

Grid Antenna Test 07/09/2019

Equipment:

- PacCL #1 – IP: 192.168.88.100
- PacCL #2 – IP: 192.168.88.101
- 2 Laptops
- 2 Grid Antennas

Setup:

PacCL #1 was setup (as the server) and wired to a grid antenna just outside the highbay garage. PacCL #2 was setup (as the client) and wired to a grid antenna in front of the dumpsters. The distance between the antennas was approximately 400 ft. Both PacCLs were set to 4.95 GHz with a bandwidth of 20 MHz.

Conducted Tests:

- Ping test – PacCL #1 alone, PacCL #2 alone, PacCL #1 and #2 simultaneously.
- TCP iperf test – PacCL #1 alone, PacCL #2 alone, PacCL #1 and #2 simultaneously.
- UDP iperf test – PacCL #1 alone, PacCL #2 alone, PacCL #1 and #2 simultaneously.

Ping Test:

	Min (ms)	Ave (ms)	Max (ms)	Mdev (ms)
PacCL #1 alone	0.695	4.538	32.874	7.226
PacCL #2 alone	0.703	4.930	35.050	7.786
PacCL #1 simultaneous	0.698	1.667	18.335	2.816
PacCL #2 simultaneous	0.816	2.203	27.371	4.241

For the simultaneous test, there was 8% loss. All other tests had a 0% loss.

TCP Iperf Test:

	Transfer (Mbytes)	Bandwidth (Mbits/s)	Send/Recieve
PaccL #1 alone	125	17.5	sender
	125	17.4	receiver
PaccL #2 alone	91.8	12.8	sender
	91.6	12.8	receiver
PaccL #1 simultaneous	61.2	8.56	sender
	60.5	8.40	receiver
PaccL #2 simultaneous	29.3	4.09	sender
	28.8	4.03	receiver

UDP Iperf Test:

	Transfer (Mbytes)	Bandwidth (Mbits/s)	Jitter (ms)	Loss/Total Datagrams
PaccL #1 alone	7.49	1.05	2.354	0/959 – 0%
PaccL #2 alone	7.49	1.05	3.916	1/959 – 0.1%
PaccL #1 simultaneous	7.49	1.05	5.420	0/959 – 0%
PaccL #2 simultaneous	7.49	1.05	8.250	7/959 – 0.73%

PacCL Firmware:

MikroTik-Test2 - Quick Set at admin@192.168.88.101 - WebFig v6.36 (stable) on RB912UAG-SHPnD (mips) - Mozilla Firefox

192.168.88.101/webfig/

WebFig v6.36 (stable) PTP Bridge Quick Set

Wireless Bridge Mode

☒ Client/CPE ☐ Server/AP

Wireless

Status	connected to ess
AP MAC	E4:8D:8C:F9:48:C9
Network Name	MikroTik-Test1
Tx/Rx Signal Strength	-75/-92 dBm
Tx/Rx CCQ	56/57 %
Signal To Noise	8 dB
Wireless Protocol	802.11

Rx Signal cur: -92 dB avg: -89 dB max: -87 dB
Tx Signal cur: -75 dB avg: -75 dB max: 0 dB

Disconnect

Configuration

Address Acquisition ☒ Static ☐ Automatic

IP Address 192.168.88.101

Netmask 255.255.255.0 (/24)

Gateway 192.168.88.1

DNS Servers

System

Router Identity MikroTik-Test2

Check For Updates Reset Configuration

Password

Confirm Password

Apply Configuration

Info on PacCL #1 and #2:

- Channel power TX: -75 dBm
- Channel power RX: -89 dBm
- Signal to noise: 8 dBm