OpenDaylight Installation Manual

1. Prepare the Operating System

Before installing OpenDaylight, update the system packages and install `unzip`.

```
sudo apt update -y
sudo apt install unzip -y
```

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2. Installing Java JRE

OpenDaylight requires **Java 8 (OpenJDK)** to run. Install Java and configure the environment variables:

```
sudo apt-get install openjdk-8-jre -y
sudo update-alternatives --config java
```

Verify Java installation:

```
java -version
```

Set the **JAVA_HOME** environment variable:

```
echo 'export JAVA_HOME=/usr/lib/jvm/java-8-openjdk-amd64/jre' | sudo
tee -a ~/.bashrc
source ~/.bashrc
echo $JAVA_HOME
```

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3. Downloading OpenDaylight

Download the latest OpenDaylight distribution from the official repository:

```
wget
https://nexus.opendaylight.org/content/repositories/opendaylight.release/org/opendaylight/integration/karaf/0.8.4/karaf-0.8.4.zip
```

Unzip the downloaded file:

```
unzip karaf-0.7.3.zip
cd karaf-0.7.3/bin
```

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4. Starting OpenDaylight

Run OpenDaylight:

```
sudo ./karaf
```

Once inside the OpenDaylight CLI, install required features.

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5. Enabling Features

To install **L2 switch UI**, run:

```
feature:install odl-l2switch-switch-ui
```

Alternatively, to enable RESTCONF, L2 switch, MD-SAL API docs, and DLUX UI:

```
feature:install odl-restconf odl-l2switch-switch odl-mdsal-apidocs
odl-dlux-core
```

Access OpenDaylight Web UI

Open a browser and go to:

```
http://<your-ip>:8181/index.html
```

Default Login Credentials:

- Username: `admin`
- Password: `admin`

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6. Creating a Mininet Topology

To connect OpenDaylight with Mininet, use the following command:

```
sudo mn --controller=remote,ip=<Controller_IP> --topo=linear,3
--switch=ovsk,protocols=OpenFlow13
```

- Replace `<Controller_IP>` with the **IP address** of the machine running OpenDaylight.
- `linear,3` creates a **linear topology** with **3 switches**.
- `OpenFlow13` ensures that switches use OpenFlow v1.3.

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7. Verifying Connectivity

To check if Mininet switches are connected to OpenDaylight, use:

```
sudo ovs-vsctl show
```

If everything is set up correctly, switches should be listed under **bridges** and connected to the OpenDaylight controller.