

NETROPY[®] TRAFFIC GENERATOR:
SESSIONSTRIKE
USER'S GUIDE
Version 1.1

Netropy® Traffic Generator SessionStrike User's Guide

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1 OVERVIEW

Apposite Technologies would like to thank you for purchasing the Apposite Technologies' Netropy Traffic Generator SessionStrike. This User's Guide is intended to describe the proper installation, configuration, and operation of this product. Please reference the *Quick Start Guide* and *Hardware Guide* for additional information. The Quick Start Guide may be used to facilitate initial configuration and the Hardware Guide to outline the specific hardware components for each model.

1.1 Netropy Traffic Generator Configuration

The Netropy Traffic Generator must be configured through the browser-based Graphical User Interface (GUI) or using the CLI. The recommended browser is Google Chrome using HTTP or HTTPS.

1.2 SessionStrike Operation

The configuration and use of the SessionStrike requires the following configuration steps accessed using the system's GUI:

1. **Open the GUI**
Connect to the Netropy Traffic Generator using the default IP/Hostname assigned. Login using your user account credentials.
2. **Reserve Ports**
Reserve the specified quantity of ports you will need for your test.
3. **Create Test Bed**
Name and select SessionStrike to configure a new Test Bed.
4. **Adjust Configuration Ports**
Add or remove selected ports from the Test Bed.
5. **Configure Client Settings**
Configure the settings for client machines and traffic profile.
6. **Configure the HTTP Server Settings**
Configure the settings for servers.

7. **Start the Test**

Click the “Start Test” button to begin capturing data on the Test Bed.

8. **Evaluate results and logs**

View the graphs and statistics to analyze and evaluate the test results. Download any logs and reports.

9. **Adjust configuration**

Alter the configuration after the initial test. This can be conducted in an effort to analyze various different configurations. All previous configuration steps from 4 to 6 can be adjusted on the same Test Bed.

2 INSTALLATION AND SET-UP

To configure and operate the Netropy Traffic Generator SessionStrike through its browser-based GUI, the dedicated Ethernet management port must first be configured with an appropriate IP address and subnet mask. For convenience, the MGMT interface comes pre-configured with an IP address of 10.0.0.10 and is accessible from a directly connected host on the 10.0.0.0/255.0.0.0 subnet. The IP address and subnet mask of the MGMT interface can be changed through the GUI by an account with administrator privileges or using CLI.

2.1 Preparation

Management of the Netropy Traffic Generator device through the GUI requires a PC running an up-to-date web browser.

Initial configuration of the management interface requires:

- ▶ a PC running a supported web browser that can be configured and placed on the 10.0.0.0/255.0.0.0 network.

2.2 Hardware Installation

The Netropy Traffic Generator appliance is designed for installation in a standard 19" rack. Please refer to the *Hardware Guide* for your specific model for rack-mount installation instructions.

Plug either one or two standard power cords into the Netropy Traffic Generator device, depending on your model, and turn on the power. Either a U.S. standard or U.S. Y-power cable will be supplied with each unit. The system will be available for use within 1-4 minutes.

2.3 IP Address Configuration via the Netropy Traffic Generator GUI

To configure the MGMT interface using the Netropy Traffic Generator GUI:

- ❶ Configure a PC running a supported web browser with the IP address 10.0.0.2 or other address on the 10.0.0.0/255.0.0.0 subnet.
- ❷ Connect an Ethernet cable between the PC and the MGMT port on the front of the Netropy Traffic Generator.
- ❸ Open the browser on the PC and enter <http://10.0.0.10> in the address bar. Review the End User License Agreement.
- ❹ Review the End User License Agreement. The Netropy Traffic Generator GUI will be displayed once the License Agreement is accepted.
- ❺ Log in using the username "admin@apposite-tech.com" and password "admin" to access the administrator portal.
- ❻ Click on IP management in the top right corner and select change IP. Enter your network settings and select "Apply" to change these settings.
- ❼ After the management interface has been configured, use the Ethernet cable to connect the MGMT port of the Netropy Traffic Generator the management network.

2.4 IP Address Configuration via the Serial Console

- ❶ Using the provided RJ45 to DB9 cable, connect the serial port of a PC running terminal emulation software to the CONSOLE port of the Netropy. Set the serial port parameters to 9600 baud, 8 bits, no parity, 1 stop bit, and disable flow control. For more details on connecting to the serial console, see the Hardware Guide for your specific model.
- ❷ Press [ENTER] to display a login prompt. At the prompt, log in as "admin", password is "admin".

```
ntg login: admin
```

- ❸ Use the following commands to set the IP address, netmask, and default gateway of the Netropy management interface:

```
mgmt set gw <default-gateway>
```

```
mgmt set addr <ip-address> netmask <mask>
```

IP addresses and subnet masks are entered in dotted-decimal format. For example:

```
[ntg]> mgmt set addr 192.168.1.1 netmask 255.255.255.0
```

- ❹ Once the management interface has been configured, use an Ethernet cable to connect the MGMT port of the Netropy to the management network. Open a browser and enter the IP address of the MGMT interface in the address bar. The Netropy End User License Agreement will be displayed.

- 5 Review the License Agreement. The Netropy GUI will be displayed once the License Agreement is accepted.
- 6 Log in using username "admin@apposite-tech.com" password "admin".

3 CONFIGURATION

To enable efficient configuration of the Netropy SessionStrike system, it is best to develop a fundamental understanding of some basic concepts and terminology.

3.1 Ports

A port is a physical connection from one device or host to another. Ports can be configured to adjust bandwidth, line rate, mapping, and mode. These factors will alter the rates and manner through which traffic is transmitted over a link.

Refer to Section 4 and 6 for additional information on how to configure and reserve ports.

3.2 Servers

Netropy Traffic Generator AppPlayback uses virtual hosts to simulate devices on a network.

Refer to Section 8 for additional information on how to configure hosts.

4 PORTS

4.1 Overview of Ports


Ports can either be set into release or reserve status. By releasing the port, you release ownership of the port, allowing it to be accessed by other users. By reserving the port, the port is retained and can be used in new “Test Beds.”

Reserving a port will not allow any other users to manage and use this same port.

These options can be enabled by clicking the switch in the Ports section of the Home page.

In order to create a test bed, the necessary ports must be selected and reserved.

Ports

Ports ID	Status	MAC Address	IP Address	Reserved By	Active Feature	Test Name	Test Status	Reserve/Release
0	UP	00:0c:29:1d:35:53	localhost	Test	SessionStrike	Session Strike	Running	
1	UP	00:0c:29:1d:35:5d	localhost	Test	SessionStrike	Session Strike	Running	


 Create Testbed

Figure 1: Reserve/Release Ports

5 TEST BEDS

5.1 Overview of Test Beds

A test bed is a platform used to configure and develop a simulated system. The test bed can be configured to emulate the specific hosts and traffic streams needed to accurately reflect the requirements of your system.

5.2 Configuring Test Beds

To create a Test Bed, select the “Create TestBed” button underneath the Port section. Select “SessionStrike” from the menu and name the test bed. After naming and selecting the proper menu option, double click the “SessionStrike” icon to add the new test bed.

The name of the test can be a maximum of 15 characters.

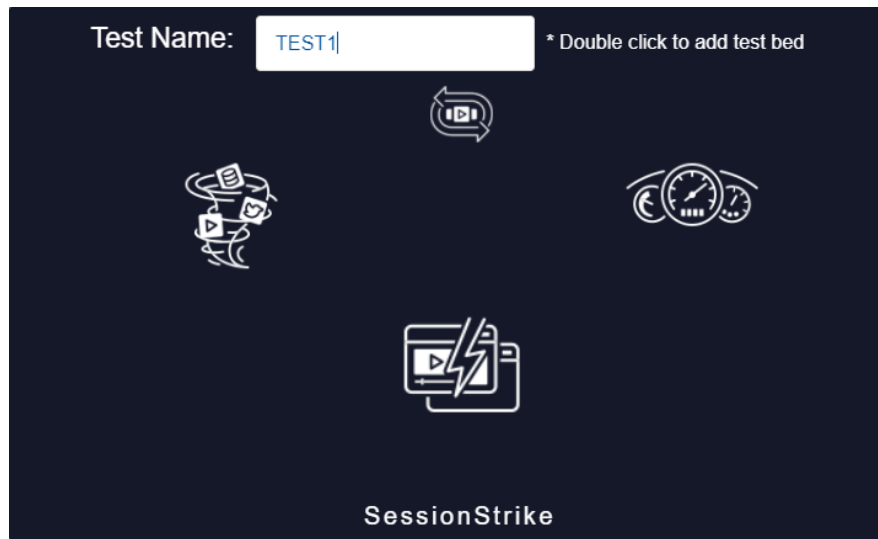


Figure 2: Naming Test Bed

After a few seconds, the new test bed should appear in the Test Bed section of the home page. Select “Configure” to begin configuring the new test bed. This operation will redirect you to the four-step configuration menu, starting with the Port Reservation tab.

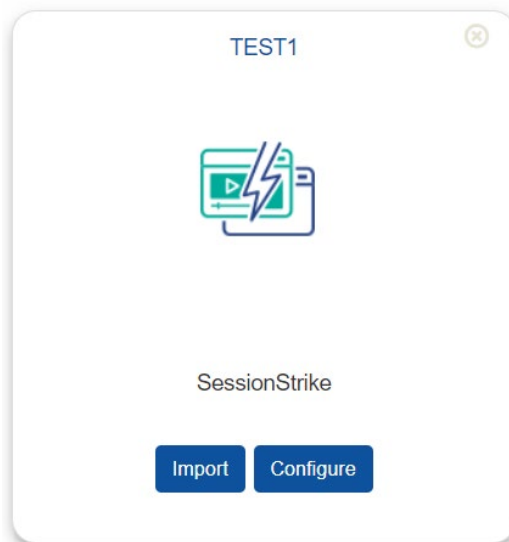


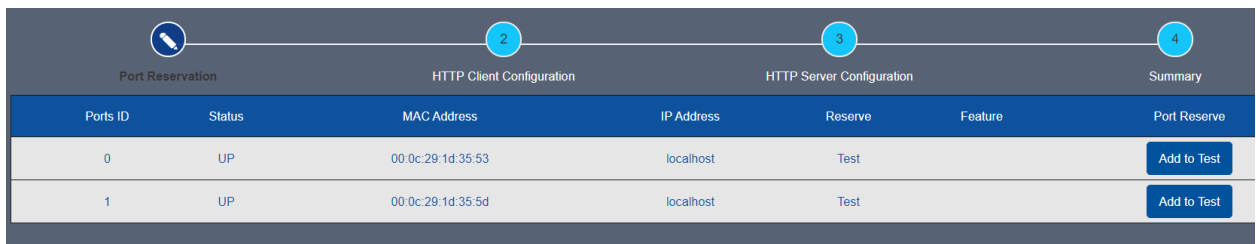
Figure 3: Configuring Test Bed

6 TEST BED:

PORT RESERVATION

6.1 Ports Overview

After logging in to the platform, you will be able to view the current ports available. This overview provides information regarding the status, MAC address, IP address, test name, and reservation state of the ports.



The screenshot shows a web interface with four tabs at the top: 'Port Reservation' (selected), 'HTTP Client Configuration', 'HTTP Server Configuration', and 'Summary'. Below the tabs is a table with the following columns: Ports ID, Status, MAC Address, IP Address, Reserve, Feature, and Port Reserve. The table contains two rows of data, each with an 'Add to Test' button in the 'Port Reserve' column.

Ports ID	Status	MAC Address	IP Address	Reserve	Feature	Port Reserve
0	UP	00:0c:29:1d:35:53	localhost	Test		<button>Add to Test</button>
1	UP	00:0c:29:1d:35:5d	localhost	Test		<button>Add to Test</button>

Figure 4: Ports Overview

6.2 Adding Ports

To add a Port to a Test Bed, select the “Add to Test” button on the right side of the Ports Configuration Tab. Selecting this button will automatically add the port the test and be confirmed with a notification pop-up that the port has been added.

Add all ports that will be needed to develop your test environment.

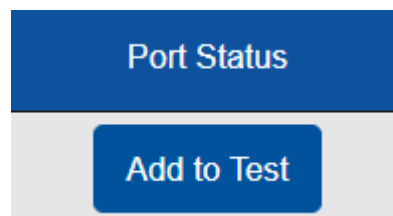


Figure 5: Add Port to Test

7 TEST BED:

HTTP CLIENT CONFIGURATION

7.1 Overview of Hosts

The client settings provide options to configure Port, IP, clients, gateways, and related network settings. In addition, the load profile settings can be adjusted, as needed.

7.2 Configuring Client Settings

The Port, Client IP, Client MAC, Server IP, External Gateway, HTTP Method, and HTTP Client Version values can be adjusted in this menu.



The screenshot displays a configuration interface for client settings on a dark blue background. The settings are organized as follows:

- Port:** A dropdown menu showing "Port 0" with a downward arrow.
- Client IP:** A text input field containing "10.0.0.2" and a separate dropdown menu showing "27" with a downward arrow.
- Client MAC:** A text input field containing "00:0c:29:1d:35:53".
- Server IP:** A text input field containing "20.0.0.2".
- External Gateway:** A checkbox that is currently unchecked.
- HTTP Client Version:** A dropdown menu showing "0.9" with a downward arrow.
- HTTP Method:** A dropdown menu showing "GET" with a downward arrow.

Figure 6: Client Settings

Each setting is further detailed in the following sections:

7.2.1 Port

The client configuration settings allow for the selection of ports that were reserved in chapter 6.2. You will need to choose which of your reserved ports will be the client side of your test. These values may vary depending on the port options associated with the test bed.

A dark blue rectangular box containing the label "Port" on the left and a white input field on the right. The input field contains the text "Port 0" and a small blue downward arrow icon on its right side.

Figure 7: Client Port

7.2.2 Client IP

A Client IP value is set by default. To adjust this value, enter a new value directly into the field. Next to this field is the CIDR value represented as a decimal. To adjust the CIDR value, simply click the drop-down and select a value between 12 and 31.

A dark blue rectangular box containing the label "Client IP" on the left. To its right are two white input fields. The first field contains the text "10.0.0.2". The second field contains the text "25" and a small blue downward arrow icon on its right side.

Figure 8: Client IP

7.2.3 Client MAC

The Client MAC address value will be allocated by default. This value can be adjusted by entering a new custom value into the field.

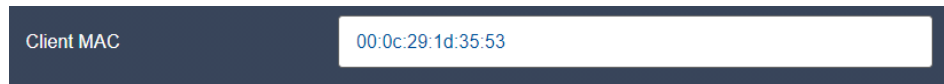
A dark blue rectangular box containing the label "Client MAC" on the left and a white input field on the right. The input field contains the text "00:0c:29:1d:35:53".

Figure 9: Client MAC

7.2.4 Server IP

The Server IP value will be allocated by default depending on the port values set. This value can be adjusted by entering a new custom value into the field.

A dark blue rectangular box containing a label 'Server IP' on the left and a white text input field on the right. The input field contains the text '20.0.0.2'.

Figure 10: Server IP

7.2.5 External Gateway

The gateway configuration is optional. By enabling the checkbox for the gateway, a new text box will appear displaying a default value. Use this option if your network requires a network gateway to route to the IP specified in 7.2.4.

A dark blue rectangular box containing two elements. On the left, the label 'External Gateway' is followed by a checked checkbox. On the right, the label 'Gateway IP' is followed by a white text input field containing the value '10.0.0.1'.

Figure 11: External Gateway

7.2.6 HTTP Client Version

By default, the HTTP Client Version will be set to 0.9. A new value can be selected from the drop-down menu. Menu options include 0.9, 1.0, 1.1, and 1.2.

A dark blue rectangular box containing a label 'HTTP Client Version' on the left and a white drop-down menu on the right. The drop-down menu shows '0.9' and a downward arrow.

Figure 12: HTTP Client Version

7.2.7 HTTP Method

By default, the HTTP Method is set to “GET”. This value can be adjusted to one of the following values:

- ▶ POST
- ▶ PUT
- ▶ HEAD
- ▶ OPTIONS

A dark blue rectangular box containing the text 'HTTP Method' on the left and a white dropdown menu on the right. The dropdown menu displays 'GET' and a small blue downward-pointing chevron icon.

Figure 13: HTTP Method

7.3 Selecting Clients

The number of clients will adjust according to the CIDR address assigned in the IP configuration.

For example, a CIDR value of /27 will correspond to 32 hosts. On the other hand, a CIDR value of /16 will correspond to 65526 hosts.

The following figure depicts the CIDR value of 27:



Figure 14: Client Configuration (Unaltered)

To adjust the quantity of hosts, simply click on the outer ring of the circle to alter the number of hosts. Another option is to manually select the value in the center and enter a number. Adjusting this number will result in an allocation of less hosts than available on the selected subnet.

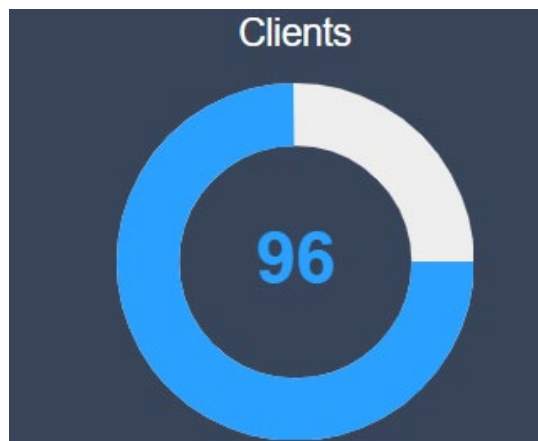


Figure 15: Client Configuration (Altered)

7.4 Load Profile

By default, the load profile parameters checkbox is not selected, resulting in a grayed-out menu. This will make the test run indefinitely. If you would like to have your tests run for a specified amount of time you can do this by selecting the checkbox, the settings become available to change. Settings include test duration and iteration.

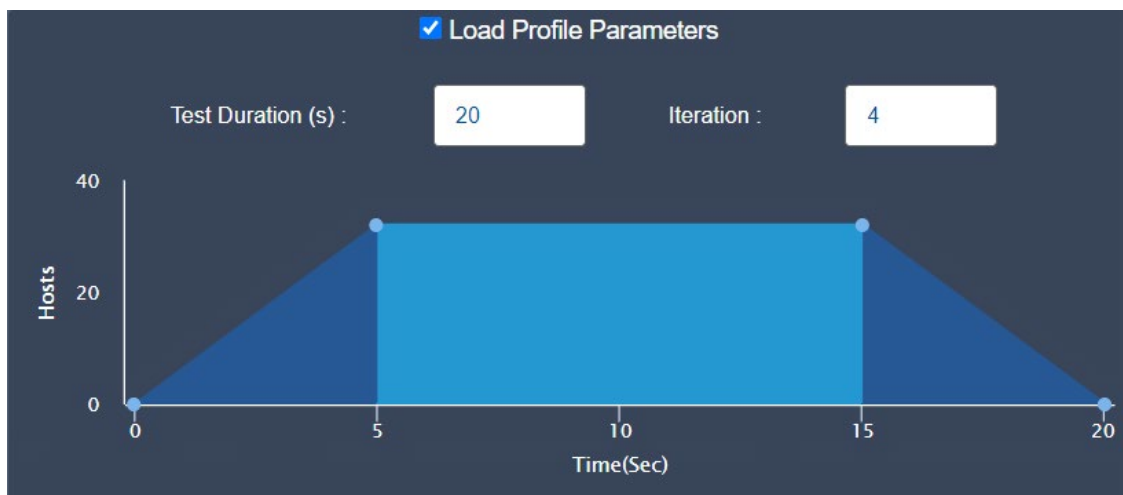


Figure 16: Load Profile Parameters

7.4.1 Updating Test Duration

Changing the test duration impacts how long the test will run. To adjust the test duration, enter a value into the field, as shown below. Time is specified in seconds.

A dark blue rectangular box containing the text "Test Duration (s) :" in white, followed by a white input field with the number "20" in blue.

Figure 17: Test Duration

7.4.2 Changing Iteration

To adjust the number of times the test will run, adjust the iteration value by entering a value into the field.

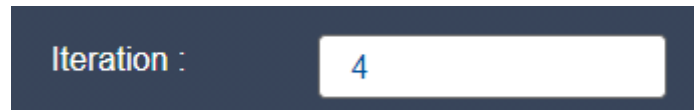
A dark blue rectangular box containing the text "Iteration :" in white, followed by a white input field with the number "4" in blue.

Figure 18: Iteration

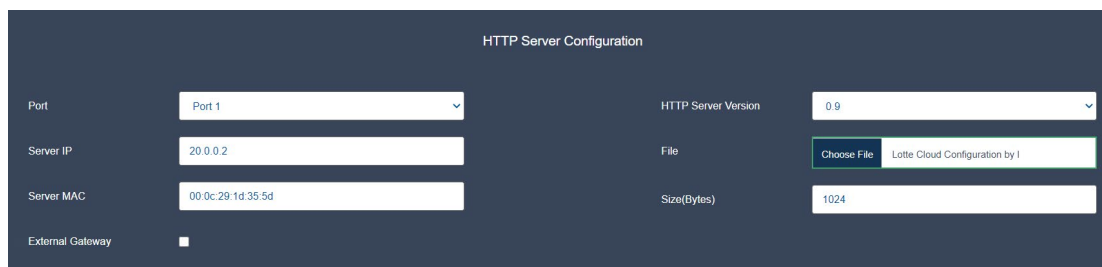
8 TEST BED:

HTTP SERVER CONFIGURATION

8.1 Server Configuration Overview

The client configuration window provides options to modify the HTTP server settings. Options include each of the following:

- ▶ Port
- ▶ Server IP
- ▶ Server MAC
- ▶ External Gateway
- ▶ Server Version
- ▶ File
- ▶ Size

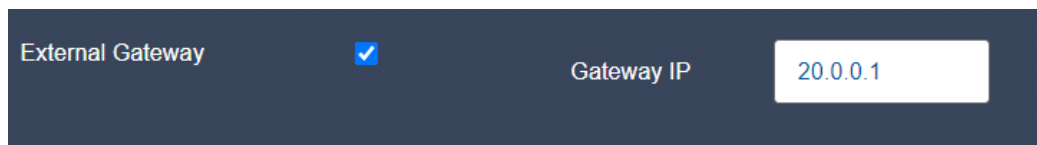


The screenshot shows a dark-themed configuration window titled "HTTP Server Configuration". It contains several input fields and a checkbox. On the left side, there are labels for "Port", "Server IP", "Server MAC", and "External Gateway". The "Port" field is a dropdown menu currently showing "Port 1". The "Server IP" field is a text box containing "20.0.0.2". The "Server MAC" field is a text box containing "00:0c:29:1d:35:5d". The "External Gateway" field has a small square checkbox. On the right side, there are labels for "HTTP Server Version", "File", and "Size(Bytes)". The "HTTP Server Version" field is a dropdown menu showing "0.9". The "File" field has a "Choose File" button and a text box containing "Lotte Cloud Configuration by I". The "Size(Bytes)" field is a text box containing "1024".

Figure 19: Server Configuration

8.1.1 Gateway

The external gateway configuration is optional. By enabling the checkbox for the gateway, a new text box will appear displaying a default value. The default value will be based on the network configurations established in the previous steps.

A dark blue rectangular form with two fields. The first field is labeled 'External Gateway' and contains a blue checkmark icon. The second field is labeled 'Gateway IP' and contains the text '20.0.0.1' in a white input box.

External Gateway	<input checked="" type="checkbox"/>	Gateway IP	<input type="text" value="20.0.0.1"/>
------------------	-------------------------------------	------------	---------------------------------------

Figure 20: Gateway Configuration

8.1.2 Port

The server configuration settings allow for the selection ports that were reserved in chapter 6.2. These values may vary depending on the port options associated with the test bed.

A dark blue rectangular form with a single dropdown menu. The label 'Port' is on the left, and the dropdown menu shows 'Port 1' with a blue downward arrow icon on the right.

Port	<input type="text" value="Port 1"/>
------	-------------------------------------

Figure 21: Port Settings

8.1.3 Server IP

The Server IP value will be allocated by default. This value can be adjusted by entering a new custom value into the field.

A dark blue rectangular form with a single text input field. The label 'Server IP' is on the left, and the input field contains the text '20.0.0.2' in blue.

Server IP	<input type="text" value="20.0.0.2"/>
-----------	---------------------------------------

Figure 22: Server IP

8.1.4 Server MAC

The MAC address value will be allocated by default. This value can be adjusted by entering a new custom value into the field.

A dark blue rectangular form with a single text input field. The label 'Server MAC' is on the left, and the input field contains the text '00:0c:29:1d:35:5d' in blue.

Server MAC	<input type="text" value="00:0c:29:1d:35:5d"/>
------------	--

Figure 23: Server MAC

8.1.5 HTTP Server Version

By default, the HTTP Server Version will be set to 0.9. A new value can be selected from the drop-down menu. Menu options include 0.9, 1.0, 1.1, and 1.2.

A dark blue horizontal bar contains the text "HTTP Server Version" on the left. To its right is a white rectangular input field with a dark blue border. Inside the field, the text "0.9" is displayed. A small dark blue downward-pointing chevron icon is located at the right end of the input field.

Figure 24: HTTP Server Version

8.1.6 File

A file can be uploaded directly onto the platform for use in the server configuration. Standard file types including PDF are available.

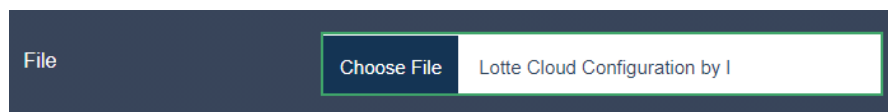
A dark blue horizontal bar contains the text "File" on the left. To its right is a white rectangular area with a dark blue border. Inside this area, on the left, is a dark blue button with the text "Choose File" in white. To the right of the button, the text "Lotte Cloud Configuration by I" is displayed.

Figure 25: File

Alternatively, the size of the messages can be altered using the Size(Bytes).

8.1.7 Size (Bytes)

The Size (Bytes) option can be used in place of the file option provided above. The max file size is 1 GB.

A dark blue horizontal bar contains the text "Size(Bytes)" on the left. To its right is a white rectangular input field with a dark blue border. Inside the field, the text "1024" is displayed.

Figure 26: Size (Byes)

9 TEST BED:

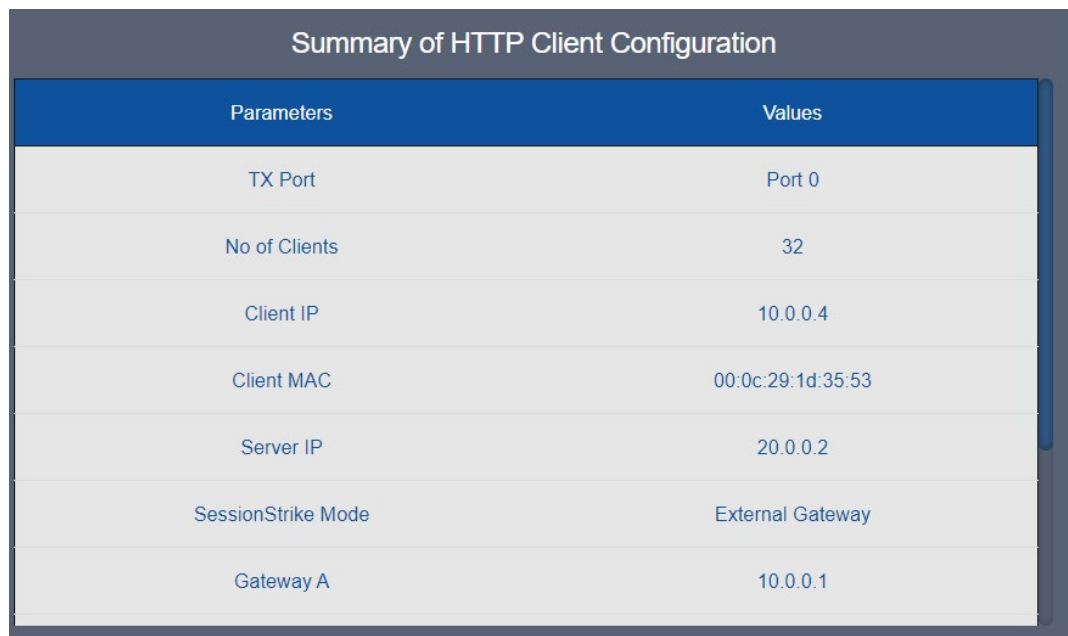
SUMMARY

9.1 Summary Overview

The Summary tab provides a detailed summary of the configuration for the test bed. If you note any problems or discrepancies with the summary, use the “Previous button” to go back to the section that needs revisions.

9.2 Summary of HTTP Client Configuration

This summary provided a high-level overview of the various configured parameters for the clients. To modify any of these settings, select the “Previous” button at the bottom of the screen.

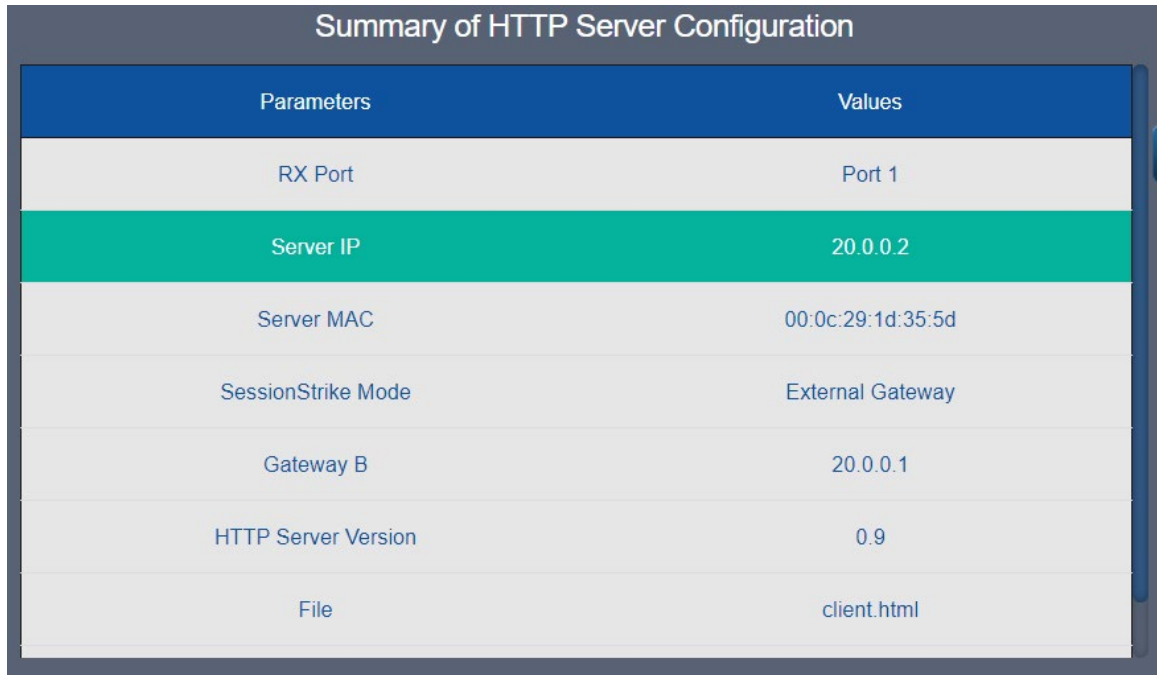


Parameters	Values
TX Port	Port 0
No of Clients	32
Client IP	10.0.0.4
Client MAC	00:0c:29:1d:35:53
Server IP	20.0.0.2
SessionStrike Mode	External Gateway
Gateway A	10.0.0.1

Figure 27: Summary of HTTP Client Configuration

9.3 Summary of HTTP Server Configuration

This summary provided a high-level overview of the various configured parameters for the servers. To modify any of these settings, select the “Previous” button at the bottom of the screen.



Parameters	Values
RX Port	Port 1
Server IP	20.0.0.2
Server MAC	00:0c:29:1d:35:5d
SessionStrike Mode	External Gateway
Gateway B	20.0.0.1
HTTP Server Version	0.9
File	client.html

Figure 28: Summary of HTTP Server Configuration

9.4 Start Test

The test can be started by selecting the “Start Test” button at the bottom of the Summary menu. By selecting this button, the test will begin, and the webpage will reload to the statistics window.

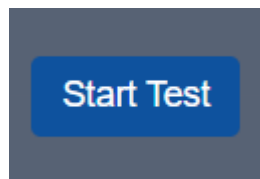


Figure 29: Start Test

10 TEST SETTINGS

The Netropy Traffic Generator SessionStrike platform provides additional settings to pause, stop, and play the test within the Statistics window.

10.1 Play/Pause/Stop

To adjust the play, pause, and stop settings for a test, select the power button the right side of the screen.



Figure 30: Play/Pause/Stop Settings

Selecting this button will present a menu to select the pause, play, and stop button. When the test is stopped, the Test Bed will initiate the generation of a report. This report will be available within the Logs tab. If a test is paused, the user will be notified and provided the option to replay in the same menu.

If a test is played, the user will be provided the option to either pause or stop the test.

10.2 Clear Statistics

To clear the current statistics, hover over the broom icon on the left side of the screen and select "Clear Statistics". This action will clear all statistics shown in the available graphs but will not alter the contents of the Log files.



Figure 31: Clear Statistics

10.3 Start Capture

To start a network packet capture of the traffic that occurs during your test, hover over the camera icon on the left side of the screen to present a green button labeled “Start Capture”. Click this button to begin a packet capture.



Figure 32: Network Capture

11 STATISTICS

The Netropy Traffic Generator SessionStrike platform provides Aggregate Statistics, TCP Stats, HTTP Stats, and Offline Analyzer results. All results can be viewed in the Statistics window of the GUI.

11.1 Aggregate Statistics

Aggregate Statistics provide detailed results for the test on the combined ports used in the test. This tab provides the following information:

- ▶ Client & Server Data Chart
- ▶ Client Statistics
- ▶ Server Statistics
- ▶ Packets/Second Graph
- ▶ Throughput Graph
- ▶ Latency Graph

To enable the Client and Server Statistics charts, select the “Show/Hide Stats” button in the top left corner.

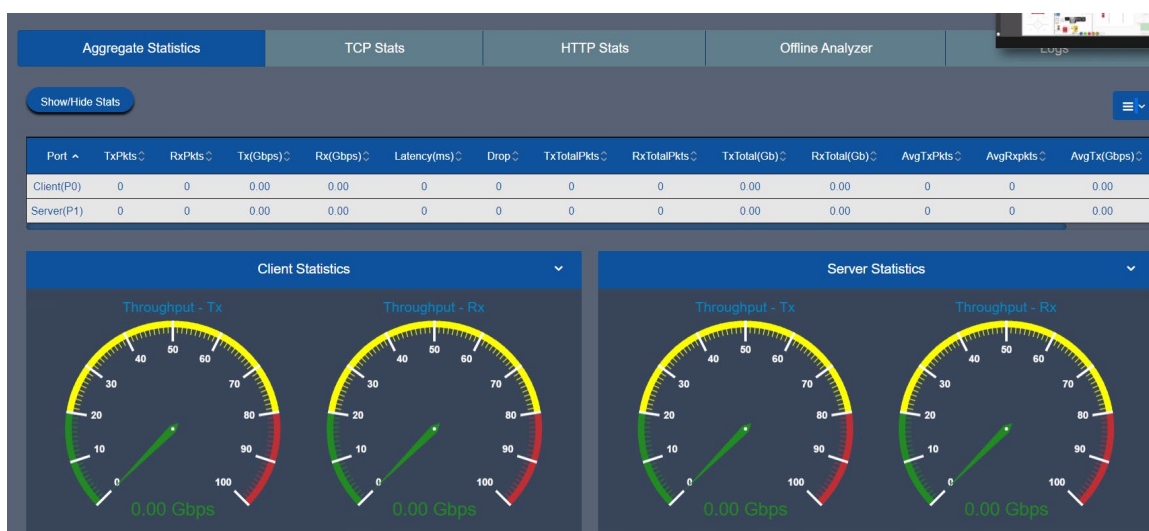


Figure 33: Show/Hide Stats


11.2 TCP Stats

The TCP Statistics tab provides a detailed breakdown of various TCP statistics such as the number of attempted, established, or failed sessions. In addition, values are calculated for SYN, SYN/ACK, ACK and RST packets.

TCP Statistics																		
Port ^	TCP Sessions Attempted		TCP Sessions Established		TCP Sessions Failed		SYN Packets		SYN-ACK Packets		PSH(Data) Packets		FIN-ACK Packets		ACK Packets		RST Packets	
	Total ↕	CPS ↕	Total ↕	CPS ↕	Total ↕	CPS ↕	Tx ↕	Rx ↕	Tx ↕	Rx ↕	Tx ↕	Rx ↕	Tx ↕	Rx ↕	Tx ↕	Rx ↕	Tx ↕	Rx ↕
Client(P0)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Server(P1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 34: TCP Statistics

To adjust the values displayed in the table above, select the blue icon in the top right corner. Uncheck values, as needed, to remove these values.



- ☒ Port
- ☒ HTTP POST
- ☒ HTTP GET
- ☒ HTTP HEAD
- ☒ HTTP PUT
- ☒ HTTP OPTIONS
- ☒ HTTP 2XX
- ☒ HTTP 3XX
- ☒ HTTP 4XX
- ☒ HTTP 5XX

[Show all](#)
[Hide all](#)

Figure 35: Table Display Adjustments

11.3 HTTP Stats

The HTTP Stats values are available in both graphic and tabular format. The data collected includes values such as Port, HTTP POST, and HTTP GET.

See the previous section to understand how to filter data presented in the data table.

HTTP Statistics									
Port ^	HTTP POST ↕	HTTP GET ↕	HTTP HEAD ↕	HTTP PUT ↕	HTTP OPTIONS ↕	HTTP 2XX ↕	HTTP 3XX ↕	HTTP 4XX ↕	HTTP 5XX ↕
Client(P0)	0	0	0	0	0	0	0	0	0
Server(P1)	0	0	0	0	0	0	0	0	0

Figure 36: HTTP Stats Table

The following depicts the HTTP Graph data with CPS graphed over time.

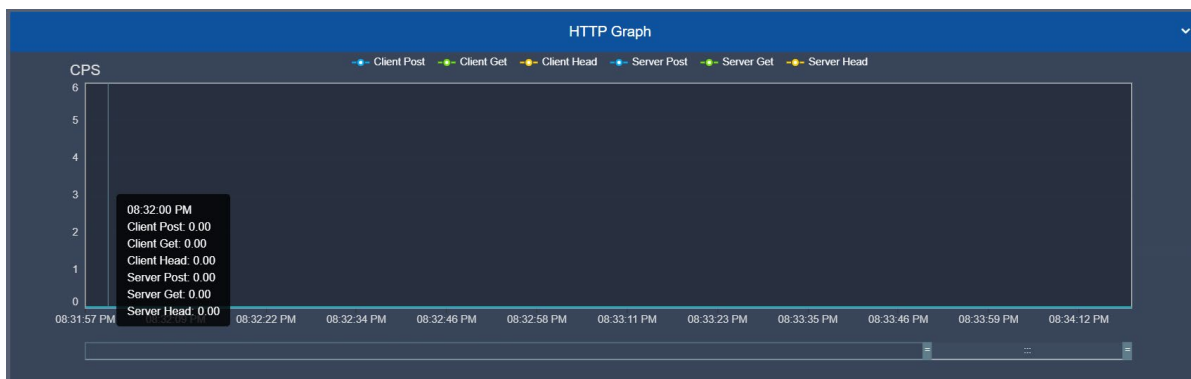


Figure 37: HTTP Stats Graph

11.3 Offline Analyzer

The Offline Analyzer tab provides the following graphs:

- ▶ Packets/Second
- ▶ Throughput
- ▶ Latency/Jitter

To download, select the download icon on the right of the graph and hover over "Download as..." to present the available download options.

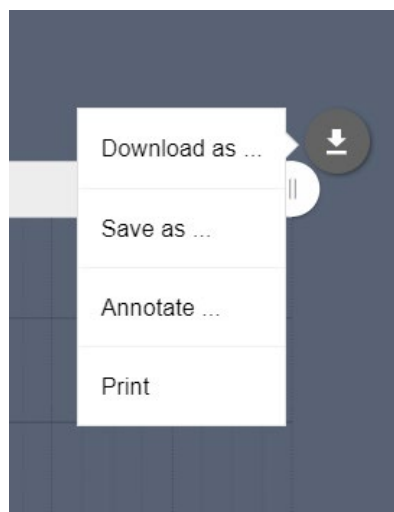


Figure 38: Downloading Graphs

Each of these graphs can be downloaded individually in either a PDF, JPG, SVG, or PNG format or saved as CSV, JSON, or XSLX file.

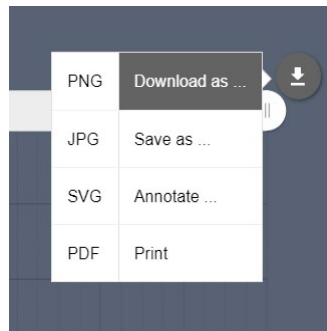


Figure 39: Download File Options

In addition, each graph can be saved as CSV, JSON, or XSLX file. To select one of these options, hover over the “Save as...” option and select the desired file format.



Figure 40: Save As File Options

To print the graph, select the “Print” option from the menu shown in the figure above. This will open your browser’s printing menu and allow you to select your default printer and settings.

These graphs also may be annotated using the built-in illustration feature. These annotated graphs can also be downloaded in the same formats. To annotate a graph, select the “Annotate” option from the menu, as shown in the figure below.

Selecting this menu option will turn the graph white and allow to annotate the graph. Users can add shapes and text directly to the graph. In addition, users are allowed to change the color and mode of the marker and text.

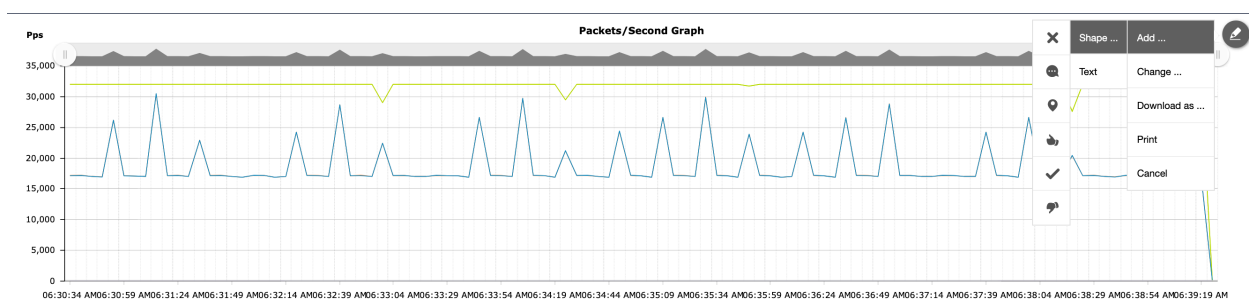


Figure 41: Annotate Graph

To change the annotated graph, hover on the edit pen on the top right corner of the graph and select “Change”.

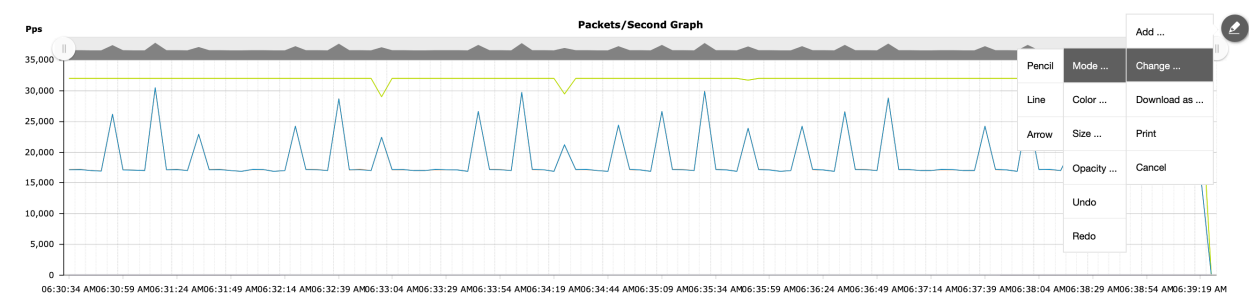


Figure 42: Change Graph

The annotated graph can be printed or downloaded in either PNG, JPG, SVG, or PDF format.

11.4 Statistics

The following table includes the definition of various statistics displayed in the graphs and tables provided by SessionStrike.

Figure 43: Statistics

Segment	Statistic	Description
	Rate	The current transmission rate for traffic delivered across the WAN over the previous one-second interval.
	Bytes/Frames	The cumulative number of bytes and packets delivered

Overall		across the communication path.
	Drop	The cumulative sum of packets dropped as a result of queuing limits on both the outbound and inbound WAN Access links and the frames dropped due to configured WAN loss parameters.
	Packets/Second	The number of packets transmitted per second.
	Throughput	The measure of traffic that successfully transmitted via a communication link.
	TX Pkts	The number of packets transmitted.
	TX (Gbps)	The cumulative number of packets transmitted in gigabits per second.
	RX Pkts	The number of packets received.
	RX (Gbps)	The cumulative number of packets received in gigabits per second
	Latency	The amount of network latency/delay on the communication link.
	RST Packets	The number of RST packets. A RST packet is used to indicate that a server is in a state where it will neither receive or accept new data.
	HTTP POST	The number of HTTP POST messages. A POST message is used to send data to a server.
	HTTP GET	The number of HTTP GET messages. A GET message is used to retrieve and/or request data from a specified resource.
	HTTP PUT	The number of HTTP PUT messages. A PUT message is used to create new resources at a location in a server.
	HTTP OPTIONS	The number of HTTP OPTIONS messages. A HTTP OPTION message is used to request communication options for a server.
	HTTP 2XX	The number of HTTP 2XX errors.
	HTTP 3XX	The number of HTTP 3XX errors.
	HTTP 4XX	The number of HTTP 4XX errors.
	HTTP 5XX	The number of HTTP 5XX errors.

12 Logs

12.1 Overview of Logs

Logs may be collected from tests to use for analysis and review by users. The system will collect and maintain these logs for future use. These files can be found within the Logs tab of the Statistics menu.

The size of these logs will vary upon the amount of data collected and the number of packets selected within the capture. All capture files will be provided in .pcap form to ensure they're compatible with Wireshark and similar software programs.

12.2 Managing Logs

The Logs tab of the Statistics window presents as list of available reports. These reports can be downloaded or deleted.

To download a report, select the download icon on the specified file. This will download a zip folder to the default download location on your device. To delete a file from the logs, select the trash can icon on the specified file.

To delete all logs, select the "Delete All" button in the top right corner.

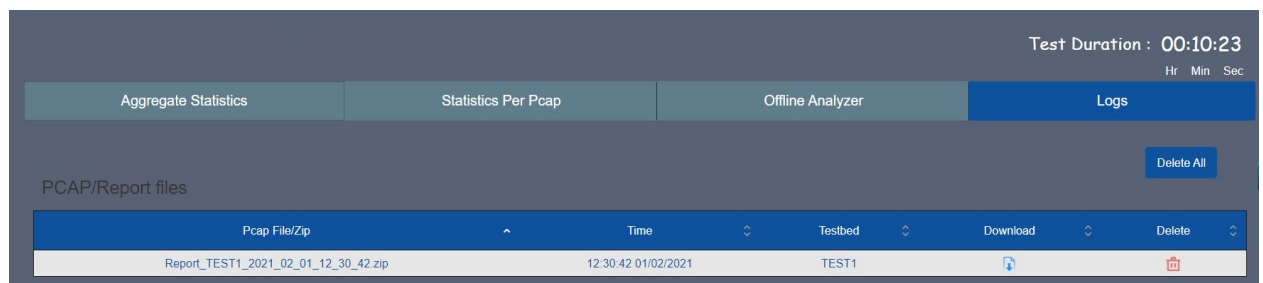


Figure 44: Logs Tab



If you select the delete icon or button, you will not be presented with a confirmation window. Unless previously downloaded, you cannot retrieve deleted reports.

12.3 Log Files

After a report has been downloaded, right click the zip folder and select “Extract All” to extract the file’s content to another location. The extracted folder may include some the following files:

- ▶ Offline Analyzer HTTP File (CSV)
- ▶ Offline Analyzer Latency File (CSV)
- ▶ Offline Analyzer PPS File (CSV)
- ▶ Offline Analyzer TCP File (CSV)
- ▶ Offline Analyzer Throughput File (CSV)
- ▶ Configuration File (XML)
- ▶ Per PCAP Stats (CSV)

13 ADMINISTRATION

The Netropy Traffic Generator SessionStrike can be administered through the Administration portal accessible via browser. The administrator must log in using their administrative credentials.

13.1 User Settings

The User tab presents options to add, edit, and delete users. By default, there will only be a single user account, the administrator. To create additional accounts to manage and configure Test Beds, the administrator must add new users.

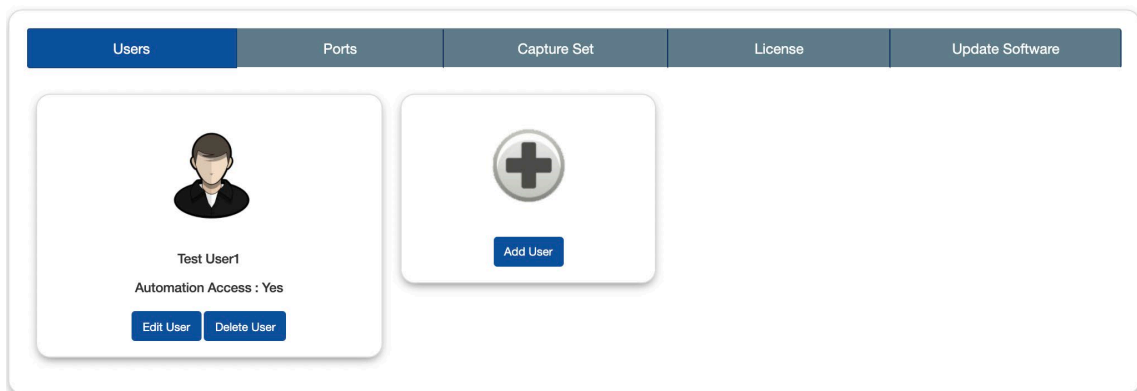


Figure 45: User Tab

When adding a new user, the following information is required:

- ▶ First Name
- ▶ Last Name
- ▶ User Name
- ▶ Email
- ▶ Password

The account will be created once the “Create User” button is selected. This user will then be able to access the configuration portal using their new credentials. Only the administrator will have access to these permissions. Other users will be able to make configuration changes but will not have privileges to access and manage other accounts.

13.2 Port Settings

The Port tab displays the status of ports and allows the administrator to manually release ports as needed. This will override any port releases and reservations made by other user accounts.

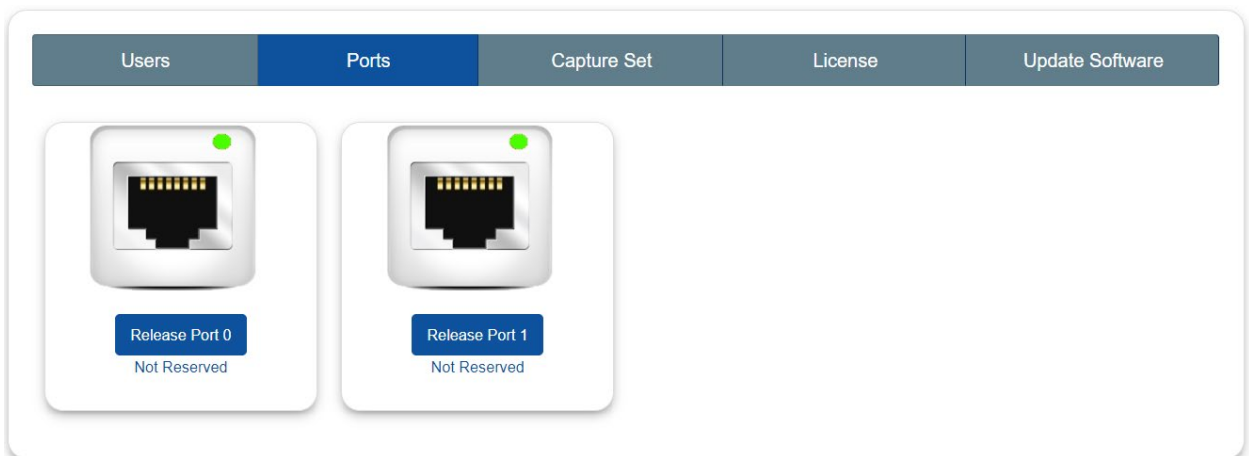


Figure 46: Port Tab

To release a port, click on the associated “Release Port X” button. As demonstrated in the figure below, this button will open a pop-up that displays the IP Address, status, speed, MAC address, and details on whether the port is reserved. By clicking “Release” the port will be released.

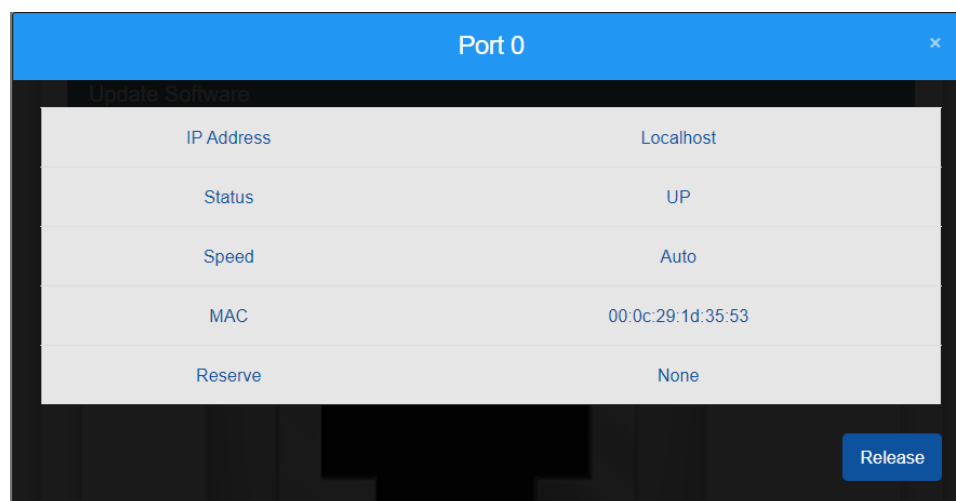


Figure 47: Release Port Settings

13.3 Capture Settings

SessionStrike can be configured to capture a specific number of packets during a session. By default, the number of packets to capture will be set to 100 packets. This setting can easily be altered by clicking the drop-down menu, as shown in the figure below. Options in this menu will range from 100 packets to 1,000,000 packets.

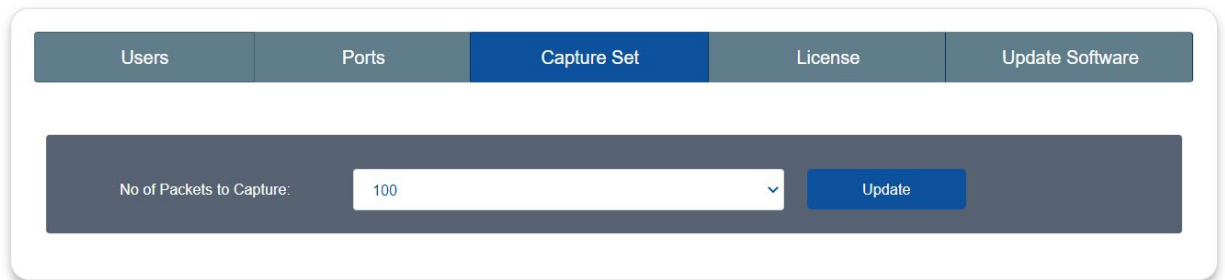
The image shows a web interface with a horizontal navigation bar at the top containing five tabs: 'Users', 'Ports', 'Capture Set' (which is highlighted in blue), 'License', and 'Update Software'. Below the navigation bar is a dark gray rectangular panel. Inside this panel, on the left, is the text 'No of Packets to Capture:'. To its right is a white input field containing the number '100' and a small downward-pointing arrow on the right side, indicating a dropdown menu. To the right of the input field is a blue button with the white text 'Update'.

Figure 48: Capture Settings

Click “Update” to initiate these changes and ensure all future packet sessions will capture the specified number of packets.

13.4 License Settings

The License tab will display the license, license type, license validity, and the number of licensed ports. To obtain additional information on how to renew a license, visit <https://www.apposite-tech.com/renewals/> to submit a renewal request form.

To add a license key, click the “Browse” button to search for files on your device. After selecting the applicable file, click open in file explorer. Then, proceed by selecting upload to upload the license key file into the system.

License	Valid
License Type	Traffic Engine, App Storm, App Playback, Session Strike
License Validity	9 Jan, 2021
Number of Licensed Ports	4

License File Browse Upload

Key

Figure 49: License Tab

13.5 Software Settings

The Update Settings tab allows the selection of a BIN file to update the system software. To update the BIN file, select the plus button icon, and select the appropriate file on your PC. After selecting the file, the system will request a system reboot. Select “Yes” to allow the system to apply all necessary patches and updates.

Upload Bin file

+

Figure 50: Update Software Tab

13.6 IP Settings

The IP address of the system can be altered by clicking on the IP Management drop-down in the upper right corner. From the drop-down options, select “Change IP”.

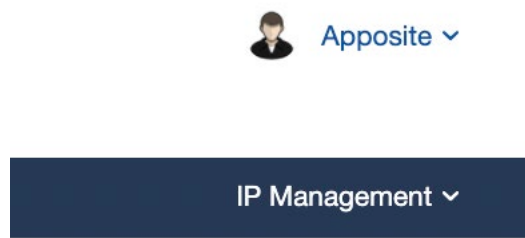


Figure 51: IP Management Dropdown

There are two settings that can be set for the IP address: DHCP and Static.

Static will be enabled by default and will display the current IP address, mask, and gateway settings. With static enabled, if necessary, values can be altered to adjust the IP address network. By selecting “Apply” these changes will be accepted.

By enabling DHCP, the IP address will be automatically set by the DHCP server, resulting in grayed-out options for the IP address, mask, and gateway fields. To apply DHCP, click “Apply”.

Please note that by selecting “Apply”, access to the system will be lost and you must reconnect to the system using the new IP address.

A screenshot of a 'Change IP' dialog box. At the top, there's a title bar with 'Change IP' and a close button. Below the title bar, there are two radio buttons: 'DHCP' (unselected) and 'Static' (selected). Underneath, there are three input fields: 'IP Address' with the value '192.168.170.86', 'Mask' with the value '255.255.255.0', and 'Gateway' with the value '192.168.170.1'. At the bottom right, there are two buttons: 'Cancel' and 'Apply'. A faint background image of a person is visible behind the input fields.

Figure 52: IP Address Settings

14 COMMAND LINE INTERFACE

The Netropy command line interface (CLI) can be accessed via the CONSOLE interface or through a Telnet or SSH connection.

The following are the only features available through the CLI:

- ▶ ARP and PING commands
- ▶ Reinitialize the unit to factory settings
- ▶ Management functions

To access the CLI, log into the device at the prompt as “admin” or other configured username.

14.1 CLI Help

The CLI includes several levels of help. The “help” command by itself displays a list of commands. “help” with a command name displays the syntax and options for the command.

When entering commands, the <Tab> key can be used to complete a partially entered command name. If there are multiple possible completions, pressing the <Tab> key again will display a list of options.

14.2 CLI Top Level Commands

Command	Syntax and Description
arp	<code>arp show</code> Displays a table of IP addresses and associated MAC addresses for the MGMT interface.
clock	<code>clock show</code> Displays the current system time and date.
help	<code>{help ?} [<command>]</code> Displays a list of available commands or syntax of a specified command. A question mark after any command also displays the syntax for that command.
init	<code>init config</code> Returns the configuration to factory default settings. Takes effect upon reboot unless the configuration is saved prior to reboot.
logout	<code>logout</code> Logout from the command line interface.
mgmt	<code>mgmt show</code> Displays the IP address and other management information. <code>mgmt show ntp associations</code> Displays the synchronization state with the configured NTP servers. <code>mgmt set addr {dhcp addr <addr> netmask <mask>}</code> Sets the IPv4 address and netmask of the MGMT interface either manually or using DHCP. If DHCP is enabled, DHCP sets the default gateway. <code>mgmt set domain <domain></code> Sets the network domain name of the device. <code>mgmt set gw <addr></code> Sets a default gateway for the MGMT interface. <code>mgmt set hostname <name></code> Sets the hostname of the device. <code>mgmt set nameserver <addr> [<addr2> [<addr3>]]</code> Sets up to three DNS servers for the device. This command overrides any nameservers set through DHCP and any DNS servers previously configured. <code>mgmt set ntp server <server> [<server2> [<server3>]]</code> Sets up to three network time protocol servers for the device. This command overrides any NTP servers set through DHCP and any NTP servers previously configured.

mgmt	<pre>mgmt clear nameserver</pre> <p>Clears all manually configured DNS servers. Does not change any DNS servers set through DHCP.</p> <pre>mgmt clear ntp server</pre> <p>Clears all manually configured NTP servers. Does not change any NTP servers set through DHCP.</p>
ping	<pre>ping <ip-address> [<size>]</pre> <p>Pings from the device to the IP <code>address</code> with the specified sized packets using the MGMT interface. Use CTRL-C to stop.</p>
reboot	<pre>reboot</pre> <p>Reboots the device. Returns user to the login prompt after reboot.</p>
Serial number	<pre>serialnumber</pre> <p>Displays the serial number of the unit.</p>
upgrade	<pre>upgrade <upgrade-image-url></pre> <p>Upgrades the Netropy firmware. FTP, HTTP, and TFTP services are supported. Ex: <code>upgrade ftp://server/netropy-image</code></p>
Version	<pre>version</pre> <p>Displays the operating firmware version.</p>

15 SECURITY

15.1 Users and Passwords

Initially, the SessionStrike system has a single user configured with the following credentials:

- ▶ Username: admin
- ▶ Password: admin

Refer to Section 13 for additional information on proper management and addition of user accounts through the GUI interface.

16 APPOSITE SUPPORT

16.1 Registration

For access to the Netropy Traffic Generator support site with firmware upgrades, documentation, and other support materials, register your unit at: <http://www.apposite-tech.com/register.html>.

Registered users will receive an email notification whenever new firmware versions are released.

16.2 Customer Support

If you experience any problems with the Netropy Traffic Generator hardware, consult the *Hardware Guide* for your intended model. If you have any questions about the firmware that have not been answered in this *User's Guide*, please check the Apposite Technologies website at <http://www.apposite-tech.com> for updated firmware and supporting documentation. If the answer to your inquiry is not answered on the website, please contact Apposite Support.

All units with an active product license may receive support and maintenance for the term of the license. This support includes hardware warranty, firmware updates, and customer support. The license expiration date for limited term licenses is shown in the Administrative portal of the Netropy Traffic Generator system on the info page.

License renewals are available from Apposite or the reseller of your unit.

If you believe the firmware is not functioning properly, please upgrade to the latest firmware release. If the problem persists, please contact Apposite Support at:

- ▶ support@apposite-tech.com
- ▶ 1.310.477.9955 ext. 2

When contacting Apposite Support, please include the following information with your request:

- ▶ Model number
- ▶ Serial number

- ▶ Your name
- ▶ Your e-mail address and phone number
- ▶ Installed firmware version
- ▶ A detailed description of the problem



Do not attempt to fix any hardware problem yourself. SessionStrike hardware devices do not contain any user serviceable parts. Opening the chassis voids the warranty.

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