

Apache Web Server Installation and Configuration

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Overview

This page provides instructions for setting up and configuring Apache on *buzz.deome.net*. It includes steps for installing Apache, configuring virtual hosts for multiple sites, securing with SSL certificates, and basic performance tuning.

1. Apache Installation

1. Update System Packages:

- Start by updating the package list and upgrading existing packages:

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

2. Install Apache:

- Install Apache with the following command:

```
sudo apt install apache2 -y
```

3. Start and Enable Apache:

- Start the Apache service and enable it to run on boot:

```
sudo systemctl start apache2  
sudo systemctl enable apache2
```

4. Verify Installation:

- Check the Apache status to ensure it's running:

```
sudo systemctl status apache2
```

2. Basic Apache Configuration

1. Main Configuration File:

- The main Apache configuration file is located at:

```
/etc/apache2/apache2.conf
```

2. Enable Recommended Modules:

- Enable commonly used modules:

```
sudo a2enmod rewrite ssl headers
```

- Restart Apache to apply the changes:

```
sudo systemctl restart apache2
```

3. Setting Up Virtual Hosts

1. Create a New Virtual Host:

- For each site, create a configuration file in `/etc/apache2/sites-available/`. For example, for *wiki.deome.net*:

```
sudo nano /etc/apache2/sites-available/wiki.deome.net.conf
```

- Add the following configuration:

```
<VirtualHost *:80>
    ServerName wiki.deome.net
    DocumentRoot /var/www/wiki
    <Directory /var/www/wiki>
        AllowOverride All
    </Directory>
    ErrorLog ${APACHE_LOG_DIR}/wiki_error.log
    CustomLog ${APACHE_LOG_DIR}/wiki_access.log combined
</VirtualHost>
```

2. Enable the Virtual Host:

- Use `a2ensite` to enable each virtual host:

```
sudo a2ensite wiki.deome.net.conf
```

- Reload Apache to apply changes:

```
sudo systemctl reload apache2
```

3. Repeat for Additional Sites:

- Create similar configuration files for *gallery.deome.net*, *buzz.deome.net*, and any other sites you plan to host.

4. SSL Configuration with Let's Encrypt

1. Install Certbot:

- Install Certbot to automate SSL certificate generation:

```
sudo apt install certbot python3-certbot-apache -y
```

2. Generate SSL Certificates:

- Use Certbot to obtain SSL certificates for each virtual host:

```
sudo certbot --apache -d wiki.deome.net  
sudo certbot --apache -d gallery.deome.net
```

- Certbot will automatically configure SSL for the specified domains.

3. Set Up Auto-Renewal:

- To ensure certificates renew automatically:

```
sudo certbot renew --dry-run
```

5. Performance and Optimization

1. Adjust Apache Settings:

- Open the main Apache configuration file:

```
sudo nano /etc/apache2/apache2.conf
```

- Consider modifying these settings under the `mpm_prefork_module` or `mpm_worker_module`:

```
KeepAlive On  
MaxKeepAliveRequests 100  
KeepAliveTimeout 5
```

2. Enable Caching:

- Install and enable Apache caching modules if desired:

```
sudo a2enmod cache
sudo a2enmod cache_disk
sudo systemctl restart apache2
```

3. Optimize Logging:

- Adjust log levels or configure centralized logging if needed. Logging configuration is in each virtual host file and `/etc/apache2/apache2.conf`.

6. Maintenance and Monitoring

1. Monitor Apache Status:

- Check Apache's status periodically:

```
sudo systemctl status apache2
```

2. Check Logs:

- Access logs for each virtual host in `/var/log/apache2/`, e.g.:

```
sudo tail -f /var/log/apache2/wiki_access.log
sudo tail -f /var/log/apache2/wiki_error.log
```

3. Restarting Apache:

- Restart Apache after any configuration changes:

```
sudo systemctl restart apache2
```

This wiki page provides a thorough guide for Apache installation, virtual host setup, SSL configuration, and performance tuning. Let me know if you'd like any additional details or further customization for your setup!

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