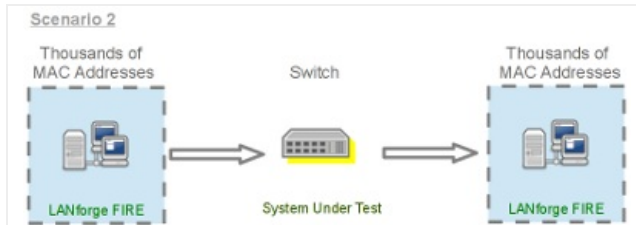
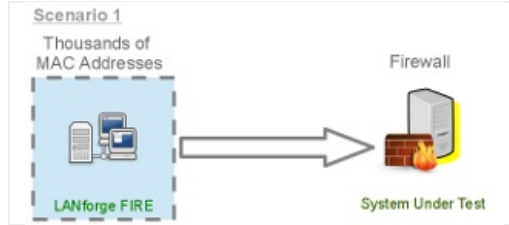


Armageddon UDP Traffic Generation with Random MAC Addresses.

Goal: Generate network traffic to a network device with one or many destination MAC addresses.

These scenarios are useful for testing switches and firewalls that have to handle UDP traffic from thousands of source MAC addresses and one or many destination MAC addresses. This cookbook covers two scenarios:

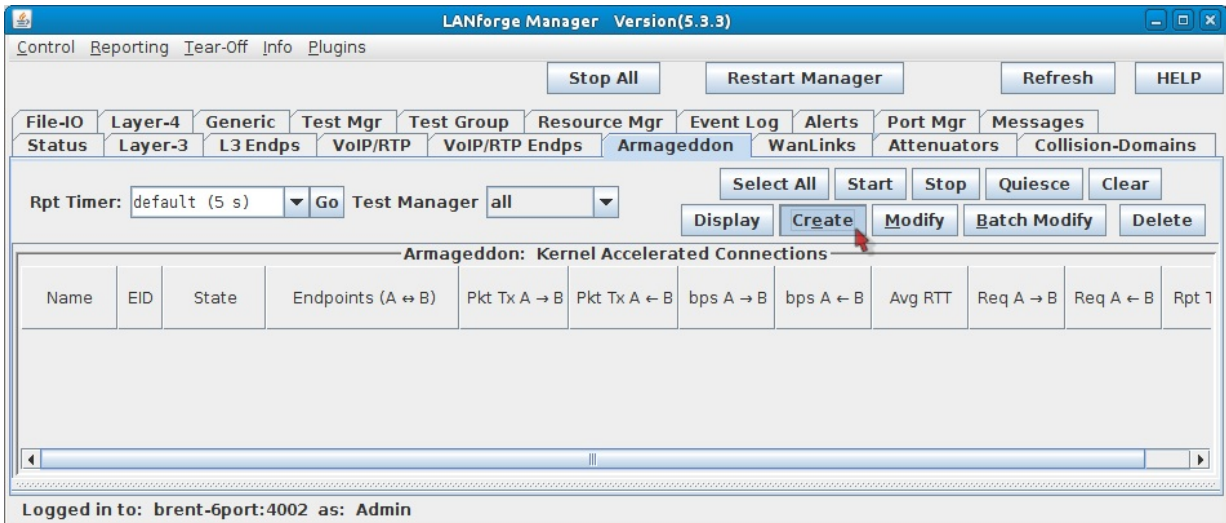
1. A single destination MAC address. (This would exercise a firewall or router.)
2. Thousands of destination MAC addresses. (This would exercise a switch by overflowing the device CAM table.)



A one-sided traffic stream is used to send packets to a network device under test when round-trip reporting is not required.



1. On the **Armageddon** tab, click **Create**.



2. **Firewall Scenario:** Configure the Armageddon connection with the following values:

Create/Modify Armageddon Endpoint

Cross Connect Information

CX Name: CX Type: Rpt Timer: Test Manager:

Quiesce: Relative-Timestamps

TX Endpoint (endpoint A)

Endp Name: Shelf: Resource: Port:

Pld Pattern: Src MAC: Dest MAC:

Min Src IP: Max Src IP: Min Dst IP: Max Dst IP:

Min Src Port: Max Src Port: Min Dst Port: Max Dst Port:

Pps Tx: Min Pkt Size: Max Pkt Size: Multi-Pkt:

Pkts to Send: Src MAC Cnt: Dst MAC Cnt: Quiesce:

Thread-ID: IP ToS:

Use Router MAC Slow Start UnManaged Checksum Clear-Port-On-Start

RX Endpoint (endpoint B)

Endp Name: Shelf: Resource: Port:

Pld Pattern: Src MAC: Dest MAC:

Min Src IP: Max Src IP: Min Dst IP: Max Dst IP:

Min Src Port: Max Src Port: Min Dst Port: Max Dst Port:

Pps Tx: Min Pkt Size: Max Pkt Size: Multi-Pkt:

Pkts to Send: Src MAC Cnt: Dst MAC Cnt: Quiesce:

Thread-ID: IP ToS:

Use Router MAC Slow Start UnManaged Checksum Clear-Port-On-Start

A. In the TX Endpoint (green box):

- A. The connection name for this example is **macgen**.
- B. Src MAC: **00:01:00:00:00:00**. This is the starting point for emulated remote MAC addresses.
- C. Dest MAC: **00:0e:fa:12:bc:3a**. Use the destination MAC address of your system under test.
- D. Min Src IP: **10.26.0.1**.
- E. Max Src IP: **10.26.254.254**. This emulates about 65,000 remote hosts.
- F. Min Dst IP: **10.27.0.1**.
- G. Max Dst IP: **10.27.254.254**. This emulates about 65,000 destination addresses.
- H. Pps Tx: **80,000**. This is a 1Gbps packet rate.
 - I. Min Pkt Size: **1514**.
 - J. Max Pkt Size: **1514**.
- K. Src MAC Cnt: **65,025**. This emulates 65,025 remote devices.
- L. Dst MAC Cnt: **1**.
- M. **Deselect Use Router MAC**.

B. In the RX Endpoint (blue box):

- A. **Select UnManaged**. This allows us to fire and forget the packets.

C. Click **OK** to commit the configuration.

3. **Switch Scenario**: Configure the Armageddon connection with the following values:

Create/Modify Armageddon Endpoint

Cross Connect Information

CX Name: CX Type: Rpt Timer: Test Manager:

Quiesce: Relative-Timestamps

TX Endpoint (endpoint A)

Endp Name: Shelf: Resource: Port:

Pld Pattern: Src MAC: Dest MAC:

Min Src IP: Max Src IP: Min Dst IP: Max Dst IP:

Min Src Port: Max Src Port: Min Dst Port: Max Dst Port:

Pps Tx: Min Pkt Size: Max Pkt Size: Multi-Pkt:

Pkts to Send: Src MAC Cnt: Dst MAC Cnt: Quiesce:

Thread-ID: IP To S:

Use Router MAC Slow Start UnManaged Checksum Clear-Port-On-Start

RX Endpoint (endpoint B)

Endp Name: Shelf: Resource: Port:

Pld Pattern: Src MAC: Dest MAC:

Min Src IP: Max Src IP: Min Dst IP: Max Dst IP:

Min Src Port: Max Src Port: Min Dst Port: Max Dst Port:

Pps Tx: Min Pkt Size: Max Pkt Size: Multi-Pkt:

Pkts to Send: Src MAC Cnt: Dst MAC Cnt: Quiesce:

Thread-ID: IP To S:

Use Router MAC Slow Start UnManaged Checksum Clear-Port-On-Start

A. In the TX Endpoint (green box):

- A. The connection name for this example is **macgen**.
- B. Src MAC: **00:01:00:00:00:00**. This is the starting point for emulated source MAC addresses.
- C. Dest MAC: **00:02:00:00:00:00**. This is the starting point for emulated destination MAC addresses. This address is 4.2 billion addresses after the starting source MAC address.
- D. Min Src IP: **10.26.0.1**.
- E. Max Src IP: **10.26.254.254**. This emulates about 65,000 remote hosts.
- F. Min Dst IP: **10.27.0.1**.
- G. Max Dst IP: **10.27.254.254**. This emulates about 65,000 destination addresses.
- H. Pps Tx: **80,000**. This is a 1Gbps packet rate.
 - I. Min Pkt Size: **1514**.
 - J. Max Pkt Size: **1514**.
 - K. Src MAC Cnt: **65,025**. This emulates 65,025 source devices.
 - L. Dst MAC Cnt: **65,025**. This emulates 65,025 destination devices.
- M. **Deselect Use Router MAC**.

B. In the RX Endpoint (blue box):

- A. **Select UnManaged**. This allows us to fire and forget the packets.

C. Click **OK** to commit the configuration.

4. Start traffic generation:

LANforge Manager Version(5.3.3)

Control Reporting Tear-Off Info Plugins

Stop All Restart Manager Refresh HELP

File-IO Layer-4 Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr Messages
 Status Layer-3 L3 Endps VoIP/RTP VoIP/RTP Endps Armageddon WanLinks Attenuators Collision-Domains

Rpt Timer: default (5 s) Go Test Manager all

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 T
macgen	14....	Stopped	macgen-A <=> macg...	0	0	0	0	0	80,000	1	1

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 Droppe
macgen-A	1.1.2.19	<input type="checkbox"/>	None	0	0	0	0	0	0	0	0	
macgen-B	0.0.65...	<input type="checkbox"/>	None	0	0	0	0	0	0	0	0	

Logged in to: brent-6port:4002 as: Admin

A. In the **Armageddon** tab, click the **Start** button. Traffic will begin.