

## Generating Armageddon Traffic Containing Random MAC Addresses

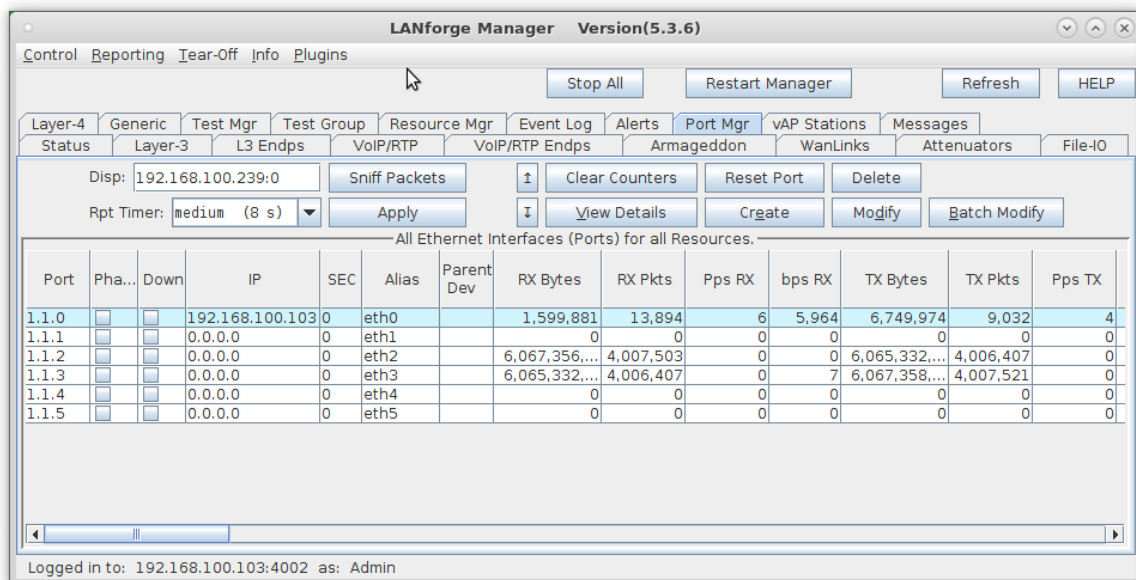
**Goal:** Set up and run traffic containing random MAC addresses using the LANforge Armageddon feature.

- For more information, see the [LANforge User's Guide: Armageddon \(Accelerated UDP\)](#)

In this test scenario, LANforge Armageddon is set up to run with random MAC addresses. This is useful when performance/stress testing network devices that may not be able to keep up with high-speed traffic containing rapidly changing MAC addresses.

**Note:** In order to use the LANforge Armageddon feature, your system must have the LANforge kernel patch applied and your system must be properly licensed. Please feel free to contact us at [support@candelatech.com](mailto:support@candelatech.com) if you would like to obtain a demo license for the Armageddon feature.

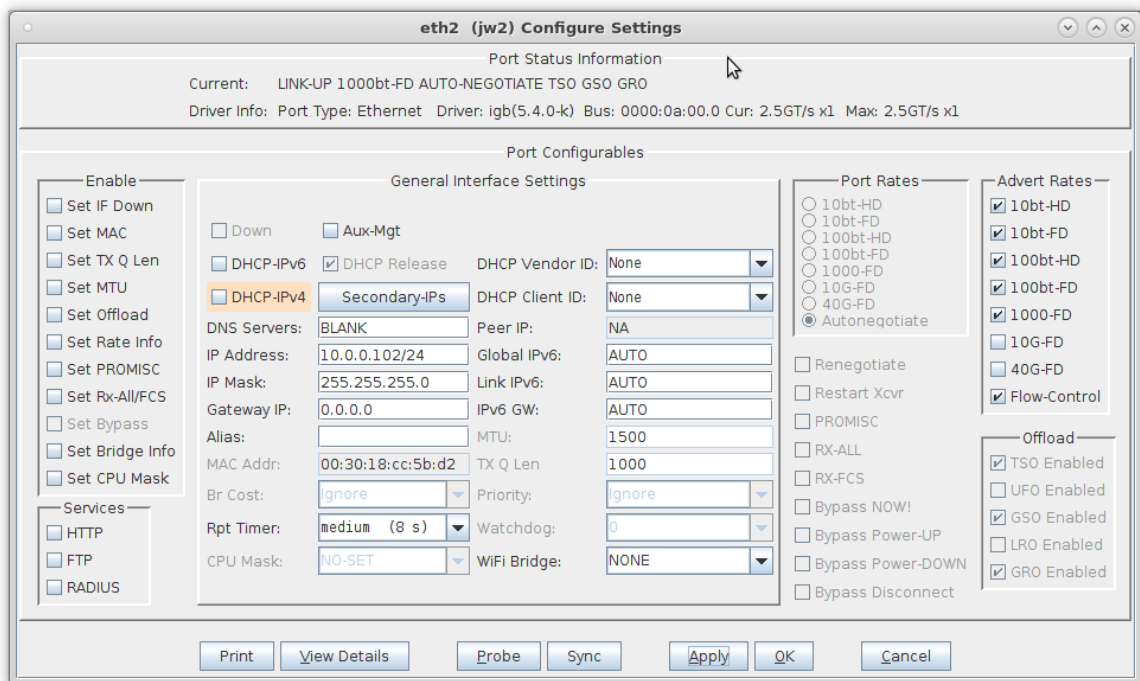
- Configure the physical interfaces.
  - Go to the Port Manager and select ports eth2 and eth3



Port	Pha...	Down	IP	SEC	Alias	Parent Dev	RX Bytes	RX Pkts	Pps RX	bps RX	TX Bytes	TX Pkts	Pps TX
1.1.0			192.168.100.103	0	eth0		1,599,881	13,894	6	5,964	6,749,974	9,032	4
1.1.1			0.0.0.0	0	eth1		0	0	0	0	0	0	0
1.1.2			0.0.0.0	0	eth2		6,067,356,...	4,007,503	0	0	6,065,332,...	4,006,407	0
1.1.3			0.0.0.0	0	eth3		6,065,332,...	4,006,407	0	7	6,067,358,...	4,007,521	0
1.1.4			0.0.0.0	0	eth4		0	0	0	0	0	0	0
1.1.5			0.0.0.0	0	eth5		0	0	0	0	0	0	0

Logged in to: 192.168.100.103:4002 as: Admin

B. Modify ports eth2 and eth3

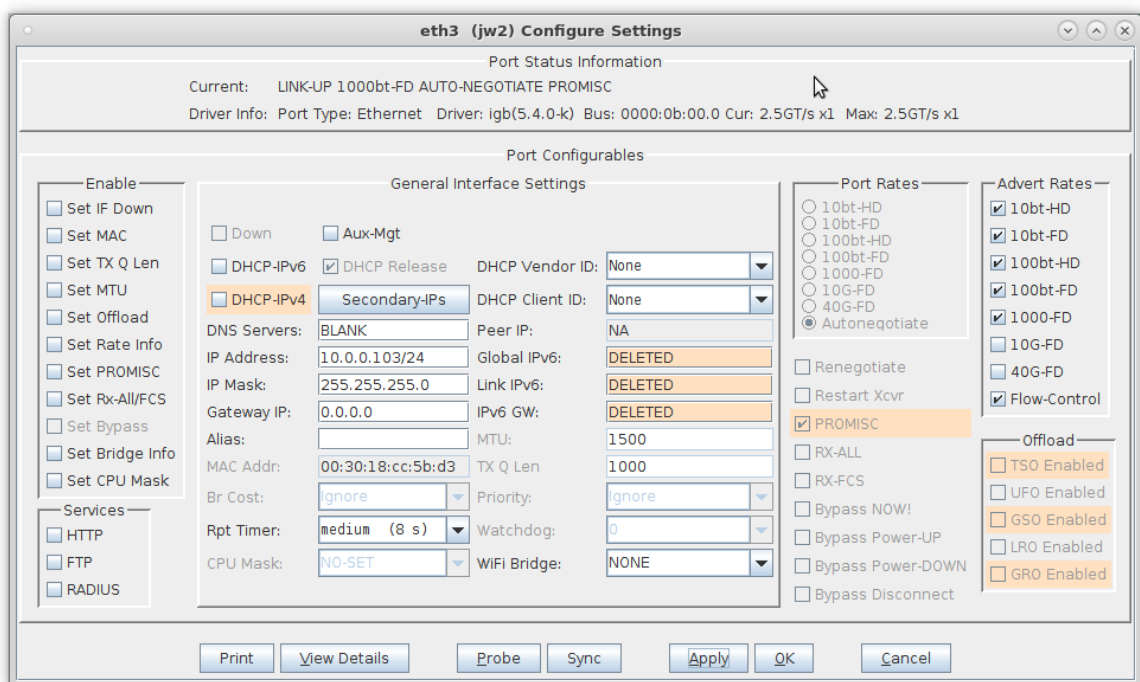


The screenshot shows the 'eth2 (jw2) Configure Settings' window. The 'Port Status Information' section at the top indicates the current status is 'LINK-UP 1000bt-FD AUTO-NEGOTIATE TSO GSO GRO' and provides driver information. The 'Port Configurables' section is divided into three main areas: 'Enable', 'General Interface Settings', and 'Port Rates'. In the 'Enable' section, 'Set PROMISC' is checked. The 'General Interface Settings' section includes fields for IP Address (10.0.0.102/24), IP Mask (255.255.255.0), Gateway IP (0.0.0.0), and other network parameters. The 'Port Rates' section shows 'Autonegotiate' selected. The 'Advert Rates' section has '1000-FD' and 'Flow-Control' checked. The 'Offload' section has 'TSO Enabled', 'GSO Enabled', 'LRO Enabled', and 'GRO Enabled' checked. At the bottom, there are buttons for 'Print', 'View Details', 'Probe', 'Sync', 'Apply', 'OK', and 'Cancel'.

A. In this example, eth2 and eth3 are connected to another LANforge system running a WanLink so that the Armageddon traffic can be sniffed on the other machine's interface

B. **NOTE:** Be sure that both ports are in Promiscuous mode by selecting the **Set PROMISC** and **PROMISC** checkboxes

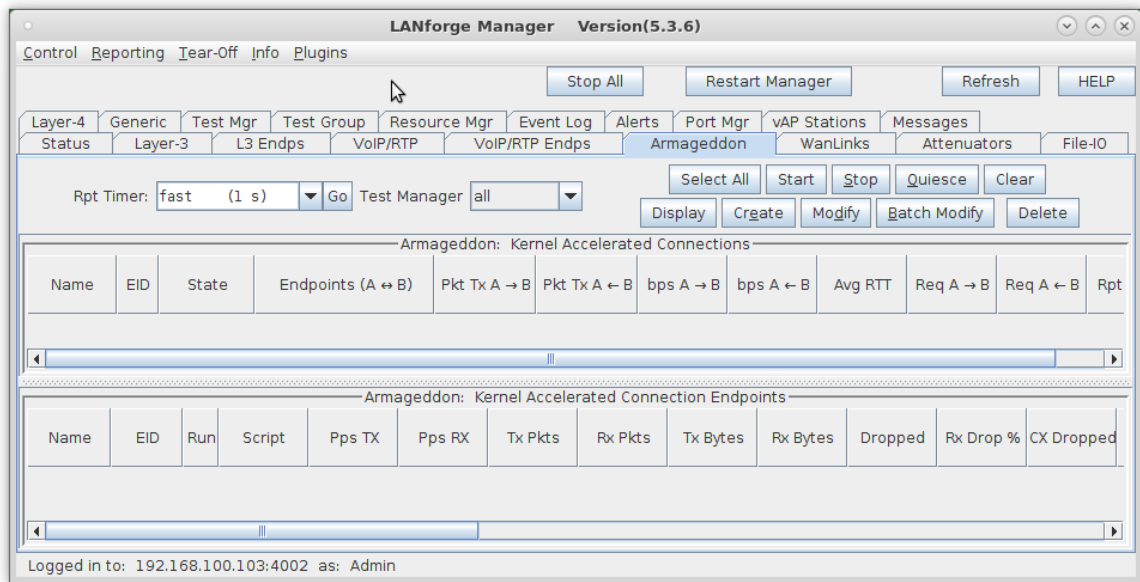
C. Configure each port with a valid IP address, then click **OK**



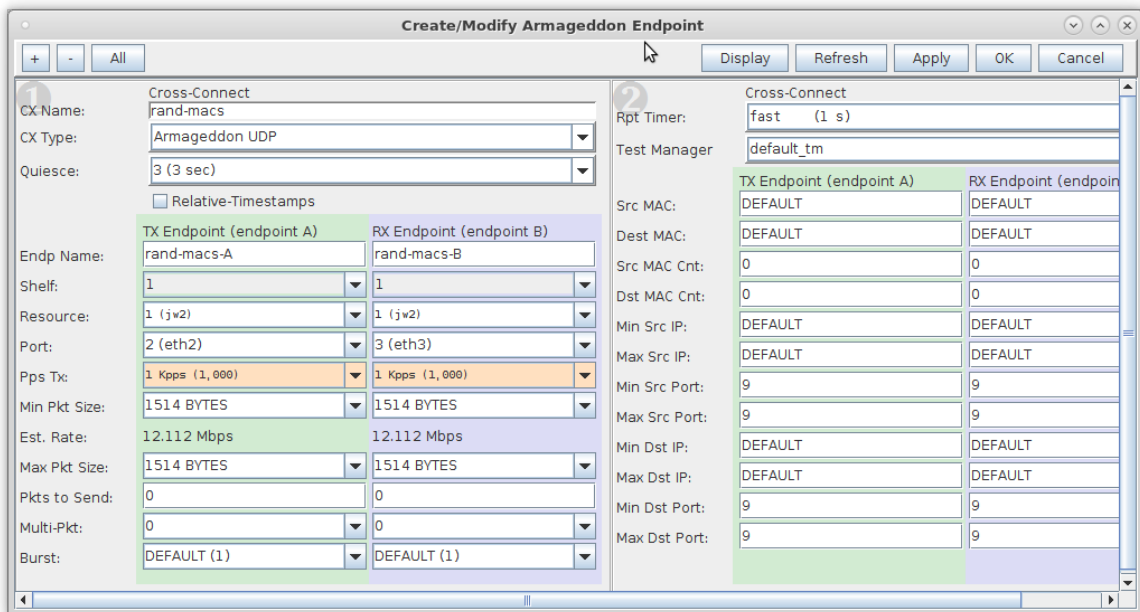
The screenshot shows the 'eth3 (jw2) Configure Settings' window. The 'Port Status Information' section indicates the current status is 'LINK-UP 1000bt-FD AUTO-NEGOTIATE PROMISC'. The 'Port Configurables' section is similar to the eth2 window, but with 'Set PROMISC' checked in the 'Enable' section. The 'General Interface Settings' section shows the IP Address as 10.0.0.103/24 and the IP Mask as 255.255.255.0. The 'Port Rates' section shows 'Autonegotiate' selected. The 'Advert Rates' section has '1000-FD' and 'Flow-Control' checked. The 'Offload' section has 'TSO Enabled', 'GSO Enabled', 'LRO Enabled', and 'GRO Enabled' checked. At the bottom, there are buttons for 'Print', 'View Details', 'Probe', 'Sync', 'Apply', 'OK', and 'Cancel'.

For more information see [LANforge User's Guide: Ports \(Interfaces\)](#)

2. Create the Armageddon cross-connect.
  - A. On the **Armageddon** tab, click **Create**



- B. Enter a CX Name, select ports eth2 and eth3, then enter the speed and packet size for both endpoints



- C. Enter values for the Source and Destination MAC addresses, specify a MAC count, and deselect Use Router MAC for both endpoints.

**Create/Modify Armageddon Endpoint**

Buttons: +, -, All, Display, Refresh, Apply, OK, Cancel

**1** Cross-Connect

CX Name: rand-macs

CX Type: Armageddon UDP

Quiesce: 3 (3 sec)

☐ Relative-Timestamps

Endp Name: rand-macs-A

Shelf: 1

Resource: 1 (jv2)

Port: 2 (eth2)

Pps Tx: 1 Kpps (1,000)

Min Pkt Size: 1514 BYTES

Est. Rate: 12.112 Mbps

Max Pkt Size: 1514 BYTES

Pkts to Send: 0

Multi-Pkt: 0

Burst: DEFAULT (1)

**2** Cross-Connect

Rpt Timer: fast (1 s)

Test Manager: default\_tm

TX Endpoint (endpoint A) RX Endpoint (endpoint B)

Src MAC: 00:30:18:cc:5b:d2 00:30:18:cc:5b:d3

Dest MAC: 00:30:18:cc:5b:d3 00:30:18:cc:5b:d2

Src MAC Cnt: 0 0

Dest MAC Cnt: 0 0

Min Src IP: DEFAULT DEFAULT

Max Src IP: DEFAULT DEFAULT

Min Src Port: 9 9

Max Src Port: 9 9

Min Dst IP: DEFAULT DEFAULT

Max Dst IP: DEFAULT DEFAULT

Min Dst Port: 9 9

Max Dst Port: 9 9

**3** TX Endpoint (endpoint A) RX Endpoint (endpoint B)

Thread-ID: 0 0

Thresholds Script

☒ Random Payload Size ☒ Random Payload Size

☐ Use Router MAC ☐ Use Router MAC

☐ UnManaged ☐ UnManaged

For more information see [LANforge User's Guide: Armageddon \(Accelerated UDP\)](#)

3. Run the Armageddon cross-connect and verify results with Wireshark.
- A. Select the Armageddon connection then click **Start**

**LANforge Manager Version(5.3.6)**

Control Reporting Tear-Off Info Plugins

Buttons: Stop All, Restart Manager, Refresh, HELP

Layer-4 Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr vAP Stations Messages

Status Layer-3 L3 Endps VoIP/RTP VoIP/RTP Endps Armageddon WanLinks Attenuators File-I/O

Rpt Timer: fast (1 s) Go Test Manager: all

Buttons: Select All, Start, Stop, Quiesce, Clear, Display, Create, Modify, Batch Modify, Delete

Armageddon: Kernel Accelerated Connections

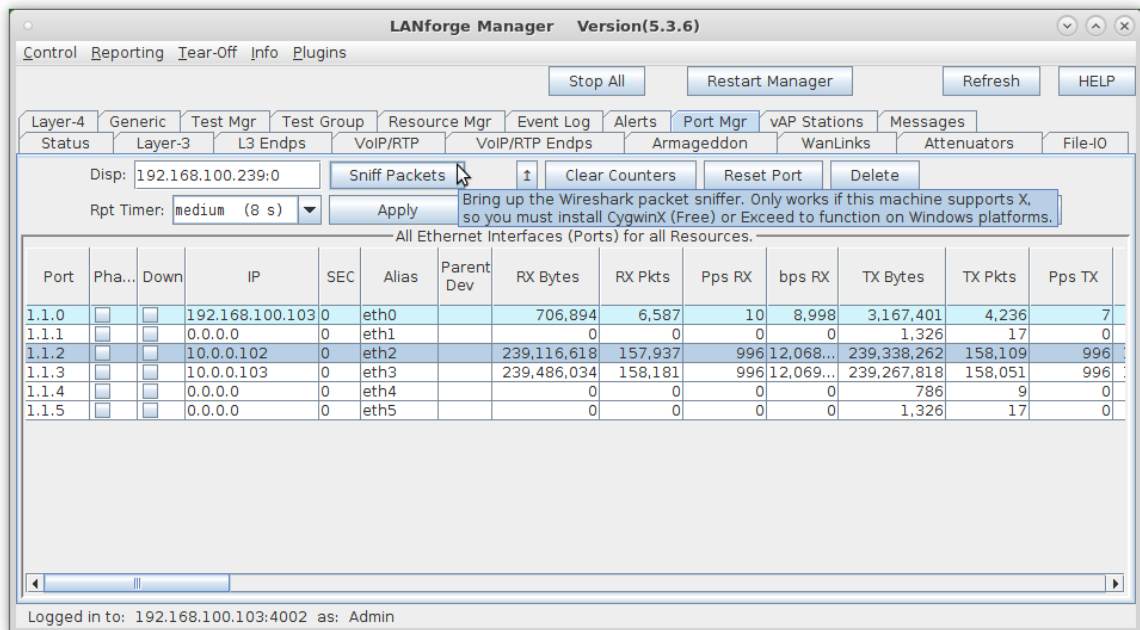
Name	EID	State	Endpoints (A ↔ B)	Pkt Tx A → B	Pkt Tx A ← B	bps A → B	bps A ← B	Avg RTT	Req A → B	Req A ← B	Rpt
rand-macs	14.2	Run	rand-macs-A <=> ra...	44,086	44,080	12,318,661	12,132,205	357	1,000	1,000	

Armageddon: Kernel Accelerated Connection Endpoints

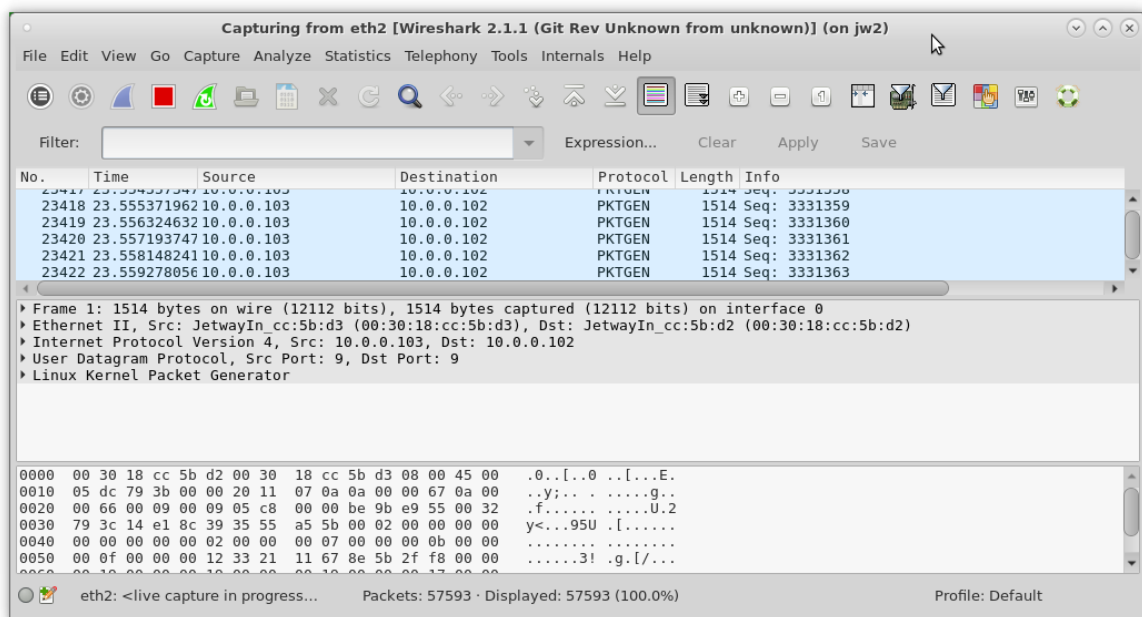
Name	EID	Run	Script	Pps TX	Pps RX	Tx Pkts	Rx Pkts	Tx Bytes	Rx Bytes	Dropped	Rx Drop %	CX Dropped
rand-ma...	1.1.2.1	<input checked="" type="checkbox"/>	None	996	995	44,086	43,941	66,746,204	66,526,674	0	0	0
rand-ma...	1.1.3.2	<input checked="" type="checkbox"/>	None	996	996	44,080	44,225	66,737,120	66,956,650	0	0	0

Logged in to: 192.168.100.103:4002 as: Admin

- B. On the **Port Mgr** tab of the other LANforge system, select one of the physical interfaces in the Armageddon connection

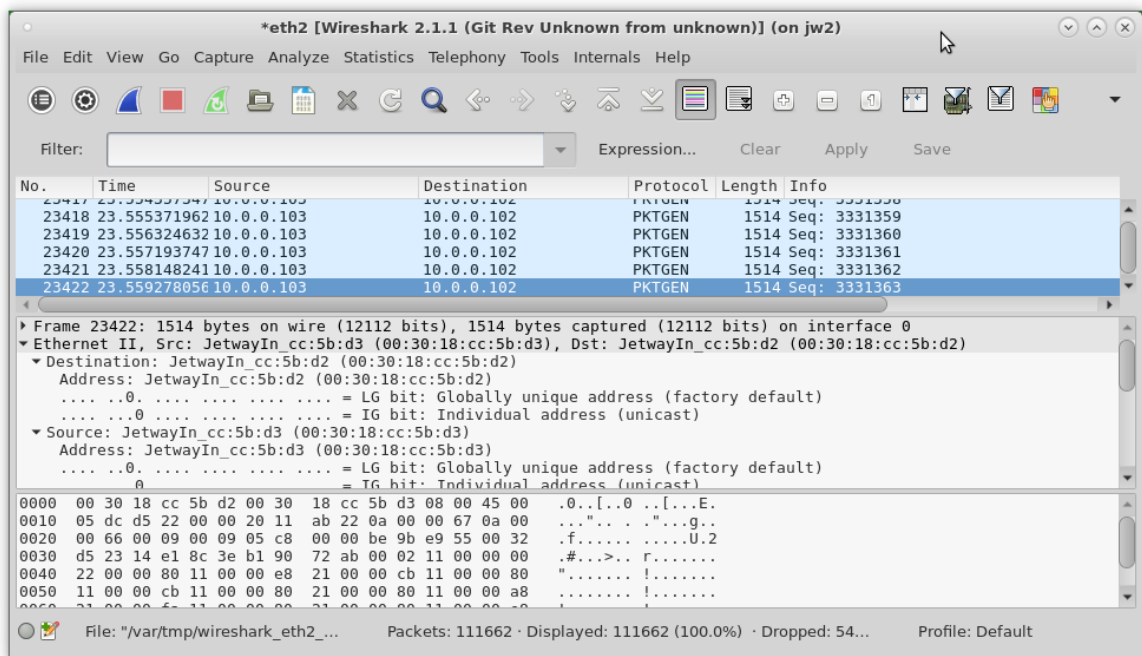


- C. Click **Sniff Packets** to launch Wireshark and begin sniffing traffic.

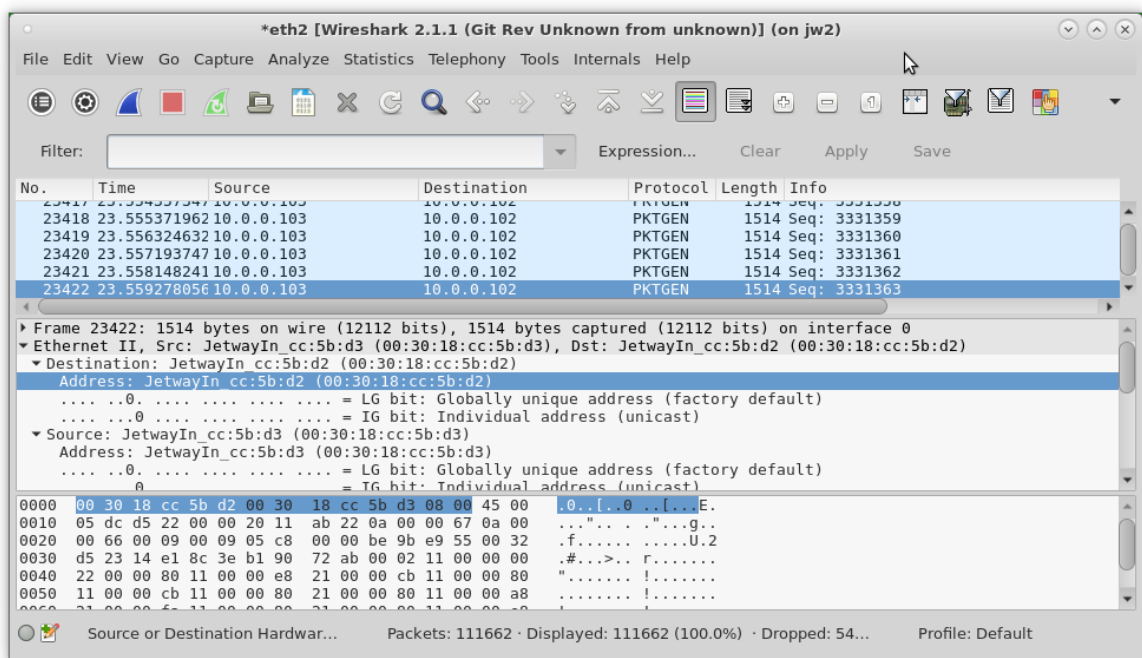


- A. Stop the Wireshark capture after a few seconds via the stop icon or pull-down menu **Capture>Stop**

D. Select several packets and note their MAC addresses



E. Verify that the MAC addresses for each packet are different



For more information see [LANforge User's Guide: Armageddon \(Accelerated UDP\)](#)

Candela Technologies, Inc., 2417 Main Street, Suite 201, Ferndale, WA 98248, USA  
www.candelatech.com | sales@candelatech.com | +1.360.380.1618