

## ScriptHunt with Test Groups

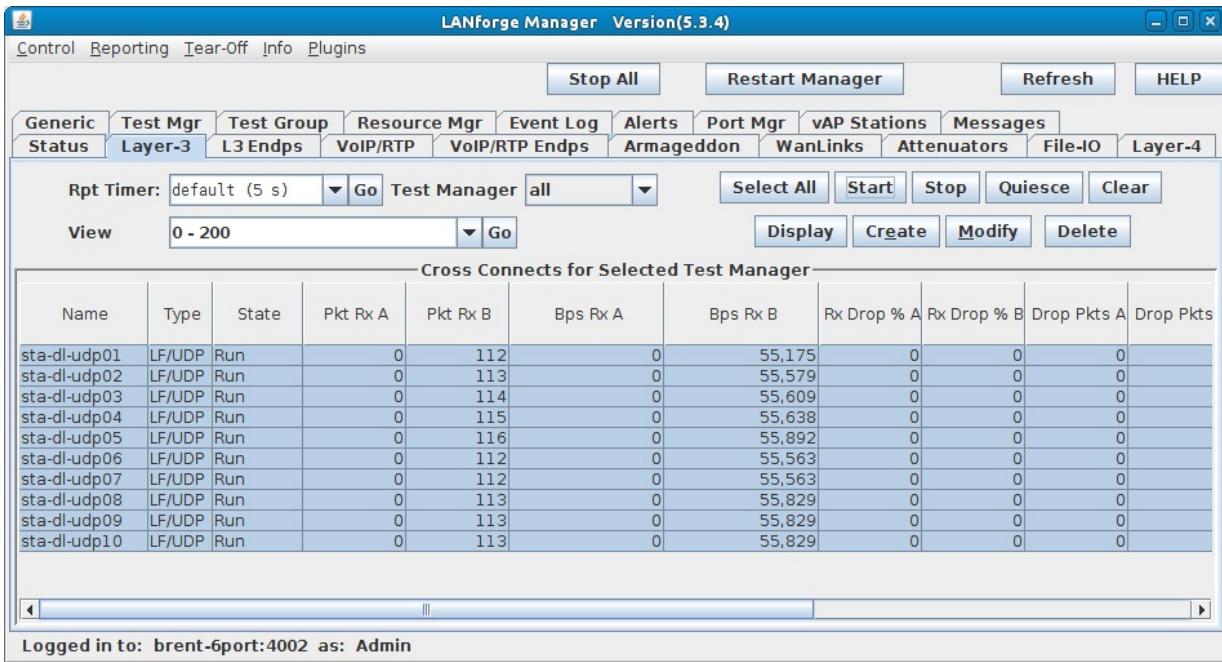
**Goal:** Create a Test Group that uses ScriptHunt to maximize the total rate of multiple connections based on desired constraints.

ScriptHunt is a script that runs connections or 'iterates' and changes tx-rates until a maximum acceptable tx-rate is reached. This can be done for multiple payload sizes and attenuations. Using a Test Group along with ScriptHunt allows you to test multiple connections at the same time.

This cookbook assumes ports and connections are already created and configured. The following areas will be covered:

- Creating and Configuring Test Groups
- ScriptHunt setup
- Running ScriptHunt and checking results
- Using additional Test Groups for alternate tests

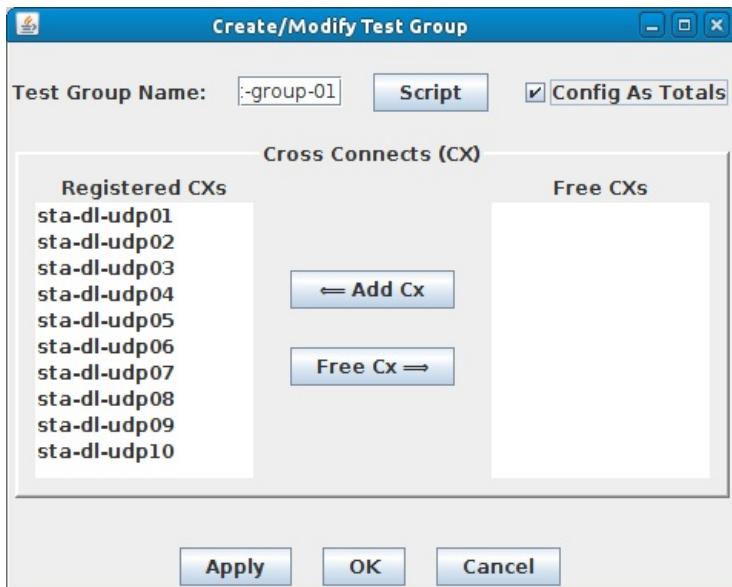
1. It is a good idea to verify connections are running as expected before getting started. The connections below are testing UDP download on 10 wireless stations.



The screenshot shows the LANforge Manager interface. The main window title is "LANforge Manager Version(5.3.4)". The menu bar includes Control, Reporting, Tear-Off, Info, Plugins, Stop All, Restart Manager, Refresh, and HELP. The toolbar has buttons for Stop All, Restart Manager, Refresh, and HELP. The navigation bar includes tabs for 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-IO, and Layer-4. Below the navigation bar are buttons for Rpt Timer (default (5 s)), Go, Test Manager (all), Select All, Start, Stop, Quiesce, Clear, View (0 - 200), Go, Display, Create, Modify, and Delete. The main content area displays a table titled "Cross Connects for Selected Test Manager". The table has columns: Name, Type, State, Pkt Rx A, Pkt Rx B, Bps Rx A, Bps Rx B, Rx Drop % A, Rx Drop % B, Drop Pkts A, and Drop Pkts B. The table lists 10 entries for sta-dl-udp01 through sta-dl-udp10, all of which are currently running (Type: LF/UDP). The Bps Rx A column shows values ranging from 0 to 114, while the Bps Rx B column shows values ranging from 0 to 55,829. The Rx Drop % A and Rx Drop % B columns show 0 for all entries. The Drop Pkts A and Drop Pkts B columns also show 0 for all entries. At the bottom of the table, there are navigation arrows and a status message: "Logged in to: brent-6port:4002 as: Admin".

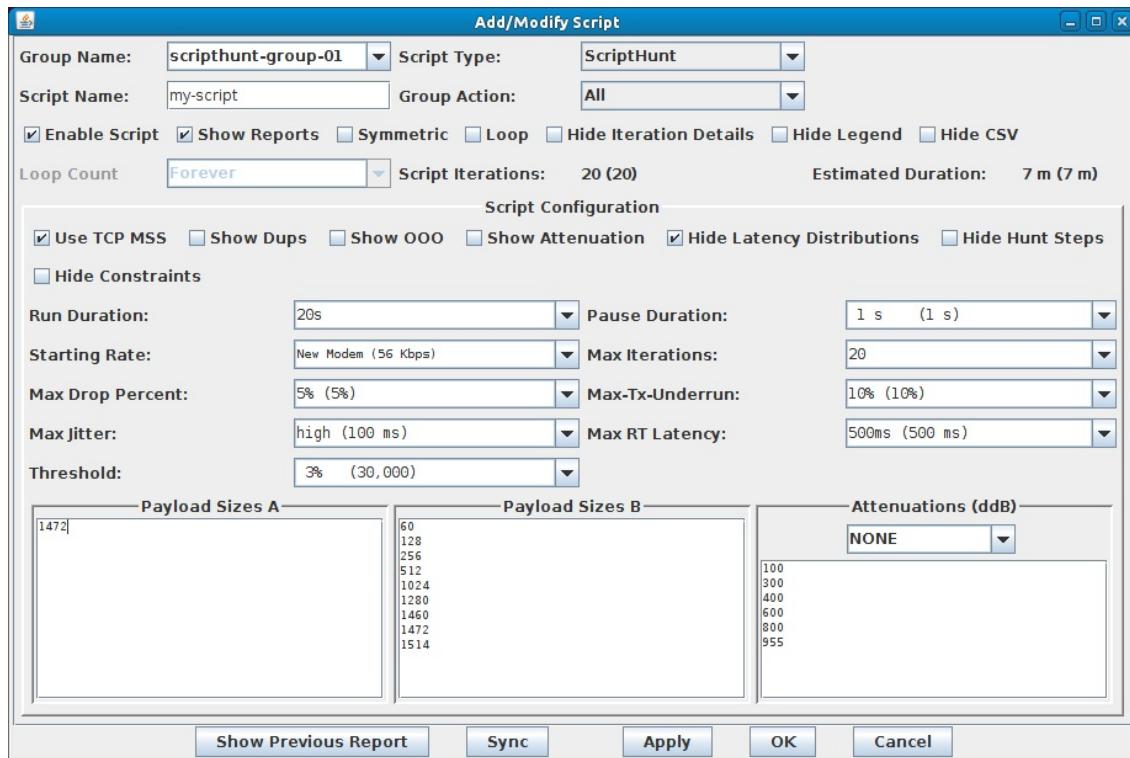
2. Create and Configure Test Group(s).

A. In the Test Group tab, click **Create**.



- A. Give the Test Group a **Name**. The name used here is 'scripthunt-group-01'
- B. Under Free CXs, shift-select the connections you want in the group and click **Add Cx**.
- C. Select the **Config As Totals** checkbox. This makes it so the tx-rate is based on a combination of all connections instead of individually.
- D. The Test Group must be created before setting up the script. Click **Apply** to create it.

B. Click **Script** to open the Add/Modify Script window.



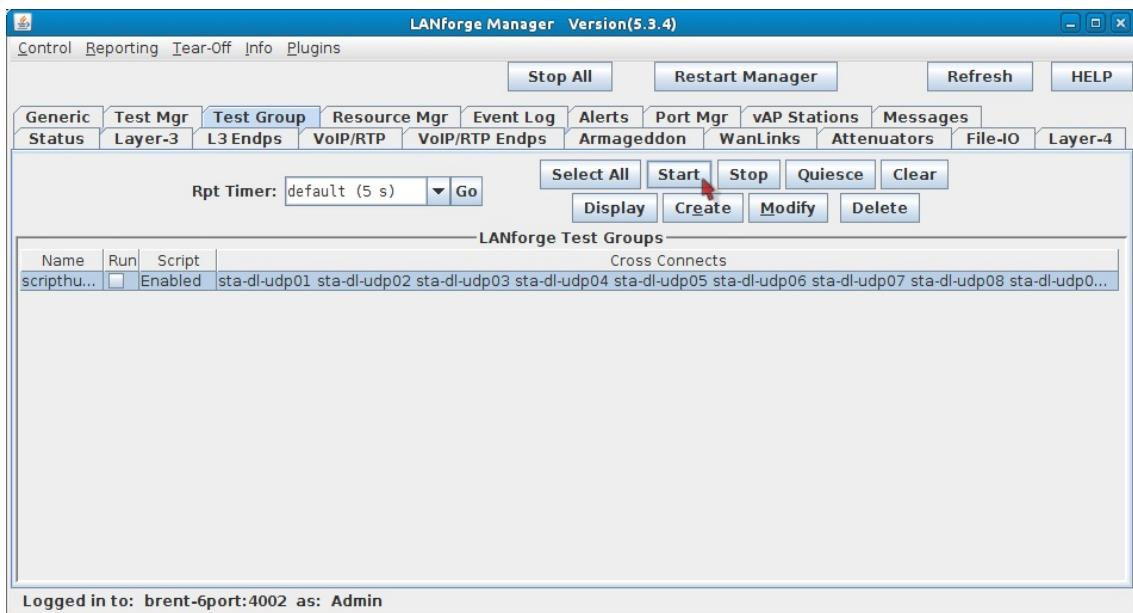
A. In the **Script Type** drop-down menu, select **ScriptHunt**.

**Note:** Most options will be left default for now (all but Run Duration and Payload Sizes A). Below are quick summaries of the drop-down options.

- B. **Run Duration:** Determines how long each iteration lasts. This should be about 15-20 seconds minimum. This test will use **20s**.
- C. **Pause Duration:** Sets how long the script waits between each iteration.
- D. **Starting Rate:** Sets the first tx-rate the script attempts.
- E. **Max Iterations:** Allows you to choose a maximum amount of times you want the script to iterate as it adjusts the rate.
- F. **Max Drop Percent:** Determines the acceptable range of drops for an iteration. In this case if there are more than 5% drops, the current iteration will fail and the next will attempt to make adjustments so there are less drops.
- G. **Max-Tx-Underrun:** With the current setting of 10%, if the actual tx-rate is running 10% slower than the attempted tx-rate, the iteration will fail.
- H. **Max Jitter:** Determines the acceptable maximum jitter for an iteration.
- I. **Max RT Latency:** This determines the maximum acceptable round-trip latency for an iteration.
- J. **Threshold:** If the percent difference of tx-rate from iteration to iteration reaches the value here or less, the script will finish unless there are additional payloads/attenuations to test.
- K. ScriptHunt will find the highest acceptable rate for each payload size listed in **Payload Sizes A and B**. The existing values are suggestions, but any desired value(s) can be entered here. If you wish to test Payload Size B, the **Symmetric** checkbox must be enabled. **Attenuations (dB)** are tested similarly, a Candela attenuator is required and must be connected then selected in the Attenuations drop-down menu. In this specific test, ScriptHunt will just test a payload of 1472 (on endpoint A only) and no attenuations.
- L. Click **OK** to add the script.
- M. Click **OK** in the Create/Modify Test Group window to close it.

3. Start the Test Group and view the results.

A. Select the Test Group and click **Start**.



B. Examine the results.

A. After each iteration completes, the results will update with various information on said iteration.

```

Max-Iterations: 20
Run-Duration: 20000ms Pause-Duration: 1000ms
Constraints: 50000,100000,500000,20,56000,30000,1,100000,
Payload-Sizes-A: 1472
Payload-Sizes-B: 60,128,256,512,1024,1280,1460,1472,1514
Attenuator: NONE Attenuations: 100,300,400,600,800,955
Estimated total script duration: 420 seconds

Started At: Wed Mar 23 14:18:30 2016

# iteration: 0/20 Endpoint: scripthunt-group-01 now: 1458767931437ms duration: 20009ms paused: 0ms
# payload-size: 1472 cfg-rate: 56000
# tx-pkts: 90 tx-bytes: 132480 tx-bytes-low-level: 136260 tx-pps: 4
# tx-bps: 52968 tx-bps-low-level: 54479
# rx-pkts: 0 rx-bytes: 0 rx-bytes-low-level: 0
# rx-pps: 0 rx-bps: 0 rx-bps-low-level: 0
# rx-drops: 0 rx-dups: 0 rx-ooo: 0 machine-load: 0.40
# peer: rx-pkts: 90 rx-bytes: 132480 rx-pps: 4
# rx-bps: 52968 rx-bps-low-level: 54479
# dropped: 0 drop percent: 0.0000 avg-rx-latency(us): 2 avg-rt-latency(us): 2000 peer-machine-load: 0.40
# rx-signal: -29 tx-link-speed: 1300000000 rx-link-speed: 175600000 attenuation: 100 peer-rx-signal: -29 tx-peer-link-speed: 175600000
rx-peer-link-speed: 1300000000
# peer-dropped: 0 peer drop percent: 0.0000
# * Passed constraints *

# iteration: 1/20 Endpoint: scripthunt-group-01 now: 1458767952452ms duration: 20009ms paused: 1006ms
# payload-size: 1472 cfg-rate: 122000
# tx-pkts: 200 tx-bytes: 294400 tx-bytes-low-level: 302800 tx-pps: 10
# tx-bps: 117707 tx-bps-low-level: 121066
# rx-pkts: 0 rx-bytes: 0 rx-bytes-low-level: 0
# rx-pps: 0 rx-bps: 0 rx-bps-low-level: 0
# rx-drops: 0 rx-dups: 0 rx-ooo: 0 machine-load: 0.25
# peer: rx-pkts: 200 rx-bytes: 294400 rx-pps: 10
# rx-bps: 117707 rx-bps-low-level: 121066
# dropped: 0 drop percent: 0.0000 avg-rx-latency(us): 2 avg-rt-latency(us): 2000 peer-machine-load: 0.25
# rx-signal: -32 tx-link-speed: 1300000000 rx-link-speed: 175600000 attenuation: 100 peer-rx-signal: -32 tx-peer-link-speed: 175600000
rx-peer-link-speed: 1300000000
# peer-dropped: 0 peer drop percent: 0.0000
# * Passed constraints *

```

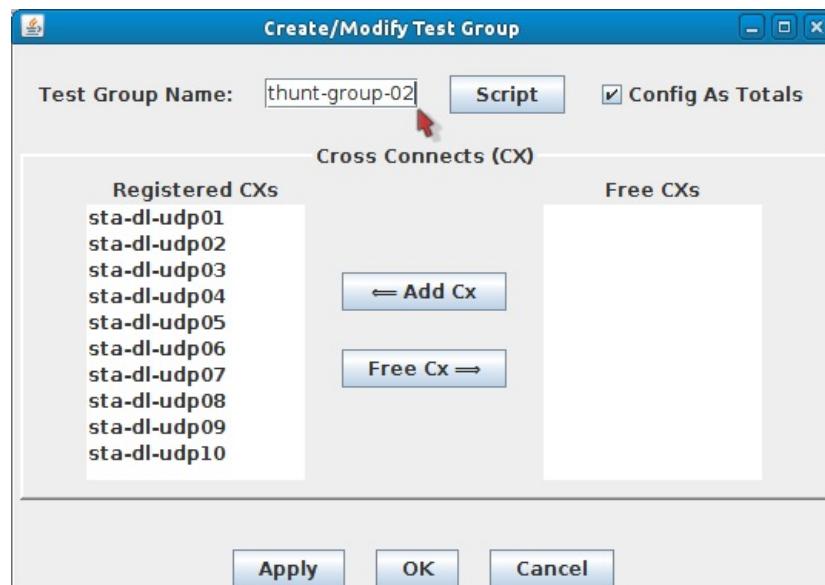
The screenshot shows the "Script Report for: scripthunt-group-01" window. It displays two iterations of test results. The first iteration shows 90 tx-pkts and 132480 tx-bytes. The second iteration shows 200 tx-pkts and 294400 tx-bytes. Both iterations have a duration of 20009ms and a peer-machine-load of 0.40. The window has buttons for "Pause", "Close", "Save File", "Graphical Display", and "Invert RX-Signal X Axis".

- B. When ScriptHunt finishes, the results will show a summary of all iterations. This data shows how high the rates reached and which failure constraints the iterations hit. This particular test reached about 429 Mbps tx-rate within the specified constraints. Notice how the configured rate (cfg-rate (bps) adjusts up and down as the drop percent (drop% peer) goes lower and higher than the 5% constraint set earlier.

| Script Report for: scripthunt-group-01   |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
|--|--------------------------------------|--|--|--|-------------------|----------------|----------------|-----------------|-----------------|------------------|------------|--------------------|
| Summary data for each iteration:   |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
| #  | pld-size<br>(bytes)                  | cfg-rate<br>(bps)                        | tx-bps<br>peer                                   | rx-bps<br>peer                                   | rx-bps-LL<br>peer | tx-pps<br>peer | rx-pps<br>peer | tx-pkts<br>peer | rx-pkts<br>peer | cx-drops<br>peer | drop% peer | rx-lat(ms)<br>peer |
| 0*   | 1472                                 | 56000                                    | 52968  | 52668  | 4                 | 4              | 90             | 90              | 90              | 0                | 0.000      | 2                  |
| 1*   | 1472                                 | 122000                                   | 117707   | 117707   | 121066            | 10             | 10             | 200             | 200             | 0                | 0.000      | 2                  |
| 2*   | 1472                                 | 198000                                   | 194207   | 199748   | 16                | 16             | 330            | 330             | 0               | 0.000            | 2          |                    |
| 3*   | 1472                                 | 406000                                   | 400204   | 411623   | 34                | 34             | 680            | 680             | 0               | 0.000            | 2          |                    |
| 4*   | 1472                                 | 1228000                                  | 1223970  | 1258893  | 104               | 104            | 2080           | 2080            | 0               | 0.000            | 2          |                    |
| 5*   | 1472                                 | 4922000                                  | 4914269  | 5054485  | 417               | 417            | 8350           | 8350            | 0               | 0.000            | 1          |                    |
| 6*   | 1472                                 | 24620000                                 | 24605425   | 25303850   | 2089              | 2089           | 41810          | 41804           | 6               | 0.014            | 1          |                    |
| 7*   | 1472                                 | 147730000                                | 147008451  | 146991385  | 151185433         | 12484          | 12482          | 249812          | 249783          | 29               | 0.012      | 2                  |
| 8  | 1472                                 | 1034120000                               | 1032603954                                       | 293173554  | 301538560         | 87687          | 24896          | 1754620         | 498166          | 1256454          | 71.608     | 73                 |
| --- Failed drop-percent constraint, reported: 71.608% max: 5   |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
| 9  | 1472                                 | 59925000                                 | 588184423  | 355069646  | 365200709         | 49948          | 30152          | 999454          | 603341          | 396113           | 39.633     | 51                 |
| --- Failed drop-percent constraint, reported: 39.632% max: 5   |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
| 10*  | 1472                                 | 369327500                                | 368777122  | 368710032  | 379230291         | 31316          | 31310          | 626633          | 626519          | 114              | 0.018      | 3                  |
| 11   | 1472                                 | 480126250                                | 477208437  | 381443173  | 392326742         | 40524          | 32392          | 810841          | 648123          | 162718           | 20.068     | 43                 |
| --- Failed drop-percent constraint, reported: 20.067% max: 5   |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
| 12*  | 1472                                 | 424726875                                | 423121467  | 417510962  | 429422639         | 35931          | 35454          | 718940          | 709407          | 9533             | 1.326      | 8                  |
| 13   | 1472                                 | 452426562                                | 449089913  | 389657894  | 400775850         | 38136          | 33089          | 763102          | 662114          | 100988           | 13.234     | 36                 |
| --- Failed drop-percent constraint, reported: 13.233% max: 5   |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
| 14   | 1472                                 | 438576718                                | 434666731  | 396467887  | 407780150         | 36906          | 33667          | 738455          | 673652          | 64803            | 8.775      | 27                 |
| --- Failed drop-percent constraint, reported: 8.775% max: 5  |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
| 15*  | 1472                                 | 431651796                                | 429019767  | 417360297  | 429268675         | 36432          | 35442          | 728962          | 709151          | 19811            | 2.718      | 14                 |
| Peer Endpoint Summary data for each iteration:   |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
| WARNING: Script is not symmetric. Peer endpoint will not be paused by this script, so the packet drop calculations will probably be slightly inaccurate due to races between transmitting and receiving. |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
| #  | pld-size<br>(bytes)                  | cfg-rate<br>(bps)                        | tx-bps<br>peer                                   | rx-bps<br>peer                                   | rx-bps-LL<br>peer | tx-pps<br>peer | rx-pps<br>peer | tx-pkts<br>peer | rx-pkts<br>peer | cx-drops<br>peer | drop% peer | rx-lat(ms)<br>peer |
| 0  | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 1  | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 2  | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 3  | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 4  | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 5  | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 6  | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 7  | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 8  | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 9  | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 10   | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 11   | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 12   | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 13   | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 14   | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| 15   | 0                                    | 0  | 0  | 0  | 0                 | 0              | 0              | 0               | 0               | 0                | 0.000      | 0                  |
| System Load at end of test: 0.70   |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
| End of Report, date: Wed Mar 23 14:24:07 2016  |                                      |  |  |  |                   |                |                |                 |                 |                  |            |                    |
| <input type="checkbox"/> Pause   | <input type="button" value="Close"/> | <input type="button" value="Save File"/> | <input type="button" value="Graphical Display"/> | <input type="checkbox"/> Invert RX-Signal X Axis |                   |                |                |                 |                 |                  |            |                    |

#### 4. Create another Test Group with alternate ScriptHunt settings.

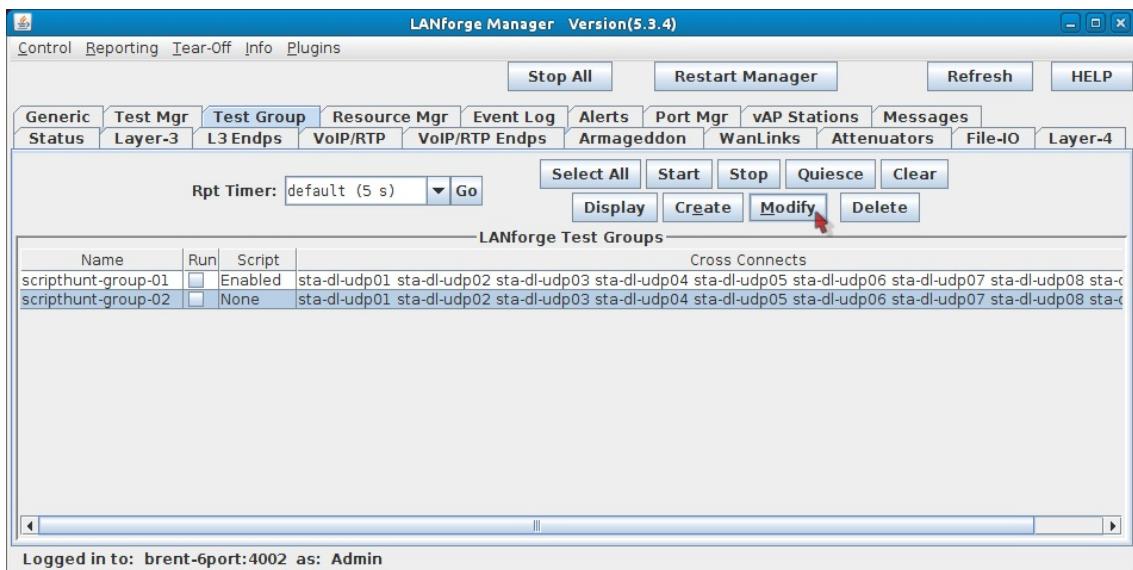
- A. We will essentially copy the last Test Group, then change ScriptHunt settings. Select 'scripthunt-group-01' and click **Modify**.



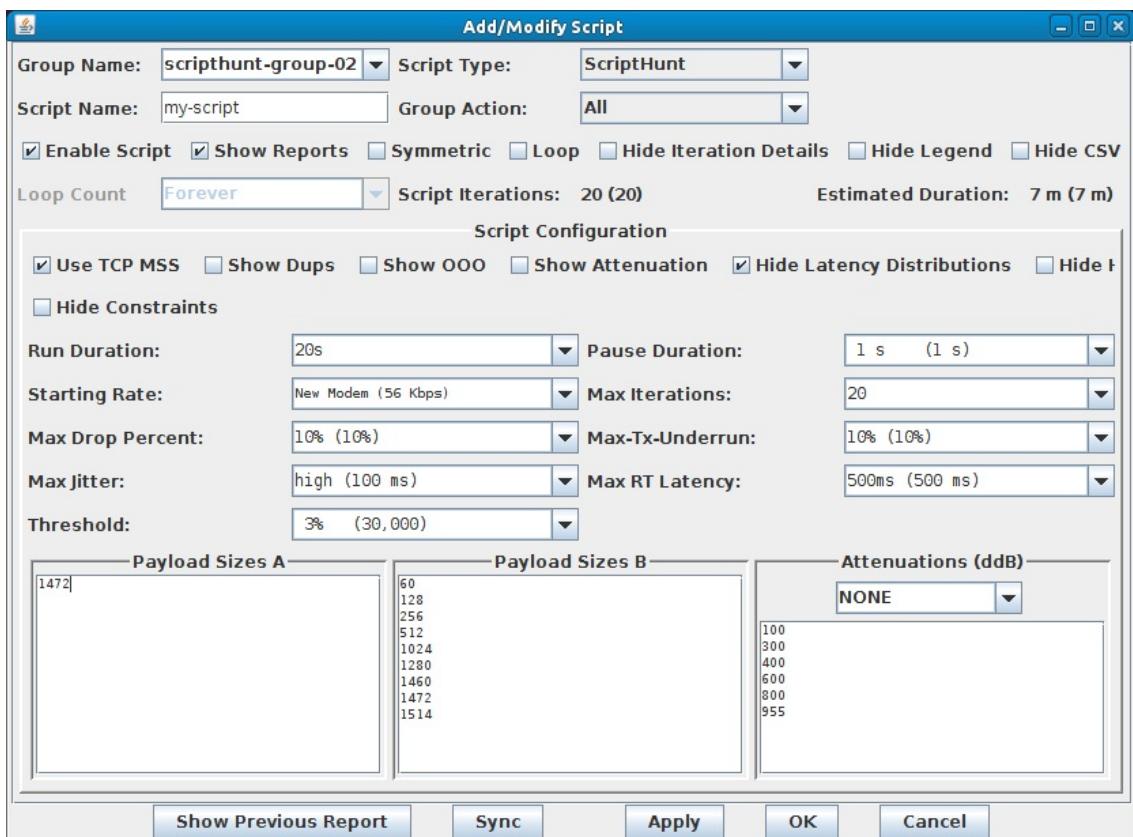
- A. Change the **Test Group Name** to 'scripthunt-group-02'.

- B. Click **OK**.

B. Select scripthunt-group-02 and click **Modify**.

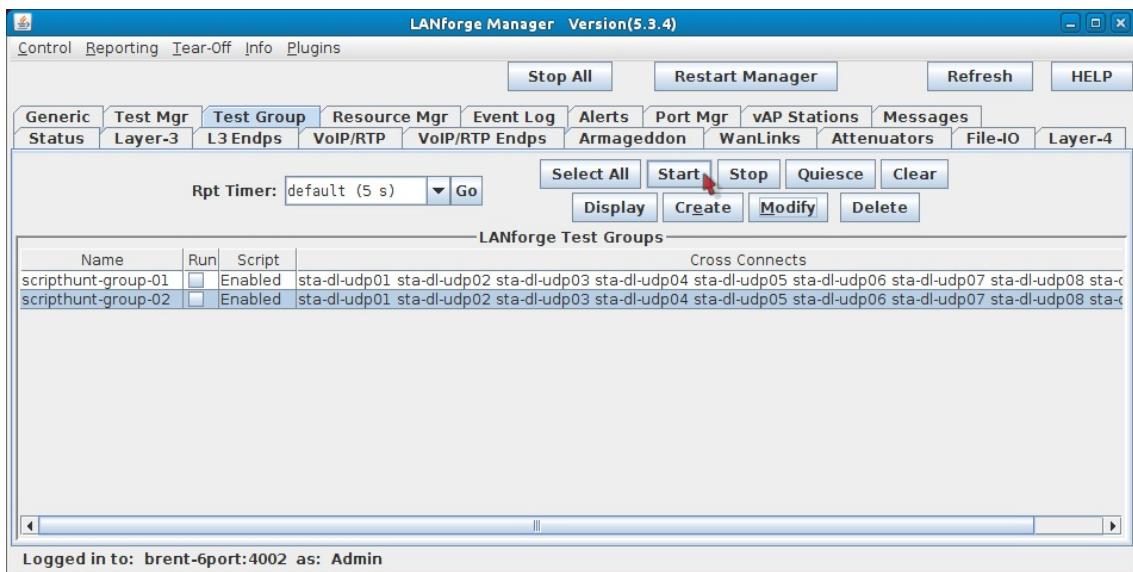


C. Click **Script**.



- Set the **Script Type** to **ScriptHunt**.
- Again, **Run Duration** should be 15-20s minimum. It is set to **20s** for this test.
- Since the only constraint limiting the first Test Group was **Max Drop Percent**, we'll raise it to **10%** and compare the results.
- Remove all but **1472** in **Payload Sizes A**.
- Click **OK**.
- Click **OK** in the Create/Modify Test Group window.
- Be sure 'scripthunt-group-01' is stopped! If you have two different ScriptHunts running on the same connection(s), they will try to fight each other.

E. Select 'scripthunt-group-02' and click **Start**.



F. Observe the results summary.

| Script Report for: scripthunt-group-02   |  |  |  |  |                   |                  |                |                   |                 |                  |               |                    |                    |                    |
|--|--|--|--|--|-------------------|------------------|----------------|-------------------|-----------------|------------------|---------------|--------------------|--------------------|--------------------|
| Summary data for each iteration:   |  |  |  |  |                   |                  |                |                   |                 |                  |               |                    |                    |                    |
| ##   | pld-size<br>- (bytes)                                      | cfg-rate<br>(bps)                        | tx-bps<br>- peer                                 | rx-bps<br>peer                                   | rx-bps-LL<br>peer | tx-pps<br>- peer | rx-pps<br>peer | tx-pkts<br>- peer | rx-pkts<br>peer | cx-drops<br>peer | drop%<br>peer | rx-lat(ms)<br>peer | rx-lat(ms)<br>peer | rx-lat(ms)<br>peer |
| 0*   | 1472   | 56000                                    | 52968  | 52968  | 54479             | 4                | 4              | 90                | 90              | 0                | 0.000         | 2                  |                    |                    |
| 1*   | 1472   | 122000                                   | 117707   | 117707   | 121066            | 10               | 10             | 200               | 200             | 0                | 0.000         | 2                  |                    |                    |
| 2*   | 1472   | 198000                                   | 194217   | 194217   | 199758            | 16               | 16             | 330               | 330             | 0                | 0.000         | 3                  |                    |                    |
| 3*   | 1472   | 406000                                   | 400204   | 400204   | 411623            | 34               | 34             | 680               | 680             | 0                | 0.000         | 2                  |                    |                    |
| 4*   | 1472   | 1228000                                  | 1224092  | 1224092  | 1259018           | 104              | 104            | 2080              | 2080            | 0                | 0.000         | 1                  |                    |                    |
| 5*   | 1472   | 4922000                                  | 4914269  | 4914269  | 5054485           | 417              | 417            | 8350              | 8350            | 0                | 0.000         | 1                  |                    |                    |
| 6*   | 1472   | 24620000                                 | 24605425   | 24603071   | 25305061          | 2089             | 2089           | 41810             | 41810           | 4                | 0.010         | 1                  |                    |                    |
| 7*   | 1472   | 147730000                                | 146362556  | 146270749  | 15044235          | 12429            | 12421          | 248702            | 248546          | 156              | 0.063         | 3                  |                    |                    |
| 8  | 1472   | 1034120000                               | 1032016412                                       | 281383368  | 289411969         | 87637            | 23895          | 1753534           | 478108          | 1275426          | 72.735        | 80                 |                    |                    |
| ---  | Failed drop-percent constraint, reported: 72.7346% max: 10 |  |  |  |                   |                  |                |                   |                 |                  |               |                    |                    |                    |
| 9  | 1472   | 590925000                                | 586655004  | 352662688  | 362725075         | 49818            | 29948          | 996905            | 599281          | 397624           | 39.886        | 53                 |                    |                    |
| ---  | Failed drop-percent constraint, reported: 39.8858% max: 10 |  |  |  |                   |                  |                |                   |                 |                  |               |                    |                    |                    |
| 10*  | 1472   | 369327500                                | 365100140  | 363247431  | 373611828         | 31004            | 30846          | 620354            | 617206          | 3148             | 0.507         | 4                  |                    |                    |
| 11   | 1472   | 480126250                                | 476564303  | 382428690  | 393240378         | 40469            | 32475          | 809787            | 649830          | 159957           | 19.753        | 43                 |                    |                    |
| ---  | Failed drop-percent constraint, reported: 19.753% max: 10  |  |  |  |                   |                  |                |                   |                 |                  |               |                    |                    |                    |
| 12*  | 1472   | 424726875                                | 422719992  | 410964864  | 422690764         | 35897            | 34899          | 718364            | 698389          | 19975            | 2.781         | 14                 |                    |                    |
| 13   | 1472   | 452426562                                | 448369037  | 398739633  | 410116715         | 38075            | 33860          | 761839            | 677512          | 84327            | 11.069        | 28                 |                    |                    |
| ---  | Failed drop-percent constraint, reported: 11.0689% max: 10 |  |  |  |                   |                  |                |                   |                 |                  |               |                    |                    |                    |
| 14*  | 1472   | 438576718                                | 434936899  | 398506573  | 409877005         | 36934            | 33841          | 739016            | 677116          | 61900            | 8.376         | 26                 |                    |                    |
| 15*  | 1472   | 445501640                                | 444155458  | 402837358  | 414331359         | 37717            | 34208          | 754755            | 684543          | 70212            | 9.303         | 23                 |                    |                    |
| Peer Endpoint Summary data for each iteration:   |  |  |  |  |                   |                  |                |                   |                 |                  |               |                    |                    |                    |
| WARNING: Script is not symmetric. Peer endpoint will not be paused by this script, so the packet drop calculations will probably be slightly inaccurate due to races between transmitting and receiving. |  |  |  |  |                   |                  |                |                   |                 |                  |               |                    |                    |                    |
| ##   | pld-size<br>- (bytes)                                      | cfg-rate<br>(bps)                        | tx-bps<br>- peer                                 | rx-bps<br>peer                                   | rx-bps-LL<br>peer | tx-pps<br>- peer | rx-pps<br>peer | tx-pkts<br>- peer | rx-pkts<br>peer | cx-drops<br>peer | drop%<br>peer | rx-lat(ms)<br>peer | rx-lat(ms)<br>peer | rx-lat(ms)<br>peer |
| 0  | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 1  | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 2  | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 3  | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 4  | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 5  | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 6  | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 7  | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 8  | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 9  | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 10   | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 11   | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 12   | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 13   | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 14   | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| 15   | 0  | 0  | 0  | 0  | 0                 | 0                | 0              | 0                 | 0               | 0                | 0.000         | 0                  |                    |                    |
| System Load at end of test: 0.81   |  |  |  |  |                   |                  |                |                   |                 |                  |               |                    |                    |                    |
| End of Report, date: Wed Mar 23 16:15:02 2016  |  |  |  |  |                   |                  |                |                   |                 |                  |               |                    |                    |                    |
| <input type="checkbox"/> Pause   | <input type="button" value="Close"/>                       | <input type="button" value="Save File"/> | <input type="button" value="Graphical Display"/> | <input type="checkbox"/> Invert RX-Signal X Axis |                   |                  |                |                   |                 |                  |               |                    |                    |                    |

- A. Compare the two results final tx-bps. The first test group got 429 Mbps at 5% maximum drops. Because the second Test Group's ScriptHunt was set at 10% maximum drops, it was able to achieve a higher tx-bps of 444 Mbps.