WEBPAGE DOWNLOAD TEST

PREPARED FOR

Netgear

PREPARED BY

Candela India Pvt Ltd

EXECUTIVE SUMMARY

The Webpage Download Test is designed to check the performance of the wireless Access Point. This test basically reports and verifies that the webpage loading time meets the expectation when 40 Clients connected on 5GHZ , 40 Clients connected on 2.4 GHZ and 40 Clients distributed on 2.4GHZ and 5 GHZ simultaneously.

1. Project Overview

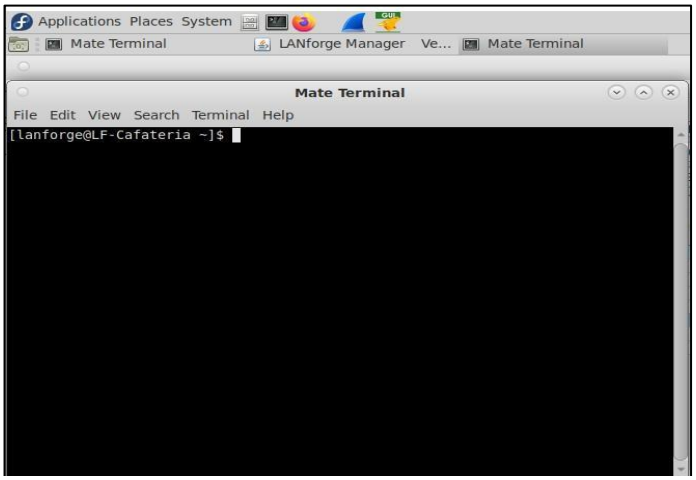
This test basically reports and verifies that the webpage loading time meets the expectation when 40 Clients connected on 5GHZ , 40 Clients connected on 2.4 GHZ and 40 Clients distributed on 2.4GHZ and 5 GHZ simultaneously.

Note:

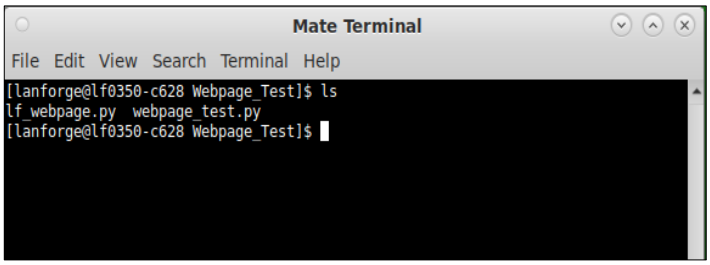
Here we are running the script using LANforge local web server called nginix for downloading the webpage when AP does not have internet.

2. How to use Script?

1) Open the Mate terminal in your lanforge.



2) Change the directory to “cd home/lanforge/CandelaAutomationScripts/Webpage_Test”



3) Configure ethernet port to nginx

4) Cli to execute the python test eg –

For 5G band :-

sudo python3 webpage_test.py --mgr localhost --mgr_port 8080 --upstream_port eth1 --num_stations 40 --security open --ssid TestAP --passwd [BLANK] --file_size 20MB --bands 5G --fiveg_radio wiphy0 --duration 2 --threshold_5g 90 --ap_name WAC505 --ssh_port 22 --total_urls 1

For 2.4G band :-

sudo python3 webpage_test.py --mgr localhost --mgr_port 8080 --upstream_port eth1 --num_stations 40 --security open --ssid TestAP --passwd [BLANK] --file_size 20MB --bands 2.4G --twog_radio wiphy1 --duration 2 --threshold_2g 90 --ap_name WAC505 --ssh_port 22 --total_urls 1

For Both band :-

sudo python3 webpage_test.py --mgr localhost --mgr_port 8080 --upstream_port eth1 --num_stations 40 --security open --ssid TestAP --passwd [BLANK] --file_size 20MB --bands Both --fiveg_radio wiphy0 --twog_radio wiphy1 --duration 2 --threshold_both 90 --ap_name WAC505 --ssh_port 22 --total_urls 1

Here

--mgr - means LANforge ip if you are running inside LANforge just give localhost

--mgr_port - port Lanforge GUI HTTP service is running on by default 8080

--upstream_port - the ethernet port i am using eth1

--num_stations - number of stations to create by default 40 (In Both band 20 stations will connect to 2.4G and 20 stations will connect to 5G that means stations will divide equally for Both band)

--security - security type (open/wpa/wpa2..etc)

--ssid - ssid to connect to AP

--passwd - keyphrase for security

--file_size - specify the size of your webpage eg - 20MB

For http://www.netgear.com url file size is 20MB

For https://www.sony.co.in url file size is 15MB

For https://www.candelatech.com url file size is 4.3MB

--bands - specify which band you want to test on like 5G/2.4G/Both by default it has

['5G', '2.4G', 'Both']

For example you want to use two bands then the order is always like

5G 2.4G

5G Both

2.4G Both

If you will give 2.4G 5G it will give error please avoid this sequence.

--twog_radio – specify radio for 2.4G clients

--fiveg_radio – specify radio for 5G clients

--duration – time to run traffic in minutes

--threshold_5g – enter the threshold value for 5G Pass/Fail criteria in seconds

--threshold_2g – enter the threshold value for 2.4G Pass/Fail criteria in seconds

--threshold_both – enter the threshold value for Both Pass/Fail criteria in seconds

--ap_name - specify the AP model

--ssh_port- specify the ssh port by default 22

--total_urls - specify the total urls you want to download eg 1

5) After execution of script results can be seen on the html-reports directory

`~ /home/lanforge/html-reports

Pdf report (Webpage.pdf) and html reports (Webpage.html) can be found inside webpage_test folder as per execution date

3. Results

Screenshot of pdf report generation is shown below

WEBPAGE DOWNLOAD TEST

2021-09-07-15:03:59

Candela TECHNOLOGIES

Test Setup Information

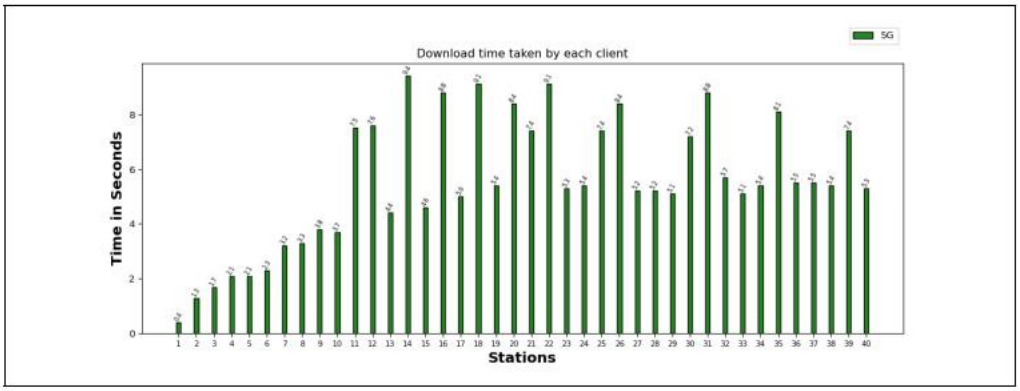
Device under test	DUT Name	WAC505
	SSID	NETGEAR73-5G
	Test Duration	0:05:16

Objective

The Webpage Download Test is designed to test the performance of the Access Point.The goal is to check whether the webpage loading time of all the 40 clients which are downloading at the same time meets the expectation when clients connected on single radio as well as dual radio

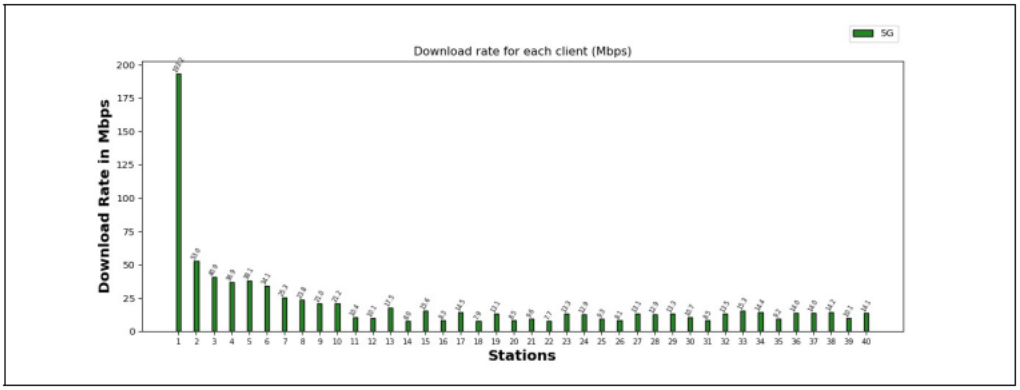
Download Time Graph

The below graph provides information about the download time taken by each client to download 1 webpage urls



Download Rate Graph

The below graph provides information about the download rate in Mbps of each client to download 1 webpage urls



Summary Table Description

This Table shows you the summary result of Webpage Download Test as PASS or FAIL criteria. If the average time taken by 40 clients to access the webpage is less than 90s it's a PASS criteria for 2.4 ghz clients, If the average time taken by 40 clients to access the webpage is less than 90s it's a PASS criteria for 5 ghz clients and If the average time taken by 40 clients to access the webpage is less than 50s it's a PASS criteria for 2.4 ghz and 5ghz clients

Band	PASS/FAIL
5G	PASS

Download Time Table Description

This Table will provide you information of the minimum, maximum and the average time taken by clients to download 1 webpage in seconds

Band	Minimum	Maximum	Average
5G	0.4	9.4	5.5

Test input Information

Information	LANforge ip	192.168.200.21
	File Size	10MB
	Bands	['5G']
	Upstream	eth1
	Stations	40
	SSID	NETGEAR73-5G
	Security	wpa2
	Duration	2
	Contact	support@candelatech.com

4. Contact

Visit - https://www.candelatech.com/

For any support related help contact - support@candelatech.com