

GITAM UNIVERSITY VISAKHAPATNAM

**DEPARTMENT OF
COMPUTER SCIENCE ENGINEERING
Session [2021]**

DEPLOYING COMPLETE ONLINE NEWS PORTAL USING VIRTUAL PRIVATE CLOUD

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ABSTRACT

The concept of cloud computing is now well known, but the measures taken to provide security within the cloud environment is more important. Today many technologies have been developed to provide security in the cloud network. Introducing the concept of virtual private network (VPN) in the cloud provides secure way of transmitting information over public cloud environment. Virtual Private Cloud provides logical separation between public and private cloud. Since anyone can access resources available in the public cloud, obviously there is multiple numbers of threats to it. The effective measures taken to avoid these threats are done with the help of VPC. In this project we have discussed different concepts of VPC , EC2 windows instance and linux instance , sub nets , route tables and inter net gateway to deploy a news portal website .

INTRODUCTION

Cloud computing is a virtualization-based technology that allows us to create, configure, and customize applications via an internet connection. The cloud technology includes a development platform, hard disk, software application, and database. The term cloud refers to a network or the internet. It is a technology that uses remote servers on the internet to store, manage, and access data online rather than local drives. The data can be anything such as files, images, documents, audio, video, and more.

Characteristics of Cloud Computing

The characteristics of cloud computing are given below:

1) Agility

The cloud works in a distributed computing environment. It shares resources among users and works very fast.

2) High availability and reliability

The availability of servers is high and more reliable because the chances of infrastructure failure are minimum.

3) High Scalability

Cloud offers "on-demand" provisioning of resources on a large scale, without having engineers for peak loads.

4) Multi-Sharing

With the help of cloud computing, multiple users and applications can work more efficiently with cost reductions by sharing common infrastructure.

5) Device and Location Independence

Cloud computing enables the users to access systems using a web browser regardless of their location or what device they use e.g. PC, mobile phone, etc. As infrastructure is off-site (typically provided by a third-party) and accessed via the Internet, users can connect from anywhere.

6) Maintenance

Maintenance of cloud computing applications is easier, since they do not need to be installed on each user's computer and can be accessed from different places. So, it reduces the cost also.

7) Low Cost

By using cloud computing, the cost will be reduced because to take the services of cloud computing, IT company need not to set its own infrastructure and pay-as-per usage of resources.

8) Services in the pay-per-use mode

Application Programming Interfaces (APIs) are provided to the users so that they can access services on the cloud by using these APIs and pay the charges as per the usage of services.

Advantages of Cloud Computing

1) Back-up and restore data

Once the data is stored in the cloud, it is easier to get back-up and restore that data using the cloud.

2) Improved collaboration

Cloud applications improve collaboration by allowing groups of people to quickly and easily share information in the cloud via shared storage.

3) Excellent accessibility

Cloud allows us to quickly and easily access store information anywhere, anytime in the whole world, using an internet connection. An internet cloud infrastructure increases organization productivity and efficiency by ensuring that our data is always accessible.

4) Low maintenance cost

Cloud computing reduces both hardware and software maintenance costs for organizations.

5) Mobility

Cloud computing allows us to easily access all cloud data via mobile.

6) Services in the pay-per-use model

Cloud computing offers Application Programming Interfaces (APIs) to the users for access services on the cloud and pays the charges as per the usage of service.

7) Unlimited storage capacity

Cloud offers us a huge amount of storing capacity for storing our important data such as documents, images, audio, video, etc. in one place.

8) Data security

Data security is one of the biggest advantages of cloud computing. Cloud offers many advanced features related to security and ensures that data is securely stored and handled.

Disadvantages of Cloud Computing

1) Internet Connectivity

As you know, in cloud computing, every data (image, audio, video, etc.) is stored on the cloud, and we access these data through the cloud by using the internet connection. If you do not have good internet connectivity, you cannot access these data. However, we have no any other way to access data from the cloud.

2) Vendor lock-in

Vendor lock-in is the biggest disadvantage of cloud computing. Organizations may face problems when transferring their services from one vendor to another. As different vendors provide different platforms, that can cause difficulty moving from one cloud to another.

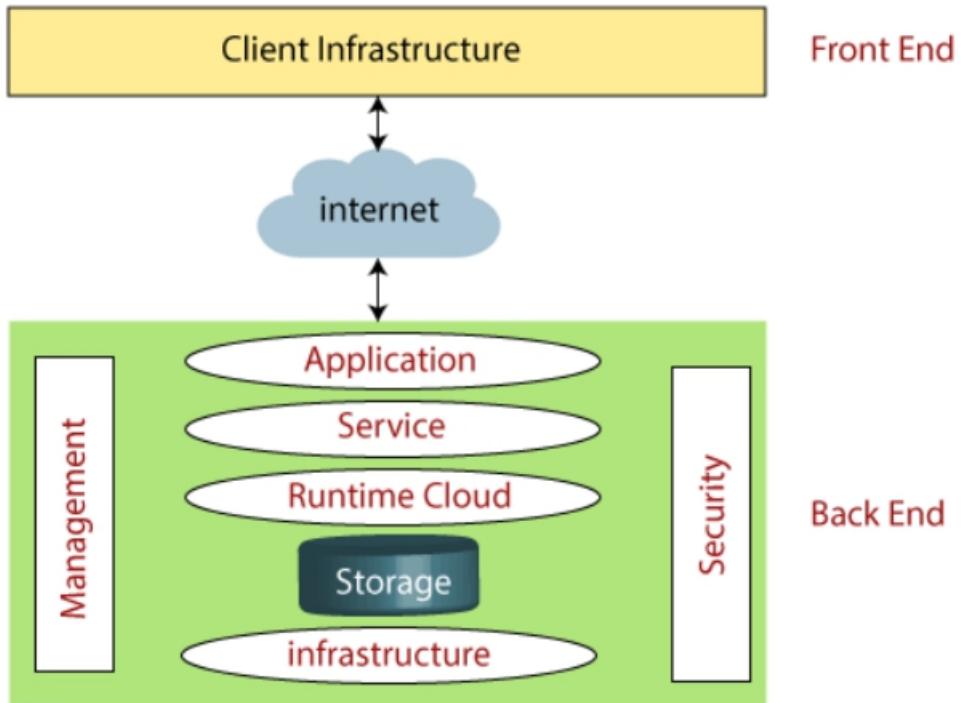
3) Limited Control

As we know, cloud infrastructure is completely owned, managed, and monitored by the service provider, so the cloud users have less control over the function and execution of services within a cloud infrastructure.

4) Security

Although cloud service providers implement the best security standards to store important information. But, before adopting cloud technology, you should be aware that you will be sending all your organization's sensitive information to a third party, i.e., a cloud computing service provider. While sending the data on the cloud, there may be a chance that your organization's information is hacked by Hackers.

Architecture of Cloud Computing



In this project, we have discussed different concepts of VPC with scenarios along with the need of VPC and its advantages. Apart from Amazon VPC we also use various AWS services like Elastic Cloud Compute (EC2) instances are one of their core resource offerings, and they form the backbone of most cloud deployments. EC2 instances provide you with customizable and scalable server options.

An other AWS service which we use in your project is an internet gateway supports IPv4 and IPv6 traffic. It does not cause availability risks or bandwidth constraints on your network traffic. An internet gateway is a horizontally scaled, redundant, and highly available VPC component that allows communication between your VPC and the internet. An internet gateway serves two purposes: to provide a target in your VPC route tables for internet-routable traffic, and to perform network address translation (NAT) for instances that have been assigned public IPv4 addresses. A sub net, or sub network, is a segmented piece of a larger network. More specifically, sub nets are a logical partition of an IP network into multiple, smaller network segments. The Internet Protocol (IP) is the method for sending data from one computer to another over the internet. Each sub net must be associated with a route table, which specifies the allowed routes for outbound traffic leaving the sub net. Every sub net that you create is automatically associated with the main route table for the VPC. You can change the association, and you can change the contents of the main route table.

VPC (Virtual Private Cloud) :

Private Cloud allows you to launch resources in a logically isolated and virtual network that you define. Amazon VPC is a free service that gives you full control over the details of your networking setup in AWS. Examples of this control include creating public-facing sub nets for web servers, and private sub nets with no internet access for your databases. Additionally, Amazon VPC enables you to create hybrid architectures by using hardware virtual private networks , and use the AWS Cloud as an extension of your own data center.

When you create a VPC, you must specify a range of IPv4 addresses for the VPC in the form of a Classless Inter-Domain Routing (CIDR) block; for example, 10.0.0.0/16. This is the primary CIDR block for your VPC (R1) . A VPC spans all of the Availability Zones in the Region. After creating a VPC, you can add one or more sub nets in each Availability Zone. You can optionally add sub nets in a Local Zone, which is an AWS infrastructure deployment that places compute, storage, database, and other select services closer to your end users. A Local Zone enables your end users to run applications that require single-digit millisecond latencies. When you create a sub net, you specify the CIDR block for the sub net, which is a subset of the VPC CIDR block. Each sub net must reside entirely within one Availability Zone and cannot span zones. Availability Zones are distinct locations that are engineered to be isolated from failures in other Availability Zones. By launching instances in separate Availability Zones, you can protect your applications from the failure of a single location. We assign a unique ID to each sub net.

The following diagram shows a VPC that has been configured with sub nets in multiple Availability Zones. 1A, 2A, and 3A are instances in your VPC. An IPv6 CIDR block is associated with the VPC, and an IPv6 CIDR block is associated with sub net 1. An internet gateway enables communication over the internet, and a virtual private network (VPN) connection enables communication with your corporate network.

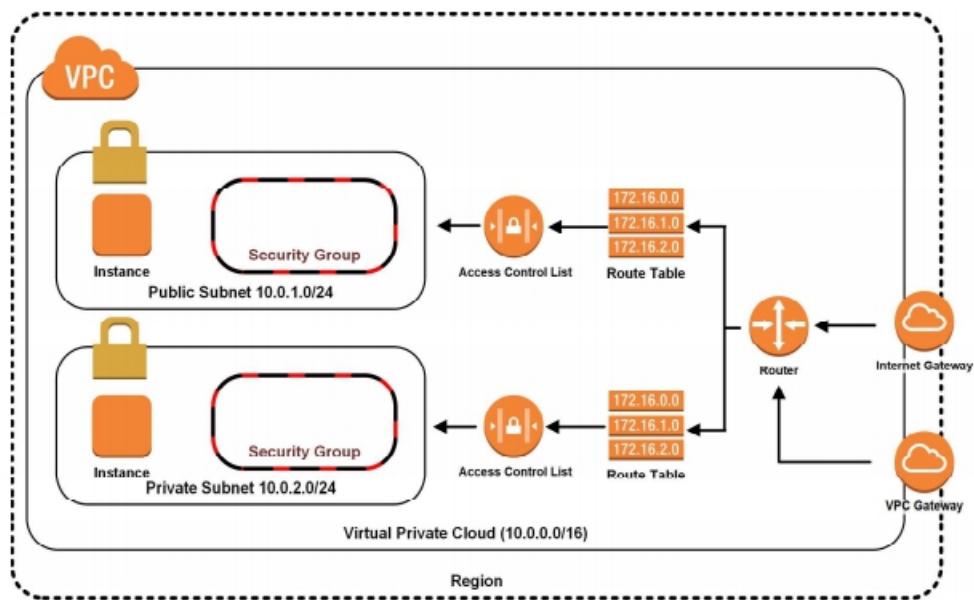
1.Elastic IP addresses are static, persistent public IP addresses

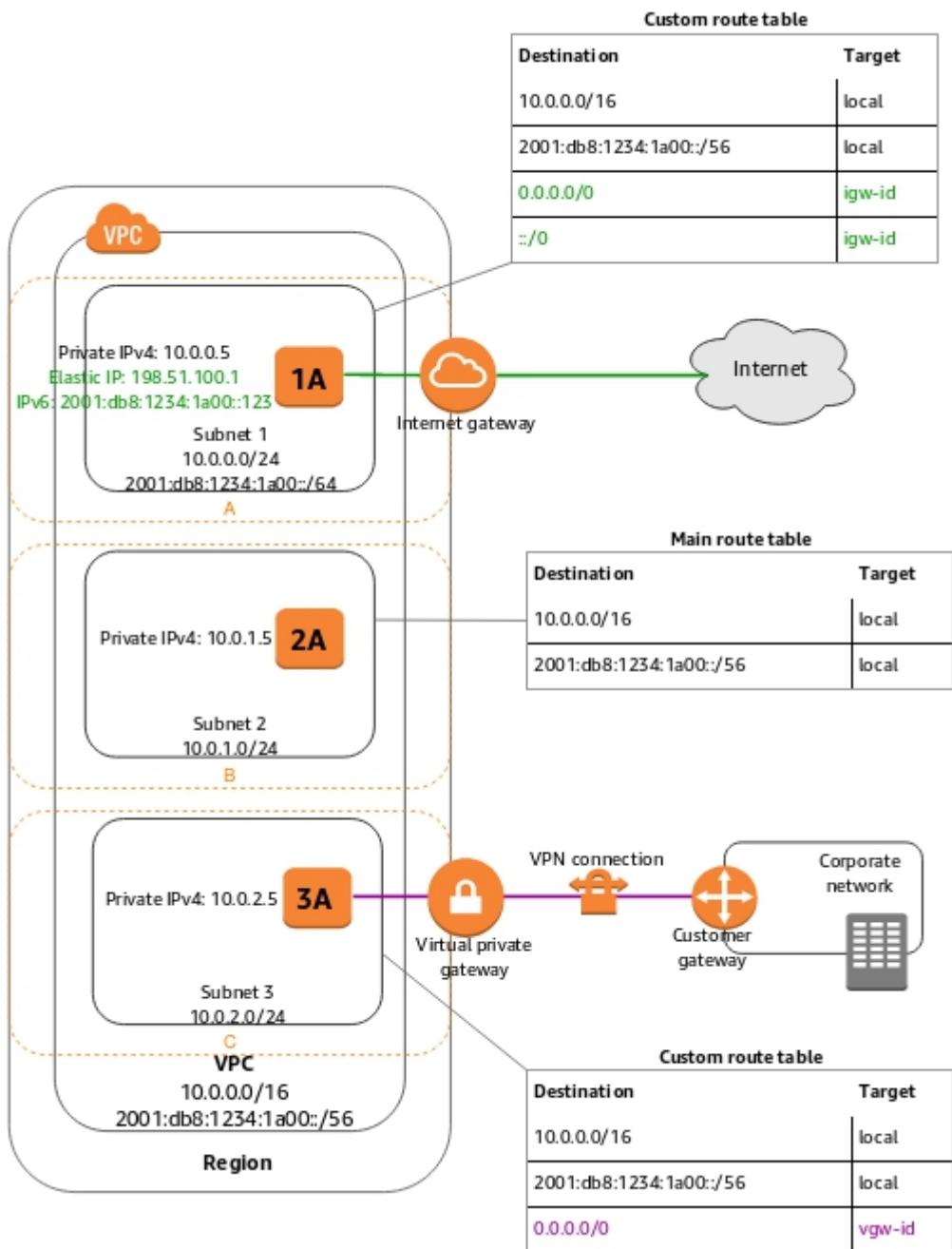
Instances launched in the VPC will have a Private IP address and can have a

2.If a sub net's traffic is routed to an internet gateway, the sub net is known as a *public sub net*.

3. If a sub net doesn't have a route to the internet gateway, the sub net is known as a *private sub net*.

4.Flow logs Capture information about the IP traffic going to and from network interfaces in your VPC allows Tenancy option for instances





NETMASK

Sub net mask is used to determine what sub net IP address to. It differentiate the network component of an IP address by dividing it into a network address and host address. Sub net mask is made by setting network bits all “1s” and setting host bits to all “0s”. When you create a VPC, you must specify an IPv4 CIDR block for the VPC. The allowed block size is between a /16 net mask (65,536 IP addresses) and /28 net mask (16 IP addresses). After you've created your VPC, you can associate secondary CIDR blocks with the VPC.

Class A	Network (8 Bit)	Hosts (24 Bit)			
	255 . 0 . 0 . 0				
Class B	Network (16 Bit)		Hosts (16 Bit)		
	255 . 255 . 0 . 0				
Class C	Network (24 Bit)			Hosts (8 Bit)	
	255 . 255 . 255 . 0				

Class	Default Subnet Mask	No of Network (2^n)	No of Hosts (2^{h-2})	Network Type
A	255.0.0.0	$2^8 = 256$	$2^{24-2} = 16,777,214$	Large
B	255.255.0.0	$2^{16} = 65,536$	$2^{16-2} = 65,534$	Medium
C	255.255.255.0	$2^{24} = 16,777,216$	$2^{8-2} = 254$	Small

To add a CIDR block to your VPC, the following rules apply:

1. The allowed block size is between a /28 net mask and /16 net mask.
2. The CIDR block must not overlap with any existing CIDR block that's associated with the VPC.
3. There are restrictions on the ranges of IPv4 addresses you can use. For more information.
4. You cannot increase or decrease the size of an existing CIDR block.
5. You have a quota on the number of CIDR blocks you can associate with a VPC and the number of routes you can add to a route table. You cannot associate a CIDR block if this results in you exceeding your quotas.
6. The CIDR block must not be the same or larger than a destination CIDR range in a route in any of the VPC route tables. For example, in a VPC where the primary CIDR block is 10.2.0.0/16, you have an existing route in a route table with a destination of 10.0.0.0/24 to a virtual private gateway. You want to associate a secondary CIDR block in the 10.0.0.0/16 range. Because of the existing route, you cannot associate a CIDR block of 10.0.0.0/24 or larger. However, you can associate a secondary CIDR block of 10.0.0.0/25 or smaller.

7. If you've enabled your VPC for ClassicLink, you can associate CIDR blocks from the 10.0.0.0/16 and 10.1.0.0/16 ranges, but you cannot associate any other CIDR block from the 10.0.0.0/8 range.
-

SUBNET ROUTING

Each sub net must be associated with a route table, which specifies the allowed routes for outbound traffic leaving the sub net. Every sub net that you create is automatically associated with the main route table for the VPC. You can change the association, and you can change the contents of the main route table.

In the previous diagram, the route table associated with sub net 1 routes all IPv4 traffic (0.0.0.0/0) and IPv6 traffic (::/0) to an internet gateway (for example, igw-1a2b3c4d). Because instance 1A has an IPv4 Elastic IP address and an IPv6 address, it can be reached from the internet over both IPv4 and IPv6.

The instance 2A can't reach the internet, but can reach other instances in the VPC. You can allow an instance in your VPC to initiate outbound connections to the internet over IPv4 but prevent unsolicited inbound connections from the internet using a network address translation (NAT) gateway or instance. Because you can allocate a limited number of Elastic IP addresses, we recommend that you use a NAT device if you have more instances that require a static public IP address. For more information. To initiate outbound-only communication to the internet over IPv6, you can use an egress-only internet gateway.

The route table associated with sub net 3 routes all IPv4 traffic (0.0.0.0/0) to a virtual private gateway. Instance 3A can reach computers in the corporate network over the Site-to-Site VPN connection.

Each sub net is associated with a route table which define its behavior

Public sub nets - inbound/outbound Internet connectivity via IGW

Private sub nets - outbound Internet connectivity via an NAT or VGW

Protected sub nets - no outbound connectivity and used for regulated workloads .

Amazon EC2

Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) Cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic

1. Virtual computing environments, known as EC2 instances
2. Pre configured templates for EC2 instances, known as Amazon Machine Images , that package the bits needed for the server (including the operating system and additional software)
3. Various configurations of CPU, memory, storage, and networking capacity for your instances, known as Instance types
4. Secure login information for your instances using key pairs (public-private keys where private is kept by user)
5. Storage volumes for temporary data that's deleted when you stop or terminate your instance, known as Instance store volumes
6. Persistent storage volumes for data using Elastic Block Store (EBS)
7. Multiple physical locations for your resources, such as instances and EBS volumes, known as Regions and Availability Zones
8. A firewall to specify the protocols, ports, and source IP ranges that can reach your instances using Security Groups
9. Static IP addresses, known as Elastic IP addresses
10. Metadata, known as tags, can be created and assigned to EC2 resources
11. Virtual networks that are logically isolated from the rest of the AWS cloud, and can optionally connect to on premises network, known as Virtual private clouds .

Amazon EC2 security groups

A *security group* acts as a virtual firewall for your EC2 instances to control incoming and outgoing traffic. Inbound rules control the incoming traffic to your instance, and outbound rules control the outgoing traffic from your instance. When you launch an instance, you can specify one or more security groups. If you don't specify a security group, Amazon EC2 uses the default security group. You can add rules to each security group that allow traffic to or from its associated instances. You can modify the rules for a security group at any time. New and modified rules are automatically applied to all instances that are associated with the security group. When Amazon EC2 decides whether to allow traffic to reach an instance, it evaluates all of the rules from all of the security groups that are associated with the instance.

When you launch an instance in a VPC, you must specify a security group that's created for that VPC. After you launch an instance, you can change its security groups. Security groups are associated with network interfaces. Changing an instance's security groups changes the security groups associated with the primary network interface.

Default security groups

Your AWS account automatically has a default security group for the default VPC in each Region. If you don't specify a security group when you launch an instance, the instance is automatically associated with the default security group for the VPC.

A default security group is named `default`, and it has an ID assigned by AWS. The following table describes the default rules for a default security group.

RFC 1918 range	Example CIDR block
10.0.0.0 - 10.255.255.255 (10/8 prefix)	Your VPC must be /16 or smaller, for example, 10.0.0.0/16.
172.16.0.0 - 172.31.255.255 (172.16/12 prefix)	Your VPC must be /16 or smaller, for example, 172.31.0.0/16.
192.168.0.0 - 192.168.255.255 (192.168/16 prefix)	Your VPC can be smaller, for example 192.168.0.0/20.

XAMPP

XAMPP is an abbreviation where X stands for Cross-Platform, A stands for Apache, M stands for MYSQL, and the Ps stand for PHP and Perl, respectively. It is an open-source package of web solutions that includes Apache distribution for many servers and command-line executables along with modules such as Apache server, MariaDB, PHP, and Perl.

XAMPP helps a local host or server to test its website and clients via computers and laptops before releasing it to the main server. It is a platform that furnishes a suitable environment to test and verify the working of projects based on Apache, Perl, MySQL database, and PHP through the system of the host itself. Among these technologies, Perl is a programming language used for web development, **PHP** is a back end scripting language, and MariaDB is the most vividly used database developed by MySQL.

Components of XAMPP

As defined earlier, XAMPP is used to symbolize the classification of solutions for different technologies. It provides a base for testing of projects based on different technologies through a personal server. XAMPP is an abbreviated form of each alphabet representing each of its major components. This collection of software contains a web server named Apache, a database management system named MariaDB and scripting/ programming languages such as PHP and Perl. X denotes Cross-platform, which means that it can work on different platforms such as Windows, Linux, and mac OS.

1. **Cross-Platform:** Different local systems have different configurations of operating systems installed in it. The component of cross-platform has been included to increase the utility and audience for this package of Apache distributions. It supports various platforms such as packages of Windows, Linus, and MAC OS.

2. **Apache:** It is an HTTP a cross-platform web server. It is used worldwide for delivering web content. The server application has made free for installation and used for the community of developers under the aegis of Apache Software Foundation. The remote server of Apache delivers the requested files, images, and other documents to the user.

3. **MariaDB:** Originally, MySQL DBMS was a part of XAMPP, but now it has been replaced by MariaDB. It is one of the most widely used relational DBMS, developed by MySQL. It offers online services of data storage, manipulation, retrieval, arrangement, and deletion.
4. **PHP:** It is the backend scripting language primarily used for web development. PHP allows users to create dynamic websites and applications. It can be installed on every platform and supports a variety of database management systems. It was implemented using C language. PHP stands for **Hypertext Processor**. It is said to be derived from Personal Home Page tools, which explains its simplicity and functionality.
5. **Perl:** It is a combination of two high-level dynamic languages, namely Perl 5 and Perl 6. Perl can be applied for finding solutions for problems based on system administration, web development, and networking. Perl allows its users to program dynamic web applications. It is very flexible and robust.
6. **phpMyAdmin:** It is a tool used for dealing with MariaDB. Its version 4.0.4 is currently being used in XAMPP. Administration of DBMS is its main role.
7. **OpenSSL:** It is the open-source implementation of the Secure Socket Layer Protocol and Transport Layer Protocol. Presently version 0.9.8 is a part of XAMPP.
8. **XAMPP Control Panel:** It is a panel that helps to operate and regulate upon other components of the XAMPP. Version 3.2.1 is the most recent update. A detailed description of the control panel will be done in the next section of the tutorial.
9. **Webalizer:** It is a Web Analytics software solution used for User logs and provide details about the usage.

10. **Mercury:** It is a mail transport system, and its latest version is 4.62. It is a mail server, which helps to manage the mails across the web.
11. **Tomcat:** Version 7.0.42 is currently being used in XAMPP. It is a servlet based on JAVA to provide JAVA functionalities.
12. **Filezilla:** It is a File Transfer Protocol Server, which supports and eases the transfer operations performed on files. Its recently updated version is 0.9.41.

PROJECT WORKING DESCRIPTION

STEP 1: CREATING VPC

Create VPC Info

A VPC is an isolated portion of the AWS cloud populated by AWS objects, such as Amazon EC2 instances.

VPC settings

Name tag - *optional*
Creates a tag with a key of 'Name' and a value that you specify.

IPv4 CIDR block Info

IPv6 CIDR block Info
 No IPv6 CIDR block
 Amazon-provided IPv6 CIDR block
 IPv6 CIDR owned by me

Tenancy Info

STEP 2 : CREATING SUBNETS

Create subnet [Info](#)

VPC

VPC ID
Create subnets in this VPC.

vpc-0b364c2a81b0494b3 (mohitvpc) ▾

Associated VPC CIDRs

IPv4 CIDRs
10.0.0.0/16

STEP 3: GIVING NAMES AND IPV4 CIDR TO THE SUBNET

Subnet 1 of 2

Subnet name

Create a tag with a key of 'Name' and a value that you specify.

sub1

The name can be up to 256 characters long.

Availability Zone [Info](#)

Choose the zone in which your subnet will reside, or let Amazon choose one for you.

US East (N. Virginia) / us-east-1a ▾

IPv4 CIDR block [Info](#)

10.0.1.0/24 X

▼ Tags - optional

STEP 4: CREATING INTERNET GATEWAY

Create internet gateway [Info](#)

An internet gateway is a virtual router that connects a VPC to the internet. To create a new internet gateway specify the name for the gateway below.

Internet gateway settings

Name tag
Creates a tag with a key of 'Name' and a value that you specify.

Tags - optional
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - optional	Remove
<input type="text" value="Name"/> X	<input type="text" value="mohitgateway"/> X	Remove

Add new tag
You can add 49 more tags.

Cancel Create internet gateway

STEP 5: ATTACHING VPC TO INTERNET GATEWAY

Attach to VPC (igw-08337530825460929) [Info](#)

VPC
Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

Available VPCs
Attach the internet gateway to this VPC.
 X

▶ AWS Command Line Interface command

Cancel Attach internet gateway

STEP 6: SELECT THE ROUTE TABLE

The screenshot shows two related pages from the AWS Management Console:

- Route Tables List:** A table showing route tables. One row is selected, showing the Route table ID as `rtb-0b02bc514582a9b7d`, VPC as `vpc-0b364c2a81b0494b3`, and Owner as `53871...`. The table includes columns for Name, Route table ID, Explicit subnet associations, Edge associations, Main, VPC, and Owner.
- Routes Details:** A table showing routes for the selected route table. It lists one route: Destination `10.0.0.0/16`, Target `local`, Status `Active`, and Propagated `No`. The table includes columns for Destination, Target, Status, and Propagated.

STEP 7: CONNECTING INTERNET GATEWAY

The screenshot shows the **Subnet associations** tab for a specific route table. It displays the following information:

- Explicit subnet associations (0):** A table with a single row for subnet `sub1` (Subnet ID: `subnet-04c2ed6a3b0d73997`, IPv4 CIDR: `10.0.1.0/24`, IPv6 CIDR: `-`). The table includes columns for Subnet ID, IPv4 CIDR, IPv6 CIDR, and Route table ID.
- Buttons:** `Add route`, `Cancel`, `Preview`, and `Save changes`.
- Navigation:** Tabs for **Routes**, **Subnet associations** (which is active), **Edge associations**, **Route propagation**, and **Tags**.

STEP 8: ADDING SUBNETS

The screenshot shows the **Selected subnets** dialog. It displays the following information:

- Available subnets (2/2):** A table listing two subnets: `sub2` (Subnet ID: `subnet-078f73de8ad2656b7`, IPv4 CIDR: `10.0.2.0/24`, IPv6 CIDR: `-`) and `sub1` (Subnet ID: `subnet-04c2ed6a3b0d73997`, IPv4 CIDR: `10.0.1.0/24`, IPv6 CIDR: `-`). The table includes columns for Name, Subnet ID, IPv4 CIDR, IPv6 CIDR, and Route table ID.
- Selected subnets:** A list containing the selected subnets: `subnet-04c2ed6a3b0d73997 / sub1` and `subnet-078f73de8ad2656b7 / sub2`.
- Buttons:** `Cancel` and `Save associations`.

STEP 9: ENABLE AUTO IP ADDRESS

Modify auto-assign IP settings [Info](#)

Enable the auto-assign IP address setting to automatically request a public IPv4 or IPv6 address for a new network interface in this subnet.

Settings

Subnet ID
subnet-04c2ed6a3b0d73997

Auto-assign IPv4 [Info](#)
 Enable auto-assign public IPv4 address

Auto-assign customer-owned IPv4 address [Info](#)
 Enable auto-assign customer-owned IPv4 address
Option disabled because no customer owned pools found.

[Cancel](#) [Save](#)

STEP 10 : CREATING WINDOWS INSTANCE

Network [i](#) [Create new VPC](#)

Subnet [i](#) [Create new subnet](#)
251 IP Addresses available

STEP 11 : ADDING SUBNET 1 FOR WINDOWS INSTANCE

251 IP Addresses available

STEP 12 : ADD THE HTTP PORT AND IPV4 PORT

Type <i>(i)</i>	Protocol <i>(i)</i>	Port Range <i>(i)</i>
RDP	TCP	3389
HTTP	TCP	80
All ICMP - IPv4	ICMP	0 - 65535

Add Rule

STEP 13 : RUNNING WINDOWS INSTANCE

Instances (1) Info								
<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DN
<input type="checkbox"/>	-	i-081d1ddc05280e9fd	Running 	t2.micro	-	No alarms 	us-east-1a	-

STEP 14 : CREATING LINUX INSTANCE

 **Amazon Linux 2 AMI (HVM), SSD Volume Type** - ami-0dc2d3e4c0f9ebd18 (64-bit x86) / ami-008a8487adc2b32ec (64-bit Arm)

Amazon Linux Free tier eligible Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is approaching end of life on December 31, 2020 and has been removed from this wizard.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select 64-bit (x86) 64-bit (Arm)

Network *(i)*   Create new VPC

Subnet *(i)*   Create new subnet
251 IP Addresses available

Auto-assign Public IP *(i)* 

STEP 15 : CREATE A WINDOWS PASSWORD

EC2 > Instances > i-081d1ddc05280e9fd > Get windows password

Get Windows password [Info](#)

Retrieve and decrypt the initial Windows administrator password for this instance.

>Password change recommended

We recommend that you change your default password. Note: If a default password is changed, it cannot be retrieved using this tool. It is important that you change your password to one that you will remember.

You can use the following information to connect to your Windows instance using Remote Desktop.

Private IP address

10.0.1.102

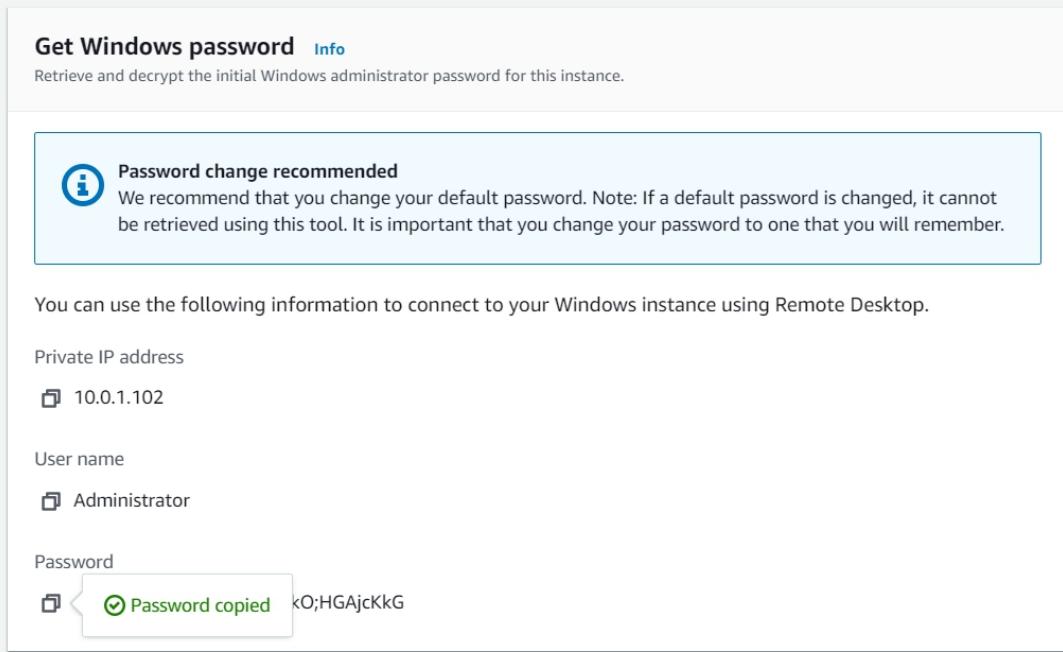
User name

Administrator

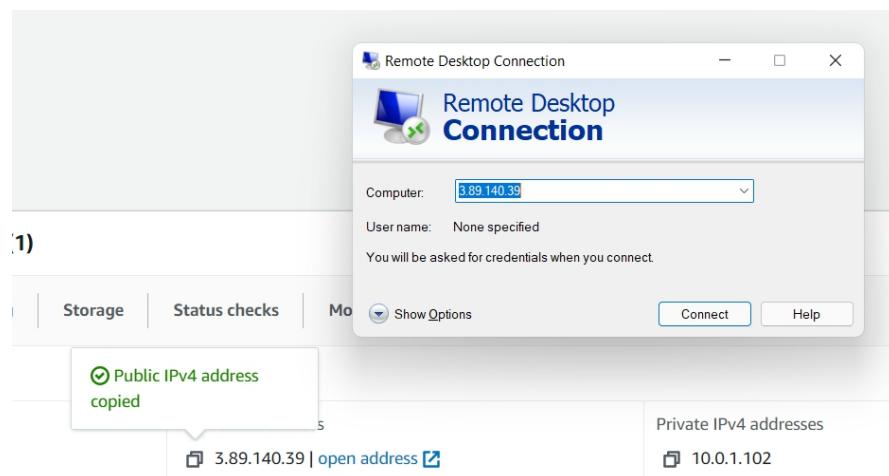
Password

>Password copied kO;HGAjcKkG

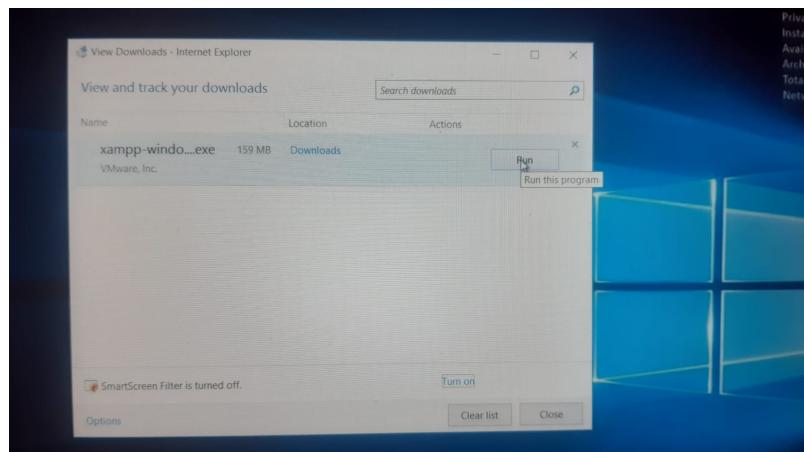
Close



STEP 16 : CONNECT TO INSTANCE THROUGH REMOTE DESKTOP CONNECTION



STEP 17 : INSTALL XAMPP



Download

XAMPP is an easy to install Apache distribution containing MariaDB, PHP, and Perl. Just download and start the installer. It's that easy.

XAMPP for Windows 7.3.29, 7.4.21 & 8.0.8

Version	Checksum	Size
7.3.29 / PHP 7.3.29	What's Included? md5 sha1	Download (64 bit) 158 Mb
7.4.21 / PHP 7.4.21	What's Included? md5 sha1	Download (64 bit) 159 Mb
8.0.8 / PHP 8.0.8	What's Included? md5 sha1	Download (64 bit) 160 Mb

Requirements [Add-ons](#) [More Downloads »](#)

Windows XP or 2003 are not supported. You can download a compatible version of XAMPP for these platforms [here](#).

Documentation/FAQs

There is no real manual or handbook for XAMPP. We wrote the documentation in the form of FAQs. Have a burning question that's not answered here? Try the [Forums](#) or [Stack Overflow](#).

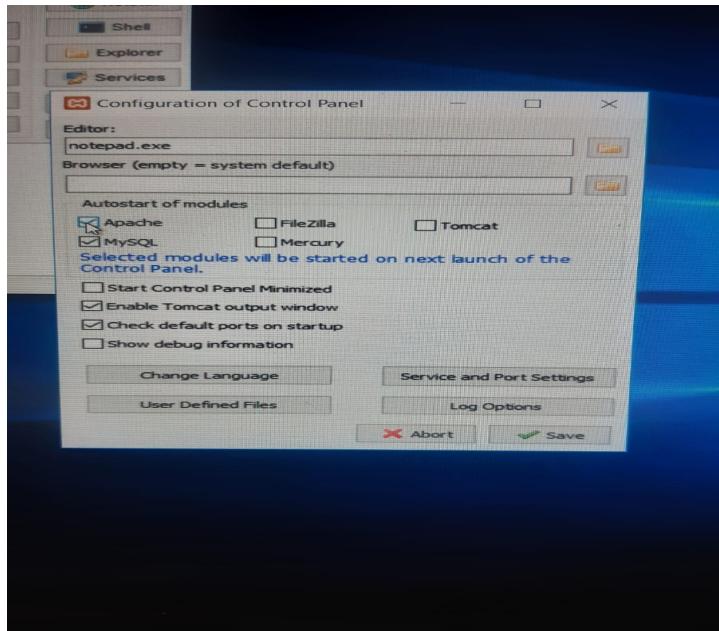
- Linux FAQs
- Windows FAQs
- OS X FAQs
- OS X XAMPP-VM FAQs

Add-ons

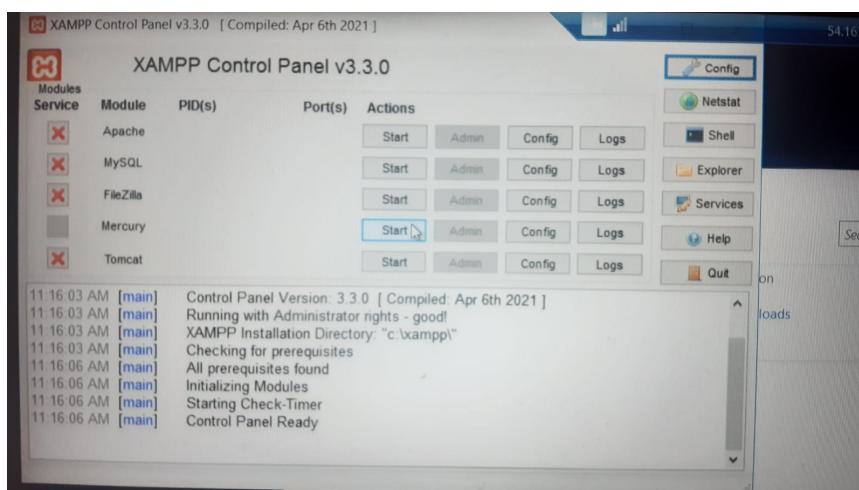


Bitnami provides a free all-in-one tool to install Drupal, Joomla!, WordPress and many other popular open source

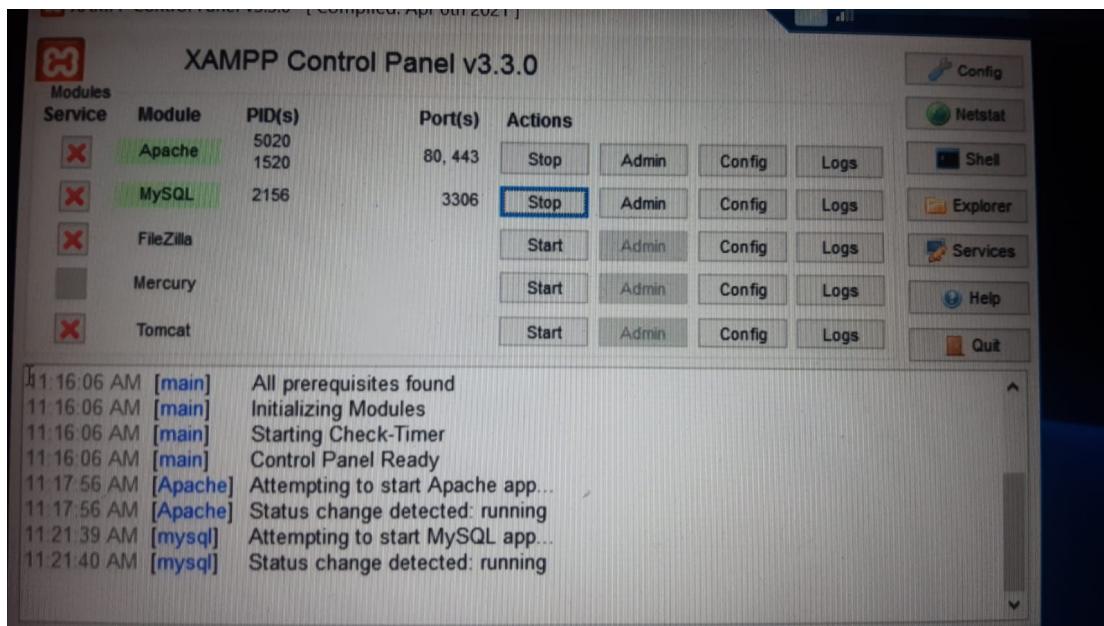
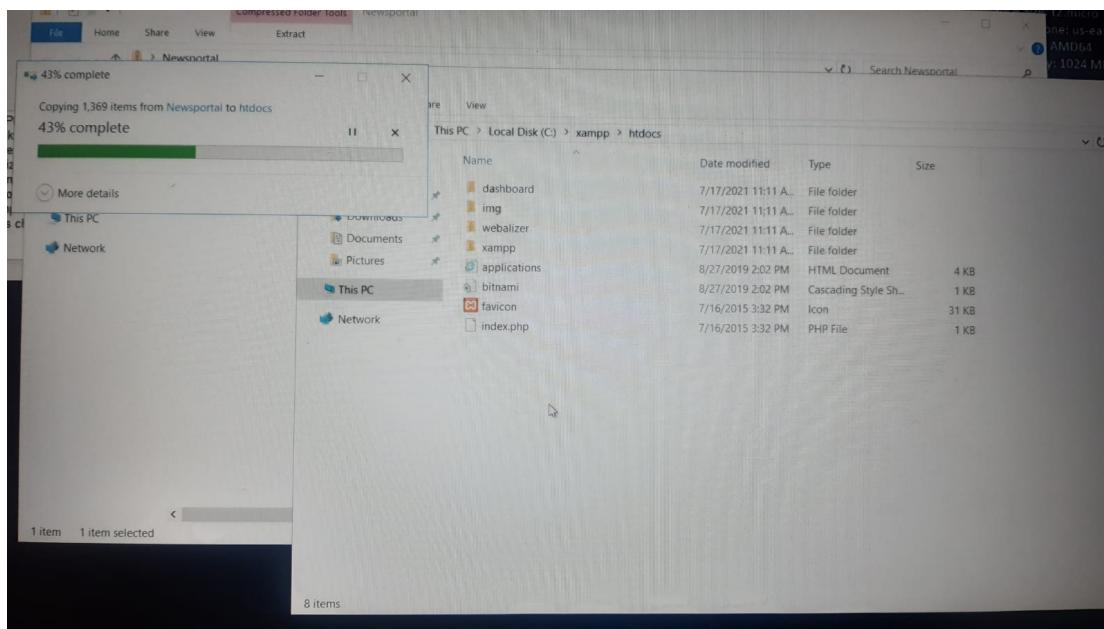
STEP 18 : ENABLE APACHE AND MYSQL



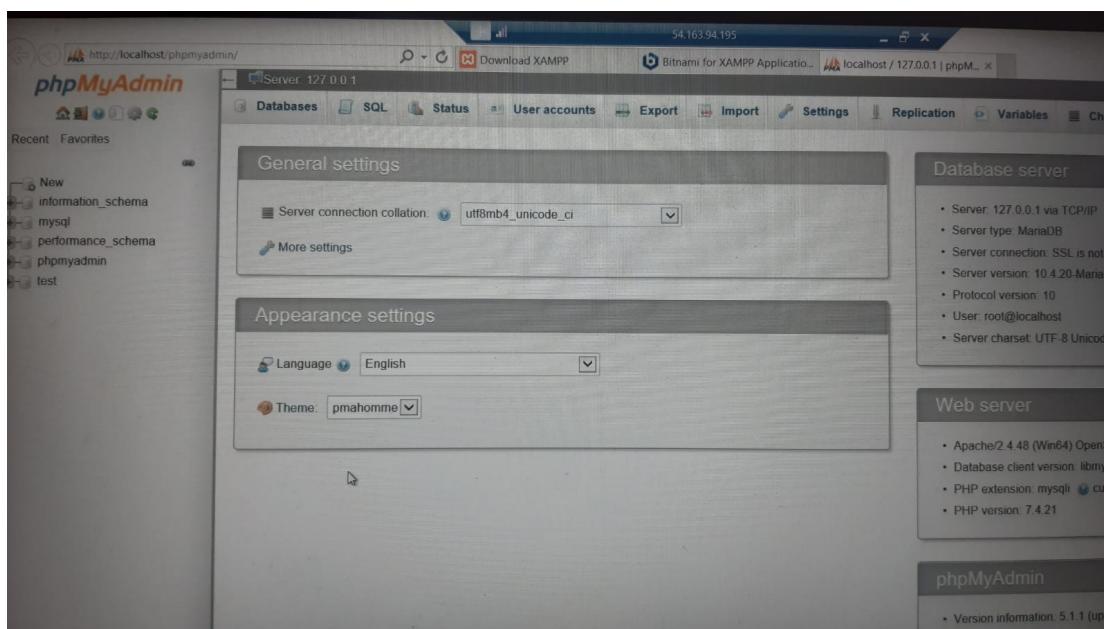
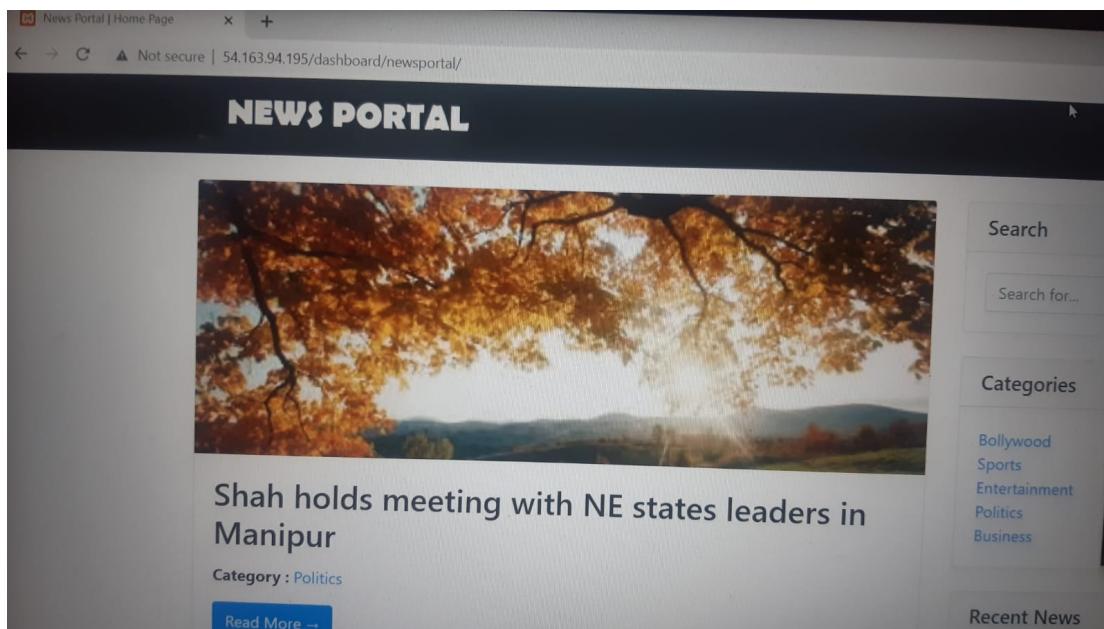
STEP 19 : RUN APACHE AND MYSQL



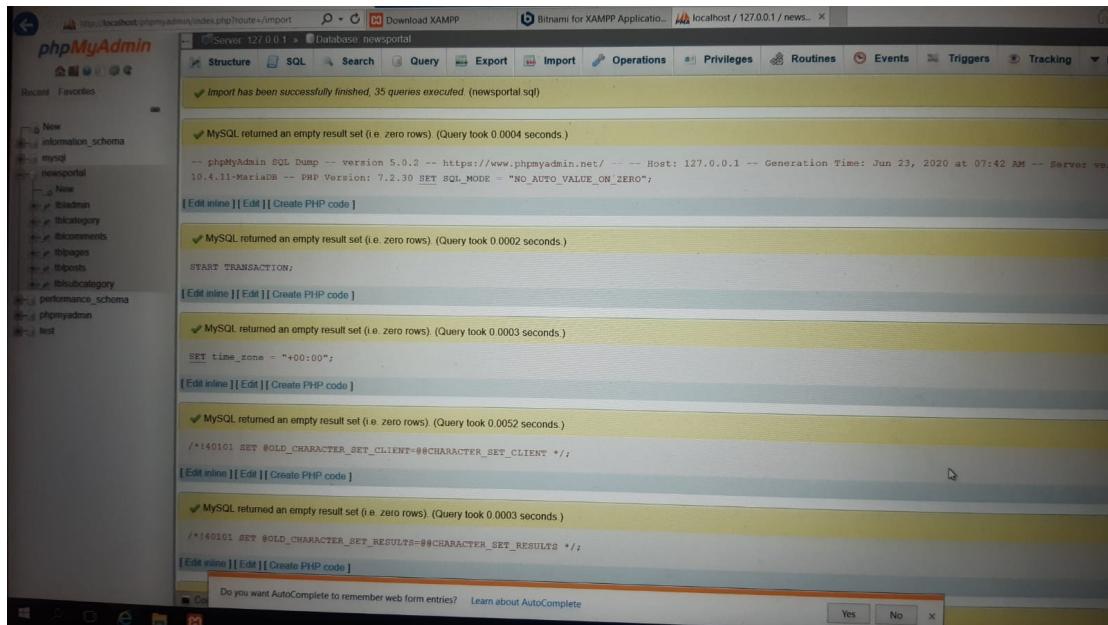
STEP 20 : UPLOAD THE PROJECT FILES AND RENAME AS DASHBOARD



STEP 21: RUN NEWSPORTAL IN LOCAL HOST



STEP 22: WE OBSERVE YOUR DATA IN DATABASE



The screenshot shows the phpMyAdmin interface with the database 'newsportal' selected. A message at the top states 'Import has been successfully finished, 35 queries executed (newsportal.sql)'. Below this, several log entries are displayed, each indicating a successful MySQL query execution. The queries relate to setting character sets, time zones, and transaction management, typical for a database dump import process.

```
-- MySQL returned an empty result set (i.e. zero rows) (Query took 0.0004 seconds)

-- MySQL returned an empty result set (i.e. zero rows) (Query took 0.0002 seconds)

START TRANSACTION;

-- MySQL returned an empty result set (i.e. zero rows) (Query took 0.0003 seconds)

SET time_zone = "+00:00";

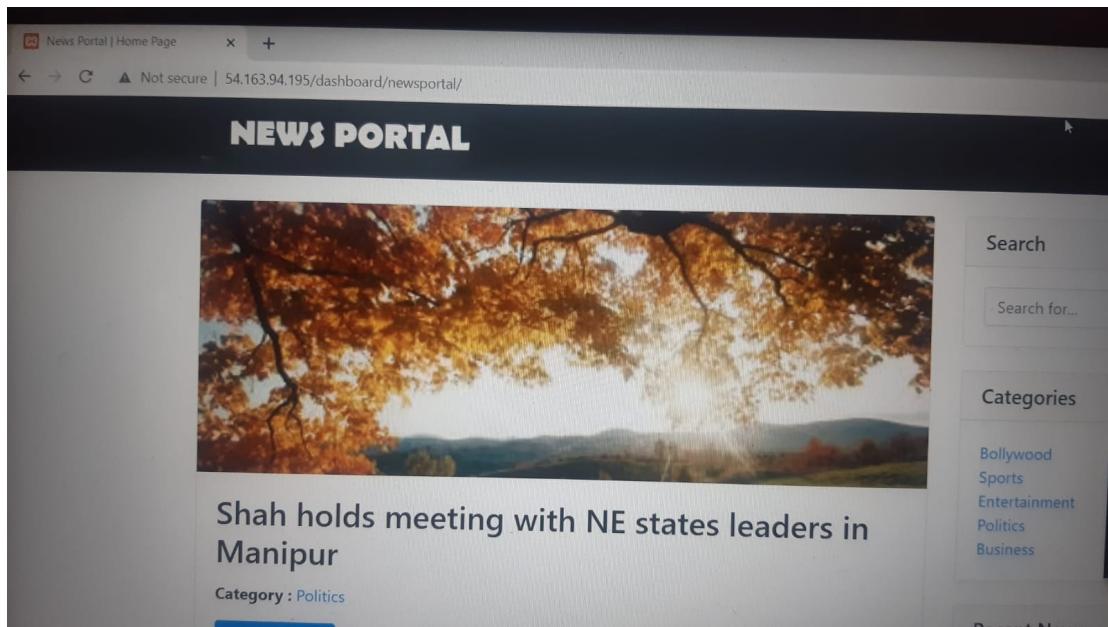
-- MySQL returned an empty result set (i.e. zero rows) (Query took 0.0052 seconds)

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;

-- MySQL returned an empty result set (i.e. zero rows) (Query took 0.0003 seconds)

/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;

-- MySQL returned an empty result set (i.e. zero rows) (Query took 0.0003 seconds)
```



CONCLUSION

On overall,The project has achieved its objectives . The project has provided a news portal web application and was deployed successfully using VPC , EC2 instance and other AWS services .It was a wonderful and great learning experience for me while working on this project .This project took me through the various phases of website deployment and I have learned various new AWS services in this project . I am very thankful to my mentor and my team members for giving me guidelines and support through out the project . The joy of work and thrill involved while tackling the various problems and challenges gave me a feel of developers industry.

REFERENCES

1. https://docs.aws.amazon.com/index.html?nc2=h_q1_doc_do
2. <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/concepts.html>
3. <https://www.javatpoint.com/cloud-computing-tutorial>
4. <https://www.apachefriends.org/index.html>