

Webserver

Lab 1: Installing Apache on Rocky Linux

Objective: Install and start Apache web server on Rocky Linux.

Update system packages:

```
sudo dnf update -y
```

1. Install Apache:

```
sudo dnf install httpd -y
```

2. Enable and start the Apache service:

```
sudo systemctl enable --now httpd
```

Verify Apache is running:

```
sudo systemctl status httpd
```

3. Install **epel-release** and then the **elinks** browser.

```
dnf install -y epel-release
```

```
dnf install -y elinks
```

Test by accessing <http://your-server-ip> in a elinks.

```
elinks http://127.0.0.1
```

Lab 2: Configuring Firewall for Apache

Objective: Allow HTTP and HTTPS traffic through the firewall.

Check firewall status:

```
sudo firewall-cmd --state
```

1. Allow Apache services:

```
sudo firewall-cmd --permanent --add-service=http
```

```
sudo firewall-cmd --permanent --add-service=https
```

```
sudo firewall-cmd --reload
```

2. Verify rules:

```
sudo firewall-cmd --list-all
```

Lab 3: Setting Up a Virtual Host

Objective: Configure Apache to serve multiple websites using Virtual Hosts.

Create a directory for your website:

```
sudo mkdir -p /var/www/example.com/html
sudo chown -R apache:apache /var/www/example.com
```

1. Create a test **index.html**:

```
echo "<h1>Welcome to Example.com</h1>" | sudo tee \
/var/www/example.com/html/index.html
```

2. Create a virtual host configuration file:

```
sudo nano /etc/httpd/conf.d/example.com.conf
```

Add the following content:

```
<VirtualHost *:80>
    ServerAdmin admin@example.com
    DocumentRoot "/var/www/example.com/html"
    ServerName example.com
    ServerAlias www.example.com
    ErrorLog "/var/log/httpd/example.com-error.log"
    CustomLog "/var/log/httpd/example.com-access.log" combined
</VirtualHost>
```

3. Restart Apache:

```
sudo systemctl restart httpd
```

4. Add an entry to the **hosts file** (for testing on local machine):

```
echo "127.0.0.1 example.com" | sudo tee -a /etc/hosts
```

5. Test by accessing <http://example.com> in a browser.

```
elinks http://example.com
```
