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Generating Traffic for VoIP Testing

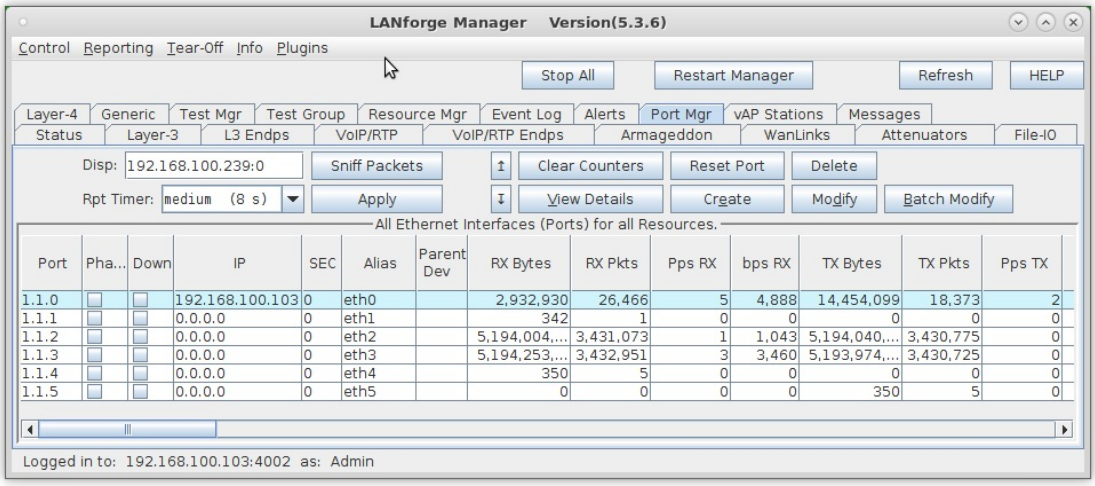
Goal: Set up and run VoIP traffic.

In this example, LANforge-FIRE is used to set up two VoIP test calls that may be used as a basis for VoIP load testing or VoIP Gateway testing.

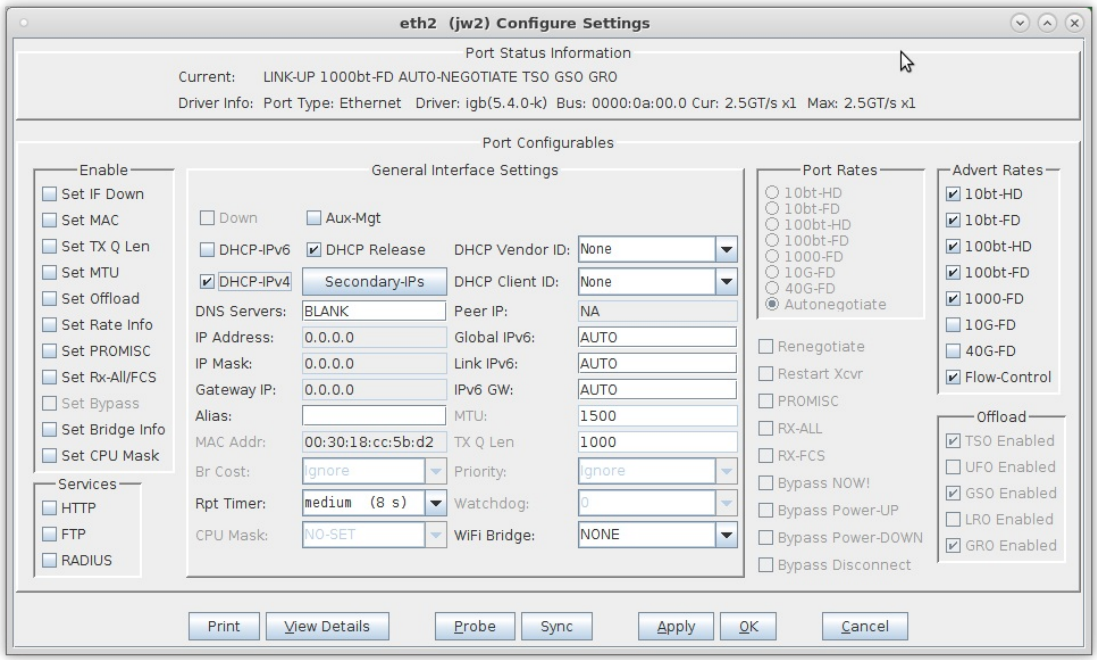
- **Test 1**: Directed VoIP call where a LANforge endpoint calls another LANforge endpoint.
- **Test 2**: Gateway VoIP call where two LANforge endpoints register with a VoIP Gateway so that the call from one endpoint to the other goes through the gateway. The VoIP Gateway used in this example is Asterisk.

1. Set up the LANforge physical connections. The same two ports are used for both tests. Connect eth1 and eth2 from the LANforge-FIRE system to a network switch that is also connected to the VoIP Gateway. This example assumes that your VoIP Gateway is set up properly. If you need assistance, you can contact us at support@candelatech.com or you can find a basic Asterisk setup at this link: LANforge FAQ: How do I configure Asterisk for SIP Phones?

2. Set up the LANforge ports so that they have valid IP addresses and IP masks.
   A. Go to the Port Manager

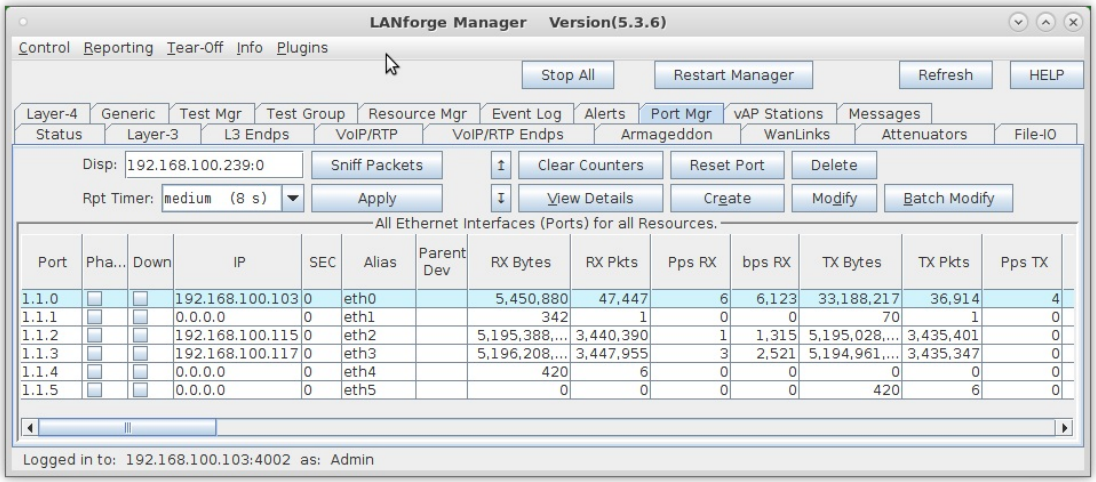


B. Modify eth2 and eth3 to set a valid network IP address and mask



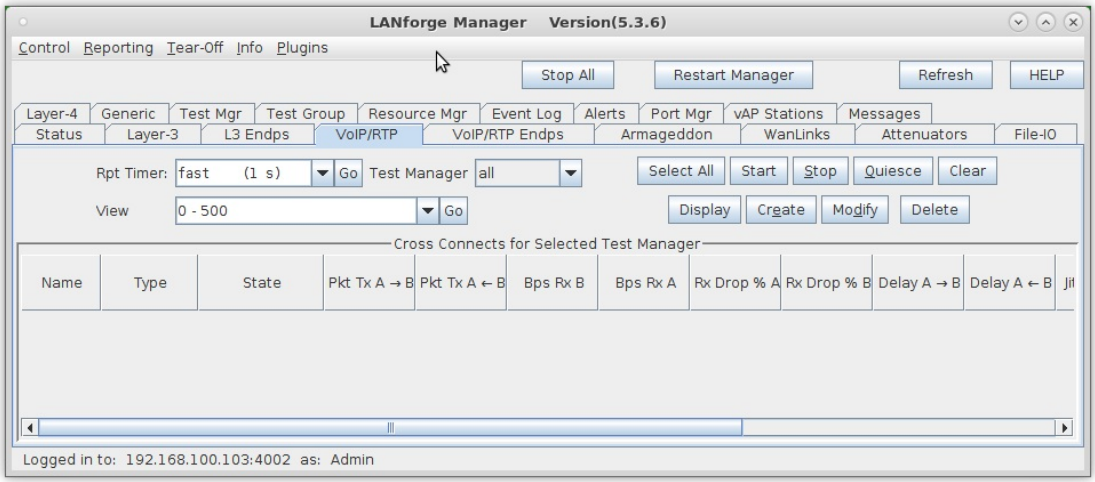
A. If your network has DHCP service, you can select the 'DHCP-IPv4' checkbox so that each port is a DHCP client and will acquire its IP address from your DHCP server

C. Verify the port configuration

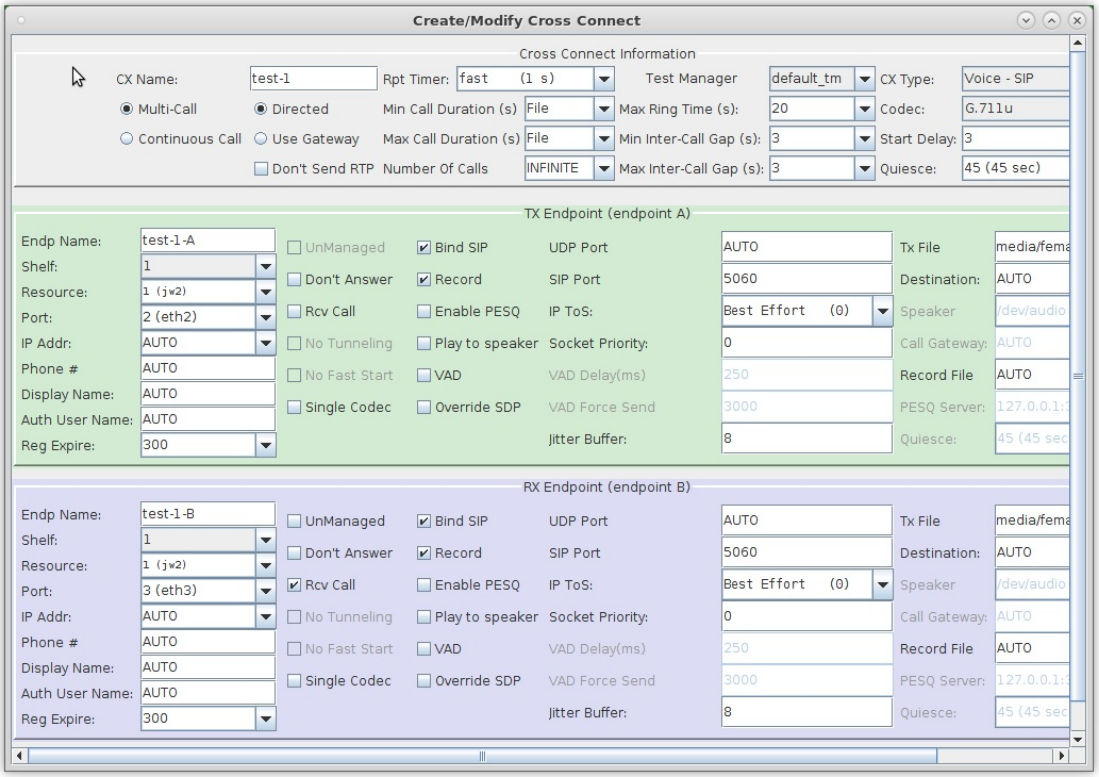


For more information see LANforge User's Guide: Ports (Interfaces)

3. Set up Test 1, a Directed VoIP call.
   A. Go to the **VoIP/RTP** tab



   B. Click the **Create** button:

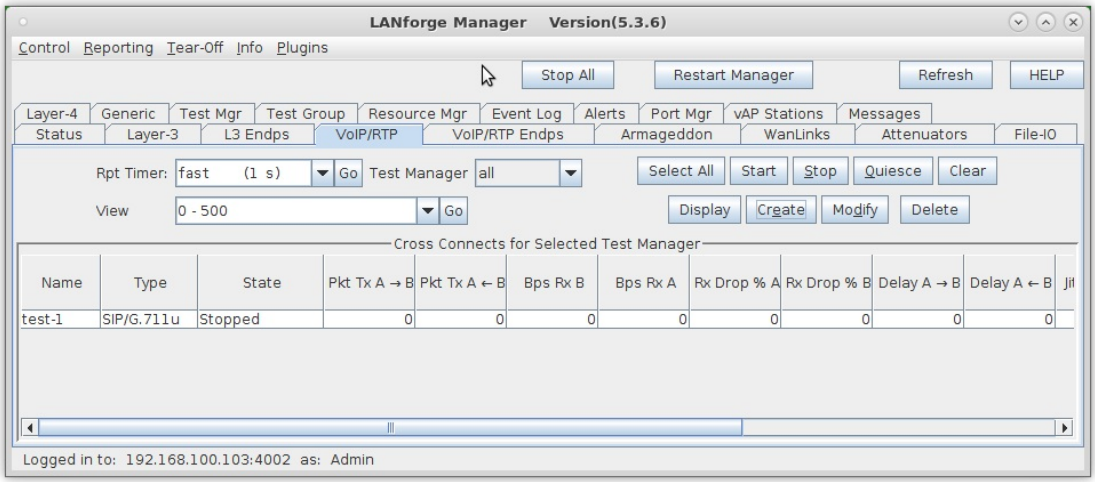


      A. Enter test-1 in the **CX Name** field
      B. Select the **Multi-Call** and **Directed** buttons
      C. Endpoint A is on port eth2 in this example. If you have a PESQ licensed server available, you can select Record and Enable PESQ.
      D. Endpoint B is on port eth3. If you are using PESQ, be sure to enter a Record File and the IP address and port of your PESQ licensed server. Be sure to select the **Rcv Call** checkbox for this endpoint to receive the call.
      E. Click **OK** to create the VoIP Directed call

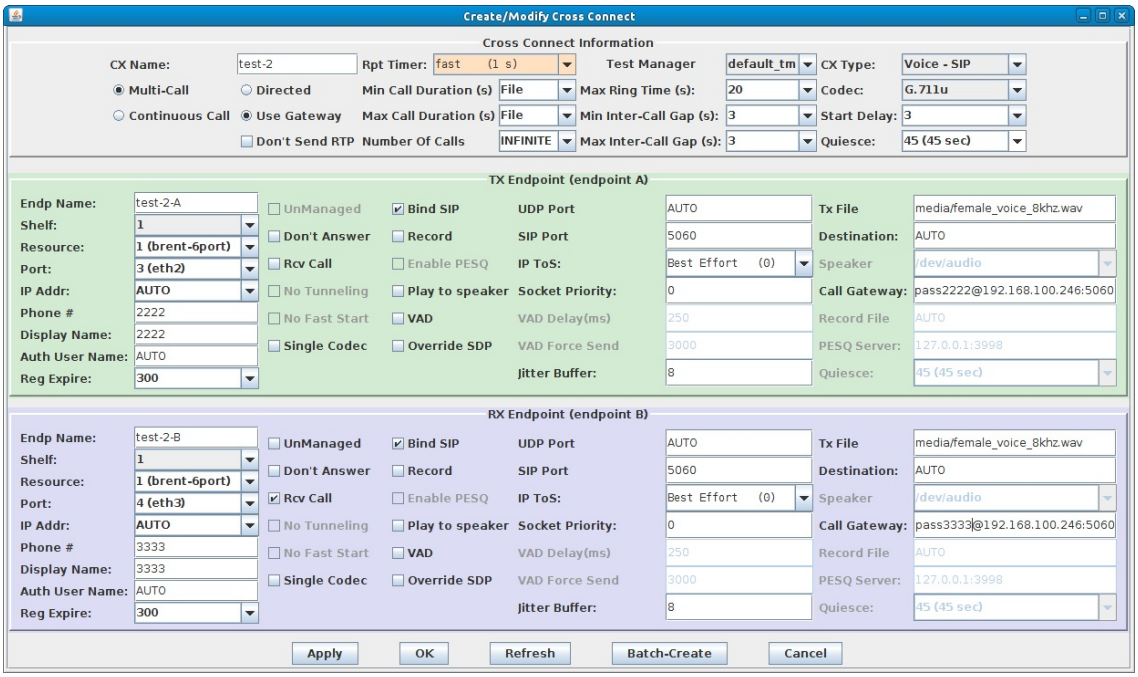
   C. Verify that the test call is created

For more information see LANforge User's Guide: VoIP Call Generator

4. Set up Test 2, a Gateway VoIP call.
   A. Go to the VoIP/RTP tab

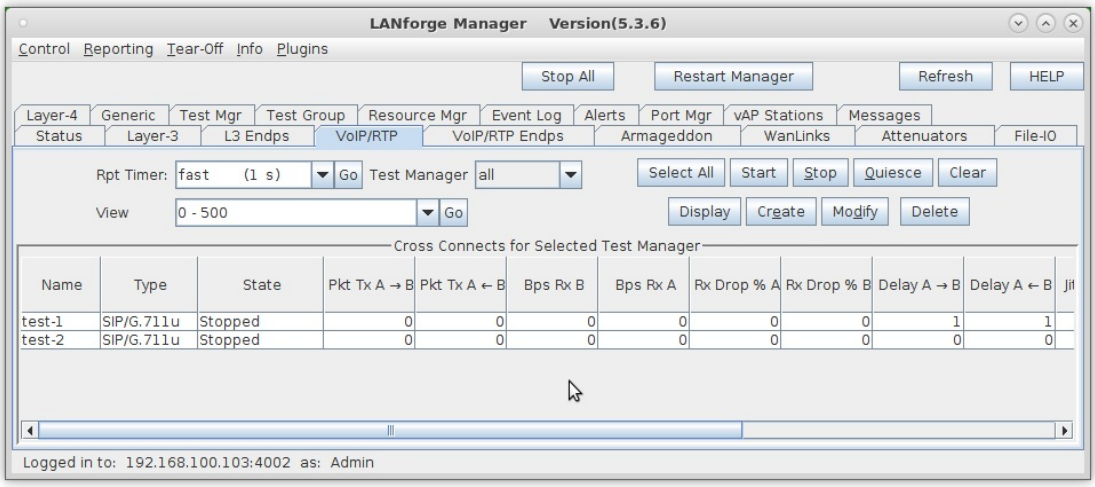


   B. Click the Create button:



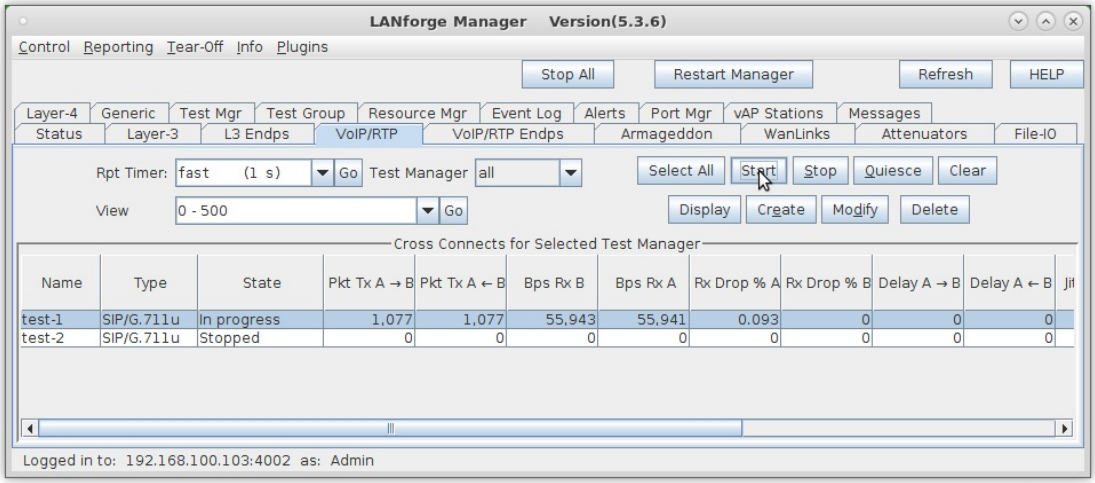
   A. Enter test-2 in the **CX Name** field
   B. Select the **Multi-Call** and **Use Gateway** buttons
   C. Endpoint A is on port eth2 in this example. Be sure to enter the proper username and password for the endpoint so that it can authenticate with the VoIP Gateway if necessary.
   D. Endpoint B is on port eth3. Be sure to select the **Rcv Call** checkbox for this endpoint to receive the call.
   E. Click **OK** to create the VoIP Gateway call

C. Verify that the test call is created

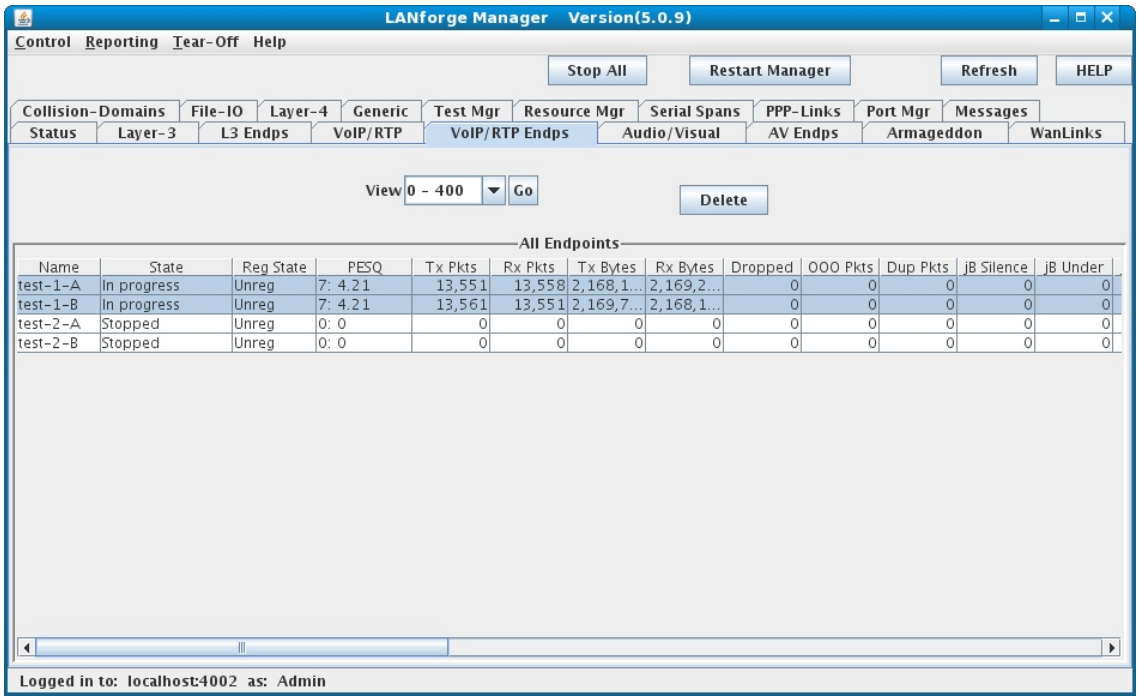


For more information see LANforge User's Guide: VoIP Call Generator

5. Run test-1 and test-2 individually.
   A. Select test-1 and click the **Start** button



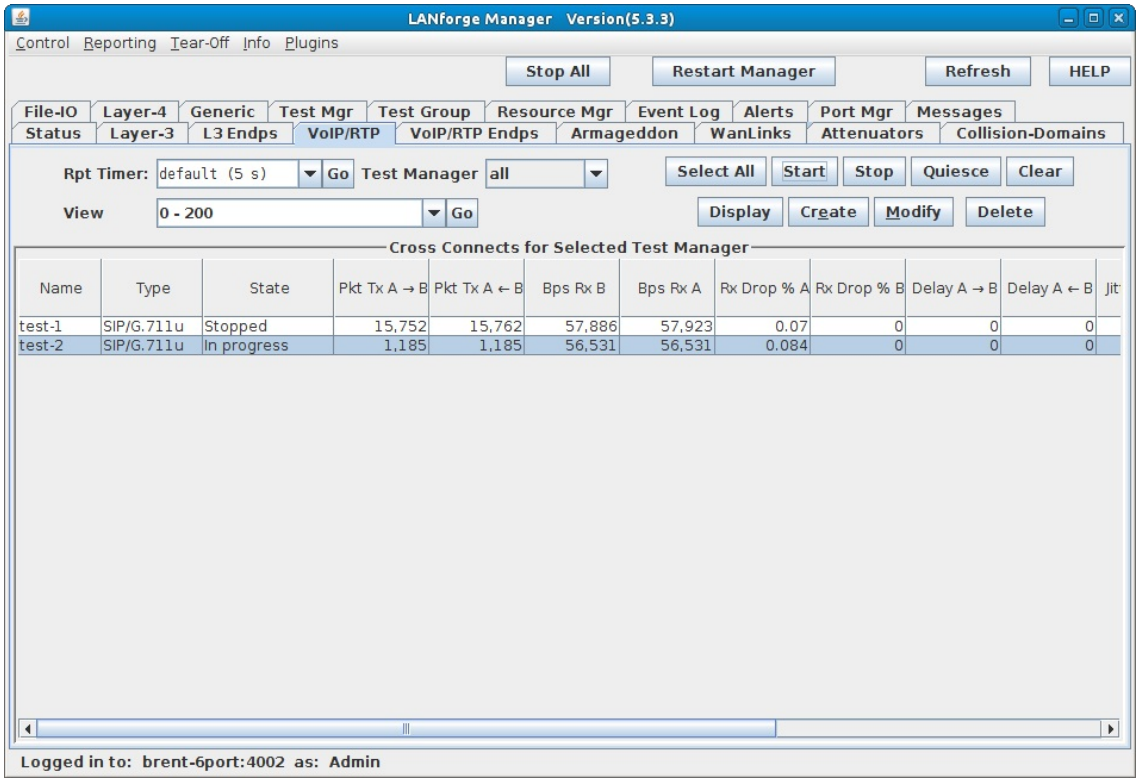
B. Go to the **VoIP/RTP Endps** tab to see detailed results:



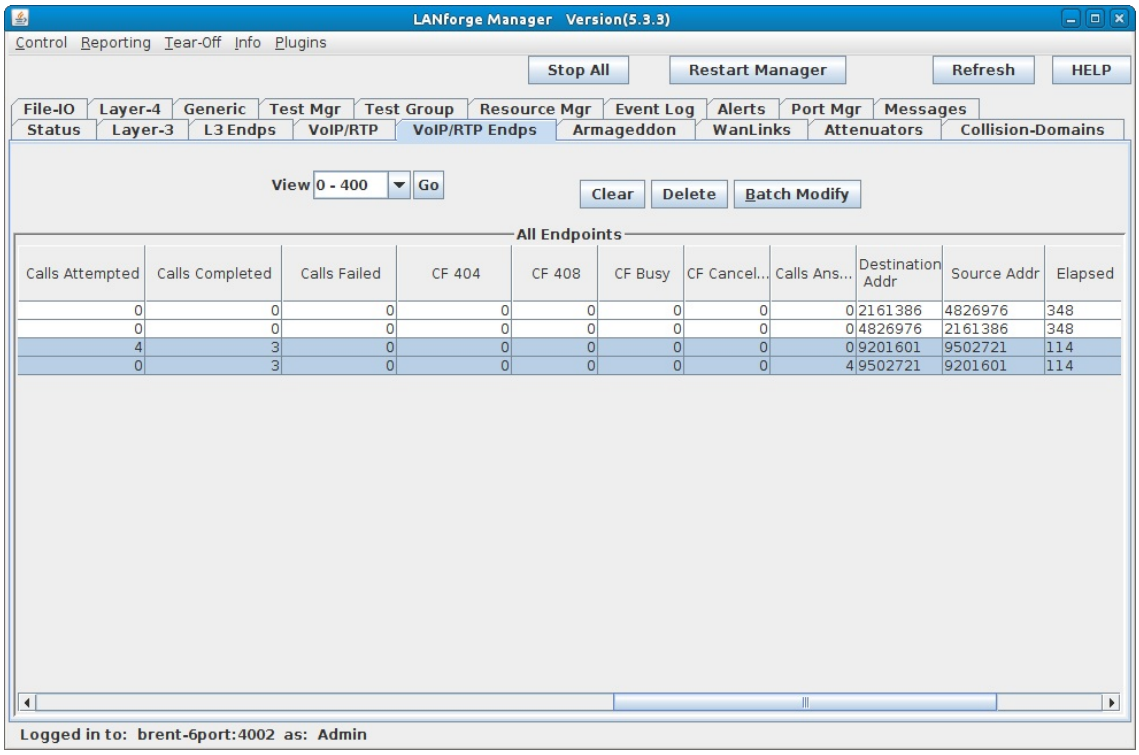
A. The PESQ score will be reported after the first successful call is completed and updated after each subsequent call

B. **NOTE**: Endpoints are unregistered while the call is in progress because they are not calling through the VoIP gateway

C. Stop test-1, select test-2 and click **Start**



D. Go to the **VoIP/RTP Endps** tab to see detailed results:



A. PESQ remains 0: 0 when it is disabled for the call in progress

B. **NOTE**: Endpoints are registered with the VoIP gateway while the call is in progress

C. Calls Attempted, Calls Completed and Calls Failed can be viewed by scrolling to the right on the **VoIP/RTP Endps** tab

For more information see LANforge User's Guide: VoIP Call Generator