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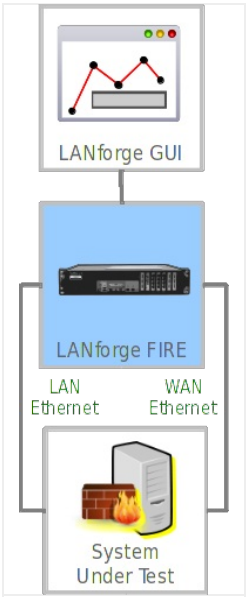
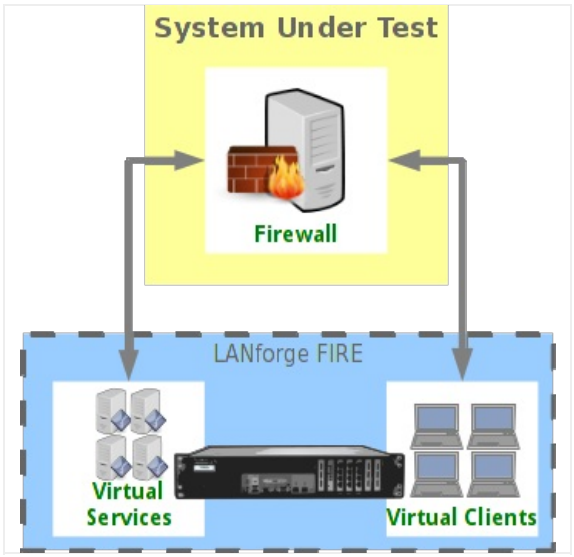
5000 concurrent TCP streams and IP addresses

Goal: Quickly set up 5000 TCP connections from 5000 different IP addresses.

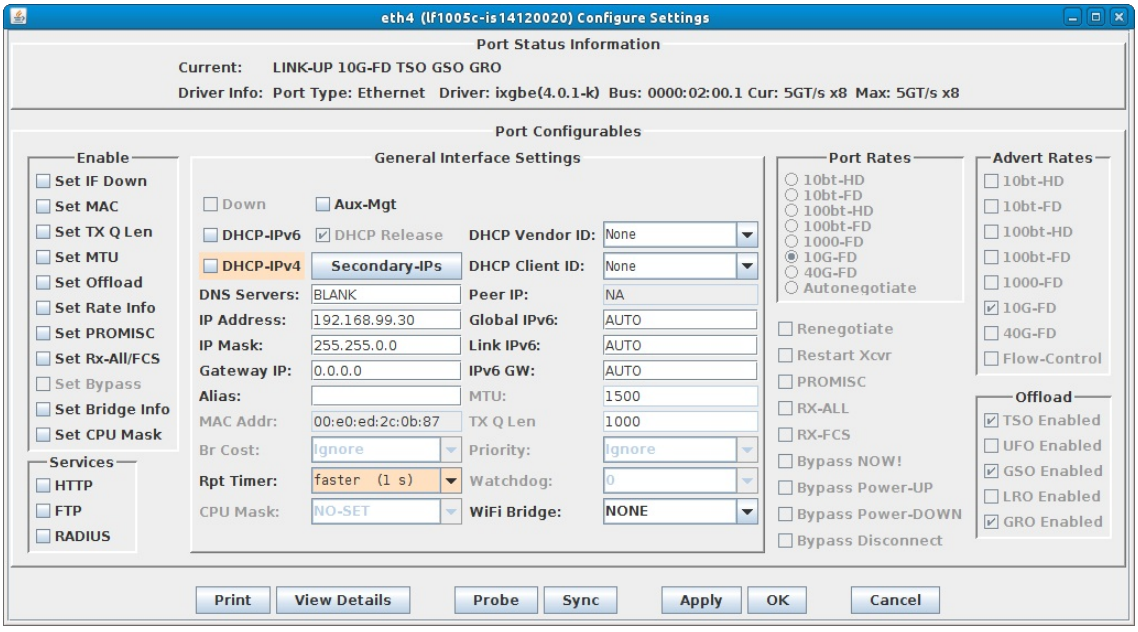
Requires LANforge 5.2.10 or later. Use the new feature in 5.2.10 that lets 'multi-conn' Layer-3 TCP connections use a range of secondary IPs to quickly create 5000 stateful TCP/IP connections on different IP addresses. This example uses two 10G ports on a system similar to the LANforge CT503-MIX systems but the procedure should work on all properly licensed higher-end systems. A standard LANforge license only supports 1000 concurrent connections, contact your sales representative for additional licenses. This cookbook assumes basic familiarity with LANforge.



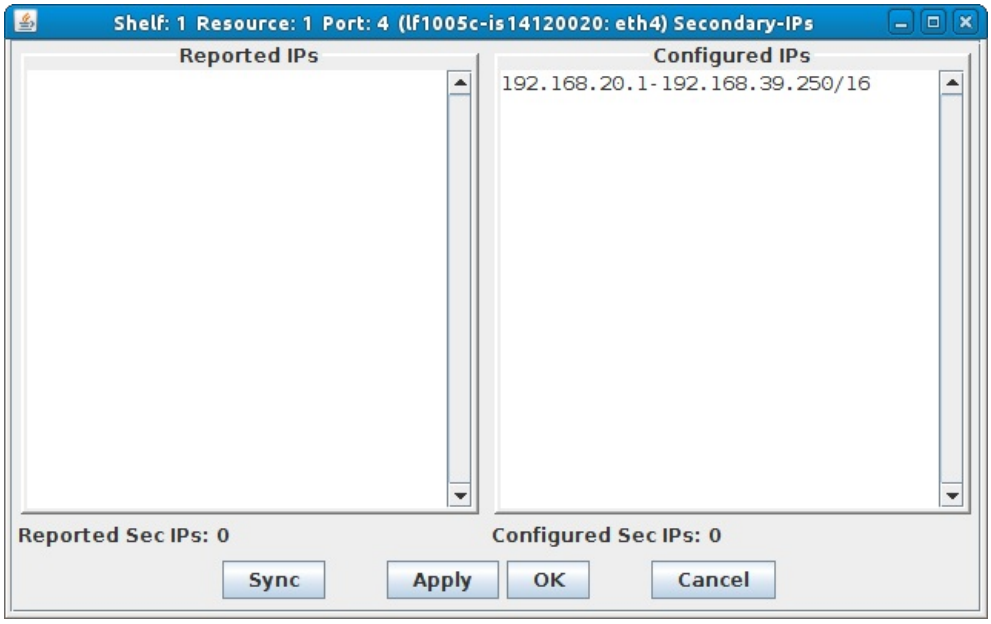


1. Create 5000 secondary IP addresses on an ethernet port. The IP address range should be on the same subnet as the primary IP address on this interface.

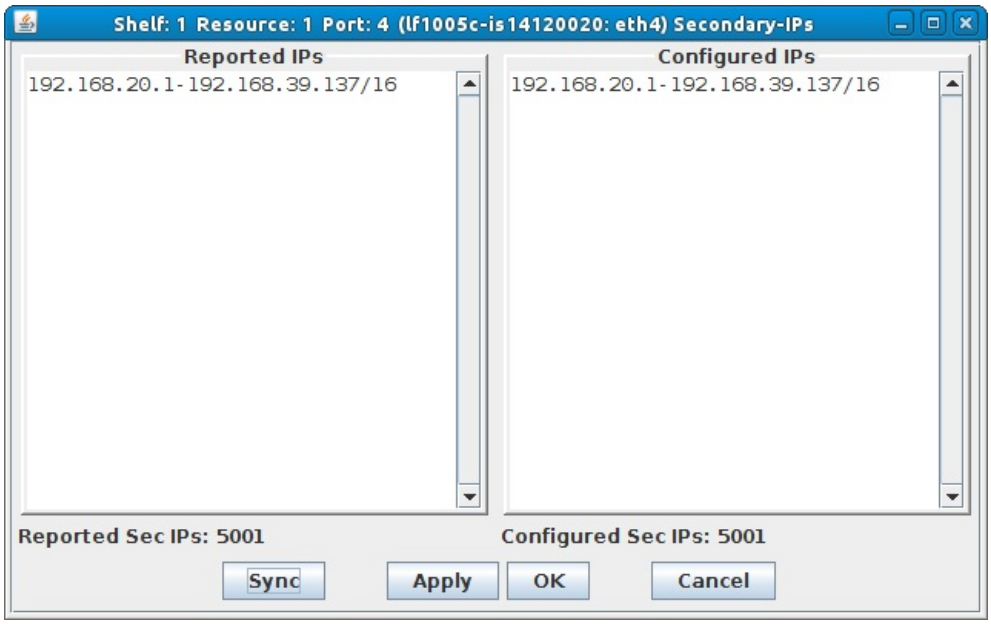
A. Go to the Port Manager tab, select the client-side ethernet port and click Modify. Ensure subnet mask is 255.255.0.0 or similar so we have plenty of room to add the 5000 secondary IPs on the subnet. Apply if changes were made.



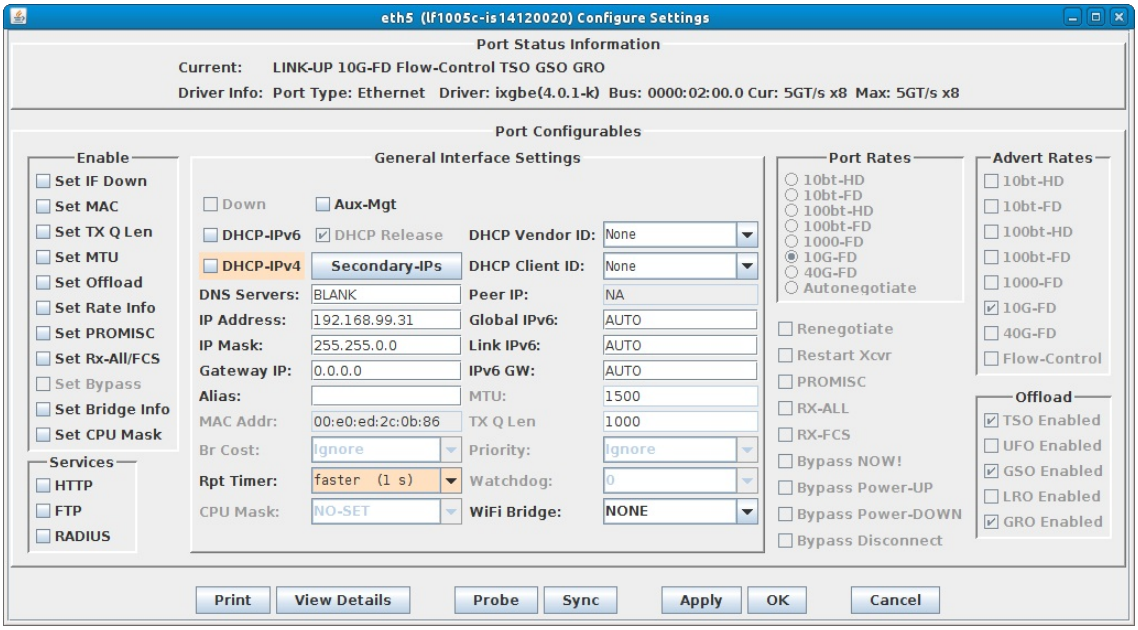
B. Click the **Secondary-IPS** button to bring up the Secondary IP address management window. Enter the IP address range similar to the image below and click **Apply**:



C. Click 'Sync' after a few minutes to make sure all of the new IP addresses were properly created.



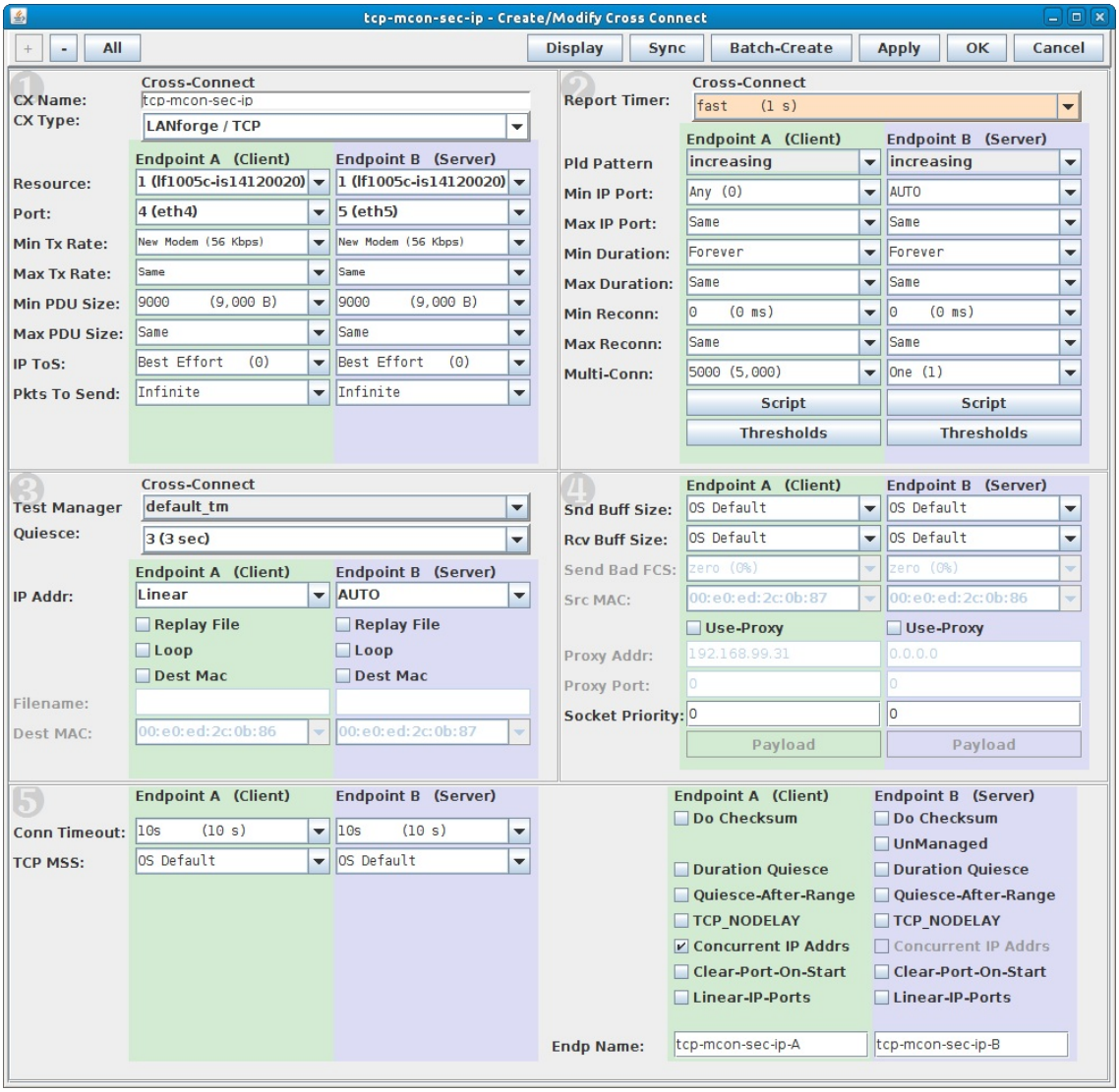
D. Make sure a second ethernet port on the LANforge is properly configured for the server-side of the network. In this case, we are using a network-emulator in bridge mode as device-under-test, so all IP addresses are on the same subnet.



For more information see LANforge User's Guide: Ports (Interfaces)

2. Create a Layer-3 TCP connection to utilize these 5000 secondary IPs and start the traffic.

A. Go to the **Layer-3** tab and click Create. Configure the **CX Name**, **CX Type**, **Ports**, and **PDU Size** in section 1. The port in the green section should be the one with the secondary IP Addresses. In section 2, configure **Min IP Port** in the green section, and **Multi-Conn** in both. In section 3, select 'Linear' for the **IP Addr** selection box in the green section. In section 5, select the **Concurrent IP Addrs** checkbox in the green section.



B. Start the connection, and then go to the **Port Mgr** tab, select one of the ethernet ports, and sniff the traffic (or use third-party tools) to verify the IP address range is as expected: