

Pcap4J SET UP GUIDE

Instruction on how to set up Pcap4J for Ubuntu IntelliJ Maven Project.

STEP 1: Install Native Library on Ubuntu

Installing libpcap for Ubuntu.

```
sudo apt-get install libpcap-dev
```

STEP 2: Add capability for Java to allow capture packet

Add capability so that the projects that use the Java version will be able to capture packet.

```
sudo setcap cap_net_raw,cap_net_admin=eip path-to-java
```

You can check it if it has the permission.

```
getcap path-to-java
```

STEP 3: Add dependencies for Java Maven project

```
<dependency>
  <groupId>org.pcap4j</groupId>
  <artifactId>pcap4j-core</artifactId>
  <version>1.8.2</version>
  <type>pom</type>
</dependency>
<!-- https://mvnrepository.com/artifact/org.pcap4j/pcap4j-packetfactory-static -->
<dependency>
  <groupId>org.pcap4j</groupId>
  <artifactId>pcap4j-packetfactory-static</artifactId>
  <version>1.8.2</version>
</dependency>
```

Get the dependencies from Maven Central:

[Pcap4J_core](https://mvnrepository.com/artifact/org.pcap4j/pcap4j-core)

[Pcap4J_static_packet_factory](https://mvnrepository.com/artifact/org.pcap4j/pcap4j-packetfactory-static)

STEP 4: Write first example

1. Find network interface where you want to capture packets
2. Open a pcap handle from the network interface. A pcap handle provides you APIs to capture packets, send packets, and so on.
3. Get a packet using the pcap handle.
4. The packet you captured consists of headers and payloads of some protocols such as Ethernet, IPv4, and TCP. Here shows example of a Ipv4 packet.

```

//FIND A NETWORK INTERFACE TO CAPTURE PACKET ON
try {
    InetAddress inetAddress = InetAddress.getByName("127.0.0.1");
    PcapNetworkInterface networkInterface = Pcaps.getDevByAddress(inetAddress);

    //OPEN PCAP HANDLE FROM NETWORK INTERFACE
    int snapLen = 65536;
    PcapNetworkInterface.PromiscuousMode mode = PcapNetworkInterface.PromiscuousMode.PROMISCUOUS;
    int timeout = 10;
    PcapHandle handle = networkInterface.openLive(snapLen, mode, timeout);

    //NOW WE CAN START CAPTURE PACKETS
    Packet packet = handle.getNextPacketEx();
    handle.close();

    //HANDLE INFORMATION FROM PACKET
    IPv4Packet ipv4Packet = packet.get(IPv4Packet.class);
    InetAddress sourceAddress = ipv4Packet.getHeader().getSrcAddr();
    System.out.println(sourceAddress);

} catch (UnknownHostException e) {
    e.printStackTrace();
} catch (PcapNativeException e) {
    e.printStackTrace();
} catch (EOFException e) {
    e.printStackTrace();
} catch (TimeoutException e) {
    e.printStackTrace();
} catch (NotOpenException e) {
    e.printStackTrace();
}

```

References

The official Pcap4j website: [Visit Pcap4j website.](#)