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Project Objective

Consider yourself a Final year Engineering student, who will be passing out in July 2024. Year 2023 was a bad year in terms of job or job market, with the global slow down and recession the prospect of a 5 figure Salary Cheque is a mirage for the students passing out in year 2024. Your college authorities with the help of your college alumni association has lined up few off-campus placement drives, but none of them will give the amount of salary you were looking for in the year 2024.

Meantime in your summer break some of you joined a networking course offered by Netcamp. The course was for 6 weeks. The basic idea for joining the course was going away from the mad – mad world for 6 weeks.

you liked the course and learned how to setup a network infrastructure which can be a basic platform for any e-Business.

After completing the course you decided, enough is enough no more searching for jobs, you will start your own company which will provide e-Business and e-Service solutions to the various small companies across the Country.

On a last day of the training program, during your tea break (in the mess) you proposed your idea to all of your group members of your group. You were overwhelmed with the support and their willingness to join your new venture. All wanted to leave their own mark – idea was to be a “JOB Maker – Not a JOB Seeker”.

You all decided to start, the company name will be the group name that you had in Netcamp. You decided to start the web services first so you can display your product lines on the web as well as communicate with your future customers.

The Owner of Netcamp was very happy with your initiation, he agreed to give you a loan of Rs. 10,00,000/- (Rupees ten lac only) as your starting capital. Infact he was so happy that some of his students are willing to take the path which he has taken some 15 years before, he gave the loan at meager 4% annual interest (where the business loan is anything about 9% + from any reputed bank in India)

You bought the following items to start your Company and plan to inaugurate the portal by 9am 1st August 2024. (very little time left – but you are motivated to go ahead and – confident you will be ready by then)

- a) Rented a space to use it as office and keep your servers
- b) 2 Red Hat Linux Enterprise server. With plenty of memory and stoage space
- c) 2 live IP address
- d) 32Mbps internet connection from ISP
- e) A domain name as netcamp.in

After a group meeting you decided to do the following and get it going.

- Create one web server which will host all the web sites for the Company (netcamp.in)
- Create one DNS server (which is same as your web server).
- Create one mailing server which will provide the email service for the Institution / Company (mail.netcamp.in – and should be able to access from web). Mail server should have POP3 support so user can download email in their own laptop/desktop. (Please customize the mail page with your own company logo and company name)
- The mail server will be the file server which will have file storage space for the user.

- File server will also have a dhcp server (range of ips =192.168.1.160 to 192.168.1.190 gateway=192.168.1.1 and dns server = give your dns server) so that it can give ip address to all client machines.
- Implement samba on your file server so it can be accessed from a windows machine.
- You were 4/5 in your group you decided that you will be the Chairman of the company and will have access to all the files / folders in your company. You created three departments – Sales, RandD and Accounts. Please divide the group members in all these groups. For the file management you decided about the following points.

Create a new partition where you will mount a folder called chairman and enable quota only for the chairman user for 200 mb.

Email address

username@netcamp.in

company.in (should also open as www.netcamp.in)

sales.company.in

research.company.in

accounts.company.in

mail.company.in

Common data folder for user (only departmental access – only the department people can read and write on the same) (samba share)

/departmentname/data

Common driver folder for the user (only departmental access – only access (r-x) but they can't write on the same) (samba share)

/departmentname/driver

Please make a note, chairman will have full access on these folder called data and driver; and he can also upload files and the folders through samba also.

In your locality there are 8 other companies, please make sure they can view your web page as well send email to you and other employees of your company.

You should also view others domain and send mail to them

Please design and implement the same.

Please note ISP will give the public ip address only after a week so, all job has to be done with private ip address only [speak to Santu Sir] for the same.

Firewall :: Please use firewall in your server make sure that telnet, ftp and ssh is not allowed from outside the network (allow only to your group members ip only)

Vmware Installation and Linux server setup

VMware Installation

To set up a virtual environment using VMware, follow these steps:

Step 1: Download VMware Software

1. **Visit the Website:** Go to [Netcamp Software Downloads](#) to download the VMware software.
2. **Select VMware:** Choose the appropriate VMware version compatible with your operating system and download the installer.

Step 2: Install VMware

1. **Run the Installer:** Locate the downloaded installer file and double-click to run it.
2. **Follow the Installation Wizard:**
 - Accept the license agreement.
 - Choose the installation location.
 - Select the components you want to install.
 - Click Next and then Install.
3. **Complete the Installation:** Once the installation is complete, click Finish.

Step 3: Configure VMware

1. **Launch VMware:** Open VMware from your applications menu.
2. **Create a New Virtual Machine:**
 - Click Create a New Virtual Machine.
 - Choose Typical (recommended) and click Next.
 - Select the installer disc image file (ISO) for the operating system you want to install.
 - Follow the prompts to configure the virtual machine settings (name, location, disk size, etc.).

Linux Server Setup

Once VMware is installed and configured, you can proceed to set up a Linux server on the virtual machine.

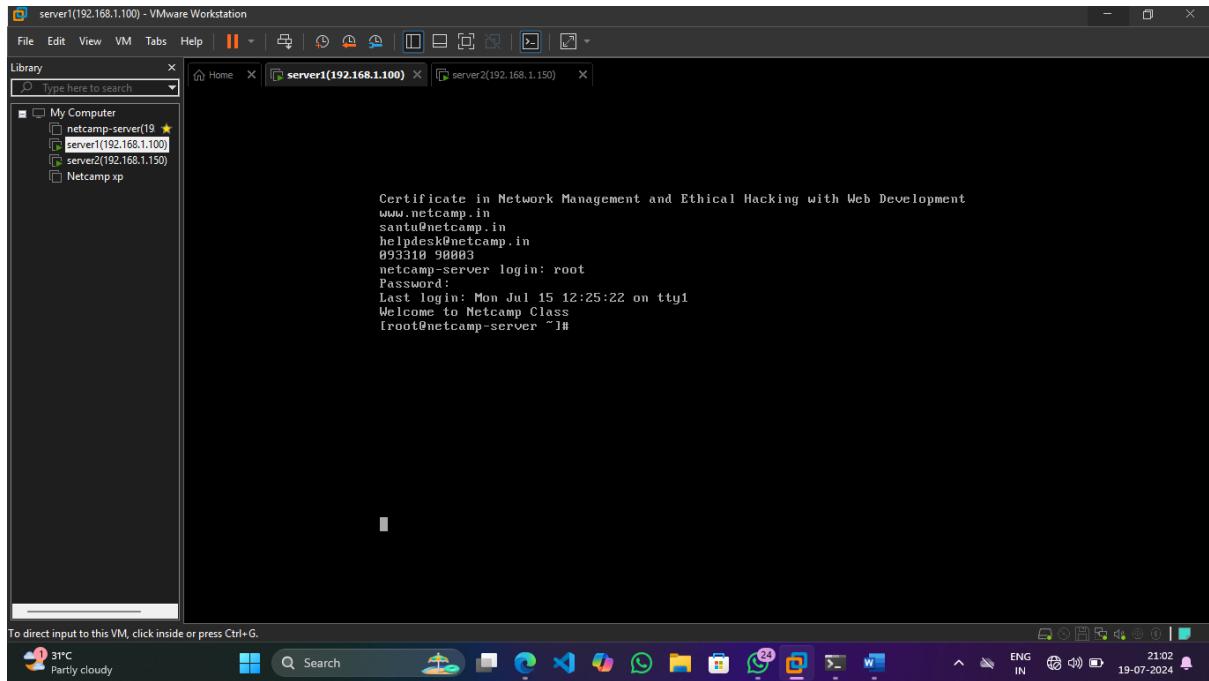
Step 1: Download Linux ISO

1. **Select a Linux Distribution:** Popular distributions include Ubuntu, CentOS, and Debian. For this setup, we will use Ubuntu.
2. **Download Ubuntu:** Go to the [Ubuntu website](#) and download the server ISO file.

Step 2: Install Linux on the Virtual Machine

1. **Start the Virtual Machine:** Open VMware and start the virtual machine you created.
2. **Mount the ISO File:** When prompted, select the Ubuntu ISO file you downloaded.
3. **Follow the Installation Steps:**

- Choose the language and keyboard layout.
- Configure the network settings.
- Set up the storage (partitioning the disk as needed).
- Create a user account and set a password.
- Select the software you want to install (e.g., OpenSSH server).
- Follow the prompts to complete the installation.



Pinging with Command prompt

Understanding Ping

Ping is a network utility used to test the reachability of a host on an Internet Protocol (IP) network. It measures the round-trip time for messages sent from the originating host to a destination computer and acknowledges receipt of those messages. Essentially, ping is used to verify if a network device is reachable and how long it takes to get a response.

Using Ping with Command Prompt

To ping a device using the Command Prompt in Windows, follow these steps:

1. Open Command Prompt:

- Press Windows + R, type cmd, and press Enter.
- Alternatively, you can search for cmd in the Start menu and click on the Command Prompt application.

2. Ping the IP Address:

- In the Command Prompt window, type the following command and press Enter:

```
Copy code
ping 192.168.1.100
```

- Replace 192.168.1.100 with the IP address of the device you want to ping.

Example of Pinging 192.168.1.100

Here is an example of what the output might look like when pinging the IP address 192.168.1.100:

```
python
Copy code
C:\>ping 192.168.1.100

Pinging 192.168.1.100 with 32 bytes of data:
Reply from 192.168.1.100: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Explanation of the Output

- **Reply from 192.168.1.100:** This indicates that the host at the IP address 192.168.1.100 is reachable.
- **bytes=32:** The size of the packet sent to the host.
- **time<1ms:** The round-trip time it took for the packet to travel to the host and back. In this case, it took less than 1 millisecond.

- **TTL=64:** Time to Live (TTL) is a value in an IP packet that tells how many hops (routers) the packet is allowed to pass through before being discarded. A TTL of 64 is common for many systems.

Troubleshooting

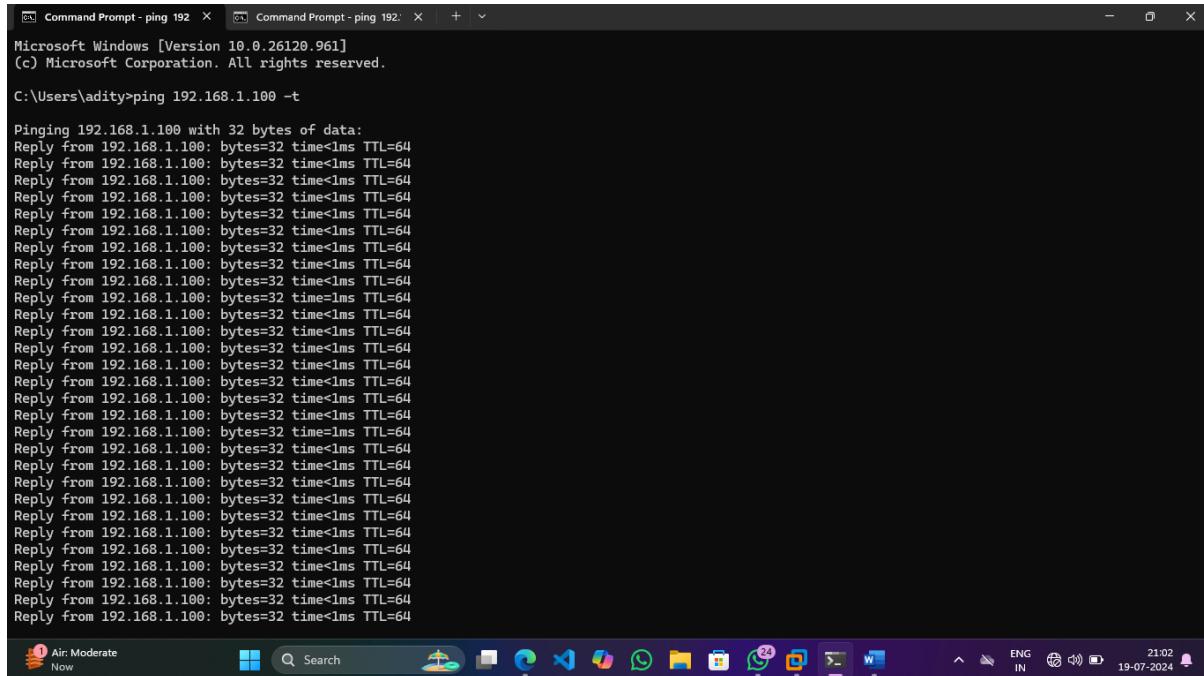
If you do not receive replies from the host, you might see something like this:

```
C:\>ping 192.168.1.100
Pinging 192.168.1.100 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.100:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

In this case, the reasons for the failure could include:

- The host at 192.168.1.100 is not reachable or not powered on.
 - There is a network configuration issue.
 - The firewall on the host is blocking ICMP packets (which are used by ping).



Webmin

Accessing Webmin on Your Linux Server

Webmin is a web-based interface for system administration on Unix. Using any modern web browser, you can manage various services on your server.

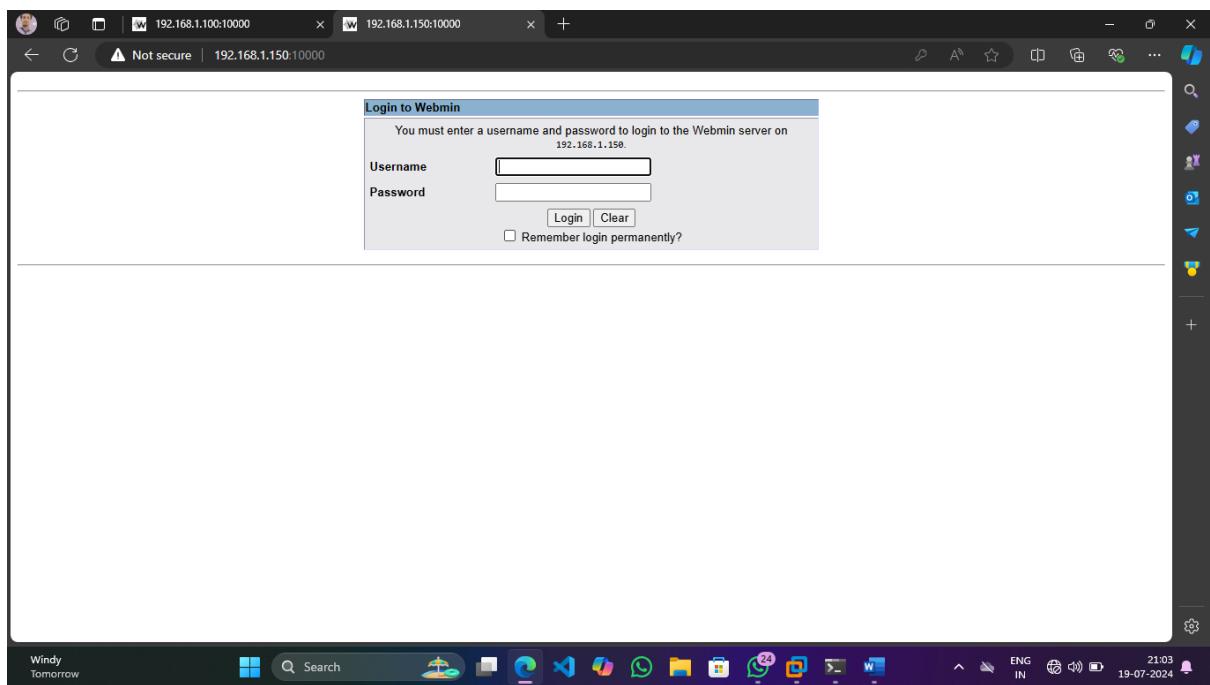
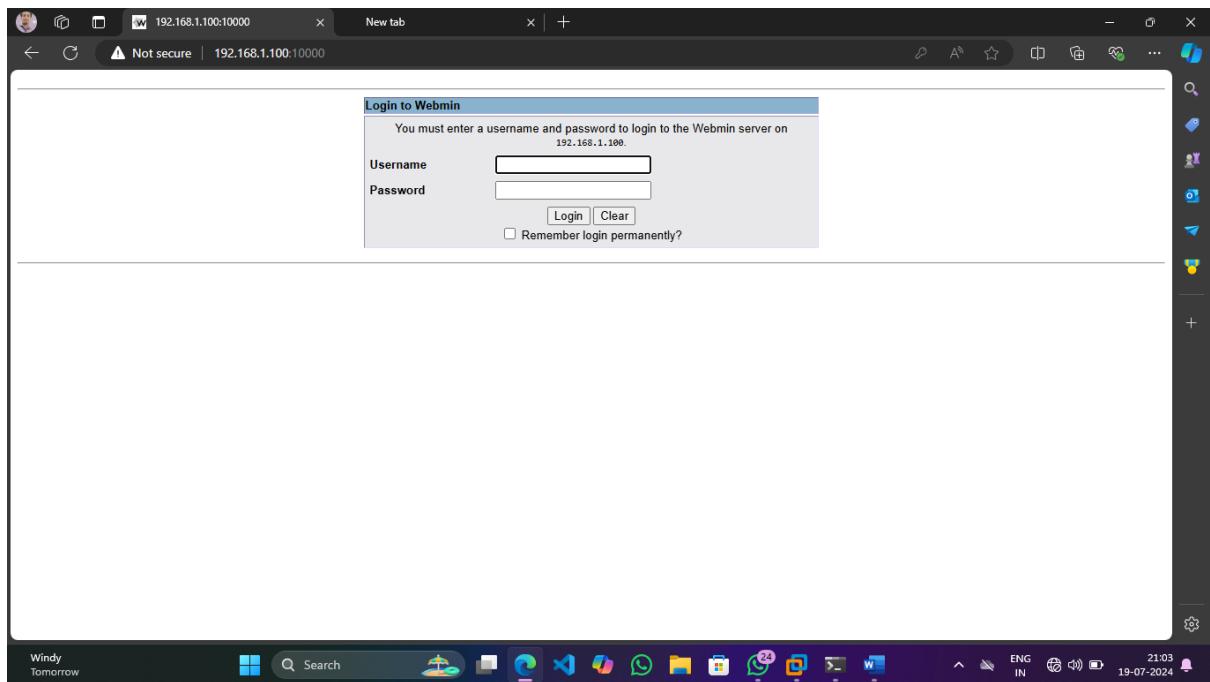
Steps to Access Webmin

1. **Ensure Webmin is Installed:** Make sure Webmin is installed on your Linux server.
 2. **Open Web Browser:** On your host machine (the one you're using to connect to your Linux server), open a web browser.
 3. **Access Webmin Interface:** In the address bar of your web browser, type the following URLs to access Webmin:
 - For the server with IP 192.168.1.100:

<https://192.168.1.100:10000>

- For the server with IP 192.168.1.150:

<https://192.168.1.150:10000>



DNS Server

A **DNS (Domain Name System) server** is a system that translates human-readable domain names (like `www.example.com`) into IP addresses (like `192.168.1.100`) that computers use to identify each other on the network. This translation is necessary because, while domain names are easy for people to remember, computers access websites based on IP addresses.

Setting Up a DNS Server

In this setup, the IP address `192.168.1.100` has been configured as the DNS server. This DNS server resolves domain names for the domain `adijai.com` and its subdomains.

Domain and Subdomain Configuration

The following domain and subdomains have been configured on the DNS server `192.168.1.100`:

1. Primary Domain:

- o `adijai.com` - The main domain.

2. Subdomains:

- o `www.adijai.com` - Typically used for the main website.
- o `sales.adijai.com` - Used for the sales department.
- o `research.adijai.com` - Used for the research department.
- o `accounts.adijai.com` - Used for the accounts department.
- o `mail.adijai.com` - Used for the mail server, with an IP address of `192.168.1.150`.

The screenshot shows the 'Create Master Zone' page in Webmin. The title bar says 'Create Master Zone'. The main form is titled 'New master zone options'. It includes fields for 'Zone type' (set to 'Forward (Names to Addresses)'), 'Domain name / Network' (set to 'adijai.com'), 'Records file' (set to 'Automatic'), 'Master server' (set to 'netcamp-server'), 'Email address' (set to 'adityajaitly01@gmail.com'), and various time-related settings like 'Refresh time' (10800 seconds), 'Expiry time' (604800 seconds), 'Transfer retry time' (3600 seconds), and 'Default time-to-live' (38400 seconds). There are also checkboxes for 'Add NS record for master server' and 'IP address for template records'. At the bottom left is a 'Create' button and a 'Return to zone list' link.

Webmin Index Module Index

Edit Master Zone

adijai.com

A Address (0) ← NS Name Server (1)
HI Host Information (0) TX Text (0)
RF Responsible Person (0) PT Reverse Address (0)
KE Public Key (0) All Record Types (1)
Edit Records File SC Edit Zone Parameters
Lookup WHOIS Information LC Edit Zone Options
SF Sender Permitted From (0) SF Location (0)
Mail Server (0) W Well Known Service (0)
Name Alias (0) SF Service Address (0)
host1 host2 host3 host4

31°C Party cloudy Search 21:09 19-07-2024 ENG IN

Webmin Index Module Index

Address Records

In adijai.com

Add Address Record

Name <input type="text"/>	Time-To-Live <input checked="" type="radio"/> Default <input type="radio"/> <input type="text"/>
Address <input type="text"/> ...	
Update reverse? <input checked="" type="radio"/> Yes <input type="radio"/> Yes (and replace existing) <input type="radio"/> No	
<input type="button" value="Create"/>	

← Return to zone list | Return to record types

31°C Party cloudy Search 21:09 19-07-2024 ENG IN

Address Records

In adijai.com

Add Address Record

Name	TTL	Address
adijai.com.	Default	192.168.1.100

Select all | Invert selection
Delete Selected Delete reverses too?

Return to zone list | Return to record types

31°C Partly cloudy

21:09 19-07-2024

Address Records

In adijai.com

Add Address Record

Name	TTL	Address
adijai.com.	Default	192.168.1.100
www.adijai.com.	Default	192.168.1.100
sales.adijai.com.	Default	192.168.1.100

Name	TTL	Address
research.adijai.com.	Default	192.168.1.100
account.adijai.com.	Default	192.168.1.100

Select all | Invert selection
Delete Selected Delete reverses too?

Return to zone list | Return to record types

31°C Partly cloudy

21:10 19-07-2024

Address Records

In adjai.com

Add Address Record

Name	Address	Time-To-Live
mail	192.168.1.150	<input type="radio"/> Default

Update reverse? Yes Yes (and replace existing) No

Create

Select all | Invert selection

Name	TTL	Address
adjai.com.	Default	192.168.1.100
www.adjai.com.	Default	192.168.1.100
sales.adjai.com.	Default	192.168.1.100

Name	TTL	Address
research.adjai.com.	Default	192.168.1.100
account.adjai.com.	Default	192.168.1.100

Select all | Invert selection

Delete Selected Delete reverses too?

Return to zone list | Return to record types

31°C Party cloudy

Search

21:10 19-07-2024

Address Records

In adjai.com

Add Address Record

Name	Address	Time-To-Live
mail	192.168.1.150	<input type="radio"/> Default

Update reverse? Yes Yes (and replace existing) No

Create

Select all | Invert selection

Name	TTL	Address
adjai.com.	Default	192.168.1.100
www.adjai.com.	Default	192.168.1.100
sales.adjai.com.	Default	192.168.1.100

Name	TTL	Address
research.adjai.com.	Default	192.168.1.100
account.adjai.com.	Default	192.168.1.100
mail.adjai.com.	Default	192.168.1.150

Select all | Invert selection

Delete Selected Delete reverses too?

Return to zone list | Return to record types

192.168.1.100:10000/bind8/index.cgi

31°C Party cloudy

Search

21:11 19-07-2024

The screenshot shows the Webmin BIND DNS Server interface. At the top, there are tabs for Miscellaneous Options, Control Interface Options, DNS Keys, Zone Defaults, Cluster Slave Servers, and Setup RNDC. Below these are links for AddTlps, Alias A, and SetNs. A large blue arrow points from the 'Start Name Server' button to the 'Edit Config File' link.

Existing DNS Zones

Create master zone | Create slave zone | Create stub zone | Create forward zone | Create delegation zone | Create zones from batch file.

Root zone 0 0000..0124 127.0.0 255

adijai.com localdomain localhost

Existing Client Views

There are no client views defined on this server.

Create a new view.

Start Name Server Click this button to start the BIND server, and load the current configuration.

Return to index

At the bottom, there is a taskbar with icons for Weather (31°C Partly cloudy), Search, and various applications like File Explorer, Task View, and Edge. The system tray shows the date and time (19-07-2024, 21:11) and language (ENG IN).

This screenshot shows the same Webmin BIND DNS Server interface as the first one, but with a different button arrangement. A large blue arrow points from the 'Apply Changes' button to the 'Stop Name Server' button.

Existing DNS Zones

Create master zone | Create slave zone | Create stub zone | Create forward zone | Create delegation zone | Create zones from batch file.

Root zone 0 0000..0124 127.0.0 255

adijai.com localdomain localhost

Existing Client Views

There are no client views defined on this server.

Create a new view.

Apply Changes Click this button to restart the running BIND server. This will cause the current configuration to become active.
Stop Name Server Click this button to stop the BIND server. Any clients using it will be unable to resolve hostnames until it is restarted.

Return to index

At the bottom, there is a taskbar with icons for Weather (31°C Partly cloudy), Search, and various applications like File Explorer, Task View, and Edge. The system tray shows the date and time (19-07-2024, 21:11) and language (ENG IN).

File Transfer Protocol

File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host to another over a TCP-based network, such as the Internet or an intranet. FTP allows users to upload, download, and manage files on a server.

Key Features of FTP

1. **File Transfer:** FTP is primarily used for transferring files between a client and a server.
2. **User Authentication:** FTP supports user authentication, allowing users to log in with a username and password to access their files.
3. **Data Integrity:** FTP ensures data integrity during the transfer process, making sure that files are not corrupted.
4. **Two Modes:** FTP operates in two modes - active mode and passive mode. Active mode requires the client to open a port and wait for the server to connect, while passive mode allows the client to establish both the data and command channels.

Basic FTP Commands

- **Connect to an FTP Server:** Use the command `ftp <server-address>` to connect to an FTP server.
- **Upload a File:** Use the `put <filename>` command to upload a file to the server.
- **Download a File:** Use the `get <filename>` command to download a file from the server.
- **List Files:** Use the `ls` command to list the files and directories on the server.
- **Change Directory:** Use the `cd <directory>` command to change the directory on the server.

Using vsftpd for FTP Service

vsftpd (Very Secure FTP Daemon) is a popular FTP server for Unix-like systems, including Linux. It is known for its security, performance, and stability.

Restarting the vsftpd Service

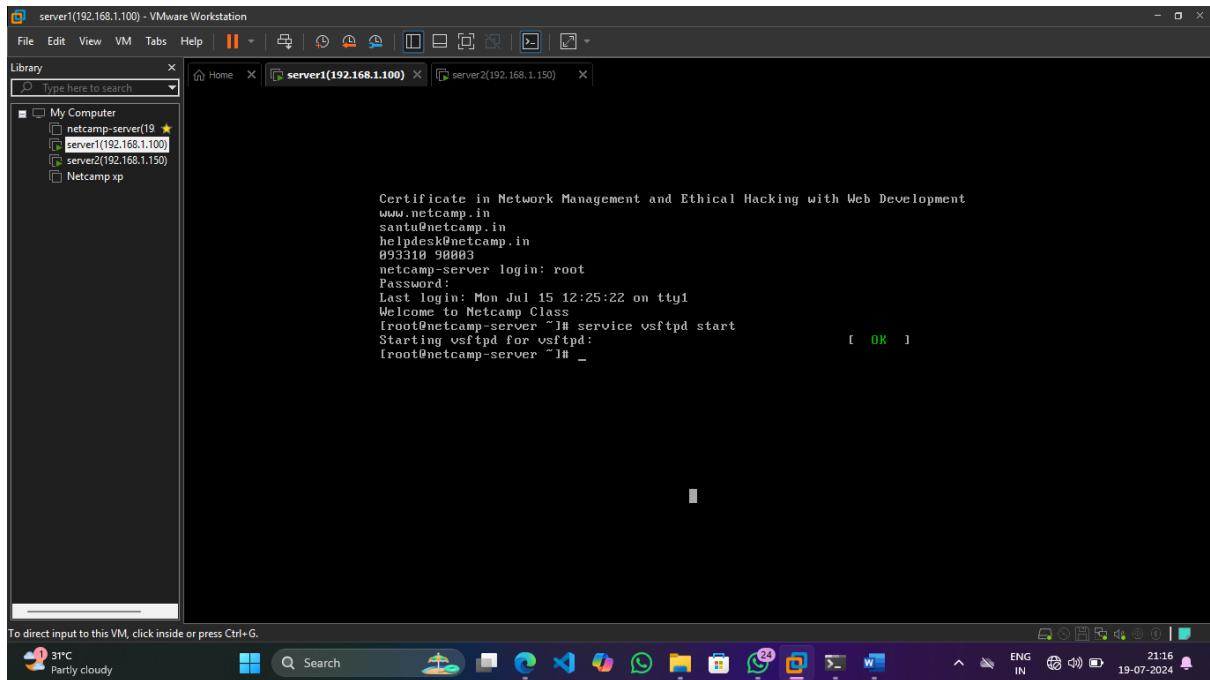
To restart the vsftpd service, you use the following command:

```
Copy code
service vsftpd restart
```

Explanation of the Command

- **service:** This command is used to run a script for starting, stopping, or restarting a service.
- **vsftpd:** This is the name of the FTP service you want to restart.
- **restart:** This option stops the service if it's running and then starts it again.

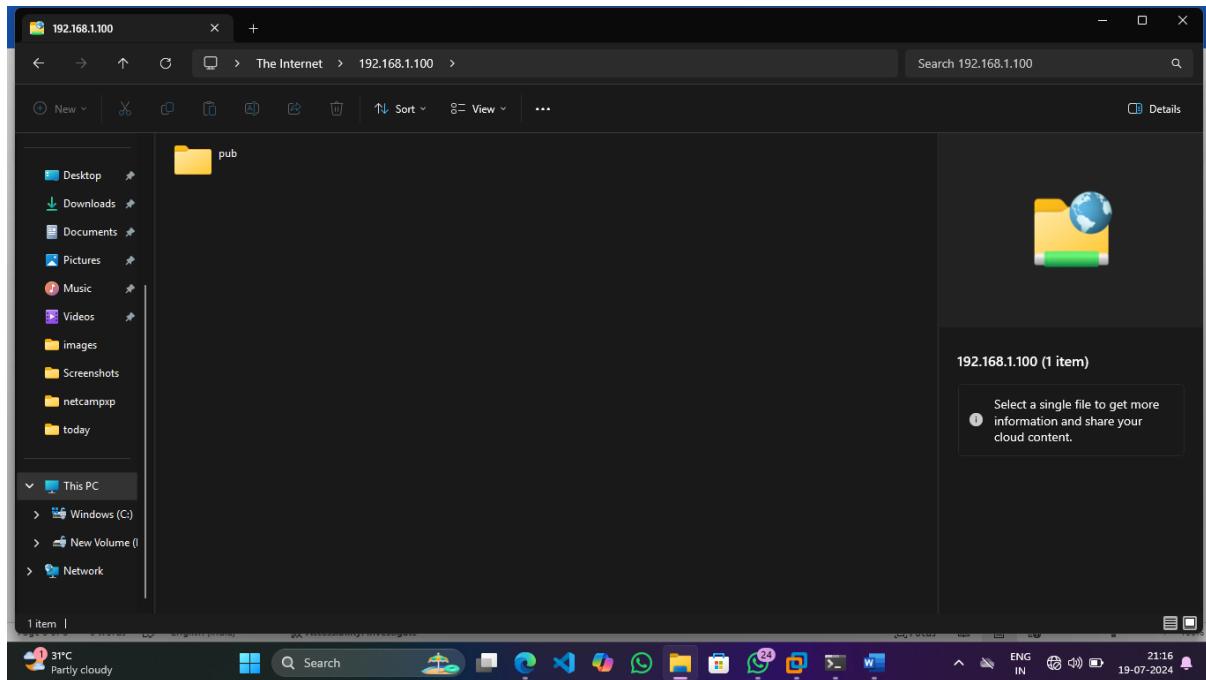
Restarting the vsftpd service can be necessary after making configuration changes or to resolve issues with the service.



File Transfer Protocol (FTP) is a standard network protocol used to transfer files between a client and a server. Here's how you can retrieve a file using FTP from a server and use FileZilla to manage file transfers.

Retrieving a File Using FTP

1. **Open File Explorer:**
 - On your PC, open File Explorer.
2. **Access FTP Server:**
 - In the address bar, type `ftp://192.168.1.100` and press Enter.
 - This will connect you to the FTP server at `192.168.1.100`.
3. **Navigate and Retrieve the File:**
 - Browse through the directories on the FTP server to locate the `pub` file.
 - Copy the `pub` file to your local machine by dragging and dropping it to a desired location on your PC.



Using FileZilla to Transfer Files

FileZilla is a free and open-source FTP client that allows you to transfer files to and from an FTP server.

1. Download and Install FileZilla:

- Download FileZilla from the official website and install it on your PC.

2. Connect to FTP Server:

- Open FileZilla.
- In the Host field, enter 192.168.1.100.
- Enter your FTP username and password.
- Click Quickconnect to connect to the FTP server.

3. Navigate the FTP Server:

- Once connected, you will see your local files on the left side and the FTP server files on the right side.
- Navigate to the directory containing the `pub` file on the server.

4. Transfer the File:

- Drag and drop the `pub` file from the right side (server) to the left side (local machine) to download it.
- To upload a file, drag and drop it from the left side (local machine) to the right side (server).

Example of Transferring `portfolio.main`

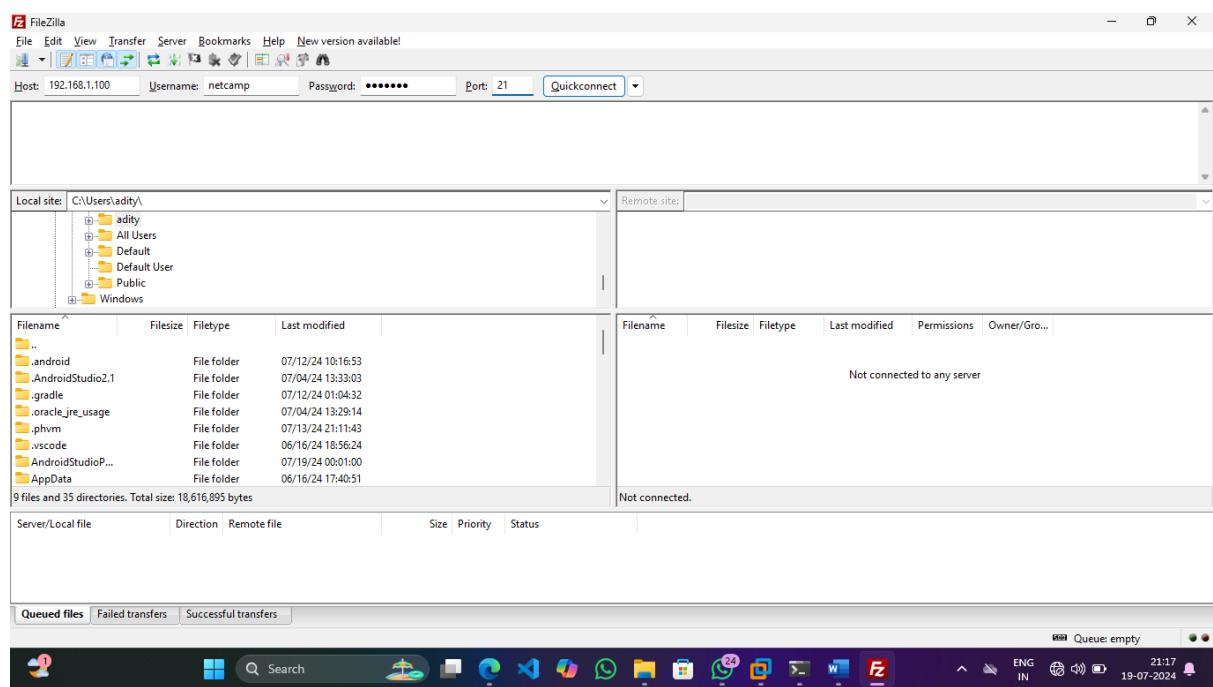
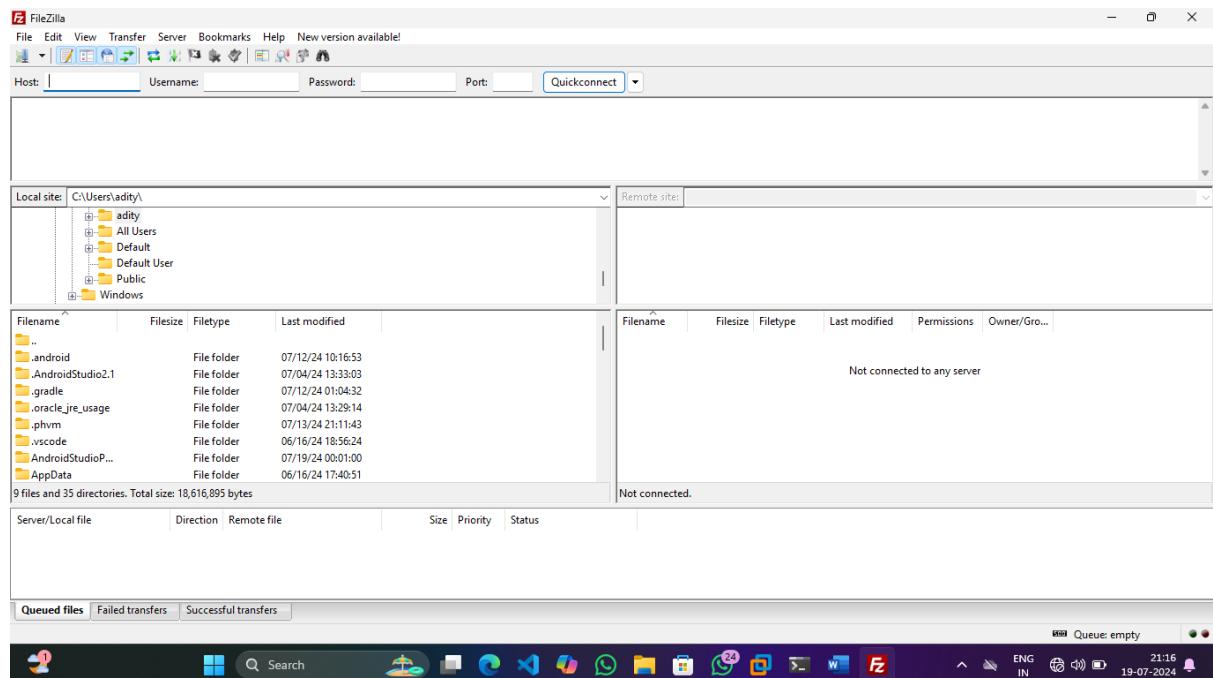
To upload `portfolio.main` file to the FTP server using FileZilla:

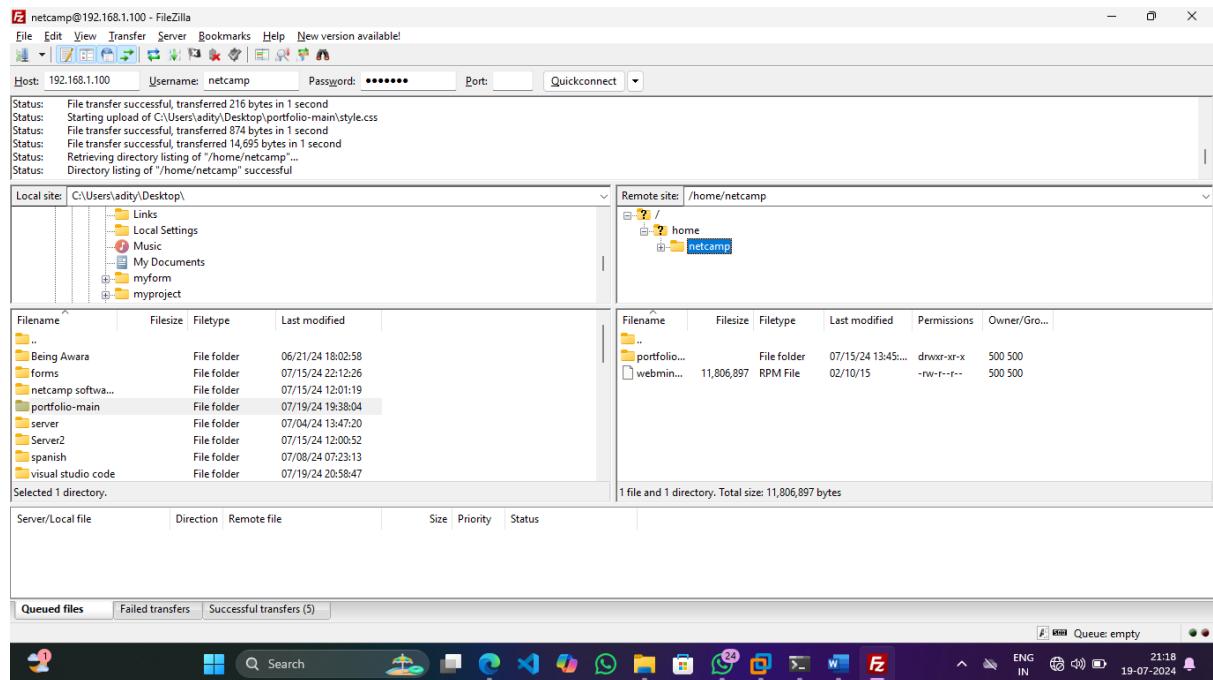
1. Locate `portfolio.main` on Your PC:

- On the left side of FileZilla, navigate to the directory containing the `portfolio.main` file.

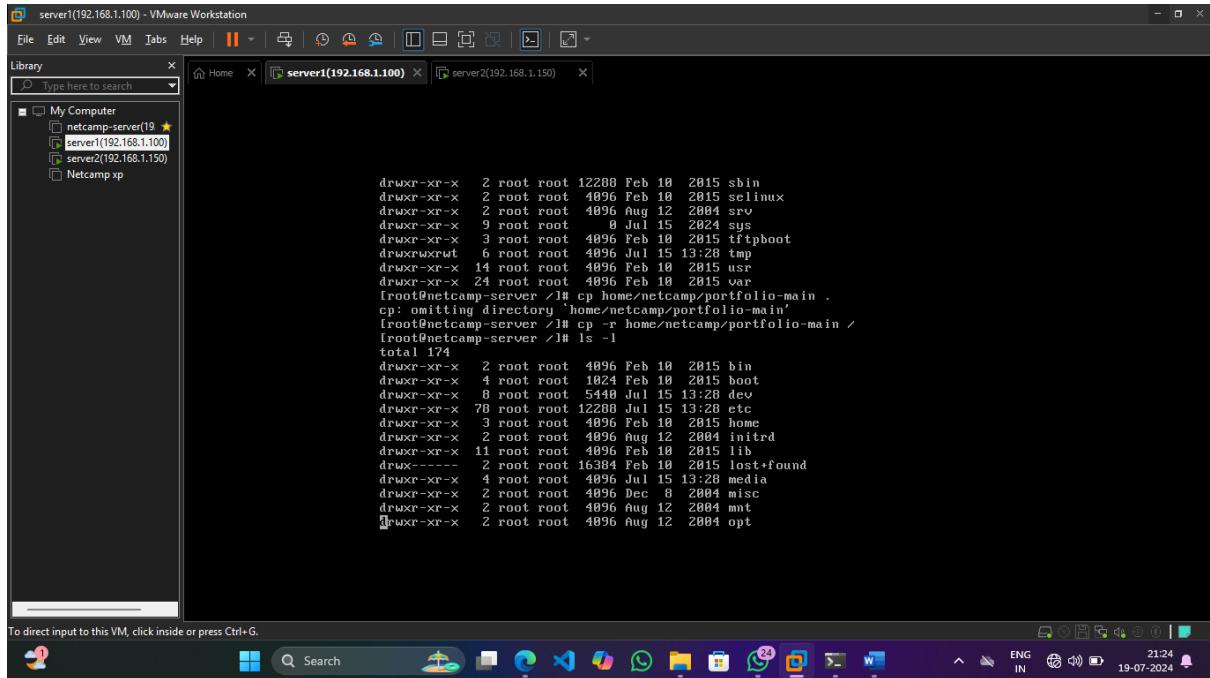
2. Upload the File:

- Drag and drop the portfolio.main file from the left side to the desired directory on the right side (FTP server).
- The file will be uploaded to the server.





Transferring file to /



Portfolio-main code

Index.html

```
<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>My Portfolio</title>

<link rel="stylesheet" href="style.css">

<link href='https://unpkg.com/boxicons@2.1.4/css/boxicons.min.css' rel='stylesheet'>

<body>
```

```
<header class="header">

  <a href="#home" class="logo">Aditya<span> Jaitly</span></a>

  <i class='bx bx-menu' id="menu-icon"></i>

  <nav class="navbar">
    <a href="#home" class="active">Home</a>
    <a href="#education">Education</a>
    <a href="#experience">Experience</a>
    <a href="#services">Services</a>
    <a href="#contact">Contact</a>
  </nav>
</header>

<section class="home" id="home">

  <div class="home-content">
    <h1>Hi, It's <span>Aditya</span></h1>
    <h3 class="text-animation">I'm a <span></span></h3>
    <p>A versatile professional skilled in data analysis, data science, full stack and software development, mobile app creation, and ethical hacking, I provide secure, innovative, and comprehensive technical solutions across various domains.
  </p>

  <div class="social-icons">
    <a href="https://www.linkedin.com/in/aditya010928/"><i class='bx bxl-linkedin' ></i></a>
    <a href="https://github.com/Aditya010928"><i class='bx bxl-github'></i></a>
    <a href="https://www.instagram.com/adityajaitly_?igsh=eG0ydGxib2Uwbjl0&utm_source=qr"><i class='bx bxl-instagram-alt' ></i></a>
  </div>

  <div class="btn-group">
```

```
<a href="#" class="btn">Hire</a>
<a href="#contact" class="btn">Contact</a>
</div>
</div>

<div class="home-img">
    <img src ="image_main.JPG" alt="">
</div>
</section>

<section class="education" id="education">
    <h2 class="heading">Education</h2>

    <div class="timeline-items">

        <div class="timeline-item">
            <div class="timeline-dot"></div>
            <div class="timeline-date">2019</div>
            <div class="timeline-content">
                <h3>High School</h3>
                <p>Completed high school with a strong foundation in science and mathematics, actively participating in various academic and extracurricular activities.</p>
            </div>
        </div>

        <div class="timeline-item">
            <div class="timeline-dot"></div>
            <div class="timeline-date">2021</div>
            <div class="timeline-content">
                <h3>Intermediate</h3>
                <p>Successfully completed intermediate education with a focus on science, honing analytical and problem-solving skills, and engaging in projects and competitions.</p>
            </div>
        </div>
    </div>
</section>
```

```
</div>

</div>

<div class="timeline-item">
    <div class="timeline-dot"></div>
    <div class="timeline-date">2025</div>
    <div class="timeline-content">
        <h3>Graduation</h3>
        <p>B.Tech in Computer Science Engineering, developing expertise in programming, software development, and data science, and participating in internships and hackathons to apply knowledge practically.</p>
    </div>
</div>

</div>
</section>

<section class="experience" id="experience">
    <h2 class="heading">Experience</h2>
    <div class="timeline-items">

        <div class="timeline-item">
            <div class="timeline-dot"></div>
            <div class="timeline-date">Feb 2024 - Mar 2024</div>
            <div class="timeline-content">
                <h3>Data Analyst Traineeship at MedTourEasy</h3>
                <p>Embarked on a comprehensive data science traineeship, led by industry leaders, offering immersive learning and career advancement. Gained vital skills and hands-on experience to excel in the ever-evolving realm of data science. Elevated my career trajectory with this transformative opportunity.</p>
                <p><strong>Skills:</strong> Data Analysis, Data Cleaning</p>
            </div>
        </div>
    </div>
</section>
```

```
</div>

<div class="timeline-item">
  <div class="timeline-dot"></div>
  <div class="timeline-date">May 2021 - Sep 2021</div>
  <div class="timeline-content">
    <h3>Interim Physics and Math Instructor at Saraswati Shiksha Sadan</h3>
    <p>• Dedicated educator<br>• Taught physics and mathematics to intermediate students<br>• Delivered science instruction to students in grades 6 to 10<br>• Emphasized fostering a strong foundation in these subjects<br>• Created an engaging learning environment</p>
    <p><strong>Skills:</strong> Physics, Science</p>
  </div>
</div>

</div>
</section>

<section class="services" id="services">
  <h2 class="heading">Services</h2>
  <div class="services-container">
    <div class="services-box">
      <div class="services-info">
        <h4>Data Analysis</h4>
        <p>Providing comprehensive data analysis services, including data cleaning, data visualization, and interpretation. We help you make data-driven decisions by uncovering patterns, trends, and insights that are crucial for your business growth. Our expertise ensures that your data is accurate, relevant, and actionable.</p>
      </div>
    </div>
  </div>

  <div class="services-box">
    <div class="services-info">
      <h4>Software Development</h4>
```

<p>Offering end-to-end software development services, from requirements gathering and system design to implementation and maintenance. We specialize in creating robust, scalable, and efficient software solutions tailored to meet your specific needs. Our agile development process ensures timely delivery and adaptability to changing requirements.</p>

</div>

</div>

<div class="services-box">

<div class="services-info">

<h4>Web Development</h4>

<p>Creating responsive and user-friendly websites using the latest technologies. Our web development services focus on providing an engaging and seamless user experience. We build websites that are not only visually appealing but also optimized for performance and SEO, ensuring your online presence is impactful and effective.</p>

</div>

</div>

<div class="services-box">

<div class="services-info">

<h4>App Development</h4>

<p>Developing high-quality mobile applications for both iOS and Android platforms. Our app development services emphasize functionality and user experience, ensuring your app is intuitive, responsive, and feature-rich. We handle everything from concept to deployment, providing a comprehensive solution for your mobile needs.</p>

</div>

</div>

<div class="services-box">

<div class="services-info">

<h4>Testing</h4>

<p>Providing thorough testing services to ensure your software is bug-free and performs optimally across different environments and scenarios. Our testing services include unit testing, integration testing, system testing, and user acceptance testing. We help you deliver reliable and high-quality software products.</p>

</div>

```
</div>

<div class="services-box">
  <div class="services-info">
    <h4>Artificial Intelligence</h4>
    <p>Implementing AI solutions to automate processes, enhance decision-making, and deliver personalized experiences. Our expertise in machine learning and data science enables us to develop intelligent systems that can analyze vast amounts of data, recognize patterns, and make predictions, driving innovation and efficiency.</p>
  </div>
</div>

<div class="services-box">
  <div class="services-info">
    <h4>Cybersecurity</h4>
    <p>Offering comprehensive cybersecurity services to protect your digital assets. Our services include vulnerability assessments, penetration testing, and security audits. We help you identify and mitigate risks, ensuring your systems and data are secure against cyber threats. Our proactive approach keeps your business safe and compliant with industry standards.</p>
  </div>
</div>

<div class="services-box">
  <div class="services-info">
    <h4>Cloud Services</h4>
    <p>Providing cloud computing solutions to help you leverage the power of the cloud for scalability, cost-efficiency, and improved collaboration. Our cloud services include migration, management, and optimization of cloud resources, enabling you to focus on your core business while we handle the technical complexities.</p>
  </div>
</div>
</div>
</section>
```

```
<section class="contact" id="contact">

    <h2 class="heading">Contact <span>Me</span></h2>

    <form action="https://api.web3forms.com/submit" method="POST">

        <!-- Access key for authentication -->
        <input type="hidden" name="access_key" value="a66dc459-7cde-450a-bb29-878a39166d20">

        <div class="input-group">
            <!-- Input fields for full name and email -->
            <div class="input-box">
                <input type="text" name="name" placeholder="Full Name" required>
                <input type="email" name="email" placeholder="Email" required>
            </div>
            <!-- Input fields for phone number and subject -->
            <div class="input-box">
                <input type="tel" name="phone_number" placeholder="Phone Number" required>
                <input type="text" name="subject" placeholder="Subject" required>
            </div>
        </div>

        <!-- Textarea for message -->
        <div class="input-group-2">
            <textarea name="message" cols="30" rows="10" placeholder="Your Message" required></textarea>
            <!-- Submit button -->
            <input type="submit" value="Send Message" class="btn">
        </div>
    </form>
</section>
```

```
<footer class="footer">  
  <div class="social">  
    <a href="https://www.linkedin.com/in/aditya010928/"><i class='bx bxl-linkedin' ></i></a>  
    <a href="https://github.com/Aditya010928"><i class='bx bxl-github'></i></a>  
    <a href="https://www.instagram.com/adityajaitly_?igsh=eG0ydGxib2Uwbjl0&utm_source=qr"><i class='bx bxl-instagram-alt' ></i></a>  
  </div>  
  <ul class="list">  
    <li>  
      <a href="#">FAQ</a>  
    </li>  
  
    <li>  
      <a href="#">Services</a>  
    </li>  
  
    <li>  
      <a href="#">About Me</a>  
    </li>  
  
    <li>  
      <a href="#">Contact</a>  
    </li>  
  
    <li>  
      <a href="#">Experience</a>  
    </li>  
  </ul>  
  <p class="copyright">  
    @ Aditya Jaitly | All Rights Reserved  
  </p>
```

```
</p>  
</footer>  
  
<script src ="script.js"></script>  
</body>  
</html>
```

Script.js

```
let menulcon = document.querySelector('#menu-icon');  
let navbar = document.querySelector('.navbar');  
let sections = document.querySelectorAll('section');  
let navLinks = document.querySelectorAll('header nav a'); // Fixed typo  
  
window.onscroll = () => {  
    sections.forEach(sec => {  
        let top = window.scrollY;  
        let offset = sec.offsetTop - 150;  
        let height = sec.offsetHeight;  
        let id = sec.getAttribute('id');  
  
        if (top >= offset && top < offset + height) { // Corrected condition  
            navLinks.forEach(link => {  
                link.classList.remove('active');  
                document.querySelector(`header nav a[href*='${id}']`).classList.add('active');  
            });  
        }  
    });  
};  
  
menulcon.onclick = () => {
```

```
menulcon.classList.toggle('bx-x');  
  
navbar.classList.toggle('active');  
  
};
```

Style.css

```
* {  
    margin: 0;  
    padding: 0;  
    box-sizing: border-box;  
    text-decoration: none;  
    border: none;  
    outline: none;  
    scroll-behavior: smooth;  
    font-family: "Poppins", sans-serif;  
}
```

```
:root {  
    --bg-color: #080808;  
    --second-bg-color: #131313;  
    --text-color: white;  
    --main-color: #00ffee;  
}
```

```
html{  
    font-size: 60%;  
  
    overflow-x: hidden;  
  
}  
  
body{  
    background: var(--bg-color);  
  
    color: var(--text-color);
```

```
}

.header{
    position: fixed;
    top: 0;
    left: 0;
    width: 100%;
    padding: 4rem 12%;
    background: rgba(0, 0, 0, 0.3);
    backdrop-filter: blur(10px);
    display: flex;
    justify-content: space-between;
    align-items: center;
    z-index: 5;
}

.logo{
    font-size: 3rem;
    color: var(--text-color);
    font-weight: 800;
    cursor: pointer;
    transition: 0.3s ease;
}

.logo:hover{
    transform: scale(1.1);
}

.logo span{
    text-shadow: 0 0 25px var(--main-color);
}

.navbar a{
    font-size: 1.8rem;
    color: var(--text-color);
    margin-left: 4rem;
```

```
    font-weight: 500;
    transition: 0.3s ease;
    border-bottom: 3px solid transparent;
}

.navbar a:hover,
.navbar a.active{
    color: var(--main-color);
    border-bottom: 3px solid var(--main-color);
}

#menu-icon{
    font-size: 3.6rem;
    color: var(--main-color);
    display: none;
}


```

```
section{
    min-height: 100vh;
    padding: 10rem 12%;
}

.home{
    display: flex;
    align-items: center;
    justify-content: center;
    gap: 15rem;
}

.home-content{
    display: flex;
    flex-direction: column;
    align-items: baseline;
    text-align: left;
    justify-content: center;
}
```

```
margin-top: 3rem;
}

span{
  color: var(--main-color);
}

.logo span{
  color: var(--main-color);
}

.home-content h3{
  margin-bottom: 2rem;
  margin-top: 1rem;
  font-size: 3.5rem;
}

.home-content h1{
  font-size: 7rem;
  font-weight: 700;
  margin-top: 1.5rem;
  line-height: 1;
}

.home-img{
  border-radius: 50%;
}

.home-img img{
  position: relative;
  top: 3rem;
  width: 32vw;
  border-radius: 50%;
  box-shadow: 0 0 25px var(--main-color);
  cursor: pointer;
  transition: 0.4s ease-in-out;
}
```

```
.home-img img:hover{
    box-shadow: 0 0 25px var(--main-color),
                0 0 50px var(--main-color),
                0 0 100px var(--main-color);
}

.home-content p{
    font-size: 1.5rem;
    font-weight: 500;
    line-height: 1.8;
    max-width: 1000px;
}

.social-icons a{
    display: inline-flex;
    justify-content: center;
    align-items: center;
    width: 4.5rem;
    height: 4.5rem;
    background: transparent;
    border: 2px solid var(--main-color);
    font-size: 2.5rem;
    border-radius: 50%;
    color: var(--main-color);
    margin: 3rem 1.5rem 3rem 0;
    transition: 0.3s ease-in-out;
}

.social-icons a:hover{
    color: var(--text-color);
    transform: scale(1.3) translateY(-5px);
    box-shadow: 0 0 25px var(--main-color);
    background-color: var(--main-color);
}
```

```
.btn{  
    display: inline-block;  
    padding: 1rem 2.8rem;  
    background-color: var(--main-color);  
    box-shadow: 0 0 25px var(--main-color);  
    border-radius: 4rem;  
    font-size: 1.6rem;  
    color: black;  
    border: 2px solid transparent;  
    letter-spacing: 0.1rem;  
    font-weight: 600;  
    transition: 0.3s ease-in-out;  
    cursor: pointer;  
}  
.btn:hover{  
    transform: scale(1.05);  
    box-shadow: 0 0 50px var(--main-color);  
}  
.btn-group{  
    display: flex;  
    align-items: center;  
    gap: 1.5rem;  
}  
.btn-group a:nth-of-type(2){  
    background-color: black;  
    color: var(--main-color);  
    border: 2px solid var(--main-color);  
    box-shadow: 0 0 25px transparent;  
}  
.btn-group a:nth-of-type(2):hover{  
    box-shadow: 0 0 25px var(--main-color);
```

```
background-color: var(--main-color);
color: black;
}

.text-animation {
    font-size: 34px;
    font-weight: 600;
    min-width: 280px;
}

.text-animation span {
    position: relative;
}

.text-animation span::before {
    content: "Web Developer";
    color: var(--main-color);
    animation: words 20s infinite;
}

.text-animation span::after {
    content: "";
    background-color: var(--bg-color);
    position: absolute;
    width: calc(100% + 8px);
    height: 100%;
    border-left: 3px solid var(--bg-color);
    right: -8px;
    animation: cursor 0.6s infinite, typing 20s steps(20) infinite;
}

@keyframes cursor {
```

```
    to {  
      border-left: 2px solid var(--main-color);  
    }  
  }
```

```
@keyframes words {  
  0%, 20% {  
    content: "Data Scientist";  
  }  
  21%, 40% {  
    content: "Software Developer";  
  }  
  41%, 60% {  
    content: "App Developer";  
  }  
  61%, 80% {  
    content: "Web Developer";  
  }  
  81%, 100% {  
    content: "Ethical Hacker";  
  }  
}
```

```
@keyframes typing{
```

```
  10%,  
  15%,  
  30%,  
  35%,  
  50%,  
  55%,  
  70%,  
  75%,
```

```
    90%,  
    95%{  
      width: 0;  
    }  
    5%,  
    20%,  
    25%,  
    40%,  
    45%,  
    60%,  
    65%,  
    80%,  
    85%{  
      width: calc(100% + 8px);  
    }  
  }  
.heading {  
  font-size: 8rem;  
  text-align: center;  
  margin: 5rem 0;  
}  
  
.education {  
  padding: 100px 15px;  
  background: var(--second-bg-color);  
}  
  
.education h2 {  
  margin-bottom: 5rem;  
}
```

```
.timeline-items {  
    max-width: 1200px;  
    margin: auto;  
    display: flex;  
    flex-wrap: wrap;  
    position: relative;  
}  
  
}
```

```
.timeline-items::before {  
    content: "";  
    position: absolute;  
    width: 5px;  
    height: 100%;  
    background-color: var(--main-color);  
    left: 50%;  
    transform: translateX(-50%);  
}  
  
}
```

```
.timeline-item {  
    margin-bottom: 40px;  
    width: 100%;  
    position: relative;  
}  
  
}
```

```
.timeline-item:last-child {  
    margin-bottom: 0;  
}  
  
}
```

```
.timeline-item:nth-child(odd) {  
    padding-right: calc(50% + 30px);  
    text-align: right;
```

```
}
```

```
.timeline-item:nth-child(even) {  
  padding-left: calc(50% + 30px);  
}  
  
.timeline-dot {  
  height: 21px;  
  width: 21px;  
  background-color: var(--main-color);  
  box-shadow: 0 0 25px var(--main-color), 0 0 50px var(--main-color);  
  position: absolute;  
  left: 50%;  
  transform: translateX(-50%);  
  border-radius: 50%;  
  top: 0; /* Adjusted from 10px to 0 for better alignment */  
}
```

```
.timeline-date {  
  font-size: 20px;  
  font-weight: 800;  
  color: white;  
  margin: 6px 0 15px;  
}
```

```
.timeline-content {  
  background-color: var(--bg-color);  
  border: 3px solid var(--main-color);  
  padding: 30px 50px;  
  border-radius: 4rem;  
  box-shadow: 0 0 10px var(--main-color);
```

```
cursor: pointer;  
transition: 0.3s ease-in-out;  
}
```

```
.timeline-content:hover {  
    transform: scale(1.05);  
    box-shadow: 0 0 25px var(--main-color);  
}
```

```
.timeline-content h3 {  
    font-size: 20px;  
    color: white;  
    margin: 0 0 10px;  
    font-weight: 500;  
}
```

```
.timeline-content p {  
    font-size: 16px;  
    color: white;  
    font-weight: 300;  
    line-height: 22px;  
}
```

```
::-webkit-scrollbar {  
    width: 15px;  
}
```

```
::-webkit-scrollbar-thumb {  
    background-color: var(--main-color);  
}
```

```
::-webkit-scrollbar-track {  
background-color: var(--bg-color);  
width: 50px;  
}
```

```
.heading {  
font-size: 8rem;  
text-align: center;  
margin: 5rem 0;  
}
```

```
.experience {  
padding: 100px 15px;  
background: var(--bg-color);  
}
```

```
.experience h2 {  
margin-bottom: 5rem;  
}
```

```
.timeline-items {  
max-width: 1200px;  
margin: auto;  
display: flex;  
flex-wrap: wrap;  
position: relative;  
}
```

```
.timeline-items::before {  
content: "";  
position: absolute;
```

```
width: 5px;  
height: 100%;  
background-color: var(--main-color);  
left: 50%;  
transform: translateX(-50%);  
}  
  
.timeline-item {  
margin-bottom: 40px;  
width: 100%;  
position: relative;  
}  
  
.timeline-item:last-child {  
margin-bottom: 0;  
}  
  
.timeline-item:nth-child(odd) {  
padding-right: calc(50% + 30px);  
text-align: right;  
}  
  
.timeline-item:nth-child(even) {  
padding-left: calc(50% + 30px);  
}  
  
.timeline-dot {  
height: 21px;  
width: 21px;  
background-color: var(--main-color);  
box-shadow: 0 0 25px var(--main-color), 0 0 50px var(--main-color);
```

```
position: absolute;  
left: 50%;  
transform: translateX(-50%);  
border-radius: 50%;  
top: 0; /* Adjusted from 10px to 0 for better alignment */  
}
```

```
.timeline-date {  
font-size: 20px;  
font-weight: 800;  
color: white;  
margin: 6px 0 15px;  
}
```

```
.timeline-content {  
background-color: var(--bg-color);  
border: 3px solid var(--main-color);  
padding: 30px 50px;  
border-radius: 4rem;  
box-shadow: 0 0 10px var(--main-color);  
cursor: pointer;  
transition: 0.3s ease-in-out;  
}
```

```
.timeline-content:hover {  
transform: scale(1.05);  
box-shadow: 0 0 25px var(--main-color);  
}
```

```
.timeline-content h3 {  
font-size: 20px;
```

```
    color: white;  
    margin: 0 0 10px;  
    font-weight: 500;  
}
```

```
.timeline-content p {  
    font-size: 16px;  
    color: white;  
    font-weight: 300;  
    line-height: 22px;  
}
```

```
::-webkit-scrollbar {  
    width: 15px;  
}
```

```
::-webkit-scrollbar-thumb {  
    background-color: var(--main-color);  
}
```

```
::-webkit-scrollbar-track {  
    background-color: var(--bg-color);  
    width: 50px;  
}
```

```
.services {  
    background: var(--second-bg-color);  
    color: black;  
}
```

```
.services h2 {  
    margin-bottom: 5rem;
```

```
    color: white;  
    text-align: center;  
    font-size: 8rem;  
}  
  
 .services-container {
```

```
    display: grid;  
    grid-template-columns: repeat(2, 1fr);  
    align-items: center;  
    gap: 2.5rem;  
}
```

```
.services-box {  
    background-color: var(--main-color);  
    height: 300px;  
    border-radius: 3rem;  
    border: 5px solid transparent;  
    cursor: pointer;  
    transition: 0.4s ease-in-out;  
    display: flex;  
    align-items: center;  
    justify-content: center;  
}
```

```
.services-box:hover {  
    background: white;  
    color: black;  
    border: 5px solid var(--main-color);  
    transform: scale(1.03);  
}
```

```
.services-info {  
    display: flex;  
    flex-direction: column;  
    text-align: left;  
    max-height: 200px;  
    justify-content: center;  
    align-items: baseline;  
    padding: 2rem;  
}
```

```
.services-info h4 {  
    font-size: 2rem;  
    font-weight: 800;  
    line-height: 2;  
}
```

```
.services-info p {  
    font-size: 1.2rem;  
    font-weight: 600;  
    max-height: 100px;  
    line-height: 1.7;  
}
```

```
.contact{  
    background-color: var(--bg-color);  
}
```

```
.contact h2{  
    margin-bottom: 3rem;  
    color: white;  
}
```

```
.contact form{
```

```
display: flex;
align-items: center;
justify-content: center;
gap: 3rem;
margin: 5rem auto;
text-align: center;
}

.contact form.input-box{
    display: flex;
    justify-content: center;
    flex-wrap: wrap;
}

.contact form .input-box input,
.contact form textarea{
    width: 100%;
    padding: 2.5rem;
    font-size: 1.8rem;
    color: var(--text-color);
    background: var(--bg-color);
    border-radius: 2rem;
    border: 2px solid var(--main-color);
    margin: 1.5rem 0;
    resize: none;
}

.contact form .btn{
    margin-top: 2rem;
}

.footer{
    position: relative;
    bottom: 0;
```

```
width: 100%;  
padding: 40px 0;  
background-color: var(--second-bg-color);  
}  
  
.footer .social{  
text-align: center;  
padding-bottom: 25px;  
color: var(--main-color);  
}  
  
.footer .social a{  
font-size: 25px;  
color: var(--main-color);  
border: 2px solid var(--main-color);  
width: 42px;  
height: 42px;  
line-height: 42px;  
display: inline-block;  
text-align: center;  
border-radius: 50%;  
margin: 0 10px;  
transition: 0.3s ease-in-out;  
}  
  
.footer .social a:hover{  
transform: scale(1.2)translateY(-10px);  
background-color: var(--main-color);  
color: black;  
box-shadow: 0 0 25px var(--main-color);  
}  
  
.footer ul{  
margin-top: 0;  
padding: 0;
```

```
font-size: 18px;  
line-height: 1.6;  
margin-bottom: 0;  
text-align: center;  
}  
  
.footer ul li a{  
color: white;  
border-bottom: 3px solid transparent;  
transition: 0.3s ease-in-out;  
}  
  
.footer ul li a:hover{  
border-bottom: 3px solid var(--main-color);  
}  
  
.footer ul li{  
display: inline-block;  
padding: 0 15px;  
}  
  
.footer .copyright{  
margin-top: 50px;  
text-align: center;  
font-size: 16px;  
color: white;  
}@media(max-width:1285px){  
html{  
font-size: 55%;  
}  
  
.services-container{  
padding-bottom: 7rem;  
grid-template-columns: repeat(2, 1fr);  
margin: 0 5rem;  
}
```

```
}

@media(max-width:991px){

    header{
        padding: 2rem 3%;

    }

    section{
        padding: 10rem 3% 2rem;

    }

    .timeline-items::before{
        left: 7px;

    }

    .timeline-item:nth-child(odd){
        padding-right: 0;
        text-align: left;

    }

    .timeline-item:nth-child(odd),
    .timeline-item:nth-child(even){
        padding-left: 37px;

    }

    .timeline-dot{
        left: 1%;

    }

    .services{
        padding-bottom: 7rem;

    }

    .services-container{
        grid-template-columns: 1fr;
        margin: 0 2rem;

    }

    .contact form{
```

```
flex-direction: column;  
}  
.footer{  
padding: 2rem 4%;  
}  
  
}  
  
@media(max-width:895px){  
#menu-icon{  
display: block;  
}  
.navbar{  
position: absolute;  
top: 100%;  
right: 0;  
width: 50%;  
padding: 1rem 3%;  
background: rgba(0, 0, 0, 0.8);  
backdrop-filter: blur(20px);  
border-bottom-left-radius: 2rem;  
border-left: 2px solid var(--main-color);  
border-bottom: 2px solid var(--main-color);  
display: none;  
}  
.navbar.active{  
display: block;  
}  
.navbar a{  
display: block;  
font-size: 2rem;  
margin: 3rem 0;
```

```
color: white;  
}  
  
.home{  
flex-direction: column-reverse;  
margin: 5rem 4rem;  
}  
  
.home-content h3{  
font-size: 2.6rem;  
}  
  
.home-content h1{  
font-size: 8rem;  
margin-top: 3rem;  
}  
  
.home-content p{  
max-width: 600px;  
margin: 0 auto;  
}  
  
.home-img img{  
width: 55vw;  
}  
  
.service h2{  
margin-bottom: 3rem;  
}  
  
.services-container{  
grid-template-columns: repeat(1,1fr);  
}  
}
```

Web Server

Web Server Hosting Using Apache Server in Webmin

Webmin is a web-based interface for system administration for Unix. Using Webmin, you can easily configure and manage the Apache web server. Apache is one of the most popular web servers used to host websites.

Steps to Host a Website Using Apache in Webmin

Prerequisites

1. **Webmin Installed:** Ensure Webmin is installed on your server.
2. **Apache Installed:** Ensure Apache is installed on your server.

Step 1: Access Webmin

1. **Open Web Browser:** Open your web browser and navigate to Webmin.

`https://your-server-ip:10000`

2. **Log in to Webmin:** Enter your Webmin username and password to log in.

Step 2: Access Apache Configuration

1. **Navigate to Apache Webserver:**
 - o On the Webmin dashboard, look for the `Servers` section.
 - o Click on `Apache Webserver`.

Step 3: Configure Apache

1. **Create a New Virtual Host:**
 - o In the Apache Webserver module, click on `Create a new virtual host`.
 - o Enter the required details for the new virtual host:
 - **Document Root:** The directory where your website files will be stored, e.g., `/var/www/html/yourwebsite`.
 - **Server Name:** The domain name for your website, e.g., `yourwebsite.com`.
 - **IP Address:** The IP address the server will listen on (use * for all available IP addresses).
2. **Save and Apply Changes:**
 - o After filling in the details, click on the `Create Now` button.
 - o Webmin will create the virtual host configuration for Apache.

Step 4: Upload Website Files

1. **Upload Files:**
 - o Use an FTP client or SCP to upload your website files to the document root directory you specified, e.g., `/var/www/html/yourwebsite`.

Step 5: Restart Apache

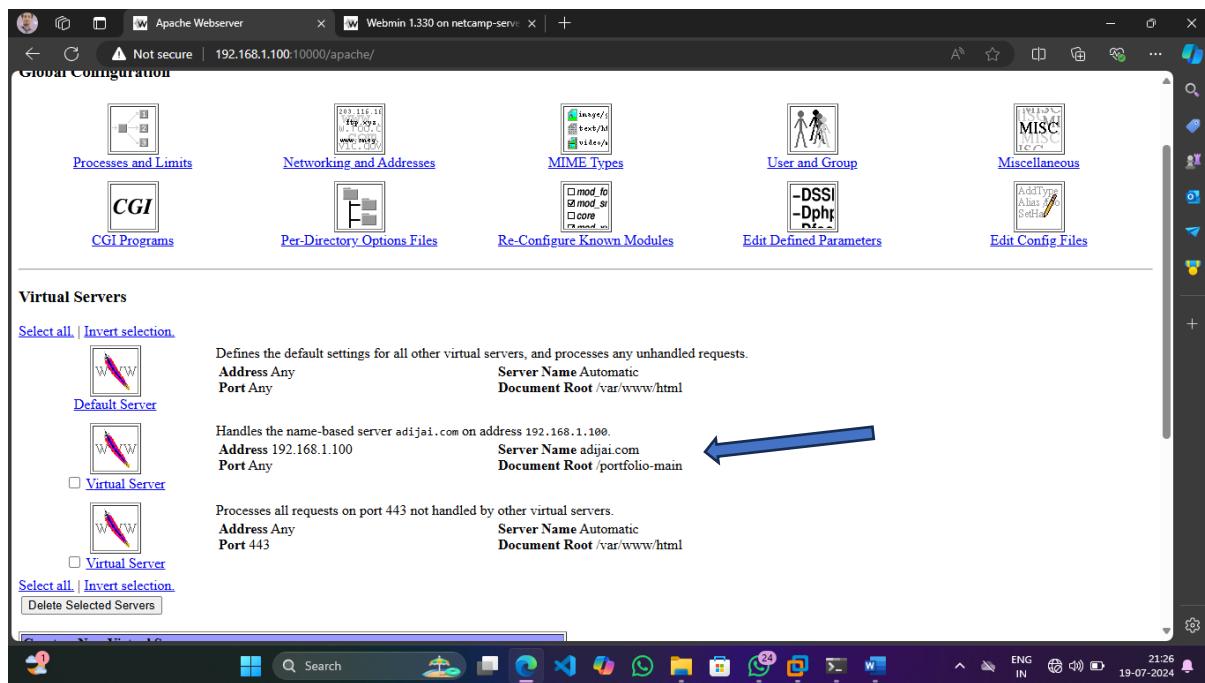
1. Restart Apache:

- In the Apache Webserver module, click on the Stop Apache and then Start Apache buttons to restart the Apache server and apply the changes.

Step 6: Access Your Website

1. Check the Website:

- Open your web browser and navigate to `http://yourwebsite.com` to see your website live.



Nslookup

Using nslookup to Find the IP Address of a Web Page

nslookup is a command-line tool used to query Domain Name System (DNS) records and resolve domain names to IP addresses. This can be useful for finding the IP address associated with a web page or domain.

Steps to Use **nslookup**

1. Open Command Prompt or Terminal:

- **Windows:** Open Command Prompt by pressing Windows + R, typing cmd, and pressing Enter.
- **Linux/Mac:** Open Terminal.

2. Run the **nslookup** Command:

- Type the following command and press Enter:

```
php
Copy code
nslookup <domain-name>
```

- Replace <domain-name> with the domain of the web page you want to find the IP address for.

Example: To find the IP address for `www.example.com`, you would run:

```
Copy code
nslookup www.example.com
```

Example Output

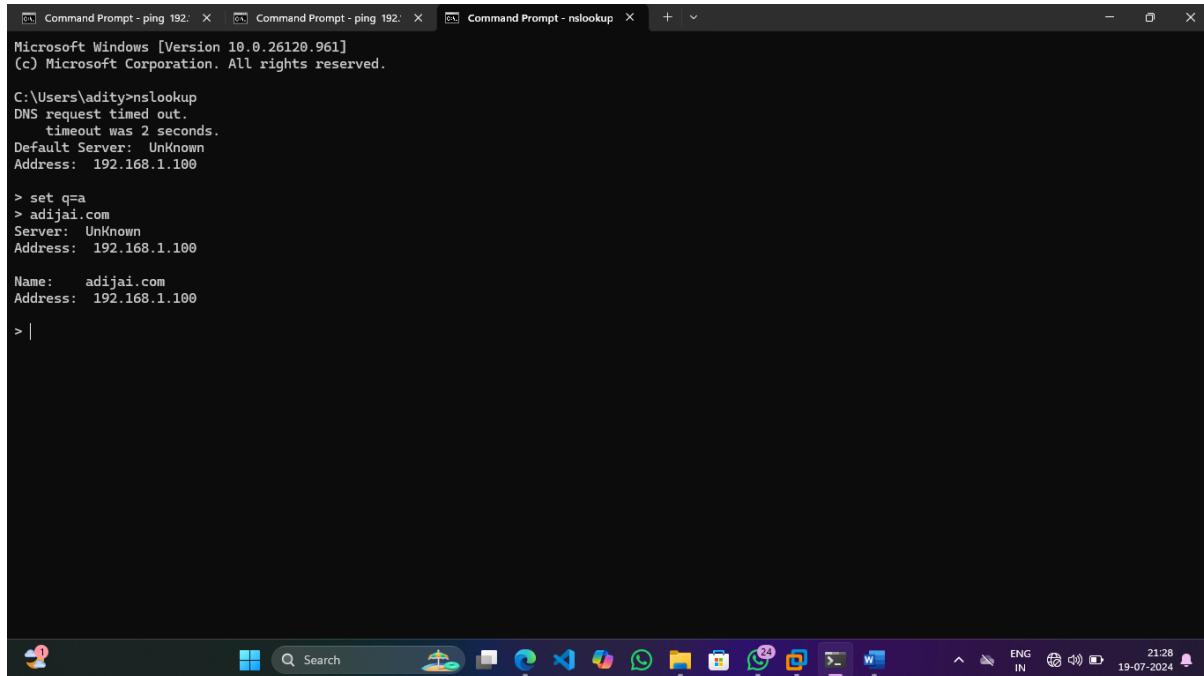
Here's an example of what the output might look like:

```
makefile
Copy code
C:\>nslookup www.example.com
Server: your.dns.server
Address: xxx.xxx.xxx.xxx

Non-authoritative answer:
Name: www.example.com
Addresses: 93.184.216.34
```

Explanation of the Output

- **Server:** This shows the DNS server used to resolve the domain name.
- **Non-authoritative answer:** This indicates that the DNS information is from a cached source and not directly from the authoritative DNS server for the domain.
- **Name:** The domain name you queried.
- **Addresses:** The IP address(es) associated with the domain name.



The screenshot shows a Windows Command Prompt window titled "Command Prompt - nslookup". The window displays the output of the nslookup command for the domain "www.example.com". The output includes the server information ("your.dns.server"), the IP address ("93.184.216.34"), and the non-authoritative answer for the name "www.example.com". The window is part of a taskbar with other open windows, including "ping 192.168.1.100" and another Command Prompt window. The system tray at the bottom right shows the date and time as "19-07-2024 21:28".

```
Microsoft Windows [Version 10.0.26120.961]
(c) Microsoft Corporation. All rights reserved.

C:\Users\adity>nslookup
DNS request timed out.
timeout was 2 seconds.
Default Server: UnKnown
Address: 192.168.1.100

> set q=aa
> adijai.com
Server: UnKnown
Address: 192.168.1.100

Name: adijai.com
Address: 192.168.1.100
> |
```

Web page

Accessing a Web Page by Domain Name and IP Address

To access a web page, you can use either the domain name or the IP address of the server hosting the web page. Here's how to do both:

Accessing via Domain Name

1. **Open a Web Browser:**
 - Open any web browser (Chrome, Firefox, Edge, etc.).
2. **Enter Domain Name:**
 - In the address bar, type the domain name and press Enter.
 - For the main domain: `http://adijai.com`
 - For the subdomain: `http://www.adijai.com`

The browser will resolve the domain name to the associated IP address and load the web page if the domain is correctly configured.

Accessing via IP Address

1. **Find the IP Address:**
 - Use `nslookup` to find the IP address of the domain:

```
Copy code
nslookup adijai.com
```

This command will return the IP address associated with the domain.
2. **Open a Web Browser:**
 - Open any web browser.
3. **Enter IP Address:**
 - In the address bar, type the IP address you obtained from `nslookup` and press Enter.
 - For example, if the IP address is 192.168.1.100, you would enter:
`http://192.168.1.100`

Example

Assume the IP address of `adijai.com` is 192.168.1.100.

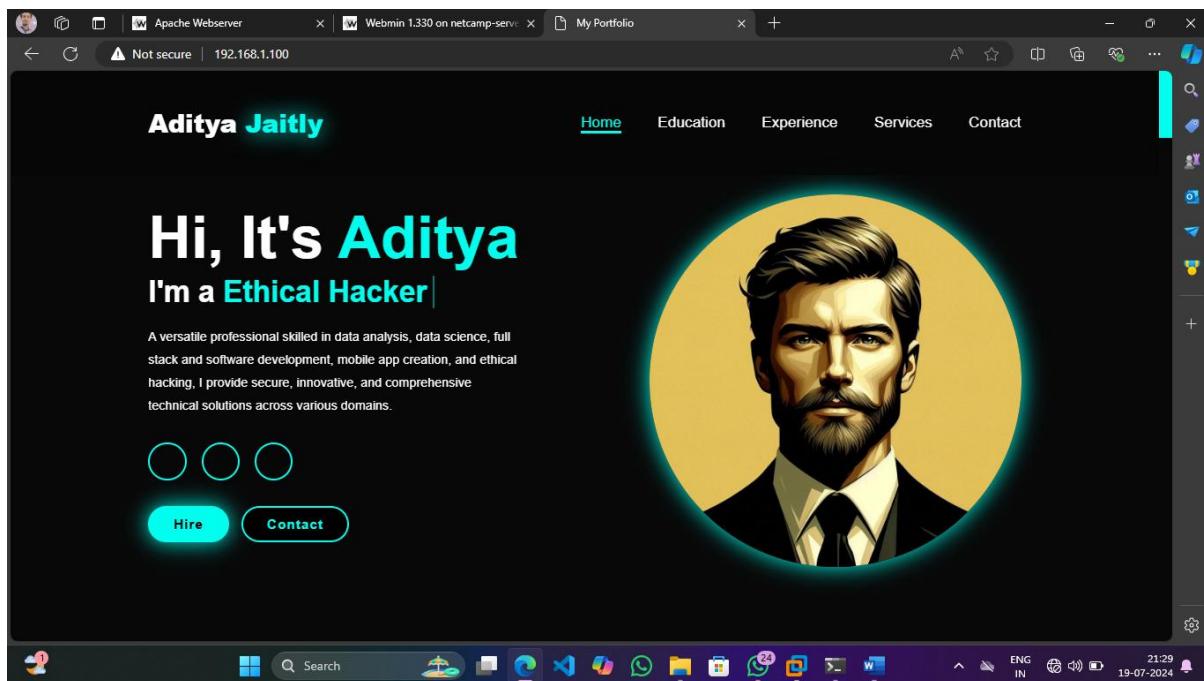
- **Access via Domain:**
 - Type `http://adijai.com` or `http://www.adijai.com` in your browser's address bar.
- **Access via IP Address:**
 - Type `http://192.168.1.100` in your browser's address bar.

Notes

- **Domain Name:** Accessing the site via domain name is preferred as it is easier to remember and typically configured with specific DNS records (e.g., for load balancing, SSL certificates).
- **IP Address:** Directly accessing via IP address bypasses DNS resolution but may not work correctly if the web server is set up to handle multiple domains or virtual hosts.

Troubleshooting

- **Domain Not Resolving:** Ensure that the domain is properly configured and DNS records are correctly set up.
- **IP Address Issues:** Ensure the IP address points to a web server and that the web server is configured to handle requests for the domain or IP address.



Apache Webserver | Webmin 1.330 on netcamp-server | My Portfolio | My Portfolio

Not secure | adijai.com

Aditya Jaitly

Hi, It's Aditya

I'm a Data Scientist

A versatile professional skilled in data analysis, data science, full stack and software development, mobile app creation, and ethical hacking. I provide secure, innovative, and comprehensive technical solutions across various domains.



Hire Contact

21:29 19-07-2024 ENG IN

Apache Webserver | Webmin 1.330 on netcamp-server | My Portfolio | My Portfolio

Not secure | www.adijai.com

Aditya Jaitly

Hi, It's Aditya

I'm a Software Developer

A versatile professional skilled in data analysis, data science, full stack and software development, mobile app creation, and ethical hacking. I provide secure, innovative, and comprehensive technical solutions across various domains.



Hire Contact

21:30 19-07-2024 ENG IN

Mail Server

Creating a Mail Server Using Webmin

Webmin provides a user-friendly web interface for managing server functions, including setting up a mail server. Here's how to set up a mail server using Webmin:

Prerequisites

1. **Webmin Installed:** Ensure Webmin is installed on your server.
2. **Mail Server Software:** Install mail server software like Postfix and Dovecot.

Step 1: Install Mail Server Software

1. **Install Postfix and Dovecot:**
 - o These are popular mail server components. Install them on your Linux server.
2. **Start and Enable Services:**
 - o Make sure Postfix and Dovecot services are running and set to start on boot.

Step 2: Configure Mail Server Using Webmin

1. **Open Webmin:**
 - o Open your web browser and go to Webmin by entering the server's IP address followed by port 10000.
2. **Access Postfix Configuration:**
 - o In Webmin, navigate to the `Servers` section and select `Postfix Mail Server`.
3. **Basic Configuration:**
 - o Set up basic settings such as your domain name and network settings. Configure mail domains and add any required mail aliases or user accounts.
4. **Configure Email Accounts:**
 - o Create mailboxes for users. Manage these under `Edit Users` or set up virtual users if needed.
5. **Access Dovecot Configuration:**
 - o Go to `Servers` and select `Dovecot IMAP/POP3 Server`.
6. **Basic Configuration:**
 - o Enable the IMAP and/or POP3 protocols. Configure authentication methods for user logins.

Step 3: Configure DNS Records

1. **MX Records:**
 - o Set up MX records in your DNS to point to your mail server.
2. **A Records:**
 - o Create an A record for your mail server domain.
3. **SPF, DKIM, and DMARC Records:**
 - o Configure these records to enhance email deliverability and security.

Step 4: Test Your Mail Server

1. **Send a Test Email:**

- Use an email client or Webmin's testing tools to verify that your mail server is functioning.

2. Check Logs:

- Monitor your mail server logs for any errors or issues.

[Webmin Index](#) [Module Config](#)

Apache Webserver

Apache version 2.0.52

Global Configuration

[Processes and Limits](#) [Networking and Addresses](#) [MIME Types](#) [User and Group](#) [Miscellaneous](#)

[CGI Programs](#) [Per-Directory Options Files](#) [Re-Configure Known Modules](#) [Edit Defined Parameters](#) [Edit Config Files](#)

Virtual Servers

Select all | Invert selection.

	Defines the default settings for all other virtual servers, and processes any unhandled requests. Address Any Port Any Server Name Automatic Document Root /var/www/html
	Handles the name-based server mail.adijai.com on address 192.168.1.150. Address 192.168.1.150 Port Any Server Name mail.adijai.com Document Root /usr/share/squirrelmail
	Processes all requests on port 443 not handled by other virtual servers. Address Any Server Name Automatic

192.168.1.150:10000/apache/edit_global.cgi?type=9 \$ Any

[Webmin Index](#) [Module Config](#)

Apache Webserver

Apache version 2.0.52

Global Configuration

[Processes and Limits](#) [Networking and Addresses](#) [MIME Types](#) [User and Group](#) [Miscellaneous](#)

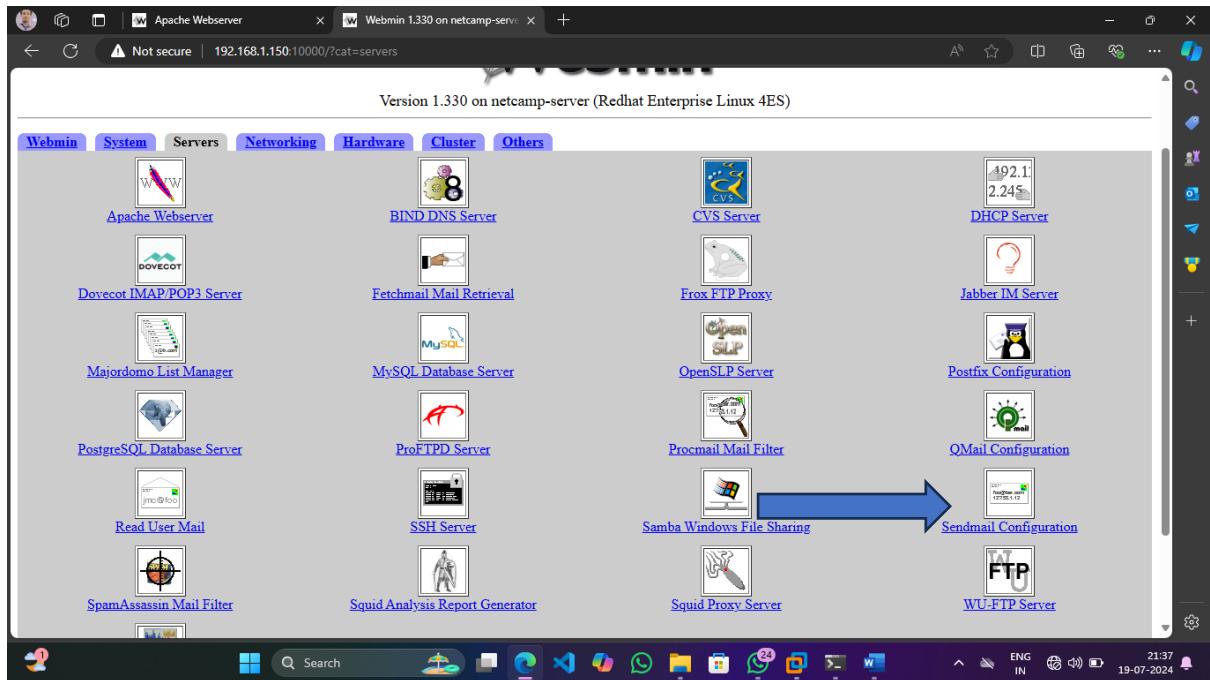
[CGI Programs](#) [Per-Directory Options Files](#) [Re-Configure Known Modules](#) [Edit Defined Parameters](#) [Edit Config Files](#)

Virtual Servers

Select all | Invert selection.

	Defines the default settings for all other virtual servers, and processes any unhandled requests. Address Any Port Any Server Name Automatic Document Root /var/www/html
	Handles the name-based server mail.adijai.com on address 192.168.1.150. Address 192.168.1.150 Port Any Server Name mail.adijai.com Document Root /usr/share/squirrelmail
	Processes all requests on port 443 not handled by other virtual servers. Address Any Server Name Automatic

192.168.1.150:10000/apache/edit_global.cgi?type=9 \$ Any



The screenshot shows the 'Sendmail Options' configuration page. A blue arrow points to the 'Port=smtp,Addr=127.0.0.1, Name=HTA' input field, which contains a custom port configuration.

Sendmail Options

Send outgoing mail via host:
Deliver directly (radio button selected),

Forward unqualified usernames to host:
Deliver locally (radio button selected),

Forward mail for local users to host:
Deliver locally (radio button selected),

Delivery mode:
Default (radio button selected), Background, Queue only, Interactive, Deferred

Sort mail queue by:
Default (radio button selected), Priority, Hostname, Time received

SMTP port options:
Default (radio button selected), Entered below...
Port=smtp,Addr=127.0.0.1, Name=HTA (input field)

Max load average for sending:
Default (radio button selected),

Max child processes:
Default (radio button selected),

Min time before retrying send:
Default (radio button selected),

Time before giving up:
Default (radio button selected), 5d,

Mail queue directory:
Postmaster (radio button selected),

Send error messages to:
User forward files (radio button selected), , \$z/\$w/\$z/forward

User forward files:
Default (radio button selected),

Min free disk space:
Default (radio button selected), 100 blocks,

Log level:
Yes (radio button selected), No

Accept mail for users' real names?:
Default (radio button selected), Selected..., Safe (No special handling)

Maximum recipients per message:
Default (radio button selected),

File security options:
Default (radio button selected), AssumeSafeChown (Assume that the shown custom call is reasonable)

Max load average for receiving:
Default (radio button selected),

Max connections / second:
Default (radio button selected),

Maximum queue size:
Default (radio button selected),

Time before sending warning:
Default (radio button selected), 4h,

Max message size:
Default (radio button selected), bytes

MIME-encode bounce messages?:
Yes (radio button selected), No

Maximum mail hop count:
Default (radio button selected),

Maximum bad recipients:
Default (radio button selected),

Sendmail Options

Send outgoing mail via host: Deliver locally

Forward unqualified usernames to host: Deliver locally

Forward mail for local users to host: Deliver locally

Delivery mode: Default

Sort mail queue by: Default

SMTP port options: Port=smtplib, Name=MTA

Max load average for sending: Default

Max child processes: Default

Min time before retrying send: Default

Time before giving up: 5d

Mail queue directory: /var/spool/mqueue

Send error messages to: Postmaster

User forward files: \$z/forward \$w.\$z/forward

Min free disk space: 100 blocks

Log level: 9

Accept mail for users' real names?: Yes

Maximum recipients per message: Default

File security options: Default

Max load average for receiving: Default

Max connections / second: Default

Maximum queue size: Default

Time before sending warning: Default

Max message size: Default bytes

MIME-encode bounce messages?: Yes

Maximum mail hop count: Default

Maximum bad recipients: Default

Sendmail Configuration

Sendmail version 8.13.1, config V10/Berkeley

MISC

- Sendmail Options (O)
- Trusted Users (T)
- Outgoing Domains (CG)
- M4**
- Sendmail M4 Configuration

Aliases (aliases)

- Address Mappings (virtuser)
- Domain Mapping (domainable)

Local Domains (Cw)

- Domain Routing (mailertable)
- Spam Control (access)
- User Mailboxes

Domain Masquerading (CM)

- Outgoing Addresses (generics)
- Relay Domains (CR)

Start Sendmail

Click this button to start sendmail with the command `/etc/rc.d/init.d/sendmail start`. Until this is done mail will not be delivered to local users from other systems, and clients will not be able to use this system as a mail server.

Return to index

Local Domains

Apart from mail to netcamp-server, sendmail will only accept for local delivery mail for domains and hostnames listed in the text box to the left. If you want your mail server to handle multiple email domains, they must all be listed on this form.

Note that merely including a domain in the list is not usually enough. You must also make sure that a DNS record for the domain exists, and points to your system.

Domains handled by this server

adjai.com
www.adjai.com
mail.adjai.com
localhost
localhost.localdomain

Save

[Return to sendmail configuration](#)

Sendmail Configuration

Sendmail version 8.13.1, config V10/Berkeley

[Search Docs...](#)

MISC

Sendmail Options (O)

Trusted Users (T)

Outgoing Domains (CG)

M4

Sendmail M4 Configuration

Mail Aliases (aliases)

Address Mappings (virtuser)

Domain Mapping (domainable)

Local Domains (Cw)

Domain Routing (mailertable)

Spam Control (access)

User Mailboxes

Domain Masquerading (CM)

Outgoing Addresses (generics)

Relay Domains (CR)

Start Sendmail

Click this button to start sendmail with the command /etc/rc.d/init.d/sendmail start. Until this is done mail will not be delivered to local users from other systems, and clients will not be able to use this system as a mail server.

[Return to index](#)

Relay Domain

A **mail relay domain** is used in email systems to forward or relay email messages from one server to another. This is typically done when an organization or service provider needs to

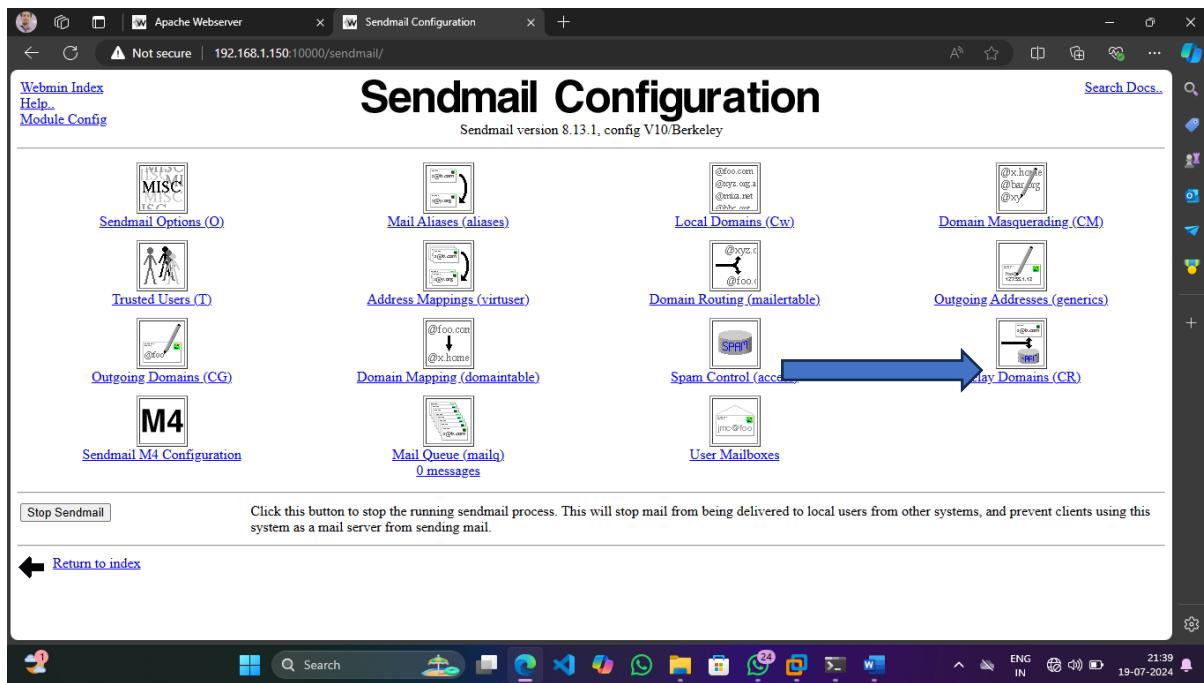
handle email traffic through different servers or services. Here's how to configure and manage mail relay domains:

What is Mail Relay?

- **Mail Relay:** It involves forwarding emails from one mail server (the relay server) to another mail server. This is useful for managing outgoing emails, handling high volumes of mail, or integrating with third-party email services.

Why Use a Mail Relay Domain?

- **Spam Prevention:** To manage and filter spam before it reaches the primary mail server.
- **Load Balancing:** To distribute email traffic across multiple servers.
- **Email Security:** To route email through secure or compliant servers.
- **External Services:** To use external email services for sending emails (e.g., transactional emails or marketing).



Apache Webserver

Relay Domains

Not secure | 192.168.1.150:10000/sendmail/list_relay.cgi

Webmin Index
Module Index

Relay Domains

Domains to which relaying is allowed

```
google.com
yahoo.com
gmail.com
outlook.com
```

Unless allowed by the [spam control](#) rules, sendmail will only permit relaying to domains listed in the text box to the left. Incoming mail messages that are not for a local user and not for one of the listed domains will be rejected.

If your system is serving as a gateway for several domains that are not directly accessible from outside your network (using the [domain routing](#) feature), then all those domains should be listed here.

[Save](#)

[Return to sendmail configuration](#)

Search

21:40 19-07-2024 ENG IN

Apache Webserver

Dovecot IMAP/POP3 Server

Not secure | 192.168.1.150:10000/dovecot/index.cgi

Webmin Index
Module Config

Dovecot IMAP/POP3 Server

Version 0.99.11

Networking and Protocols

User and Login Options

Mail Files

SSL Configuration

Edit Config File

Start Dovecot Server

Start at boot? Yes No

Start the Dovecot IMAP/POP3 server process, so that users can download their email.
Change this setting to enable or disable starting the Dovecot server at system boot time.

[Return to index](#)

Search

21:40 19-07-2024 ENG IN

Apache Webserver

Networking and Protocols

Not secure | 192.168.1.150:10000/dovecot/edit_net.cgi

Webmin Index
Module Index

Networking and Protocols

Dovecot networking and mail protocol options

Serve mail protocols: IMAP, POP3, IMAP (SSL), POP3 (SSL)

Accept SSL connections?: Yes (radio button selected)

Interfaces for IMAP connections:

- Default (radio button selected)
- All IPv4 and IPv6
- All IPv4
- IP address: []

Interfaces for POP3 connections:

- Default (radio button selected)
- All IPv4 and IPv6
- All IPv4
- IP address: []

Interfaces for IMAP SSL connections:

- Default (radio button selected)
- All IPv4 and IPv6
- All IPv4
- IP address: []

Interfaces for POP3 SSL connections:

- Default (radio button selected)
- All IPv4 and IPv6
- All IPv4
- IP address: []

Save

Return to module index

21:41 19-07-2024 ENG IN

Apache Webserver

Dovecot IMAP/POP3 Server

Not secure | 192.168.1.150:10000/dovecot/

Webmin Index
Module Config

Dovecot IMAP/POP3 Server

Version 0.99.11

Networking and Protocols

User and Login Options

Mail Files

SSL Configuration

Edit Config File

Start Dovecot Server

Start at boot? Yes No

Start the Dovecot IMAP/POP3 server process, so that users can download their email.
Change this setting to enable or disable starting the Dovecot server at system boot time.

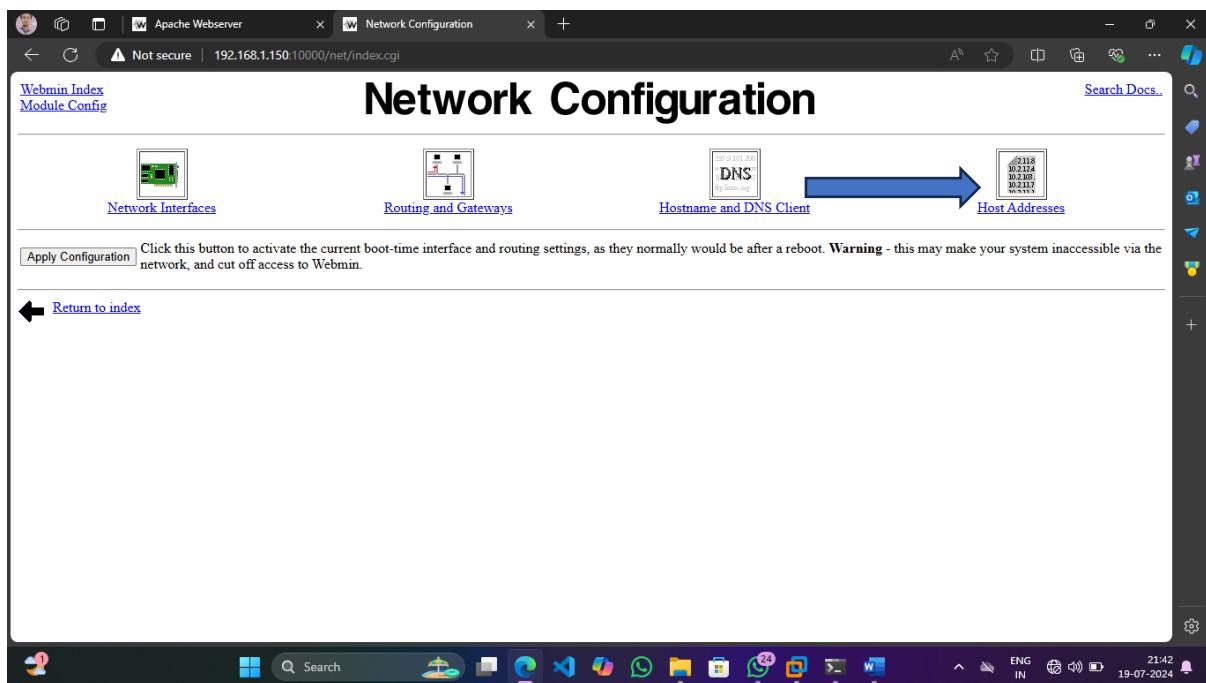
Return to index

21:41 19-07-2024 ENG IN

The screenshot shows the Dovecot IMAP/POP3 Server configuration interface. At the top, there are five main menu items: Networking and Protocols, User and Login Options, Mail Files, SSL Configuration, and Edit Config File. Below these are three buttons: Apply Configuration, Stop Dovecot Server, and Start at boot? (with options Yes or No). A blue arrow points from the text "Activate the current Dovecot configuration by stopping and re-starting the server process." to the "Apply Configuration" button. Another blue arrow points from the text "Change this setting to enable or disable starting the Dovecot server at system boot time." to the "Start at boot?" section.

Networking Configuration

The screenshot shows the Webmin 1.330 interface on Redhat Enterprise Linux 4ES. The top navigation bar includes Home Page, Feedback, Logout, and a search bar. The main menu has tabs for Webmin, System, Servers, Networking, Hardware, Cluster, and Others. The Networking tab is selected. Below the tabs is a grid of icons representing various network services. A blue arrow points from the text "Network Configuration" to the icon for Network Configuration.



Understanding the Default Host Address 127.0.0.1

The IP address 127.0.0.1 is known as the **loopback address**. Here's why it is used and its significance:

What is 127.0.0.1?

- **Loopback Address:** 127.0.0.1 is the most commonly used IP address in the loopback range, which is 127.0.0.0/8. This address is used to test network applications and services on the local machine without involving external network traffic.

Why Use 127.0.0.1?

1. Local Testing:

- **Testing Network Applications:** It allows developers to test and debug network applications on the same machine where they are running. For example, if you are developing a web server, you can access it locally using 127.0.0.1 to see how it functions without sending traffic over the network.

2. Isolation:

- **Self-contained Communication:** Using 127.0.0.1 ensures that network communication remains isolated to the local machine. It does not interact with other devices on the network, which can be useful for testing and development.

3. Default Configuration:

- **Default Settings:** Many software applications and services use 127.0.0.1 as their default host address because it is a reliable way to refer to the local machine. This simplifies initial configuration and testing.

4. Reliability:

- **Local Interface:** The loopback address is always available and does not require any physical network interface to be functional. This ensures that services bound to 127.0.0.1 are always reachable from the local machine.

Practical Use Cases

1. Web Development:

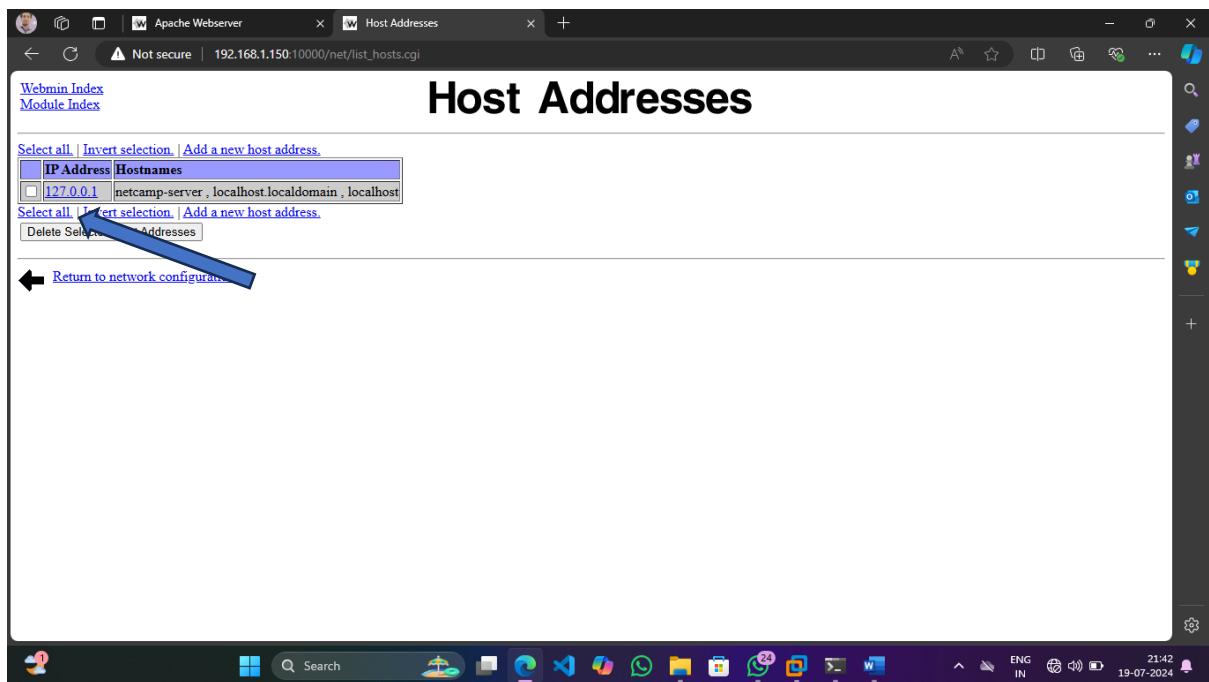
- When developing websites or web applications locally, you can use 127.0.0.1 to run and test a web server on your local machine. Accessing `http://127.0.0.1` in a browser allows you to view your development site.

2. Database Servers:

- Database systems often use 127.0.0.1 to allow local applications to connect to the database server without exposing it to the network.

3. Network Tools:

- Tools like ping, telnet, and netcat can use 127.0.0.1 to test connectivity and functionality on the local machine.



Apache Webserver

Edit Host Address

Not secure | 192.168.1.150:10000/net/edit_host.cgi?idx=0

Webmin Index
Module Index

Edit Host Address

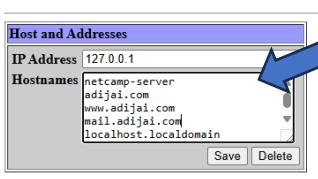
Host and Addresses

IP Address: 127.0.0.1

Hostnames: netcamp-server, adjai.com, www.adjai.com, mail.adjai.com, localhost.localdomain, localhost

Save Delete

Return to host addresses list



21:43 19-07-2024 ENG IN

Apache Webserver

Host Addresses

Not secure | 192.168.1.150:10000/net/list_hosts.cgi

Webmin Index
Module Index

Host Addresses

Select all | Invert selection | Add a new host address.

IP Address	Hostnames
127.0.0.1	netcamp-server, adjai.com, www.adjai.com, mail.adjai.com, localhost.localdomain, localhost

Select all | Invert selection | Add a new host address.

Delete Selected Host Addresses

Return to network configuration

192.168.1.150:10000/net/index.cgi



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Network Configuration

Webmin Index Module Config

Search Docs..

Network Interfaces Routing and Gateways Hostname and DNS Client Host Addresses

Apply Configuration Click this button to activate the current boot-time interface and routing settings, as they normally would be after a reboot. **Warning** - this may make your system inaccessible via the network, and cut off access to Webmin.

Return to index

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Apache Webserver Network Configuration SquirrelMail - Login

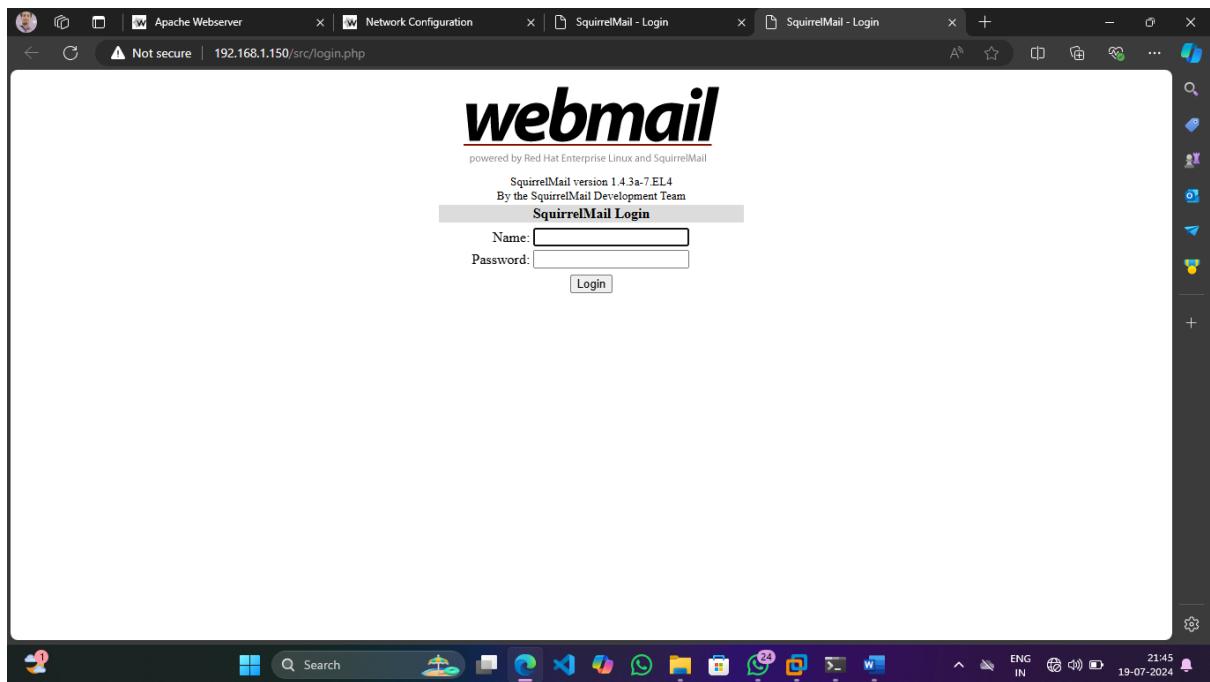
Not secure mail.adjai.com/src/login.php

webmail
powered by Red Hat Enterprise Linux and SquirrelMail
SquirrelMail version 1.4.3a-7.EL4
By the SquirrelMail Development Team

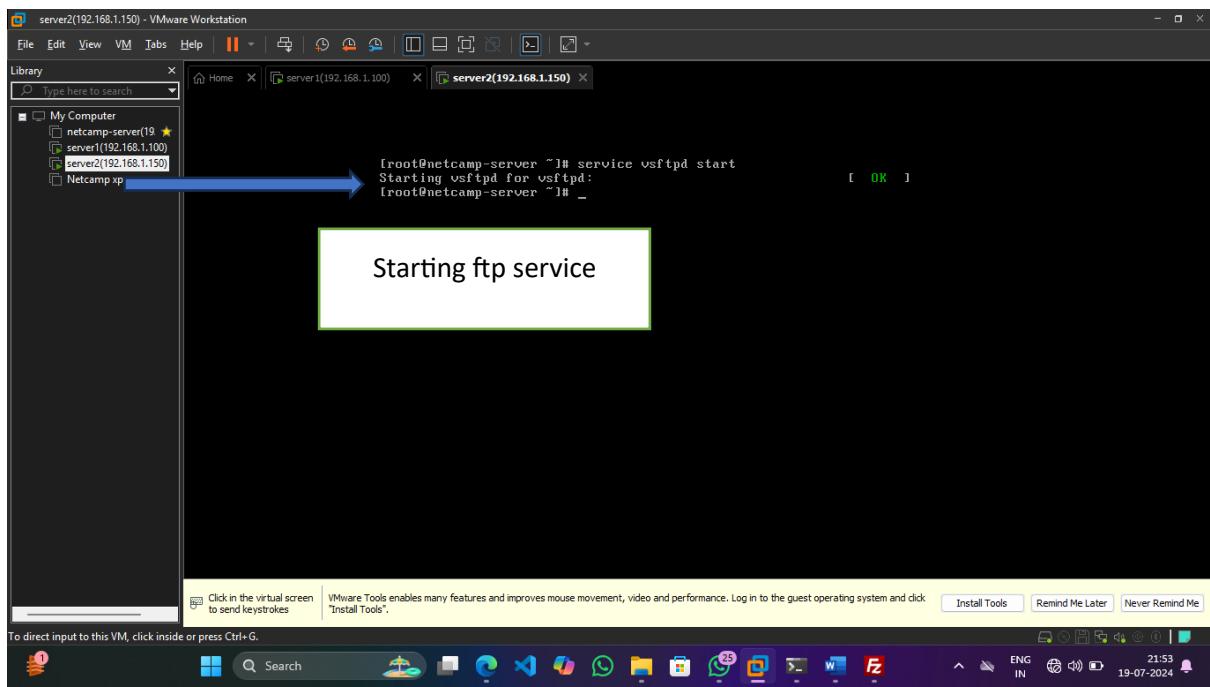
SquirrelMail Login

Name:
Password:

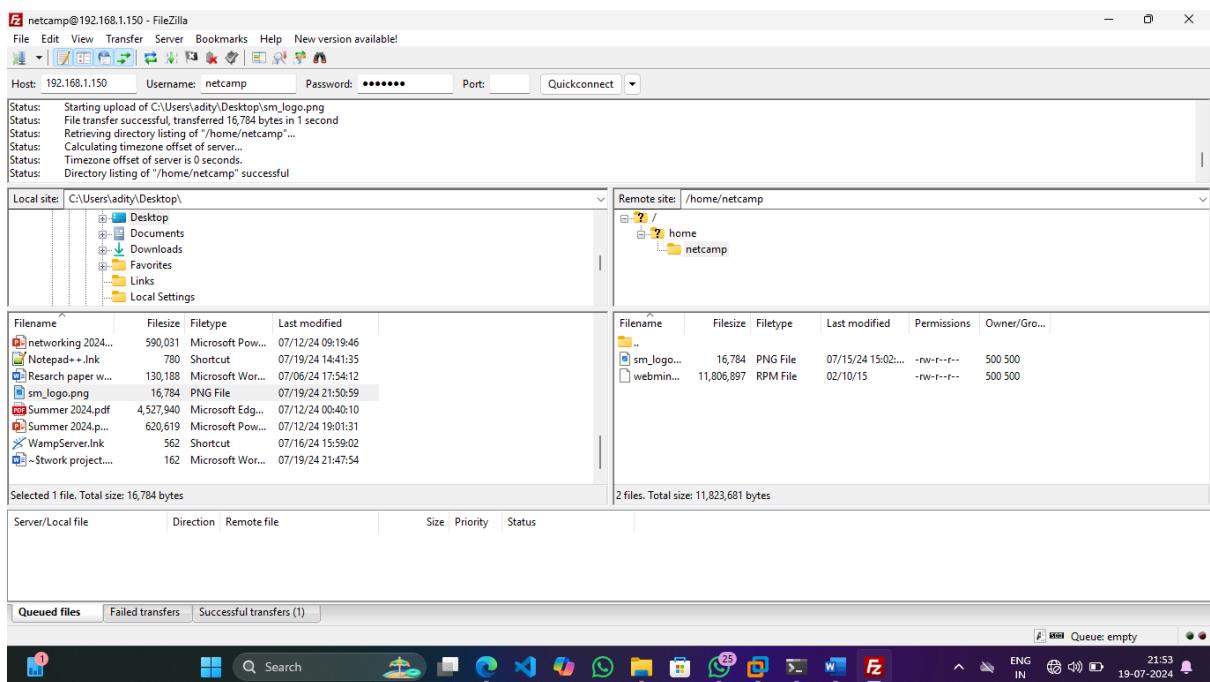
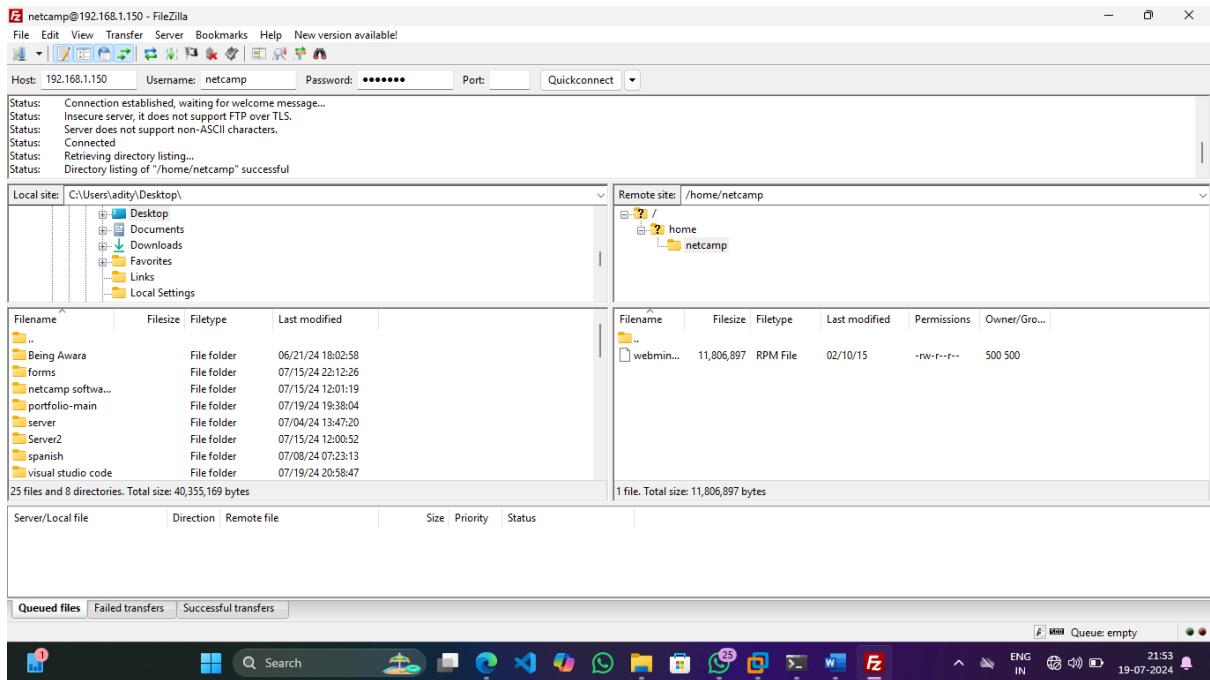
21:44 19-07-2024 ENG IN



Changing logo



Transferring logo



Dhcp Server

A **Dynamic Host Configuration Protocol (DHCP)** server is a network service that automatically assigns IP addresses and other network configuration parameters to devices on a network. This allows devices to communicate on the network without requiring manual configuration.

Key Functions of a DHCP Server

1. **Automatic IP Address Assignment:**
 - **Dynamic IP Addressing:** Assigns IP addresses to devices (clients) on the network from a defined pool of addresses. This helps manage IP address distribution without manual intervention.
2. **Configuration of Network Settings:**
 - **Subnet Mask:** Provides the subnet mask required for network communication.
 - **Default Gateway:** Specifies the IP address of the default gateway used for routing traffic outside the local network.
 - **DNS Servers:** Provides the addresses of DNS servers for domain name resolution.
 - **Other Options:** Can include settings like NTP servers, domain names, and more.

How DHCP Works

1. **DHCP Discover:**
 - When a client connects to the network, it sends a broadcast message (DHCP Discover) to locate available DHCP servers.
2. **DHCP Offer:**
 - DHCP servers on the network respond with a DHCP Offer message, which includes an IP address and other configuration information.
3. **DHCP Request:**
 - The client selects an offer and sends a DHCP Request message back to the chosen DHCP server to request the offered configuration.
4. **DHCP Acknowledgment:**
 - The DHCP server confirms the request with a DHCP Acknowledgment message, finalizing the IP address assignment and other settings.
5. **Lease Renewal:**
 - The client periodically renews the IP address lease by sending a DHCP Request to the server. The server responds with an acknowledgment, extending the lease time.

Configuring a DHCP Server

1. **Install DHCP Server Software:**
 - **Linux:** Use packages like `isc-dhcp-server` or `dhcpd`.
 - **Windows Server:** Install the DHCP role through Server Manager.
2. **Configure DHCP Settings:**
 - **Define IP Address Range:** Specify the pool of IP addresses that the DHCP server can assign to clients.
 - **Set Lease Time:** Determine how long an IP address is assigned to a client before it needs renewal.
 - **Configure Network Parameters:** Set default gateway, DNS servers, and other options as needed.

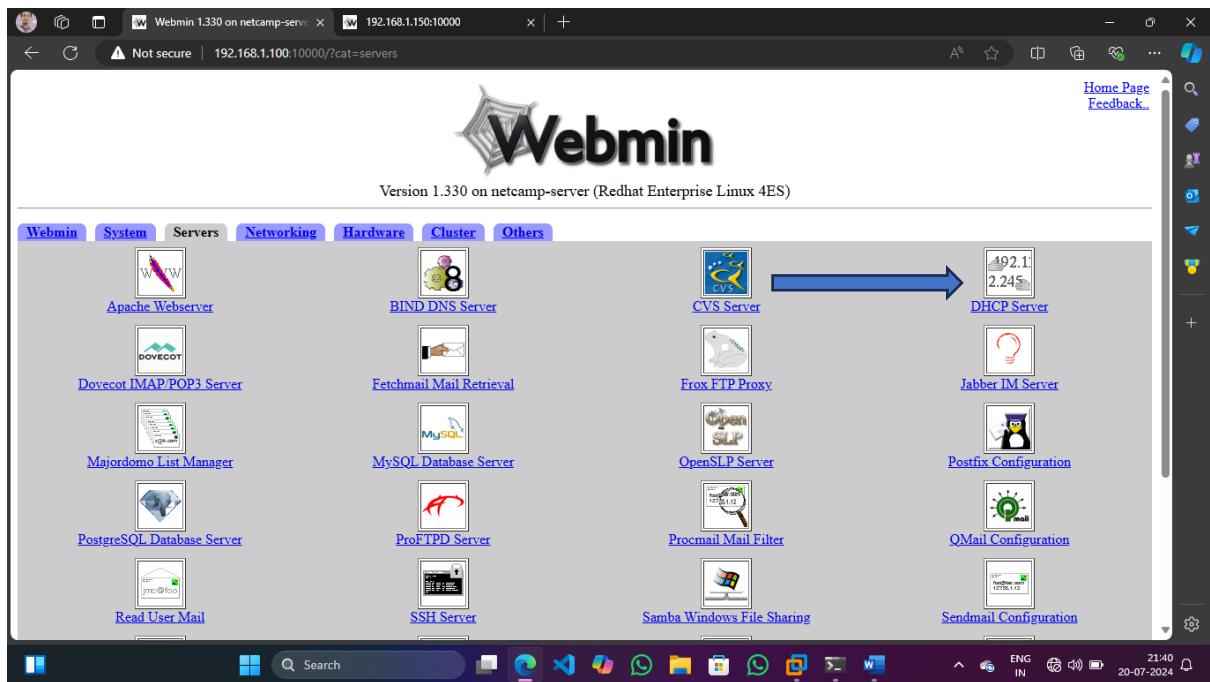
3. Start and Manage the DHCP Service:

- Ensure that the DHCP server is running and properly configured. Monitor and manage the service to ensure reliable operation.

4. Verify Configuration:

- Use client devices to ensure they receive the correct IP address and network settings from the DHCP server. Check server logs for any issues.





The screenshot shows the DHCP Server configuration page for ISC DHCPd version 3.0.1. The top navigation bar includes Webmin Index, Module Config, and Search Docs. The main content area is titled "DHCP Server".

Subnets and Shared Networks
No subnets or shared networks have been defined.
[Add a new subnet](#) | [Add a new shared network](#)

Hosts and Host Groups
No hosts or groups have been defined.
[Add a new host](#) | [Add a new host group](#)

DNS-zones
No DNS zones have been defined yet.
[Add a new DNS zone](#)

Buttons and links include:

- Edit Client Options
- Edit TSIG-keys
- Configure
- Edit Network Interface
- List Active Leases

Text at the bottom: 192.168.1.100:10000/dhcpd/edit_shared.cgi?new=1 | start the DHCP server on your system, using the current configuration.

Create Subnet

Subnet Details

Subnet description:

Network address: -

Address ranges: -

Shared network: <None>

Boot filename: None This server Forever Yes No Default

Boot file server: Default Allow Deny Ignore Default

Lease length for BOOTP clients: Forever 1 day 1 week 1 month 1 year Never

Dynamic DNS enabled?: Yes No Default

Dynamic DNS reverse domain: Default Allow Deny Ignore Default

Allow unknown clients?: Allow Deny Ignore Default

client-updates: Can clients update their own records?: Yes Default (No)

Server is authoritative for this subnet?: Yes Default (No)

Hosts directly in this subnet:

Netmask:

Default lease time: Default 1 day 1 week 1 month 1 year Never

Maximum lease time: Default 1 day 1 week 1 month 1 year Never

Server name: Default 1 day 1 week 1 month 1 year Never

Lease end for BOOTP clients: Default 1 day 1 week 1 month 1 year Never

Dynamic DNS domain name: Default 1 day 1 week 1 month 1 year Never

Dynamic DNS hostname: From client Default 1 day 1 week 1 month 1 year Never

Groups directly in this subnet:

[Create](#)

[Return to subnet list](#)

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Create Subnet

Subnet Details

Subnet description:

Network address: -

Address ranges: -

Shared network: <None>

Boot filename: None This server Forever Yes No Default

Boot file server: Default Allow Deny Ignore Default

Lease length for BOOTP clients: Forever 1 day 1 week 1 month 1 year Never

Dynamic DNS enabled?: Yes No Default

Dynamic DNS reverse domain: Default Allow Deny Ignore Default

Allow unknown clients?: Allow Deny Ignore Default

client-updates: Can clients update their own records?: Yes Default (No)

Server is authoritative for this subnet?: Yes Default (No)

Hosts directly in this subnet:

Netmask:

Default lease time: Default 1 day 1 week 1 month 1 year Never

Maximum lease time: Default 1 day 1 week 1 month 1 year Never

Server name: Default 1 day 1 week 1 month 1 year Never

Lease end for BOOTP clients: Default 1 day 1 week 1 month 1 year Never

Dynamic DNS domain name: Default 1 day 1 week 1 month 1 year Never

Dynamic DNS hostname: From client Default 1 day 1 week 1 month 1 year Never

Groups directly in this subnet:

[Create](#)

[Return to subnet list](#)

21:41 20-07-2024 ENG IN

DHCP Server

Subnets and Shared Networks

Select all | Invert selection | Add a new subnet | Add a new shared network.

192.168.1.0

Select all | Invert selection | Add a new subnet | Add a new shared network.

Delete Selected

Hosts and Host Groups

No hosts or groups have been defined.

Add a new host | Add a new host group.

DNS-zones

No DNS zones have been defined yet.

Add a new DNS zone.

Edit Client Options | Edit DHCP client options that apply to all subnets, shared networks, hosts and groups
Edit TSIG-keys | Edit TSIG-keys (used for authenticating updates to DNS servers)

ENG IN 21:41 20-07-2024

DHCP Server

Subnets and Shared Networks

Select all | Invert selection | Add a new subnet | Add a new shared network.

192.168.1.0

Select all | Invert selection | Add a new subnet | Add a new shared network.

Delete Selected

Hosts and Host Groups

No hosts or groups have been defined.

Add a new host | Add a new host group.

DNS-zones

No DNS zones have been defined yet.

[Add a new DNS zone](#)

Edit Client Options | Edit DHCP client options that apply to all subnets, shared networks, hosts and groups
 Edit TSIG-keys | Edit TSIG-keys (used for authenticating updates to DNS servers)
 Configfile | Edit configfile in texteditor (caution!)
 Edit Network Interface | Set the network interfaces that the DHCP server listens on when started.
 List Active Leases | List leases currently issued by this DHCP server for dynamically assigned IP addresses.
 Start Server | Click this button to start the DHCP server on your system, using the current configuration.

[Return to index](#)

ENG IN 21:42 20-07-2024

Client Options

For all networks, hosts and groups

Client Options

Client hostname	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	Default routers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Subnet mask	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	Broadcast address	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Domain name	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	DNS servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Time servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	Log servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Swap server	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	Root disk path	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
NIS domain	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	NIS servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Font servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	XDM servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Static routes	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	NetBIOS name servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
NTP servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	NetBIOS node type	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
NetBIOS scope	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	These IPs only?		
Time offset	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	<input type="checkbox"/>		
SLP directory agent IPs	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	<input type="checkbox"/>		
SLP service scope	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	<input type="checkbox"/>		
Custom option Number <input type="text"/> Value <input type="text"/>			Custom option	Number <input type="text"/> Value <input type="text"/>	
Option definition Option name <input type="text"/> Number <input type="text"/> Type <input type="text"/>					
Use name as client hostname? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Default		Default lease time <input type="radio"/> Default <input type="radio"/> <input type="text"/> secs		Maximum lease time <input type="radio"/> Default <input type="radio"/> <input type="text"/> secs	
Boot filename <input type="radio"/> None <input type="radio"/> <input type="text"/>					

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Client Options

For all networks, hosts and groups

Client Options

Client hostname	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	Default routers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Subnet mask	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	Broadcast address	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Domain name	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	DNS servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Time servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	Log servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Swap server	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	Root disk path	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
NIS domain	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	NIS servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Font servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	XDM servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
Static routes	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	NetBIOS name servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
NTP servers	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	NetBIOS node type	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>
NetBIOS scope	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	These IPs only?		
Time offset	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	<input type="checkbox"/>		
SLP directory agent IPs	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	<input type="checkbox"/>		
SLP service scope	<input type="radio"/> Default	<input type="radio"/> <input type="text"/>	<input type="checkbox"/>		
Custom option Number <input type="text"/> Value <input type="text"/>			Custom option	Number <input type="text"/> Value <input type="text"/>	
Option definition Option name <input type="text"/> Number <input type="text"/> Type <input type="text"/>					
Use name as client hostname? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Default		Default lease time <input type="radio"/> Default <input type="radio"/> <input type="text"/> secs		Maximum lease time <input type="radio"/> Default <input type="radio"/> <input type="text"/> secs	
Boot filename <input type="radio"/> None <input type="radio"/> <input type="text"/>					

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Screenshot of the Client Options configuration page (192.168.1.100:10000/dhcpd/edit_options.cgi?global=1). A blue arrow points to the "Server is authoritative for all subnets?" option, which is set to "Yes".

Font servers: Default (radio button selected), XDM servers: Default (radio button selected)

Static routes: Default (radio button selected)

NTP servers: Default (radio button selected)

NetBIOS scope: Default (radio button selected)

Time offset: Default (radio button selected)

SLP directory agent IPs: Default (radio button selected)

SLP service scope: Default (radio button selected)

Custom option: Number [] Value []

Option definition: Option name [] Number [] Type []

Use name as client hostname?: Yes (radio button selected)

Boot filename: None (radio button selected)

Boot file server: This server (radio button selected)

Lease length for BOOTP clients: Forever (radio button selected)

Dynamic DNS enabled?: Yes (radio button selected)

Dynamic DNS reverse domain: Default (radio button selected)

Dynamic DNS update strategy: Ad-hoc (radio button selected)

Allow unknown clients to update their own records?: Allow (radio button selected)

Server is authoritative for all subnets?: Yes (radio button selected)

Default lease time: Default (radio button selected)

Maximum lease time: Default (radio button selected)

Server name: Default (radio button selected)

Lease end for BOOTP clients: Never (radio button selected)

Dynamic DNS domain name: Default (radio button selected)

Dynamic DNS hostname: From client (radio button selected)

Buttons: Save, Return to network and host list

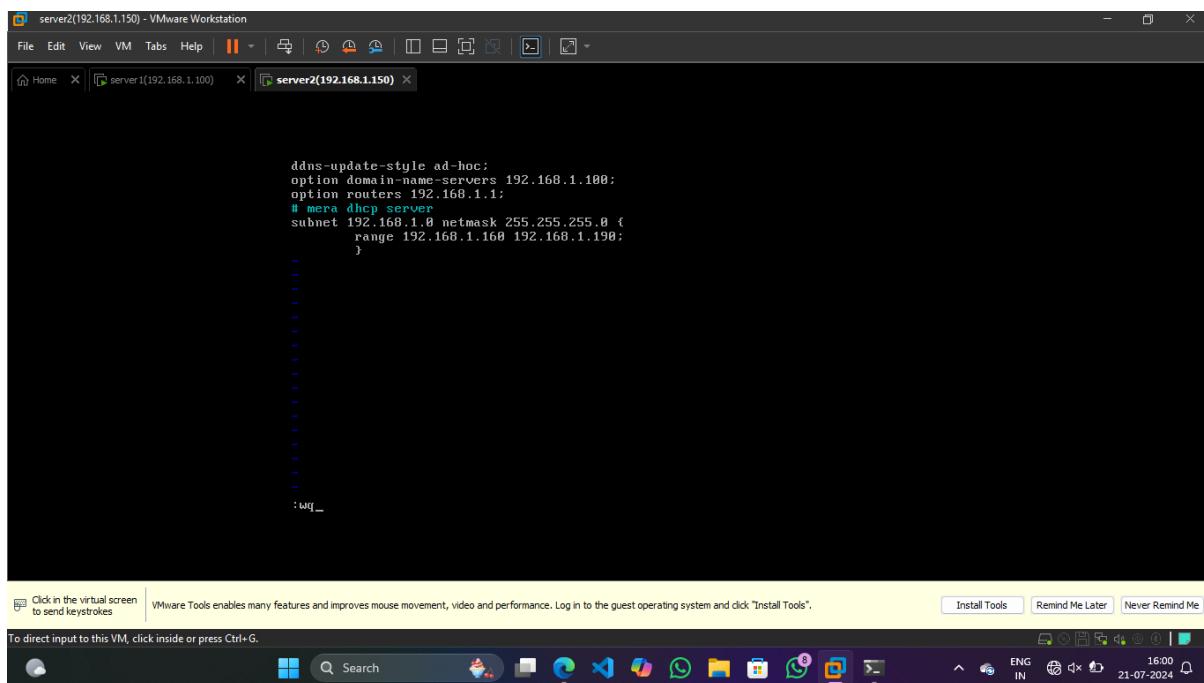
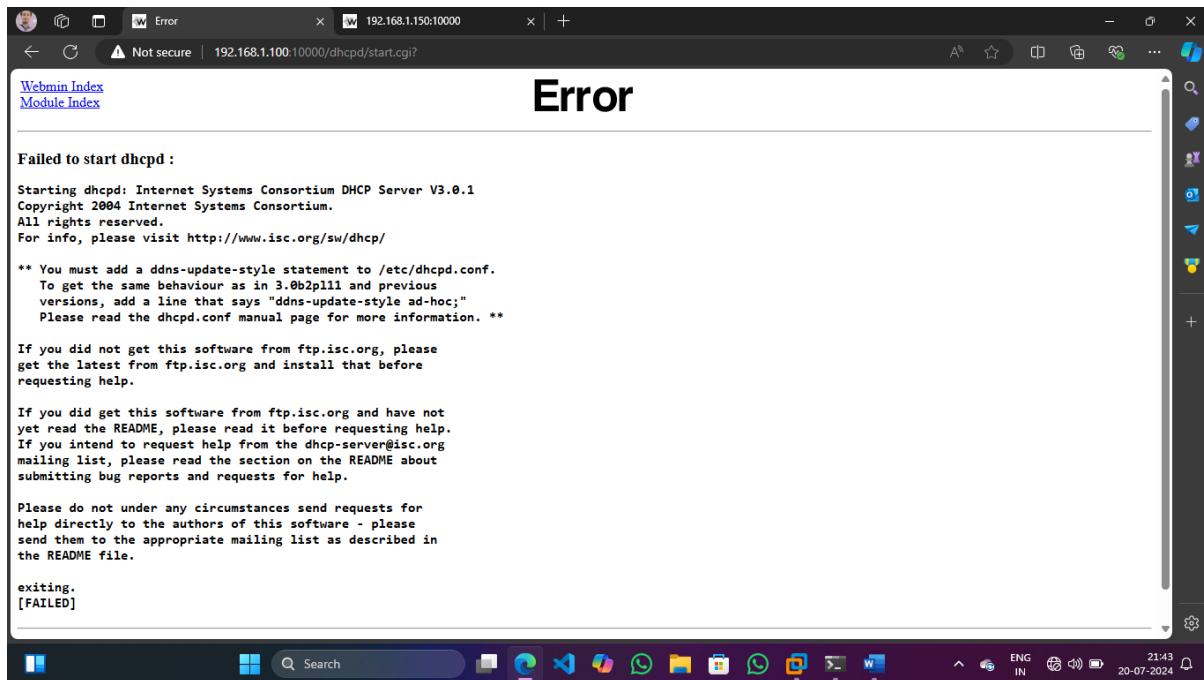
Screenshot of the DHCP Server configuration page (192.168.1.100:10000/dhcpd/). A blue arrow points to the "Start Server" button.

Hosts and Host Groups: No hosts or groups have been defined.

DNS-zones: No DNS zones have been defined yet.

Buttons: Edit Client Options, Edit TSIG-keys, Configfile, Edit Network Interface, List Active Leases, Start Server, Return to index

Fixing error



Partitioning

Partitioning a disk like `/dev/sda` means dividing the disk into separate sections, called partitions. Each partition can act as a separate storage area, allowing you to organize and manage your data more effectively. Here's a simplified explanation:

1. What is `/dev/sda`?

- `/dev/sda` is a common name for the first hard drive or SSD in a Linux system. It refers to the entire disk.

2. Why Partition a Disk?

- **Organization:** To separate different types of data. For example, you might have one partition for the operating system and another for personal files.
- **Efficiency:** To manage space better and improve system performance. Different partitions can have different file systems suited to their use.
- **Security:** To isolate system files from user files, which can help in case of system problems or data loss.

3. Common Types of Partitions:

- **Primary Partition:** A main section on the disk. You can have up to four primary partitions.
- **Extended Partition:** A special type of partition that allows you to create additional partitions beyond the four primary ones.
- **Logical Partition:** Partitions inside an extended partition.

4. What Does Partitioning Involve?

- **Creating Partitions:** Deciding how many partitions you need and their sizes.
- **Formatting Partitions:** Setting up each partition with a file system so it can store data.
- **Mounting Partitions:** Assigning directories where the partitions will be accessible in the system.

5. How to Partition a Disk:

- **Using Tools:** You can use tools like `fdisk`, `parted`, or graphical programs like `gparted` to manage partitions.
- **Assigning Labels:** You can name partitions and set them up for specific uses, like storing your operating system, user files, or backups.

6. After Partitioning:

- **Format Each Partition:** Prepare it for use by setting up a file system.
- **Update System Settings:** Make sure the system knows where to find and use each partition.

```
[root@netcamp-server etc]# fdisk -l
Disk /dev/sda: 21.4 GB, 21474836480 bytes
255 heads, 63 sectors/track, 2610 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Device Boot Start End Blocks Id System
/dev/sda1 * 1 13 104391 83 Linux
/dev/sda2 14 1288 10241437+ 83 Linux
/dev/sda3 1289 1549 2096402+ 82 Linux swap
[root@netcamp-server etc]#
```

To direct input to this VM, click inside or press Ctrl+G.



ENG IN 21:56 20-07-2024

```
[root@netcamp-server etc]# fdisk -l
Disk /dev/sda: 21.4 GB, 21474836480 bytes
255 heads, 63 sectors/track, 2610 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Device Boot Start End Blocks Id System
/dev/sda1 * 1 13 104391 83 Linux
/dev/sda2 14 1288 10241437+ 83 Linux
/dev/sda3 1289 1549 2096402+ 82 Linux swap
[root@netcamp-server etc]# fdisk /dev/sda
The number of cylinders for this disk is set to 2610.
There is nothing wrong with that, but this is larger than 1024,
and could in certain setups cause problems with:
1) software that runs at boot time (e.g., old versions of LILO)
2) booting and partitioning software from other OSes
(e.g., DOS FDISK, OS/2 FDISK)
Command (m for help):
```

To direct input to this VM, click inside or press Ctrl+G.



ENG IN 21:58 20-07-2024

```
server1(192.168.1.100) - VMware Workstation
File Edit View VM Tabs Help || Home Netcamp xp server1(192.168.1.100) server2(192.168.1.150)

and could in certain setups cause problems with:
1) software that runs at boot time (e.g., old versions of LILO)
2) booting and partitioning software from other OSs
(e.g., DOS FDISK, OS/2 FDISK)

Command (m for help): m
Command action
  a    toggle a bootable flag
  b    edit bsd disklabel
  c    toggle the dos compatibility flag
  d    delete a partition
  l    list known partition types
  m    print this menu
  n    add a new partition
  o    create a new empty DOS partition table
  p    print the partition table
  q    quit without saving changes
  s    create a new empty Sun disklabel
  t    change a partition's system id
  u    change display/entry units
  v    verify the partition table
  w    write table to disk and exit
  x    extra functionality (experts only)

Command (m for help):
```

To direct input to this VM, click inside or press Ctrl+G.



```
server1(192.168.1.100) - VMware Workstation
File Edit View VM Tabs Help || Home Netcamp xp server1(192.168.1.100) server2(192.168.1.150)

and could in certain setups cause problems with:
1) software that runs at boot time (e.g., old versions of LILO)
2) booting and partitioning software from other OSs
(e.g., DOS FDISK, OS/2 FDISK)

Command (m for help): m
Command action
  a    toggle a bootable flag
  b    edit bsd disklabel
  c    toggle the dos compatibility flag
  d    delete a partition
  l    list known partition types
  m    print this menu
  n    add a new partition
  o    create a new empty DOS partition table
  p    print the partition table
  q    quit without saving changes
  s    create a new empty Sun disklabel
  t    change a partition's system id
  u    change display/entry units
  v    verify the partition table
  w    write table to disk and exit
  x    extra functionality (experts only)

Command (m for help):
```

To direct input to this VM, click inside or press Ctrl+G.



```
server1(192.168.1.100) - VMware Workstation
File Edit View VM Tabs Help ||| 
Home Netcamp xp server1(192.168.1.100) server2(192.168.1.150)

Command action
  a  toggle a bootable flag
  b  edit bsd disklabel
  c  toggle the dos compatibility flag
  d  delete a partition
  l  list known partition types
  m  print this menu
  n  add a new partition
  o  create a new empty DOS partition table
  p  print the partition table
  q  quit without saving changes
  s  create a new empty Sun disklabel
  t  change a partition's system id
  u  change display/entry units
  v  verify the partition table
  w  write table to disk and exit
  x  extra functionality (experts only)

Command (m for help): n
Command action
  e  extended
  p  primary partition (1-4)
p
Selected partition 4
First cylinder (1550-2610, default 1550): _

To direct input to this VM, click inside or press Ctrl+G.
[Windows Start] Search [Icons] [Taskbar] ENG IN 21:59 20-07-2024
```

```
server1(192.168.1.100) - VMware Workstation
File Edit View VM Tabs Help ||| 
Home Netcamp xp server1(192.168.1.100) server2(192.168.1.150)

Command action
  c  toggle the dos compatibility flag
  d  delete a partition
  l  list known partition types
  m  print this menu
  n  add a new partition
  o  create a new empty DOS partition table
  p  print the partition table
  q  quit without saving changes
  s  create a new empty Sun disklabel
  t  change a partition's system id
  u  change display/entry units
  v  verify the partition table
  w  write table to disk and exit
  x  extra functionality (experts only)

Command (m for help): n
Command action
  e  extended
  p  primary partition (1-4)
p
Selected partition 4
First cylinder (1550-2610, default 1550): 1550
Last cylinder or +size or +sizeM or +sizeK (1550-2610, default 2610): 2618

Command (m for help): _

To direct input to this VM, click inside or press Ctrl+G.
[Windows Start] Search [Icons] [Taskbar] ENG IN 21:59 20-07-2024
```

```
d  delete a partition
l  list known partition types
m  print this menu
n  add a new partition
o  create a new empty DOS partition table
p  print the partition table
q  quit without saving changes
s  create a new empty Sun disklabel
t  change a partition's system id
u  change display/entry units
v  verify the partition table
w  write table to disk and exit
x  extra functionality (experts only)

Command (m for help): w
The partition table has been altered!

Calling ioctl() to re-read partition table.

WARNING: Re-reading the partition table failed with error 16: Device or resource
busy.
The kernel still uses the old table.
The new table will be used at the next reboot.
Syncing disks.

To direct input to this VM, click inside or press Ctrl+G.
```



```
[root@netcamp-server ~]# mkfs -t ext3 /dev/sda4
mke2fs 1.45 (28-Feb-2004)
max_blocks 2181754080, rsv_groups = 66582, rsv_gdb = 520
Filesystem label=
OS type: Linux
Block size=4896 (log=2)
Fragment size=4896 (log=2)
1866560 inodes, 2138628 blocks
186531 blocks (5.00%) reserved for the super user
First data block=8
Maximum filesystem blocks=2185232384
66 block groups
32768 blocks per group, 32768 fragments per group
16168 inodes per group
Superblock backups stored on blocks:
    32768, 98384, 163840, 229376, 294912, 819200, 884736, 1605632

Writing inode tables: done
inode_size=37448 i_size = 4243456
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information:
```

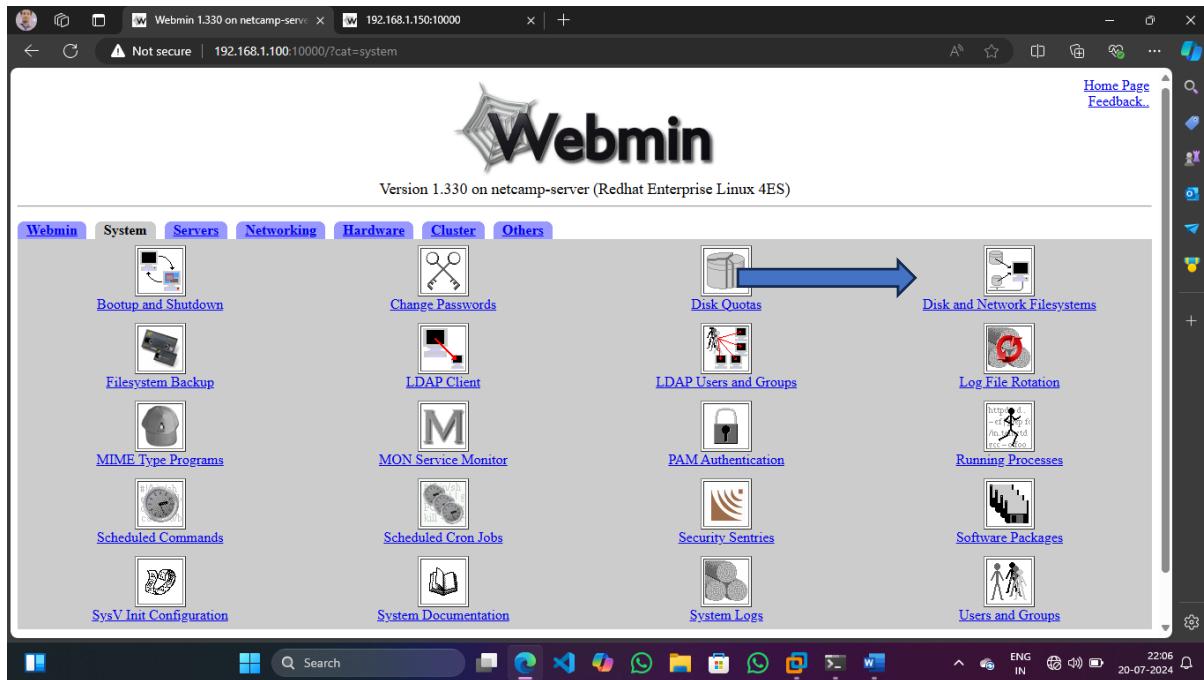


Kota Partitioning

Kota Partitioning typically refers to a specific type of disk partitioning strategy or configuration used in certain environments. The term “Kota” might be specific to a particular use case or system. Generally, partitioning involves dividing a disk into multiple sections, each acting as a separate storage unit. However, if "Kota" is a unique or specialized term, it could imply:

- **Custom Partitioning Strategy:** A specific method or scheme of dividing the disk into partitions, tailored for particular needs or use cases.
- **Naming Convention:** “Kota” might be a name or identifier for a particular partitioning layout used in certain systems or configurations.

In general disk partitioning, partitions are created to organize data, manage space, and improve performance, but the term “Kota Partitioning” isn’t standard and might be specific to a particular system or context. If you have more details or context about what “Kota” specifically refers to, I could provide a more tailored explanation.



Disk and Network Filesystems

Mounted as	Type	Location	In use?	Permanent?
/ (Root filesystem)	New Linux Native Filesystem (ext3)	Partition labelled /	Yes	Yes
/boot	New Linux Native Filesystem (ext3)	Partition labelled /boot	Yes	Yes
/dev/pts	PTS Filesystem (devpts)	none	Yes	Yes
/dev/shm	RAM Disk (tmpfs)	none	Yes	Yes
/proc	Kernel Filesystem (proc)	proc	Yes	Yes
/sys	SYSFS	none	Yes	Yes
<i>Virtual Memory</i>	Virtual Memory (swap)	Partition labelled SWAP-sda3	No	Yes
/media/cdrecorder	Unknown Type	IDE device C	No	Yes
/media/floppy	Unknown Type	Floppy disk 0	No	Yes
/proc/bus/usb	USBFS	usbfs	Yes	No
... /c/sys/fs/binfmt_misc	BINFMT_MISC	none	Yes	No
... /lib/ufs/rpc_pipefs	RPC_PIPEFS	sunrpc	Yes	No
<i>Virtual Memory</i>	Virtual Memory (swap)	SCSI device A partition 3	Yes	No

Add mount Type: Apple Filesystem (hfs) ↲

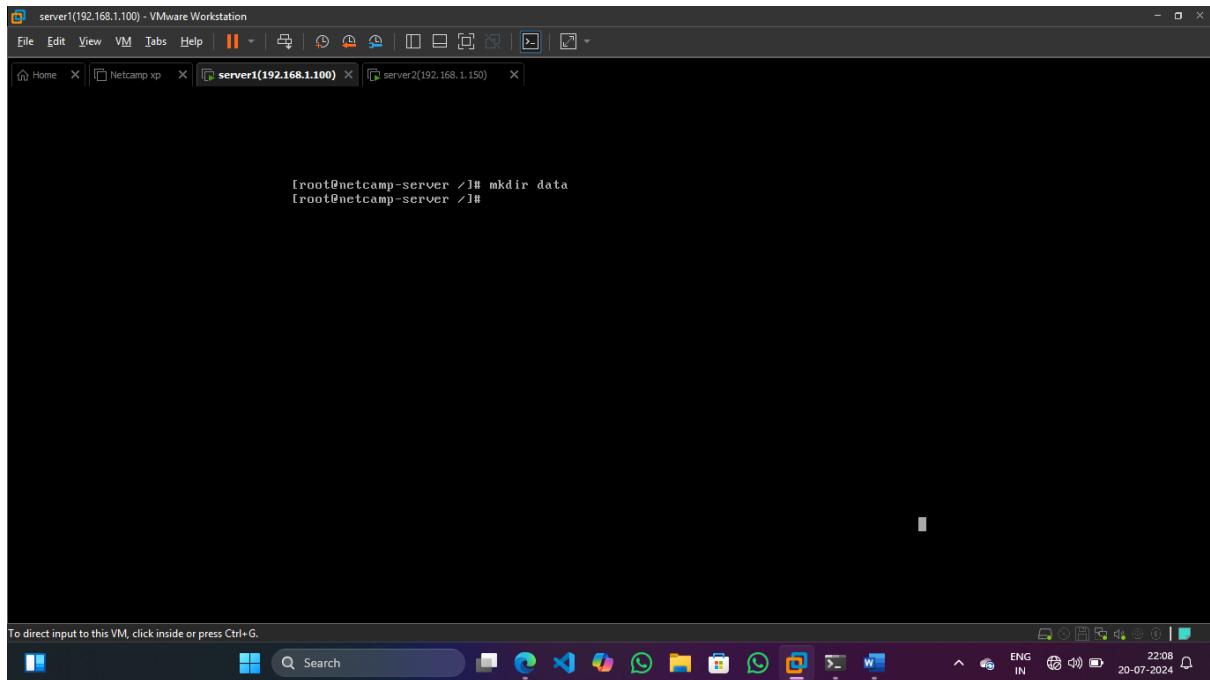
Return to index

Disk and Network Filesystems

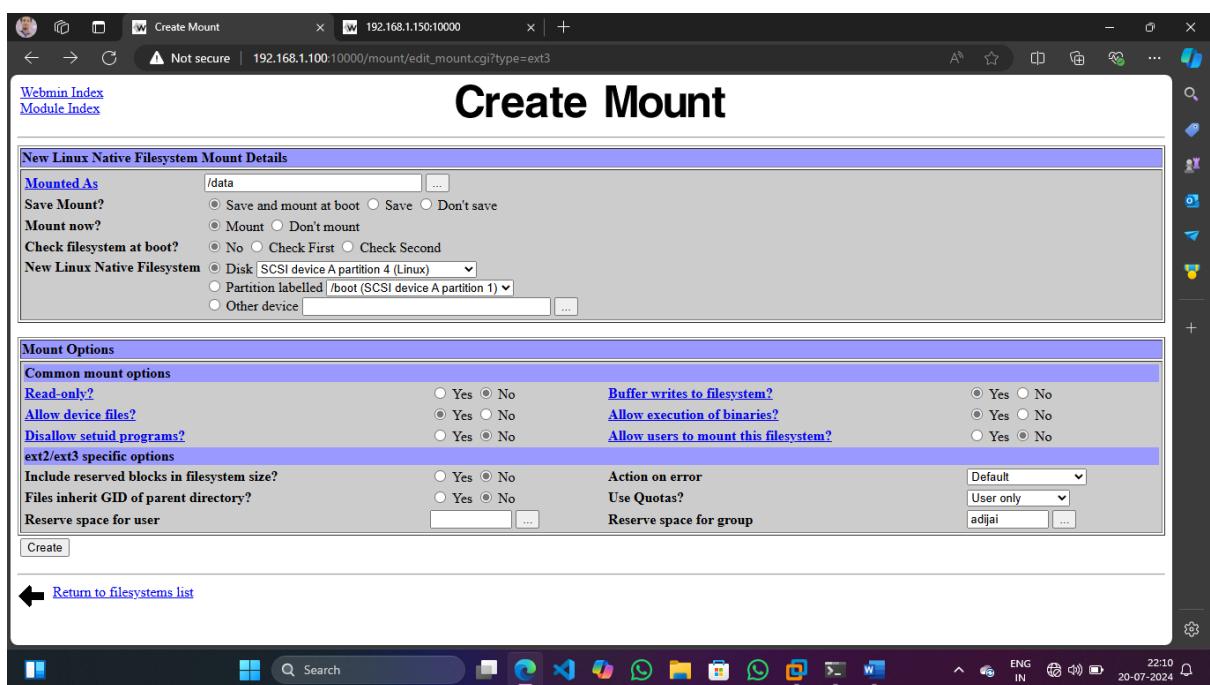
Mounted as	Type	Location	In use?	Permanent?
/ (Root filesystem)	Apple Filesystem (hfs)	Partition labelled /	Yes	Yes
/boot	Common Internet Filesystem (cifs)	Partition labelled /boot	Yes	Yes
/dev/pts	Linux Native Filesystem (ext2)	none	Yes	Yes
/dev/shm	Linux on top of MS-DOS Filesystem (msdos)	none	Yes	Yes
/proc	Loopback Filesystem (bind)	proc	Yes	Yes
/sys	MS-DOS Filesystem (msdos)	none	Yes	Yes
	Minix Filesystem (minix)	none	Yes	Yes
	Network Filesystem (nfs)	none	Yes	Yes
	Network Filesystem v4 (nfs4)	none	Yes	Yes
	New Automounter Filesystem (autofs)	none	Yes	Yes
	New Linux Native Filesystem (ext3)	Partition labelled SWAP-sda3	No	Yes
/media/cdrecorder	OS/2 Filesystem (hfs)	IDE device C	No	Yes
/media/floppy	Old EXT Linux Filesystem (ext)	Floppy disk 0	No	Yes
/proc/bus/usb	Old XIAFS Linux Filesystem (xafs)	usbfs	Yes	No
... /c/sys/fs/binfmt	RAM Disk (tmpfs)	none	Yes	No
... /lib/ufs/rpc_pipefs	Reiser Filesystem (reiserfs)	sunrpc	Yes	No
<i>Virtual Memory</i>	System V Filesystem (sysv)	SCSI device A partition 3	Yes	No
	Virtual Memory (swap)			
	Windows Filesystem (vfat)			
<i>Virtual Memory</i>	Virtual Memory (swap)			

Add mount Type: Apple Filesystem (hfs) ↳

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```
[root@netcamp-server ~]# mkdir data
[root@netcamp-server ~]#
```



New Linux Native Filesystem Mount Details

Mounted As: /data

Save Mount?

Save and mount at boot Save Don't save

Mount now?

Mount Don't mount

Check filesystem at boot?

No Check First Check Second

New Linux Native Filesystem

Disk [SCSI device A partition 4 (Linux)]

Partition labelled /boot [SCSI device A partition 1]

Other device

Mount Options

Common mount options

Read-only? Yes No

Allow device files? Yes No

Disallow setuid programs? Yes No

ext2/ext3 specific options

Include reserved blocks in filesystem size? Yes No

Files inherit GID of parent directory? Yes No

Create

Return to filesystems list

Disk and Network Filesystems

Mounted as	Type	Location	In use?	Permanent?
/ (Root filesystem)	New Linux Native Filesystem (ext3)	Partition labelled /	Yes	Yes
/boot	New Linux Native Filesystem (ext3)	Partition labelled /boot	Yes	Yes
/dev/pts	PTS Filesystem (devpts)	none	Yes	Yes
/dev/shm	RAM Disk (tmpfs)	none	Yes	Yes
/proc	Kernel Filesystem (proc)	proc	Yes	Yes
/sys	SYSFS	none	Yes	Yes
<i>Virtual Memory</i>	Virtual Memory (swap)	Partition labelled SWAP-sda3	No	Yes
/media/cdrecorder	Unknown Type	IDE device C	No	Yes
/media/floppy	Unknown Type	Floppy disk 0	No	Yes
/data	New Linux Native Filesystem (ext3)	SCSI device A partition 4	Yes	Yes
/proc/bus/usb	USBFS	usbfs	Yes	No
... /sys/fs/binfmt_misc	BINfmt_MISC	none	Yes	No
... /lib/nfs/rpc_pipefs	RPC_PIPEFS	sunrpc	Yes	No
<i>Virtual Memory</i>	Memory (swap)	SCSI device A partition 3	Yes	No

Add mount Type: Apple Filesystem (hfs)

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Webmin

Version 1.330 on netcamp-server (Redhat Enterprise Linux 4ES)

Home Page Feedback

Webmin System Servers Networking Hardware Cluster Others

Bootup and Shutdown	Change Passwords	Disk Quotas	Disk and Network Filesystems
Filesystem Backup	LDAP Client	LDAP Users and Groups	Log File Rotation
MIME Type Programs	MON Service Monitor	PAM Authentication	Running Processes
Scheduled Commands	Scheduled Cron Jobs	Security Sentries	Software Packages
SysV Init Configuration	System Documentation	System Logs	Users and Groups

192.168.1.100:10000/quota/index.cgi

Disk Quotas

Filesystem	Type	Mounted From	Status	Action
/data	New Linux Native Filesystem	SCSI device A partition 4	User Quotas Active	Disable Quotas

[Edit User Quotas:](#)

[Return to index](#)

192.168.1.100:10000/quota/activate.cgi?dir=/data&active=1&mode=1



Edit Quota

Quota for adijai on /data

Soft kilobyte limit	<input type="radio"/> Unlimited	<input type="radio"/> <input type="text"/> bytes
Hard kilobyte limit	<input type="radio"/> Unlimited	<input type="radio"/> <input type="text"/> bytes
Available space on disk	8192 MB total / 7726 MB free	
Soft file limit	<input type="radio"/> Unlimited	<input type="radio"/> <input type="text"/>
Hard file limit	<input type="radio"/> Unlimited	<input type="radio"/> <input type="text"/>
Available files on disk	1066560 total / 1066548 free	

[Update](#) [List All Quotas](#)

[Return to filesystem list](#)



Not secure | 192.168.1.100:10000 | +

Webmin Index
Module Index
Help...

Edit Quota

Quota for adjai on /data

Soft kilobyte limit	<input checked="" type="radio"/> Unlimited <input type="radio"/> 150 bytes ▾	Soft file limit	<input checked="" type="radio"/> Unlimited <input type="radio"/> <input type="text"/>
Hard kilobyte limit	<input checked="" type="radio"/> Unlimited <input type="radio"/> 200 bytes ▾	Hard file limit	<input checked="" type="radio"/> Unlimited <input type="radio"/> <input type="text"/>
Available space on disk	8192 MB total / 7726 MB free		
Update		List All Quotas	

← [Return to filesystem list](#)

Folder Managing

Folder Structure and Permissions

1. Top-Level Folders:

- o **sales**
- o **accounts**
- o **research**

2. Subfolders for Each Top-Level Folder:

- o Each top-level folder will have two subfolders:
 - **data** (Permission: 777)
 - **driver** (Permission: 775)

3. Permissions:

- o **data**: Accessible and writable by everyone (read, write, execute permissions for owner, group, and others).
- o **driver**: Accessible and writable by owner and group (read, write, execute permissions for owner and group, but read and execute permissions for others).

2. Group and User Setup

1. Create Groups:

- o **grpsale**: For Sales Department
- o **grpacc**: For Accounts Department
- o **grpres**: For Research and Development Department

2. Create Users and Assign to Groups:

- o **Sales Department**:
 - Users: sales1, sales2
 - Group: grpsale
- o **Accounts Department**:
 - Users: account1, account2
 - Group: grpacc
- o **Research and Development Department**:
 - Users: research1, research2
 - Group: grpres
- o **Chairman**:
 - User: chairman
 - Group: The chairman will be added to all three groups (grpsale, grpacc, grpres).

3. Group Membership

1. Add Users to Groups:

- o **Sales Department**:
 - Add sales1 and sales2 to grpsale.
 - Add chairman to grpsale.
- o **Accounts Department**:
 - Add account1 and account2 to grpacc.
 - Add chairman to grpacc.
- o **Research and Development Department**:

- Add research1 and research2 to grpres.
- Add chairman to grpres.

4. Folder Ownership and Group Permissions

1. Set Ownership:

- **Sales Folder:** Set owner to chairman and group to grpsale.
- **Accounts Folder:** Set owner to chairman and group to grpacc.
- **Research Folder:** Set owner to chairman and group to grpres.

2. Set Permissions:

- **data Folder** (within each department folder):
 - Permission: 777 (read, write, execute for everyone)
- **driver Folder** (within each department folder):
 - Permission: 775 (read, write, execute for owner and group; read and execute for others)

Summary

1. **Create** three top-level folders: sales, accounts, and research.
2. **Inside** each folder, create two subfolders: data and driver, with appropriate permissions.
3. **Create** groups for each department (grpsale, grpacc, grpres) and a group for the chairman.
4. **Add** users to their respective department groups and the chairman to all groups.
5. **Assign** ownership of the top-level folders to the chairman and set the group permissions accordingly.

```

[root@netcamp-server ~]# cd .
[root@netcamp-server ~]# cd /
[root@netcamp-server /]# mkdir sales account
[root@netcamp-server /]# useradd chairman
[root@netcamp-server /]# passwd chairman
Changing password for user chairman.
New UNIX password:
BAD PASSWORD: it's WAY too short
Retype new UNIX password:
passwd: all authentication tokens updated successfully.
[root@netcamp-server /]# useradd sales1
[root@netcamp-server /]# useradd sales2
[root@netcamp-server /]# passwd sales1
Changing password for user sales1.
New UNIX password:
BAD PASSWORD: it's WAY too short
Retype new UNIX password:
passwd: all authentication tokens updated successfully.
[root@netcamp-server /]# passwd sales2
Changing password for user sales2.
New UNIX password:
BAD PASSWORD: it's WAY too short
Retype new UNIX password:
passwd: all authentication tokens updated successfully.
[root@netcamp-server /]#

```

To direct input to this VM, click inside or press Ctrl+.

```
New UNIX password:  
BAD PASSWORD: it's WAY too short  
Retype new UNIX password:  
passwd: all authentication tokens updated successfully.  
root@netcamp-server ~# passwd accounts2  
Changing password for user accounts2.  
New UNIX password:  
BAD PASSWORD: it's WAY too short  
Retype new UNIX password:  
passwd: all authentication tokens updated successfully.  
root@netcamp-server ~# useradd research1  
root@netcamp-server ~# useradd research2  
root@netcamp-server ~# passwd research1  
Changing password for user research1.  
New UNIX password:  
BAD PASSWORD: it's WAY too short  
Retype new UNIX password:  
passwd: all authentication tokens updated successfully.  
root@netcamp-server ~# passwd research2  
Changing password for user research2.  
New UNIX password:  
BAD PASSWORD: it's WAY too short  
Retype new UNIX password:  
passwd: all authentication tokens updated successfully.  
root@netcamp-server ~# ifconfig_
```



```
[root@netcamp-server ~]# useradd research2
[root@netcamp-server ~]# passwd research1
Changing password for user research1.
New UNIX password:
BAD PASSWORD: it's WAY too short
Retype new UNIX password:
passwd: all authentication tokens updated successfully.
[root@netcamp-server ~]# passwd research2
Changing password for user research2.
New UNIX password:
BAD PASSWORD: it's WAY too short
Retype new UNIX password:
passwd: all authentication tokens updated successfully.
[root@netcamp-server ~]# cd sales
[root@netcamp-server sales]# mkdir data driver
[root@netcamp-server sales]# cd /
[root@netcamp-server ~]# cd research
[root@netcamp-server research]# mkdir data driver
[root@netcamp-server research]# cd /
[root@netcamp-server ~]# cd accounts
-bash: cd: accounts: No such file or directory
[root@netcamp-server ~]# cd account
[root@netcamp-server account]# mkdir data driver
[root@netcamp-server account]# cd /
[root@netcamp-server ~]#
```



```
drwxr-xr-x  2 root root 4096 Aug 12 2004 mmt
drwxr-xr-x  2 root root 4096 Aug 12 2004 opt
drwxr-xr-x  2 root root 4096 Jul 15 13:53 portfolio-main
dr-xr-xr-x  54 root root   0 Jul 17 2024 proc
drwxr-xr-x  4 root root 4096 Jul 17 06:32 research
drwxr-xr-x 13 root root 4096 Jul 17 05:38 root
drwxr-xr-x  4 root root 4096 Jul 17 06:31 sales
drwxr-xr-x  2 root root 12288 Jul 15 14:35 sbin
drwxr-xr-x  2 root root 4096 Feb 18 2015 selinux
drwxr-xr-x  2 root root 4096 Aug 12 2004 srv
drwxr-xr-x  9 root root   0 Jul 17 2024 sys
drwxr-xr-x  3 root root 4096 Feb 18 2015 tftpboot
drwxrwxrwx  6 root root 4096 Jul 17 10:33 tmp
drwxr-xr-x 14 root root 4096 Feb 18 2015 usr
drwxr-xr-x 24 root root 4096 Feb 18 2015 var
[root@netcamp-server ~]# ls -ld accounts
ls: accounts: No such file or directory
[root@netcamp-server ~]# ls -ld account
drwxr-xr-x  4 root root 4096 Jul 17 06:32 account
[root@netcamp-server ~]# groupadd
usage: groupadd [-g gid] [-l lobj] [-r lfl] group
[root@netcamp-server ~]# groupadd grpacc
[root@netcamp-server ~]# groupadd grpsole
[root@netcamp-server ~]# groupadd grpres
[root@netcamp-server ~]#
```

 Click in the virtual screen
to send keystrokes

 Click in the virtual screen to send keystrokes VMware Tools enables many features and improves mouse movement, video and performance. Log in to the guest operating system and click "Install Tools".

[Install Tools](#) [Remind Me Later](#) [Never Remind Me](#)

To direct input to this VM, click inside or press Ctrl+G



18:59
1-07-2024

18:59

```
dr-xr-xr-x 54 root root 8 Jul 17 2024 proc
drwxr-xr-x 4 root root 4896 Jul 17 06:32 research
drwxr-xr-x 13 root root 4896 Jul 17 05:30 root
drwxr-xr-x 4 root root 4896 Jul 17 06:31 sales
drwxr-xr-x 2 root root 12288 Jul 15 14:35sbin
drwxr-xr-x 2 root root 4896 Feb 10 2015 selinux
drwxr-xr-x 2 root root 4896 Aug 12 2004 srv
drwxr-xr-x 9 root root 0 Jul 17 2024 sys
drwxr-xr-x 3 root root 4896 Feb 10 2015 tftpbboot
drwxrwxrwt 6 root root 4896 Jul 17 10:33 tmp
drwxr-xr-x 14 root root 4896 Feb 10 2015 usr
drwxr-xr-x 24 root root 4896 Feb 10 2015 var

[root@netcamp-server ~]# ls -l accounts
ls: accounts: No such file or directory
[root@netcamp-server ~]# ls -l account
drwxr-xr-x 4 root root 4965 Jul 17 06:32 account
[root@netcamp-server ~]# groupadd
usage: groupadd [-g gid] [-o] [-r] [-f] group
[root@netcamp-server ~]# groupadd grpcace
[root@netcamp-server ~]# groupadd grpsale
[root@netcamp-server ~]# groupadd grpres
[root@netcamp-server ~]# chgrp grpsale sales
[root@netcamp-server ~]# chgrp grpcace account
[root@netcamp-server ~]# chgrp grpres research
```

To direct input to this VM, click inside or press Ctrl+G

10:01

1 | 2

```
drwxr-xr-x  4 root root 4096 Jul 17 06:31 sales
drwxr-xr-x  2 root root 12280 Jul 15 14:35 sbn
drwxr-xr-x  2 root root 4096 Feb 10 2015 sellinux
drwxr-xr-x  2 root root 4096 Aug 12 2014 srv
drwxr-xr-x  9 root root 0 Jul 17 2024 sys
drwxr-xr-x  3 root root 4096 Feb 10 2015 tftpbboot
drwxrwxrwt  6 root root 4096 Jul 17 18:33 tmp
drwxr-xr-x 14 root root 4096 Feb 10 2015 usr
drwxr-xr-x 24 root root 4096 Feb 10 2015 var
[root@hetcamp-server ~]# ls -ld accounts
ls: accounts: No such file or directory
[root@hetcamp-server ~]# ls -ld account
drwxr-xr-x  4 root root 4096 Jul 17 06:32 account
[root@hetcamp-server ~]# groupadd
usage: groupadd [-g gid [-l lname] [-r] [-f] group
[root@hetcamp-server ~]# groupadd grpcce
[root@hetcamp-server ~]# groupadd grpsale
[root@hetcamp-server ~]# groupadd grpsales
[root@hetcamp-server ~]# chgrp grpsale sales
[root@hetcamp-server ~]# chgrp grpcce account
[root@hetcamp-server ~]# chgrp grpsales research
[root@hetcamp-server ~]# chmod 750 sales
[root@hetcamp-server ~]# chmod 750 account
[root@hetcamp-server ~]# _
```

To direct input to this VM, click inside or press Ctrl+G



```
[root@netcamp-server ~]# ls -ld accounts
ls: accounts: No such file or directory
[root@netcamp-server ~]# ls -ld account
drwxr-xr-x 4 root root 4096 Jul 17 06:32 account
[root@netcamp-server ~]# groupadd
usage: groupadd [-g gid [-o]] [-r] [-f] group
[root@netcamp-server ~]# groupadd grpacc
[root@netcamp-server ~]# groupadd grpsale
[root@netcamp-server ~]# groupadd grpres
[root@netcamp-server ~]# chgrp grpsale sales
[root@netcamp-server ~]# chgrp grpacc account
[root@netcamp-server ~]# chgrp grpres research
[root@netcamp-server ~]# chmod 750 sales
[root@netcamp-server ~]# chmod 750 research
[root@netcamp-server ~]# chmod 750 account
[root@netcamp-server ~]# chmod 750 sales
[root@netcamp-server sales]# ls -l
total 8
drwxr-xr-x 2 root root 4096 Jul 17 06:31 data
drwxr-xr-x 2 root root 4096 Jul 17 06:31 driver
[root@netcamp-server sales]# chgrp chairman data
[root@netcamp-server sales]# chgrp chairman driver
[root@netcamp-server sales]# chmod 777 data
[root@netcamp-server sales]# chmod 775 driver
[root@netcamp-server sales]# _
```

To direct input to this VM, click inside or press Ctrl+G



```
[root@netcamp-server ~]# cd sales
[root@netcamp-server sales]# ls -l
total 8
drwxr-xr-x 2 root root 4096 Jul 17 06:31 data
drwxr-xr-x 2 root root 4096 Jul 17 06:31 driver
[root@netcamp-server sales]# chgrp chairman data
[root@netcamp-server sales]# chmod 775 driver
[root@netcamp-server sales]# chmod 775 data
[root@netcamp-server sales]# cd account
-bash: cd: account: No such file or directory
[root@netcamp-server sales]# cd /
[root@netcamp-server ~]# cd account
[root@netcamp-server account]# chgrp chairman driver
[root@netcamp-server account]# chmod 775 driver
[root@netcamp-server account]# chmod 777 data
[root@netcamp-server account]# cd /
[root@netcamp-server account]# cd research
[root@netcamp-server research]# chgrp chairman driver
[root@netcamp-server research]# chmod 775 driver
[root@netcamp-server research]# chmod 777 data
[root@netcamp-server research]# chmod 775 driver
[root@netcamp-server research]# cd /
[root@netcamp-server ~]#
```

To direct input to this VM, click inside or press Ctrl+G.



19:03 21-07-2024 ENG IN

```
[root@netcamp-server ~]# usermod -G grpacc,grpsale,grpres chairman
[root@netcamp-server ~]# usermod -G grpacc accounts1
[root@netcamp-server ~]# usermod -G grpacc accounts2
[root@netcamp-server ~]# usermod -G grpsale sales1
[root@netcamp-server ~]# usermod -G grpsale sales2
[root@netcamp-server ~]# usermod -G grpres research1
[root@netcamp-server ~]# usermod -G grpres research2
[root@netcamp-server ~]#
```

To direct input to this VM, click inside or press Ctrl+G.



19:06 21-07-2024 ENG IN

Samba

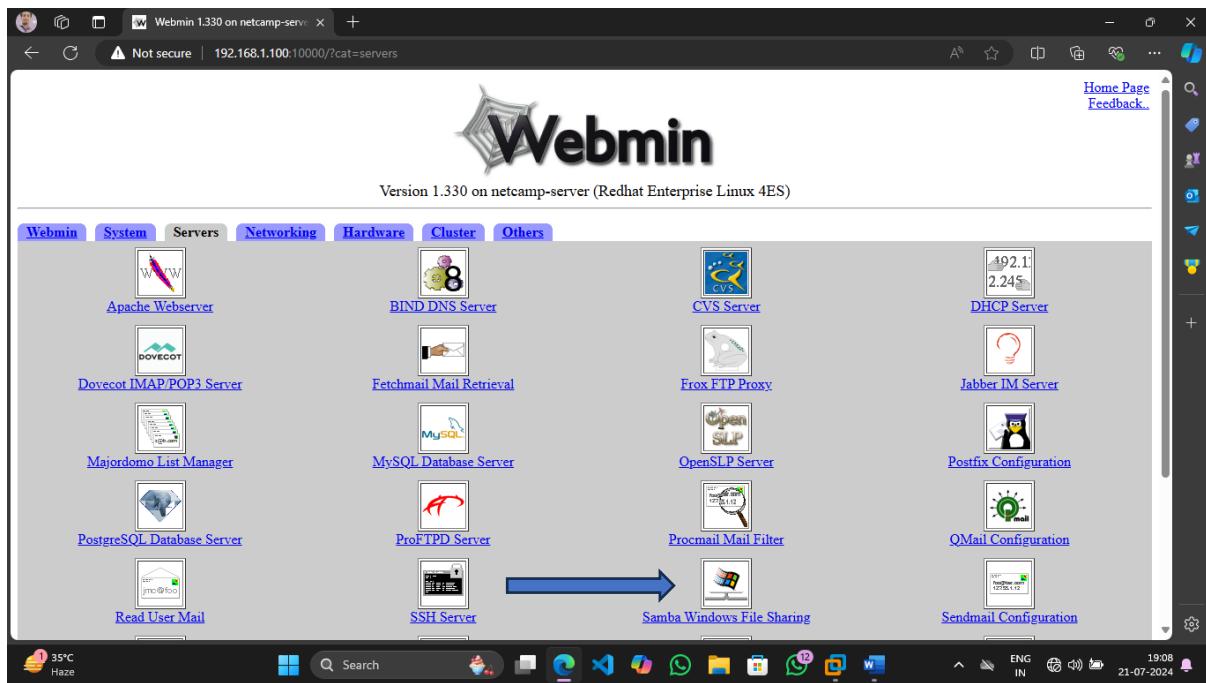
Samba is a software suite that provides file and print services for computers using the SMB (Server Message Block) protocol. This protocol allows applications on a computer to read and write to files and request services from server programs in a networked environment.

Key Uses of Samba

1. **File Sharing:**
 - Samba allows you to share files and directories between Linux/Unix servers and Windows clients. This means that Windows users can access files stored on a Linux server as if they were on their own machines.
2. **Printer Sharing:**
 - Samba can also be used to share printers over a network. Windows clients can send print jobs to printers connected to a Linux server.
3. **Integration into Windows Networks:**
 - Samba enables Linux and Unix systems to integrate with Windows networks by providing services similar to those offered by Windows servers. This includes participating in Windows domain setups.
4. **Access Control:**
 - Samba allows for the management of user access to shared resources. You can set permissions to control who can read, write, or modify files and directories.

Why Use Samba?

1. **Cross-Platform Compatibility:**
 - Samba bridges the gap between Windows and Linux/Unix systems, allowing for seamless file and printer sharing across different operating systems.
2. **Cost-Effective:**
 - Samba is open-source and free, making it a cost-effective solution for file and printer sharing compared to proprietary solutions.
3. **Flexibility and Configuration:**
 - Samba provides extensive configuration options, allowing administrators to fine-tune access controls and integrate with existing Windows networks.
4. **Centralized Management:**
 - Samba enables centralized management of file sharing and printing services, simplifying administration in mixed-environment networks.



Webmin Index
Module Index

Create File Share

Share Information

Share name Home Directories Share

Directory to share

Automatically create directory? Yes No Create with owner

Available? Yes No Browseable? Yes No

Share Comment

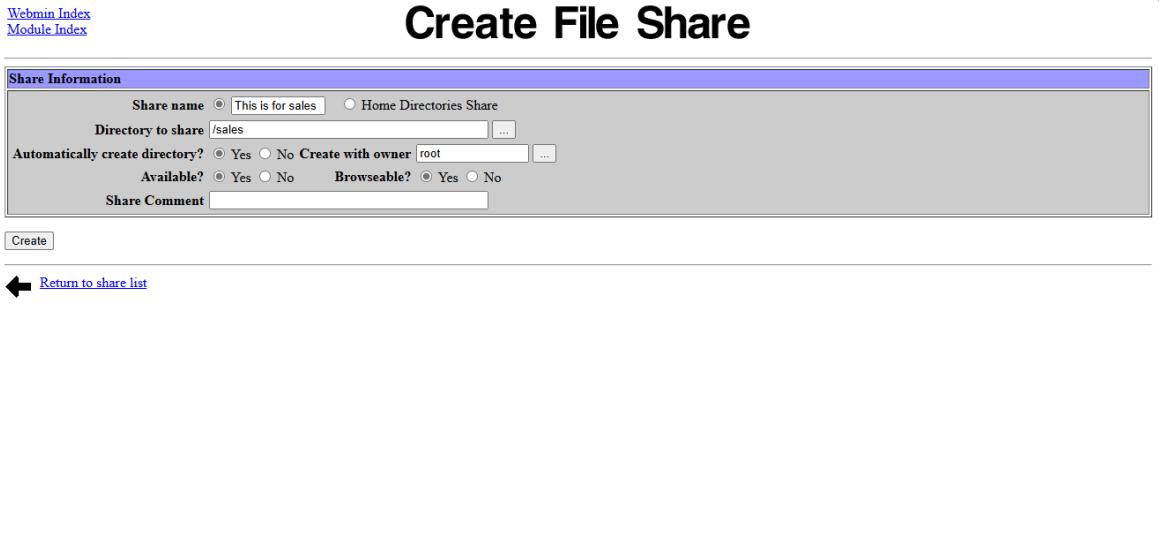
[Return to share list](#)

Create File Share

Share Information

Share name This is for sales Home Directories Share
Directory to share ...
Automatically create directory? Yes No Create with owner ...
Available? Yes No Browseable? Yes No
Share Comment
[Create](#)

[Return to share list](#)



35°C Haze 19:09 21-07-2024 ENG IN

Edit File Share

Share Information

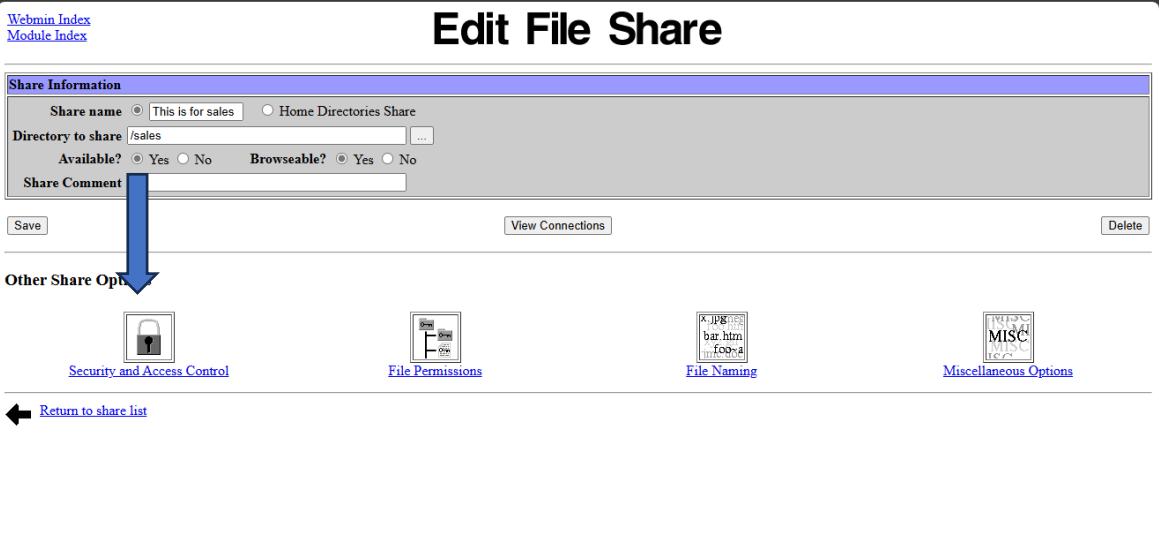
Share name This is for sales Home Directories Share
Directory to share ...
Available? Yes No Browseable? Yes No
Share Comment

[Save](#) [View Connections](#) [Delete](#)

Other Share Options

[Security and Access Control](#) [File Permissions](#) [File Naming](#) [Miscellaneous Options](#)

[Return to share list](#)



19:11 21-07-2024 ENG IN 35°C Haze

Edit Security

For share This is for sales

Security and Access Control

Writable? Yes No
 Guest Unix user: nobody

Hosts to allow All Only allow:
 Hosts to deny None Only deny:

Revalidate users? Yes No

Valid users
 Valid groups
 Invalid users
 Invalid groups

Possible users
 Read only users
 Read/write users

Guest Access? None Yes Guest only
 Limit to possible list? Yes No

Save

[Return to file share](#) | [Return to share list](#)

Samba Windows File Sharing

Not secure | 192.168.1.100:10000/samba/index.cgi

File Sharing Options

- Unix Networking
- SMB
- Authentication
- Windows to Unix Printing
- Miscellaneous Options
- Winbind Options
- File Share Defaults
- Printer Share Defaults
- [Edit Config File](#)

Samba Users

- [Edit Samba users and passwords](#)
- [Convert Unix users to Samba users](#)
- [Configure automatic Unix and Samba user synchronisation](#)
- [Add and edit Samba groups](#)
- [Configure automatic Unix and Samba group synchronisation](#)
- [Bind to Domain](#)

Buttons

Click this button to restart the running Samba servers on your system. This will force the current configuration to be applied. This will also disconnect any connections to the current configuration to be applied immediately you should just wait 1 minute until Samba reloads the configuration automatically.

Click this button to shut down the running Samba servers on your system. All currently logged in users will be forcibly disconnected.

[Return to index](#)

192.168.1.100:10000/samba/edit_gsync.cgi

Convert Users

This form allows you to synchronize the Unix and Samba user list. When Samba is using [encrypted passwords](#), a separate list of users and passwords is used instead of the system user list. The list of users not to convert can contain usernames, UIDs, group names prefixed with an @, or UID ranges like 500-1000 or 500-.

Don't convert or remove these users: 499

Update existing Samba users from their Unix details

Add new Samba users from the Unix user list

Delete Samba users who do not exist under Unix

For newly created users, set the password to:

No password
 Account locked
 Use this password:

[Return to share list](#)

35°C Haze 19:16 21-07-2024 ENG IN

Samba Windows File Sharing

Unix Networking

SMB

Authentication

Windows to Unix Printing

Miscellaneous Options

Winbind Options

File Share Defaults

Printer Share Defaults

Edit Config File

Samba Users

Edit Samba users and passwords

Convert Unix users to Samba users

Configure automatic Unix and Samba user synchronisation

Add and edit Samba groups

Configure automatic Unix and Samba group synchronisation

Bind to Domain

Restart Samba Servers

Click this button to restart the running Samba servers on your system. This will force the current configuration to be applied. This will also disconnect any connections to the server, so if you do not want the current configuration to be applied immediately you should just wait 1 minute until Samba reloads the configuration automatically.

Stop Samba Servers

Click this button to shut down the running Samba servers on your system. All currently logged in users will be forcibly disconnected.

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Not secure | 192.168.1.100:10000/samba/edit_euser.cgi?idx=3

Webmin Index
Module Index

Edit Samba User

Username **chairman**

Password Current password New password

User options Normal user
 No password required
 Account disabled
 Workstation trust account

Unix UID **502**

Save **Delete**

[Return to user list](#) | [Return to share list](#)

Netcamp xp - VMware Workstation

File Edit View VM Help |||

Home server1(192.168.1.100) server2(192.168.1.150) Netcamp xp

My Documents

My Computer

My Network Places

www.netcamp.in

To open samba

Run

Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.

Open: **\\192.168.1.100**

OK Cancel Browse...

Your computer might be at risk

Automatic Updates is turned off

Click this balloon to fix this problem.

start

To direct input to this VM, click inside or press Ctrl+G.

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Search

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