

NGINX INSTALLATION AND CONFIGURATION

Author: Varshni D S

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OVERVIEW

Nginx is a widely used web server known for its high performance, security, and scalability. This document provides a step-by-step guide for installing and configuring Nginx on an Ubuntu system.

COMMAND GUIDE

1. Script Declaration (`#!/bin/bash`)

- The **shebang** (`#!`) defines the script execution environment as **Bash shell** (`/bin/bash`).

2. System Update and Upgrade

`sudo apt update -y && sudo apt upgrade -y`

- `sudo apt update -y`: Fetches the latest package lists.
- `sudo apt upgrade -y`: Upgrades installed packages.
- `-y`: Automatically confirms updates.

3. Installing Nginx

`sudo apt install -y nginx`

- Installs the **Nginx** web server.
- `-y` allows automatic installation without confirmation prompts.

4. Starting and Enabling Nginx

```
sudo systemctl start nginx  
sudo systemctl enable nginx
```

- `sudo systemctl start nginx`: Starts the Nginx service.
- `sudo systemctl enable nginx`: Ensures Nginx starts on system boot.

5. Restoring the Default Nginx Page

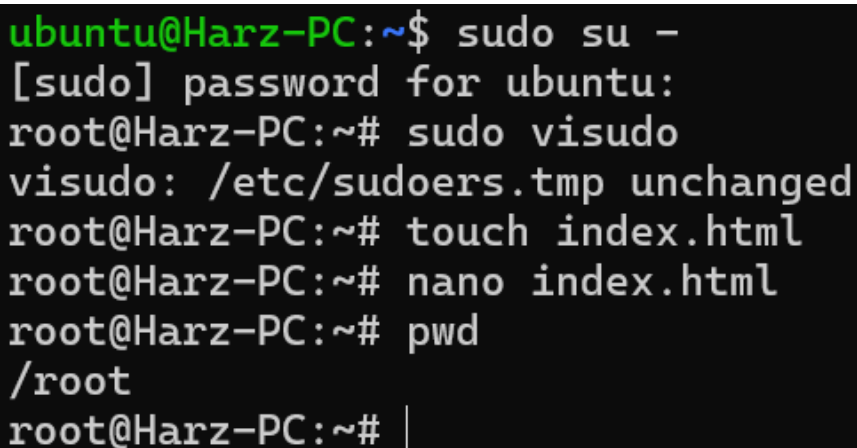
```
sudo cp /usr/share/nginx/html/index.html /var/www/html/index.nginx-debian.html
```

- Copies the **default Nginx welcome page** (`index.html`) to `/var/www/html/`, renaming it as `index.nginx-debian.html`.
- Useful for restoring the page if modifications have been made.

6. Restarting Nginx

```
sudo systemctl restart nginx
```

- Applies changes by restarting Nginx.



```
ubuntu@Harz-PC:~$ sudo su -  
[sudo] password for ubuntu:  
root@Harz-PC:~# sudo visudo  
visudo: /etc/sudoers.tmp unchanged  
root@Harz-PC:~# touch index.html  
root@Harz-PC:~# nano index.html  
root@Harz-PC:~# pwd  
/root  
root@Harz-PC:~# |
```

DEFAULT NGINX PAGE CONTENT

Upon successful installation, Nginx serves the following **default web page**:

```
<!DOCTYPE html>  
<html lang="en">
```

```
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>NGINX</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      margin: 50px;
    }
    h1 {
      color: #009639;
    }
  </style>
</head>
<body>
  <h1>NGINX</h1>
  <p>Welcome to the NGINX server. This is a simple HTML page.</p>
</body>
</html>
```

VERIFYING INSTALLATION

1. Checking Nginx Service Status

Run the following command to verify Nginx is running:

```
sudo systemctl status nginx
```

If successful, the output should include:

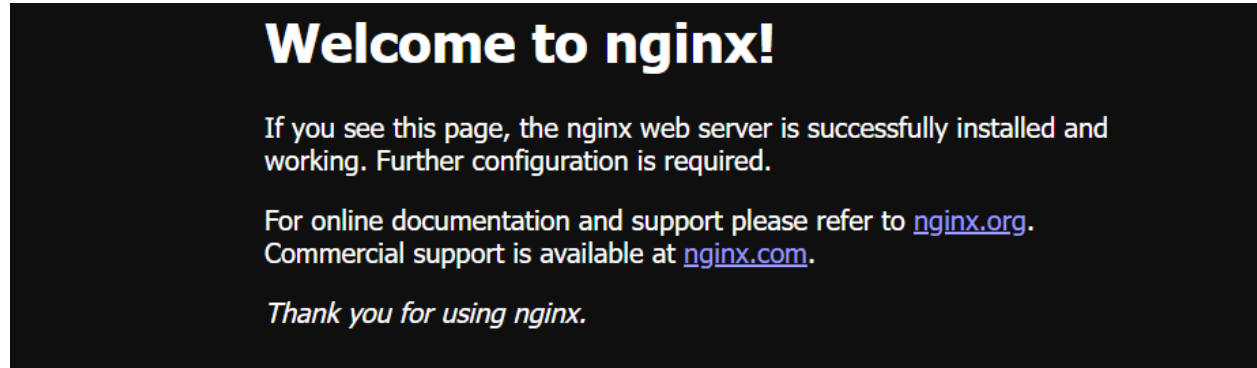
Active: active (running)

2. Accessing Nginx in a Web Browser

Once installed, open a **web browser** and go to:

<http://localhost>

You should see the **default Nginx welcome page** displayed.



CONCLUSION

Following these steps, you have successfully installed and configured Nginx on Ubuntu. The web server is now operational and ready for further customization.

CUSTOM WEBPAGE

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Nginx Professional Website</title>
  <link href="https://cdnjs.cloudflare.com/ajax/libs/bootstrap/5.3.0/css/bootstrap.min.css" rel="stylesheet">
  <script src="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.4.2/js/all.min.js"></script>
  <style>
    body {
      font-family: 'Arial', sans-serif;
      background: linear-gradient(45deg, #1c1c3c, #0f0f1f);
      color: white;
      text-align: center;
    }
    .hero {
      padding: 100px 20px;
```

```

        background: rgba(255, 255, 255, 0.1);
        border-radius: 10px;
        margin: 20px;
        animation: fadeIn 2s ease-in-out;
    }
    @keyframes fadeIn {
        from { opacity: 0; transform: translateY(-20px); }
        to { opacity: 1; transform: translateY(0); }
    }
    .btn-custom {
        background-color: #ff1e56;
        color: white;
        padding: 12px 25px;
        font-weight: bold;
        border-radius: 5px;
        transition: all 0.3s ease-in-out;
    }
    .btn-custom:hover {
        background-color: #d90429;
        transform: scale(1.05);
    }
    .section {
        padding: 50px 20px;
    }
    .card {
        background-color: rgba(255, 255, 255, 0.1);
        border: none;
        padding: 20px;
        border-radius: 10px;
        transition: transform 0.3s ease-in-out;
    }
    .card:hover {
        transform: translateY(-10px);
        background-color: rgba(255, 255, 255, 0.2);
    }
    footer {
        padding: 20px;
        background: #111;
        margin-top: 20px;
    }
}
</style>
</head>
<body>

```

```
<!-- Hero Section -->
<div class="container">
  <div class="hero">
    <h1>Welcome to Nginx Hosting</h1>
    <p>Fast, Secure & Scalable Web Hosting with Nginx</p>
    <a href="#services" class="btn btn-custom">Get Started</a>
  </div>
</div>

<!-- Services Section -->
<div class="container section" id="services">
  <h2>Our Services</h2>
  <div class="row mt-4">
    <div class="col-md-4">
      <div class="card">
        <i class="fas fa-rocket fa-3x mb-3"></i>
        <h4>High Speed Hosting</h4>
        <p>Experience lightning-fast performance with optimized Nginx servers.</p>
      </div>
    </div>
    <div class="col-md-4">
      <div class="card">
        <i class="fas fa-lock fa-3x mb-3"></i>
        <h4>Top Security</h4>
        <p>Advanced security measures to protect your data and privacy.</p>
      </div>
    </div>
    <div class="col-md-4">
      <div class="card">
        <i class="fas fa-code fa-3x mb-3"></i>
        <h4>Developer Friendly</h4>
        <p>Seamless integration with modern web technologies.</p>
      </div>
    </div>
  </div>
</div>

<!-- Contact Section -->
<div class="container section">
  <h2>Contact Us</h2>
  <form>
    <input type="text" class="form-control mb-3" placeholder="Your Name">
    <input type="email" class="form-control mb-3" placeholder="Your Email">
    <textarea class="form-control mb-3" placeholder="Your Message"></textarea>
  </form>
</div>
```

```
        <button class="btn btn-custom">Send Message</button>
    </form>
</div>

<!-- Footer -->
<footer>
    <p>© 2025 Nginx Hosting | Powered by Nginx</p>
</footer>

</body>
</html>
```

