active Directory Rights Management Services

☐ Device Health Attestation

☐ DHCP Server

☐ DNS Server

☐ Fax Server

☒ File and Storage Services (1 of 12 installed)

☐ Host Guardian Service

☐ Hyper-V

☐ Network Controller

☐ Network Policy and Access Services

☐ Print and Document Services

☐ Remote Access

☐ Remote Desktop Services

☐ Volume Activation Services

☒ **Web Server (IIS)**

☐ Windows Deployment Services

☐ Windows Server Update Services

Description

Web Server (IIS) provides a reliable, manageable, and scalable Web application infrastructure.

< Previous

Next >

Install

Cancel

Click on **Add Features**

Add Roles and Features Wizard

Add features that are required for Web Server (IIS)?

The following tools are required to manage this feature, but do not have to be installed on the same server.

Web Server (IIS)

Management Tools

[Tools] IIS Management Console

☒ Include management tools (if applicable)

Add Features

Cancel

Click on **Next** 3 times

On the **Confirmation** page, click on **Install** and wait for 3-5 mins.

Add Roles and Features Wizard

DESTINATION SERVER  
EC2AMAZ-MP68V8M

Confirm installation selections

Before You Begin

Installation Type

Server Selection

Server Roles

Features

Web Server Role (IIS)

Role Services

Confirmation

Results

To install the following roles, role services, or features on selected server, click Install.

☐ Restart the destination server automatically if required

Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes.

Web Server (IIS)

Management Tools

IIS Management Console

Web Server

Common HTTP Features

Default Document

Directory Browsing

HTTP Errors

Static Content

Health and Diagnostics

HTTP Logging

[Export configuration settings](#)

[Specify an alternate source path](#)

< Previous

Next >

Install

Cancel

Click on **Close**

Add Roles and Features Wizard

DESTINATION SERVER  
EC2AMAZ-MP68V8M

Installation progress

Before You Begin

Installation Type

Server Selection

Server Roles

Features

Web Server Role (IIS)

Role Services

Confirmation

Results

View installation progress

i

Feature installation

Installation succeeded on EC2AMAZ-MP68V8M.

Web Server (IIS)

Management Tools

IIS Management Console

Web Server

Common HTTP Features

Default Document

Directory Browsing

HTTP Errors

Static Content

Health and Diagnostics

HTTP Logging

1

You can close this wizard without interrupting running tasks. View task progress or open this page again by clicking Notifications in the command bar, and then Task Details.

[Export configuration settings](#)

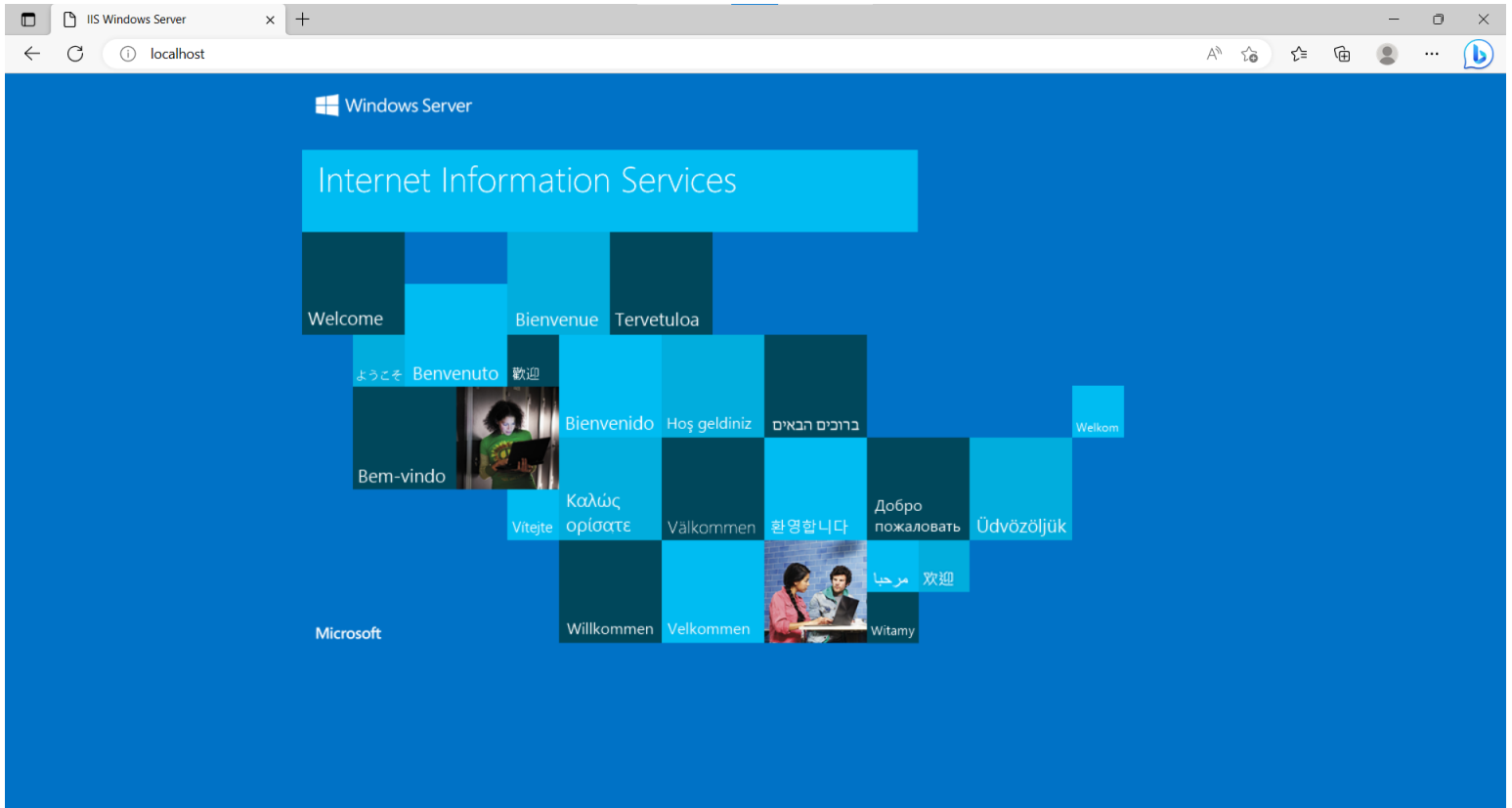
< Previous

Next >

Close

Cancel

You can open the browser in the instance and enter <http://localhost> as the url to see the web page.



The web server files are located at `C:\inetpub\wwwroot`.

Open cmd > type `cd C:\inetpub\wwwroot` and hit enter to move to the web server directory.  
To create index.html, type `echo "Welcome to my webpage" > index.html`

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.1607]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator>cd C:\inetpub\wwwroot

C:\inetpub\wwwroot>echo "Welcome to my webpage" > index.html

C:\inetpub\wwwroot>
```

You can again go to <http://localhost> in your instance's browser to see the new web page.



# Accessing the Web Server hosted on your EC2 instance from anywhere and on any device

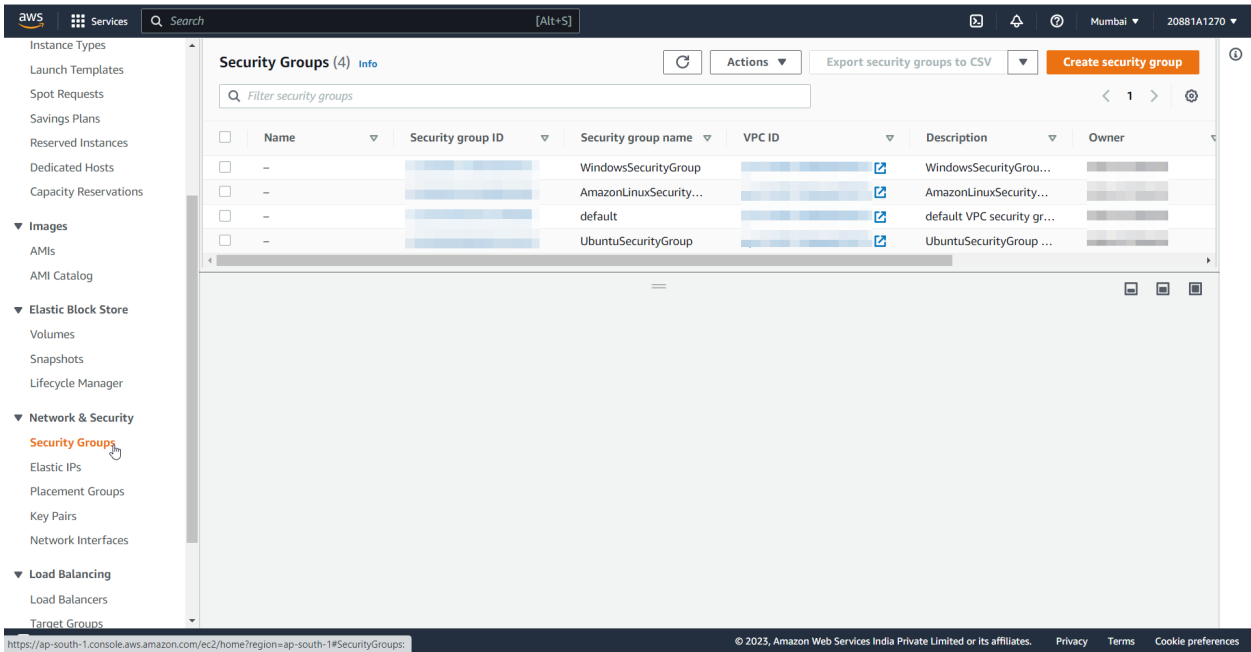
Open a browser and enter the Public IPv4 address of your EC2 instance to access the web server hosted on your instance.



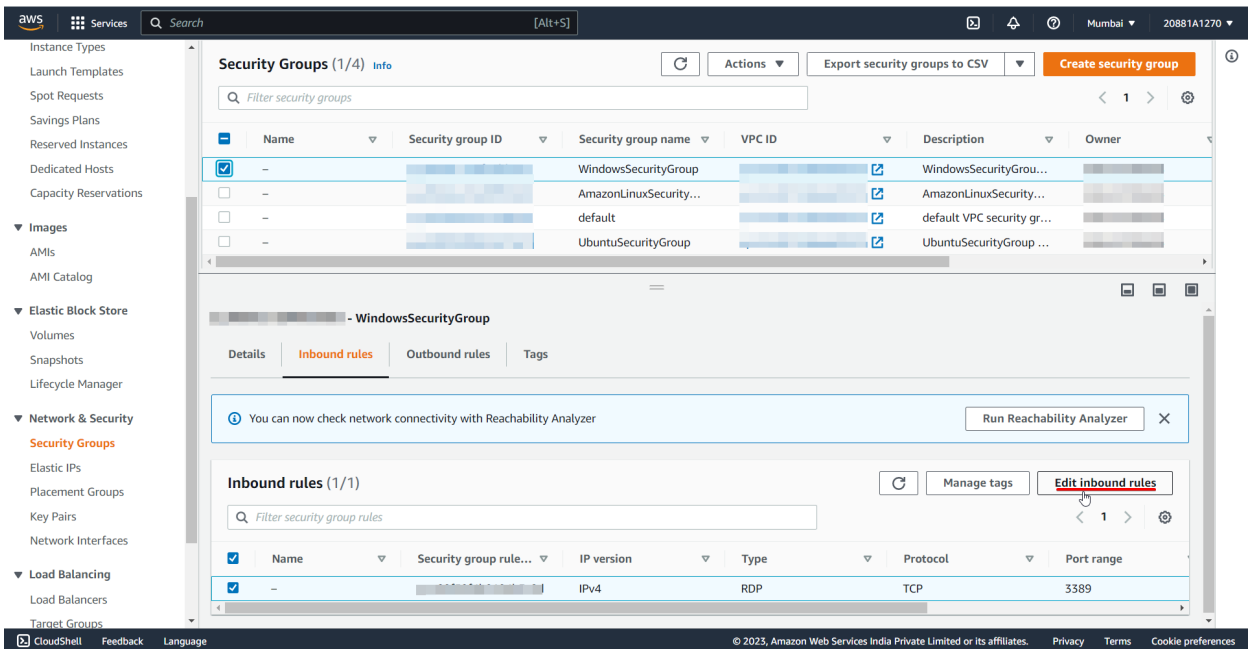
\* Modify your index.html and add any files required accordingly to create your own website.

If you are unable to access the web server, you need to allow HTTP traffic to your EC2 instance from the Inbound rules in your instance’s Security Group settings.

Firstly, go to the **Security Groups** tab and select the Security Group associated with your instance.



Click on **Edit inbound rules**



Click on Add rule

aws

Services

Search

[Alt+S]

Mumbai

20881A1270

EC2

>

Security Groups

>

- WindowsSecurityGroup

>

Edit inbound rules

Edit inbound rules

Info

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules

Info

Security group rule ID	Type	Protocol	Port range	Source	Description - optional	
	RDP	TCP	3389	Custom		Delete
				0.0.0.0/0		

Add rule

Cancel

Preview changes

Save rules

CloudShell

Feedback

Language

© 2023, Amazon Web Services India Private Limited or its affiliates.

Privacy

Terms

Cookie preferences

Type = HTTP  
Source = Anywhere-IPv4  
Click on Save rules

aws

Services

Search

[Alt+S]

Mumbai

20881A1270

EC2

>

Security Groups

>

- WindowsSecurityGroup

>

Edit inbound rules

Edit inbound rules

Info

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules

Info

Security group rule ID	Type	Protocol	Port range	Source	Description - optional	
	RDP	TCP	3389	Custom		Delete
				0.0.0.0/0		
-	HTTP	TCP	80	Anywhere-IPv4		Delete
				0.0.0.0/0		

Add rule

Cancel

Preview changes

Save rules

CloudShell

Feedback

Language

© 2023, Amazon Web Services India Private Limited or its affiliates.

Privacy

Terms

Cookie preferences

You will now be able to access the web server hosted on your EC2 instance from anywhere.



## Bootstrapping AWS EC2 instances with user data

When you launch an Amazon ECS container instance, you have the option of passing user data to the instance. The data can be used to run scripts when the instance boots.

The user data can be edited for an already created instance  
Right click on the instance > Instance settings > Edit user data

The screenshot shows the AWS Management Console interface. On the left, the navigation pane includes 'New EC2 Experience', 'EC2 Dashboard', 'EC2 Global View', 'Events', 'Tags', 'Limits', 'Instances', 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity Reservations', 'Images', 'AMIs', 'AMI Catalog', 'Elastic Block Store', 'Volumes', and 'Snapshots'. The main content area displays a list of instances. The 'AmazonLinux' instance is selected, and the 'Instance settings' menu is open, showing options like 'Attach to Auto Scaling Group', 'Change termination protection', 'Change stop protection', 'Change shutdown behavior', 'Change auto-recovery behavior', 'Change instance type', 'Change Nitro Enclaves', 'Change credit specification', 'Change resource based naming options', 'Modify instance placement', 'Modify Capacity Reservation settings', 'Edit user data', 'Allow tags in instance metadata', 'Manage tags', and 'Modify instance metadata options'. The 'Edit user data' option is highlighted.

Or, the user data can be given while creating the instance  
Select Amazon Linux, Expand **Advanced details** and scroll down to find **User data**  
Enter the required commands to launch a web server

The screenshot shows the 'Launch instance' wizard in the AWS Management Console. The 'Summary' section on the right shows the number of instances (1), the software image (Amazon Linux 2023.0.2), the virtual server type (t2.micro), the firewall (AmazonLinuxSecurityGroup), and the storage (1 volume(s) - 8 GiB). The 'User data' field is expanded, showing a script to launch a web server. The script is as follows:

```
#!/bin/bash
sudo su
yum update -y
yum install httpd -y
cd /var/www/html
echo "This Web Server is launched through Bootstrapping" > index.html
service httpd start
chkconfig httpd on
```

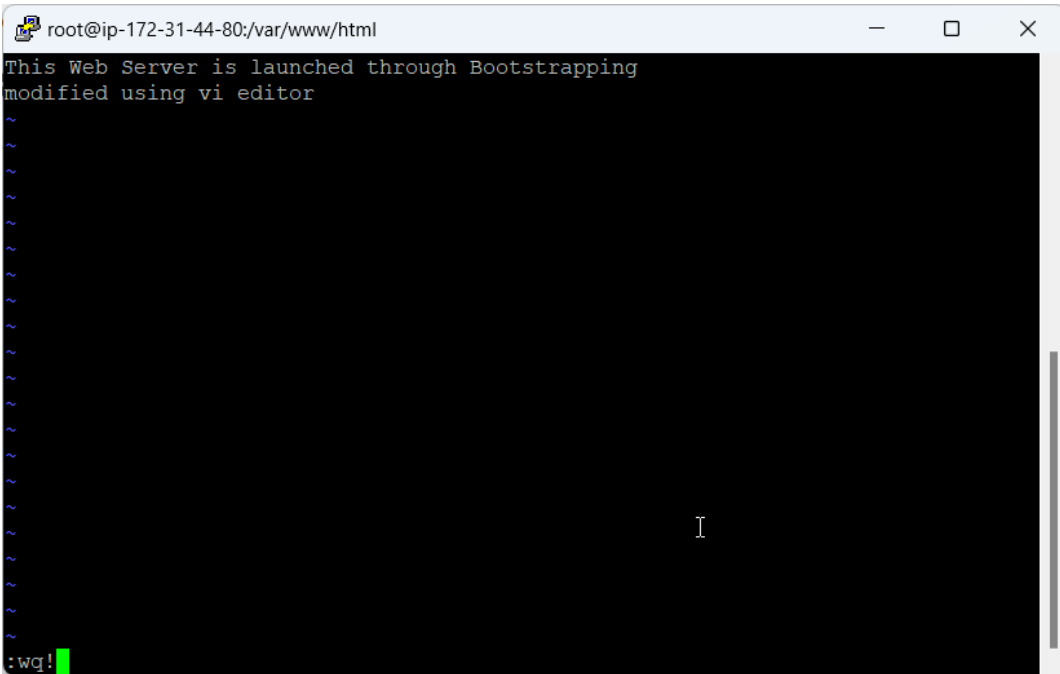
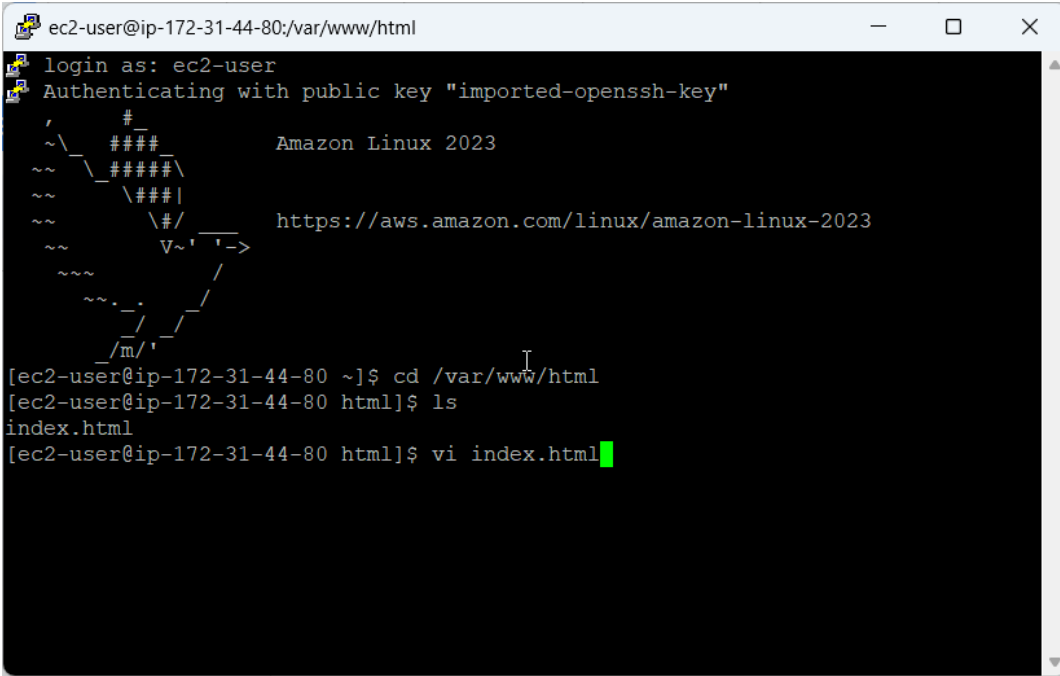
Below the script, there is a checkbox labeled 'User data has already been base64 encoded'. A 'Free tier' notification is also visible, stating: 'Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and...'

Open your browser and enter the public IPv4 address of your instance to directly see the web server without even logging in to the instance.



The `index.html` file can be modified by logging in to the instance.

Login to the instance > change directory to `/var/www/html` > type `vi index.html` to edit the file



After saving the file, open your browser and go the instance's public IPv4 address to see the changes

