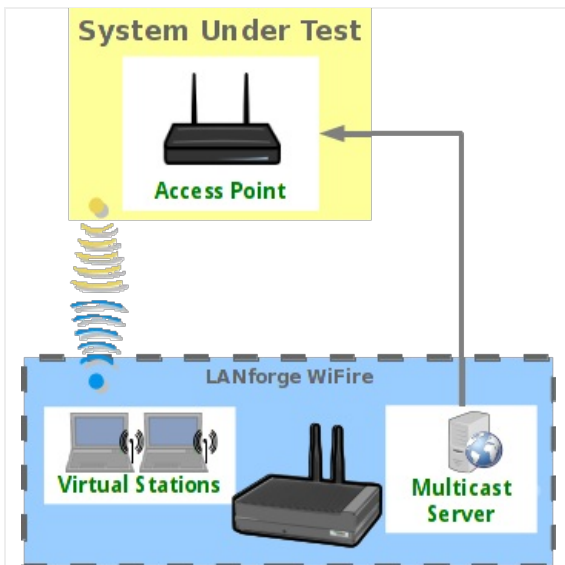
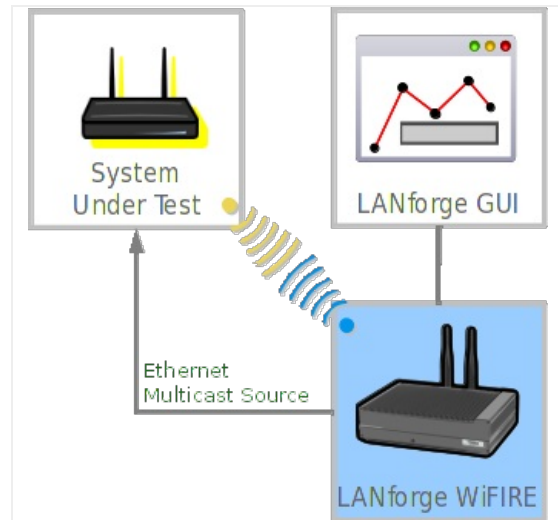


## Test WiFi Multicast Download.

**Goal:** Test WiFi Multicast Download.

Test WiFi Multicast Download with a small number of stations. This example uses a pair of LANforge CT520 systems, but the procedure should work on all CT521, CT522, CT523 and CT525 systems. Multicast is a bit special in Wireless networks. Packets are normally transmitted at the lowest rate, so even a small bit of multicast traffic will slow down the entire network. In this example, we will transmit multicast frames from the AP to the stations. Many users will instead use the wired Ethernet port as the transmitter, but aside from the different port, the procedure should be the same. This example assumes you have already created and configured the desired amount of WiFi station interfaces.



### 1. Create Multicast transmitter on AP interface

- A. Go to the **L3 Endps** tab, and click **Create**. Set the IGMP Addr, IGMP Dest Port, name, PDU Size, Port, etc and click OK when done.

Create/Modify Endpoint	
Endp Type:	Multicast
Rpt Timer:	fast (1 s)
IGMP Addr:	224.9.9.9
IGMP Dest Port:	9999
IGMP Source IP:	
IGMP Source Port:	
Endp Name:	mcast-xmit-sta
Shelf:	1
Resource:	1 (brent-521)
Port:	6 (sta0)
Pld Pattern:	increasing
IP Addr:	AUTO
Min IP Port:	9999
Max IP Port:	Same
Min Tx Rate:	4Mbps
Max Tx Rate:	Same
Min PDU Size:	UDP Pld (1,472 B)
Max PDU Size:	Same
IP ToS:	Best Effort (0)
Pkts To Send:	Infinite
TTL:	32
Quiesce:	3 (3 sec)
Min Duration:	Forever
Max Duration:	Same
Min Reconn:	0 (0 ms)
Max Reconn:	Same
Multi-Conn:	Normal (0)
Filename:	
Dest MAC:	<custom>
<input type="checkbox"/> Duration Quiesce <input type="checkbox"/> Do Checksum <input type="checkbox"/> UnManaged <input type="checkbox"/> Rcv Mcast <input type="checkbox"/> Multicast SSM <input type="checkbox"/> Replay File <input type="checkbox"/> Loop <input checked="" type="checkbox"/> Dest Mac	
<input type="button" value="Script"/> <input type="button" value="Payload"/>	
<input type="button" value="Advanced"/> <input type="button" value="Thresholds"/>	
<input type="button" value="APPLY"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	

## 2. Create Multicast receivers on Station interfaces

- A. Go to the **L3 Endps** tab, and click **Create**. Set the IGMP Addr; Min IP Port, name, Port. The IGMP Addr and IP Port should match the transmitter. Make sure you also select the 'Rcv Mcast' checkbox. Click **Apply** when done. You can then change the name, change the Port, and click **Apply** again to create a duplicate endpoint on another station interface.

## 3. Test throughput

- A. Select the Multicast transmitter and receiver endpoints on the **L3 Endps** tab and click **Start**. Observe transmit and receive rates, packet-loss, and other statistics to verify performance is at expected value.

All Endpoints													
Name	Run	Mng	Script	Tx Rate	Tx Rate(1)	Rx Rate	Rx Rate(1)	Rx Drop %	Tx Pkts	Rx Pkts	Delay	Dropped	Jit
mcast-rcv-sta-001	✓	✓	None	0	0	3,982,040	3,983,503	0	0	1,124,155	5	3,970	
mcast-rcv-sta-002	✓	✓	None	0	0	3,982,038	3,983,767	0	0	1,123,984	6	3,968	
mcast-rcv-sta-003	✓	✓	None	0	0	3,982,038	3,983,868	0	0	1,124,018	5	3,968	
mcast-rcv-sta-004	✓	✓	None	0	0	3,982,039	3,983,802	0	0	1,124,086	5	3,969	
mcast-rcv-sta-005	✓	✓	None	0	0	3,982,035	3,983,467	0	0	1,124,188	5	3,970	
mcast-xmit-sta	✓	✓	None	3,996,096	3,995,421	0	0	0	1,127,879	0	0	0	
tcp-1.13-03.006-A	✓	✓	None	0	0	0	0	0	0	0	0	0	
tcp-1.13-03.006-B	✓	✓	None	0	0	0	0	0	0	0	0	0	
tcp-1.13-03.007-A	✓	✓	None	0	0	0	0	0	0	0	0	0	

Logged in to: 192.168.100.138:4002 as: Admin