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ethr 5900HX

AMD Ryzen 9 5900HX testing with a ASUS G513QY v1.0 (G513QY.311 BIOS) and ASUS AMD Cezanne 512MB on Pop 22.04 via the Phoronix Test Suite.

Automated Executive Summary

A had the most wins, coming in first place for 75% of the tests.

Based on the geometric mean of all complete results, the fastest (A) was 1.016x the speed of the slowest (B). C was 0.99x the speed of A and B was 0.994x the speed of C.

The results with the greatest spread from best to worst included:

Ethr (Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 4) at 1.14x
Ethr (Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 16) at 1.103x
Ethr (Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 64) at 1.093x
Ethr (Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 1) at 1.082x
Ethr (Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 32) at 1.076x
Ethr (Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 2) at 1.044x
Ethr (Server Address: localhost - Protocol: UDP - Test: Bandwidth - Threads: 1) at 1.03x
Ethr (Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 8) at 1.03x
Ethr (Server Address: localhost - Protocol: UDP - Test: Bandwidth - Threads: 8) at 1.024x

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Ethr (Server Address: localhost - Protocol: TCP - Test: Bandwidth - Threads: 8) at 1.022x.

Test Systems:

A

B

C

Processor: AMD Ryzen 9 5900HX @ 3.30GHz (8 Cores / 16 Threads), Motherboard: ASUS G513QY v1.0 (G513QY.311 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 16GB, Disk: 512GB SAMSUNG MZVLQ512HBLU-00B00, Graphics: ASUS AMD Cezanne 512MB (2500/1000MHz), Audio: AMD Navi 21 HDMI Audio, Monitor: LQ156M1JW25, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Pop 22.04, Kernel: 5.17.5-76051705-generic (x86_64), Desktop: GNOME Shell 42.1, Display Server: X Server 1.21.1.3, OpenGL: 4.6 Mesa 22.0.1 (LLVM 13.0.1 DRM 3.44), Vulkan: 1.3.204, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 1920x1080

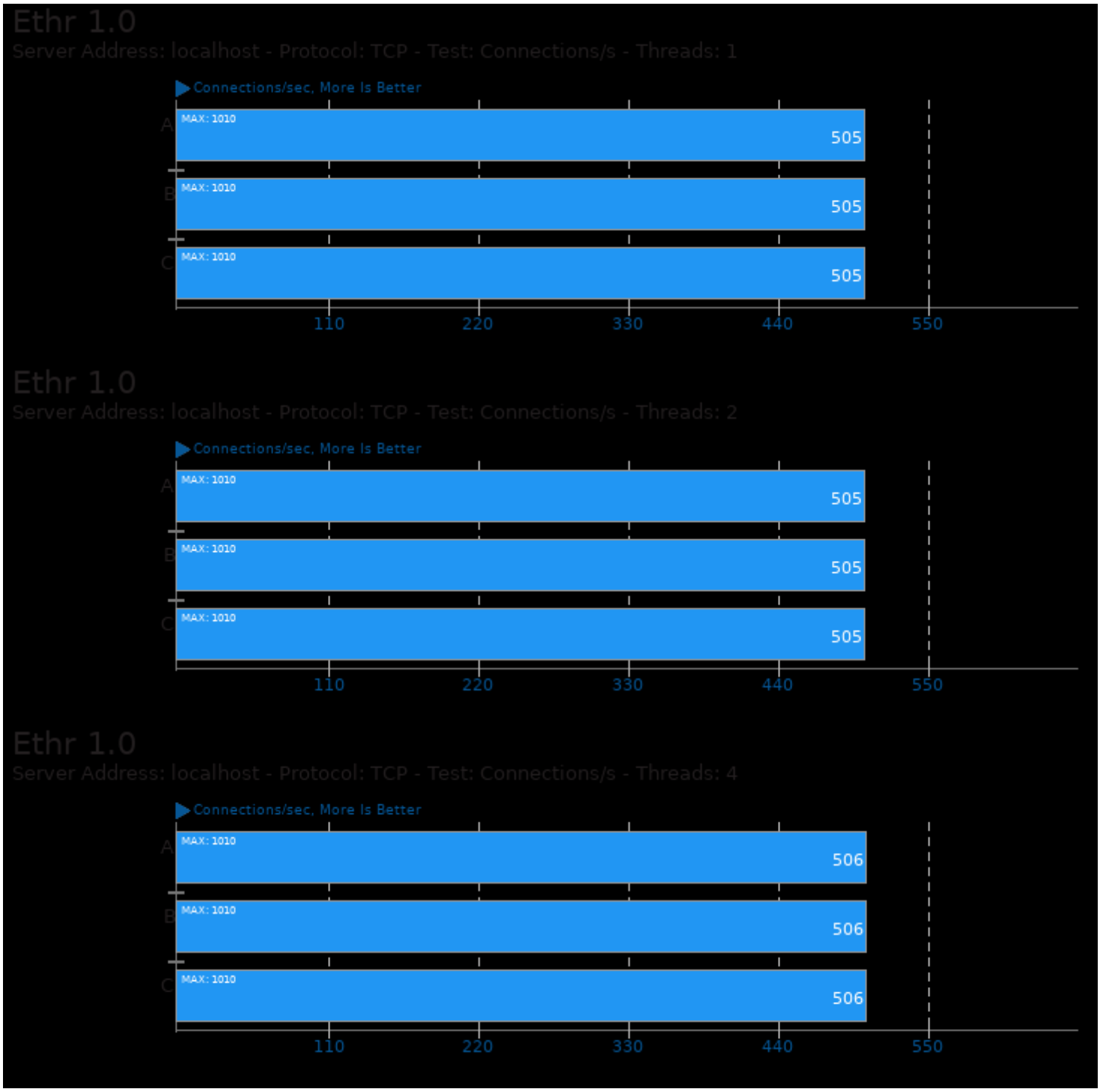
Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	A	B	C
Ethr - TCP - Connections/s - 1 (Connections/sec)	505	505	505
Ethr - TCP - Connections/s - 2 (Connections/sec)	505	505	505
Ethr - TCP - Connections/s - 4 (Connections/sec)	506	506	506
Ethr - TCP - Connections/s - 8 (Connections/sec)	507	507	507
Ethr - TCP - Connections/s - 16 (Connections/sec)	**508**	**507**	**507**
Normalized	100%	99.8%	99.8%
Ethr - TCP - Connections/s - 32 (Connections/sec)	**508**	**507**	**507**
Normalized	100%	99.8%	99.8%

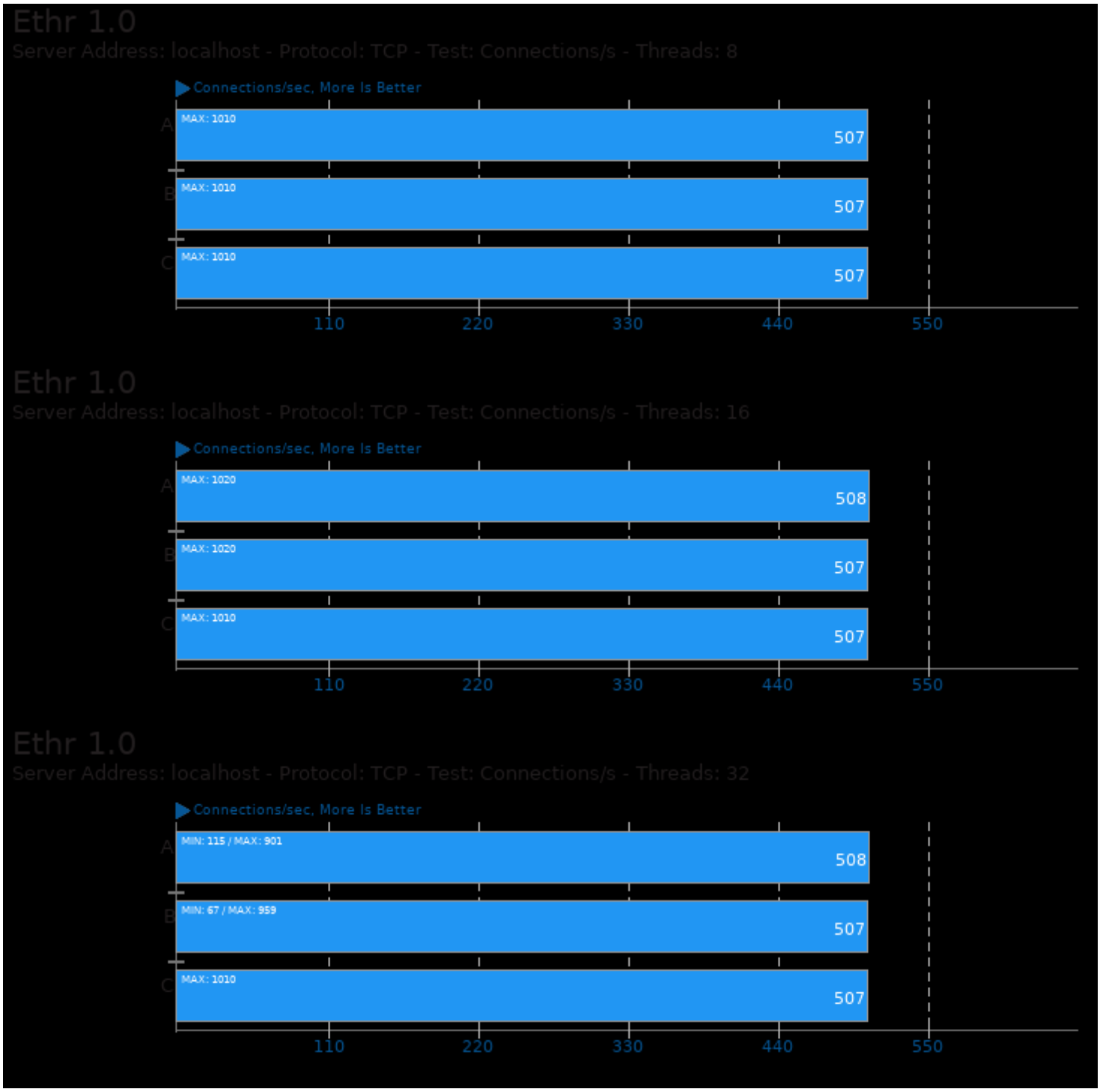
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Ethr - TCP - Connections/s - 64 (Connections/sec)	**506**	507	**508**
Normalized	99.61%	99.8%	100%
Ethr - TCP - Bandwidth - 1 (Gbits/sec)	**40.88**	**40.35**	40.59
Normalized	100%	98.7%	99.29%
Ethr - TCP - Bandwidth - 2 (Gbits/sec)	68.8	**68.7**	**69.27**
Normalized	99.32%	99.18%	100%
Ethr - TCP - Bandwidth - 4 (Gbits/sec)	**88.54**	**86.95**	87.82
Normalized	100%	98.2%	99.19%
Ethr - TCP - Bandwidth - 8 (Gbits/sec)	**83.79**	**81.96**	82.71
Normalized	100%	97.82%	98.71%
Ethr - TCP - Bandwidth - 16 (Gbits/sec)	**35.47**	**35.29**	35.40
Normalized	100%	99.49%	99.8%
Standard Deviation	111.6%	111.6%	111.7%
Ethr - TCP - Bandwidth - 32 (Gbits/sec)	56.51	**56.41**	**56.63**
Normalized	99.79%	99.61%	100%
Ethr - TCP - Bandwidth - 64 (Gbits/sec)	**52.54**	**52.29**	**52.29**
Normalized	100%	99.52%	99.52%
Ethr - UDP - Bandwidth - 1 (Packets/sec)	**312969**	**303768**	307188
Normalized	100%	97.06%	98.15%
Ethr - UDP - Bandwidth - 2 (Packets/sec)	**539342**	534164	**530513**
Normalized	100%	99.04%	98.36%
Ethr - UDP - Bandwidth - 4 (Packets/sec)	**1268000**	**1250000**	1254800
Normalized	100%	98.58%	98.96%
Ethr - UDP - Bandwidth - 8 (Packets/sec)	**2949600**	2961600	**3019600**
Normalized	97.68%	98.08%	100%
Ethr - UDP - Bandwidth - 16 (Packets/sec)	**2001100**	**1990087**	2000666
Normalized	100%	99.45%	99.98%
Standard Deviation	111.6%	111.6%	111.6%
Ethr - UDP - Bandwidth - 32 (Packets/sec)	3621600	**3620000**	**3683200**
Normalized	98.33%	98.28%	100%
Ethr - UDP - Bandwidth - 64 (Packets/sec)	**3832800**	3800800	**3798400**
Normalized	100%	99.17%	99.1%
Ethr - TCP - Latency - 1 (us)	**38.663**	**41.835**	39.451
Normalized	100%	92.42%	98%
Ethr - TCP - Latency - 2 (us)	**38.528**	**40.212**	39.506
Normalized	100%	95.81%	97.52%
Ethr - TCP - Latency - 4 (us)	**38.085**	**43.418**	41.193
Normalized	100%	87.72%	92.46%
Ethr - TCP - Latency - 8 (us)	40.009	**39.41**	**40.586**
Normalized	98.5%	100%	97.1%
Ethr - TCP - Latency - 16 (us)	**38.325**	40.55	**42.256**
Normalized	100%	94.51%	90.7%
Ethr - TCP - Latency - 32 (us)	**40.382**	38.873	**37.525**
Normalized	92.93%	96.53%	100%
Ethr - TCP - Latency - 64 (us)	**37.314**	39.781	**40.802**
Normalized	100%	93.8%	91.45%

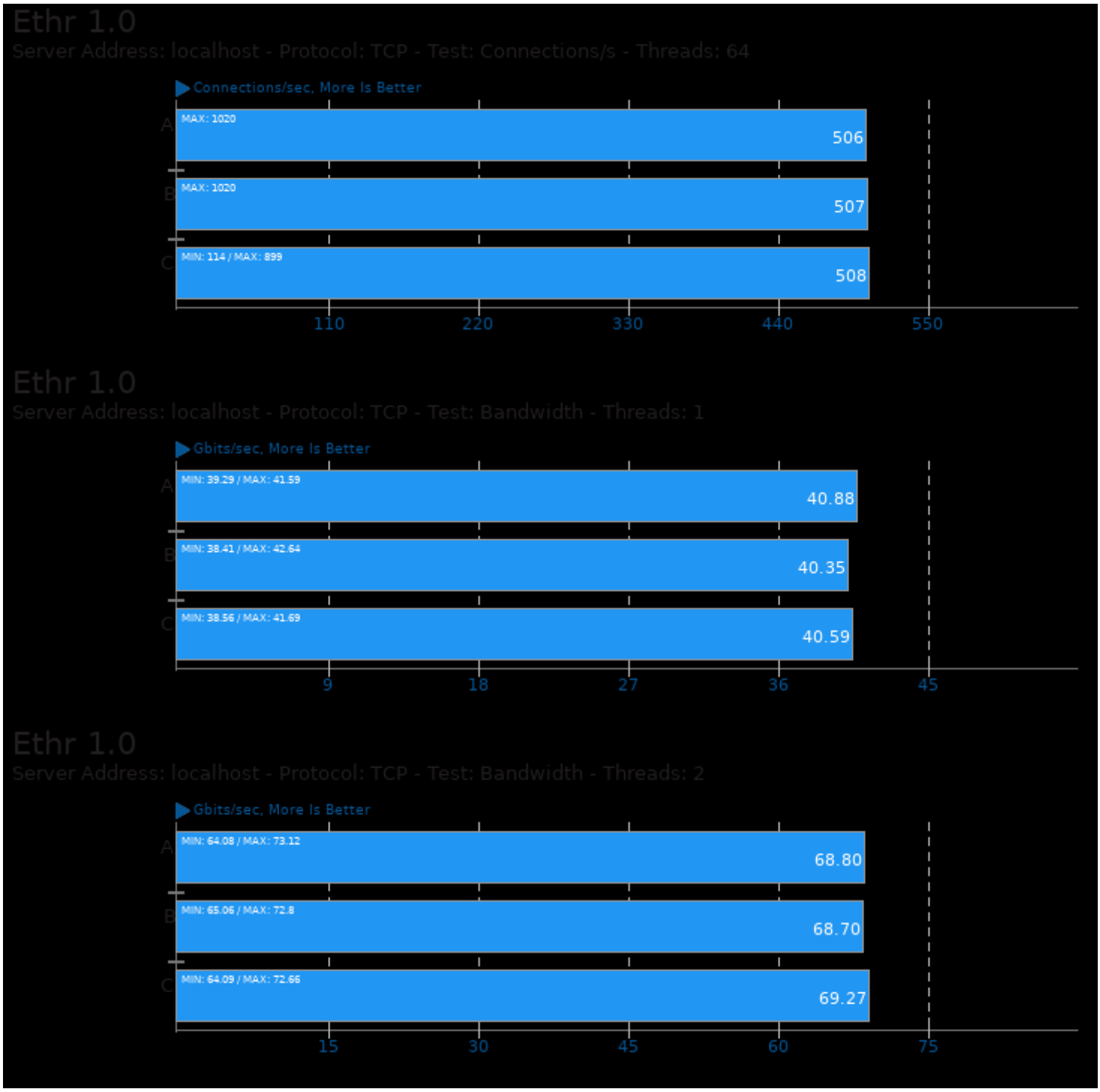
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Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Connections/s - Threads: 1
Connections/sec, More Is Better
A
MAX: 1010
505
B
MAX: 1010
505
C
MAX: 1010
505
110
220
330
440
550
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Connections/s - Threads: 2
Connections/sec, More Is Better
A
MAX: 1010
505
B
MAX: 1010
505
C
MAX: 1010
505
110
220
330
440
550
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Connections/s - Threads: 4
Connections/sec, More Is Better
A
MAX: 1010
506
B
MAX: 1010
506
C
MAX: 1010
506
110
220
330
440
550

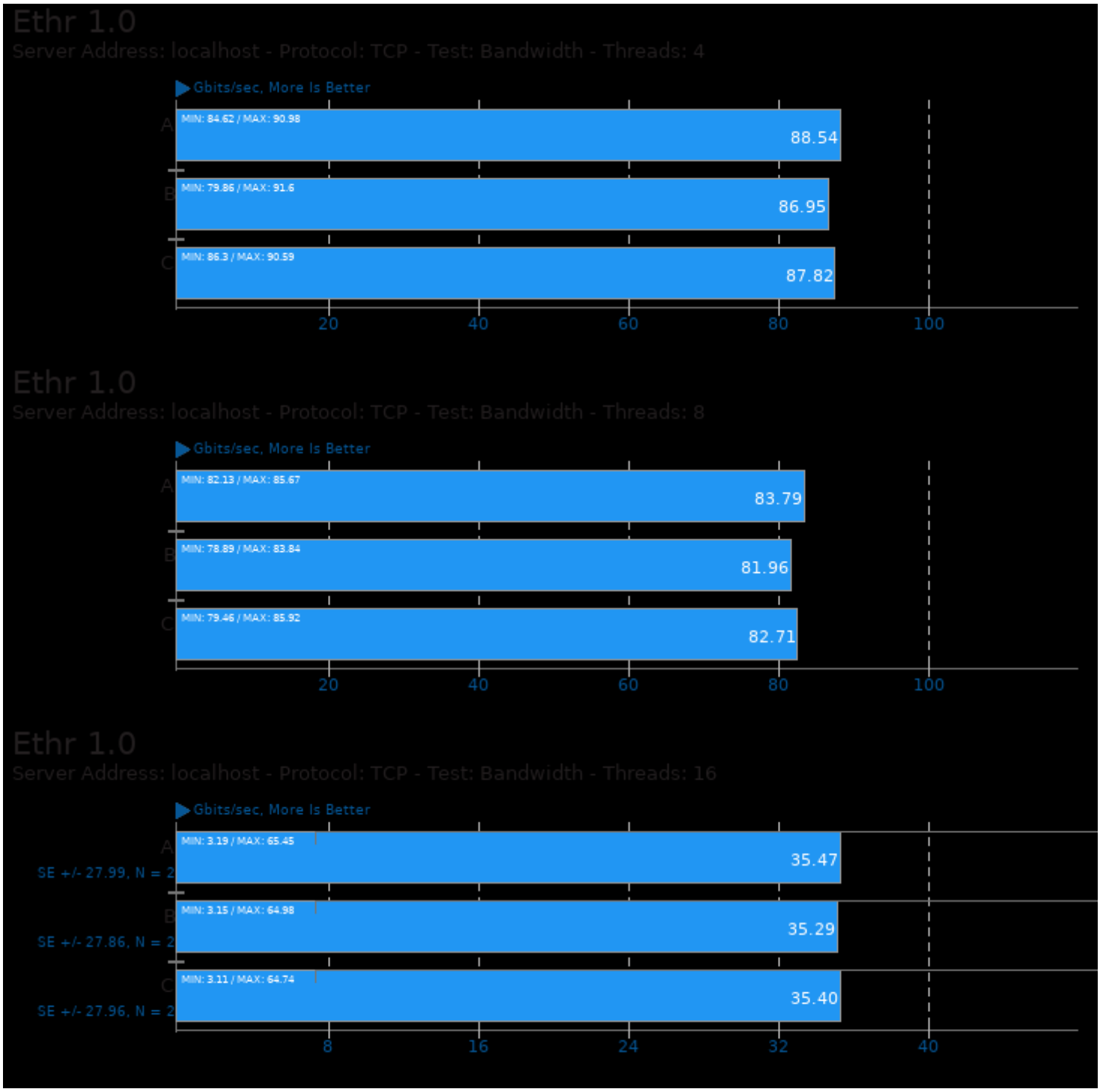
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Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Connections/s - Threads: 8
Connections/sec, More Is Better
A
MAX: 1010
507
B
MAX: 1010
507
C
MAX: 1010
507
110
220
330
440
550
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Connections/s - Threads: 16
Connections/sec, More Is Better
A
MAX: 1020
508
B
MAX: 1020
507
C
MAX: 1010
507
110
220
330
440
550
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Connections/s - Threads: 32
Connections/sec, More Is Better
A
MIN: 115 / MAX: 901
508
B
MIN: 67 / MAX: 959
507
C
MAX: 1010
507
110
220
330
440
550

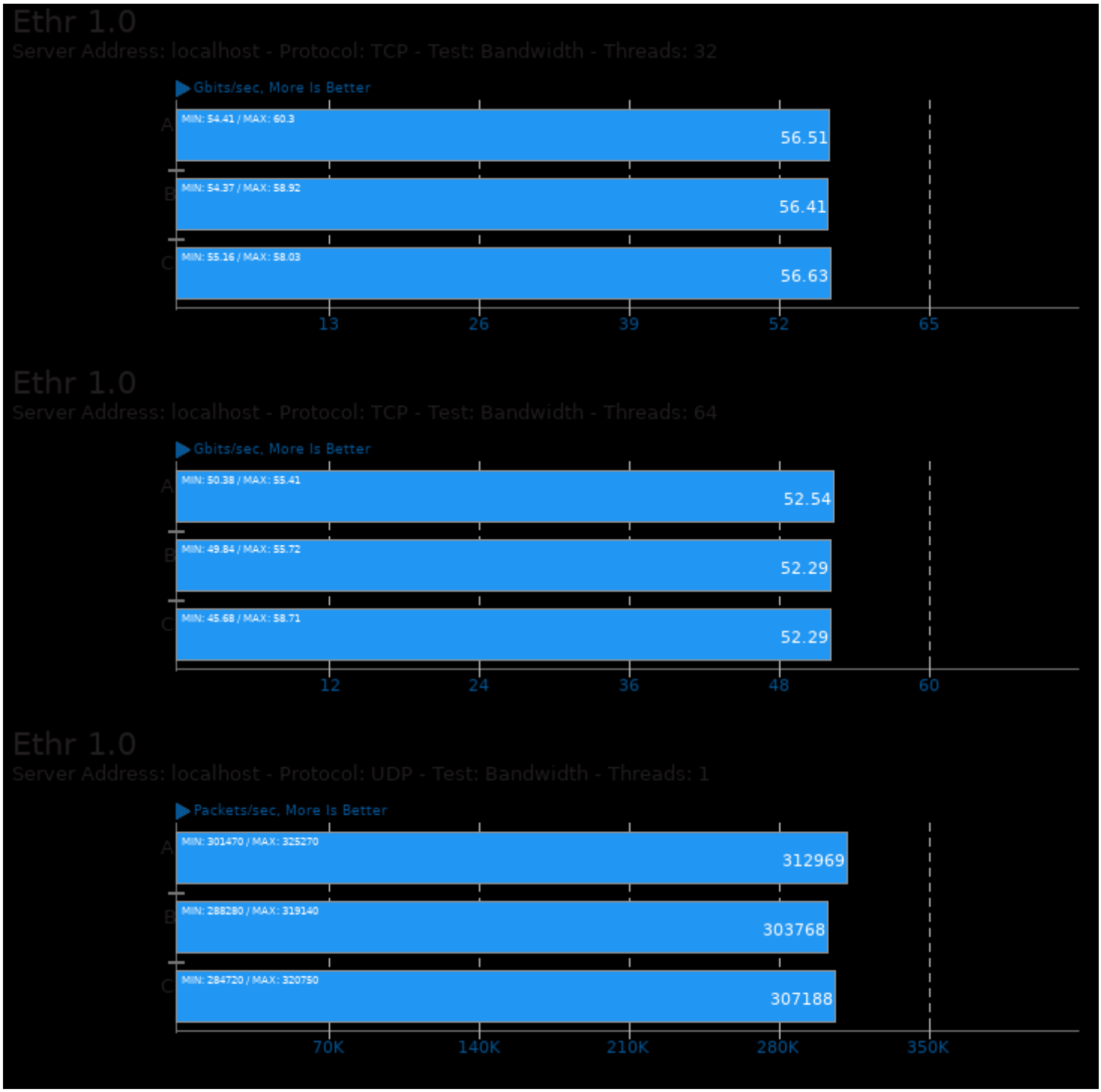
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Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Connections/s - Threads: 64
Connections/sec, More Is Better
A
MAX: 1020
506
B
MAX: 1020
507
C
MIN: 114 / MAX: 899
508
110
220
330
440
550
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Bandwidth - Threads: 1
Gbits/sec, More Is Better
A
MIN: 39.29 / MAX: 41.59
40.88
B
MIN: 38.41 / MAX: 42.64
40.35
C
MIN: 38.56 / MAX: 41.69
40.59
9
18
27
36
45
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Bandwidth - Threads: 2
Gbits/sec, More Is Better
A
MIN: 64.08 / MAX: 73.12
68.80
B
MIN: 65.06 / MAX: 72.8
68.70
C
MIN: 64.09 / MAX: 72.66
69.27
15
30
45
60
75

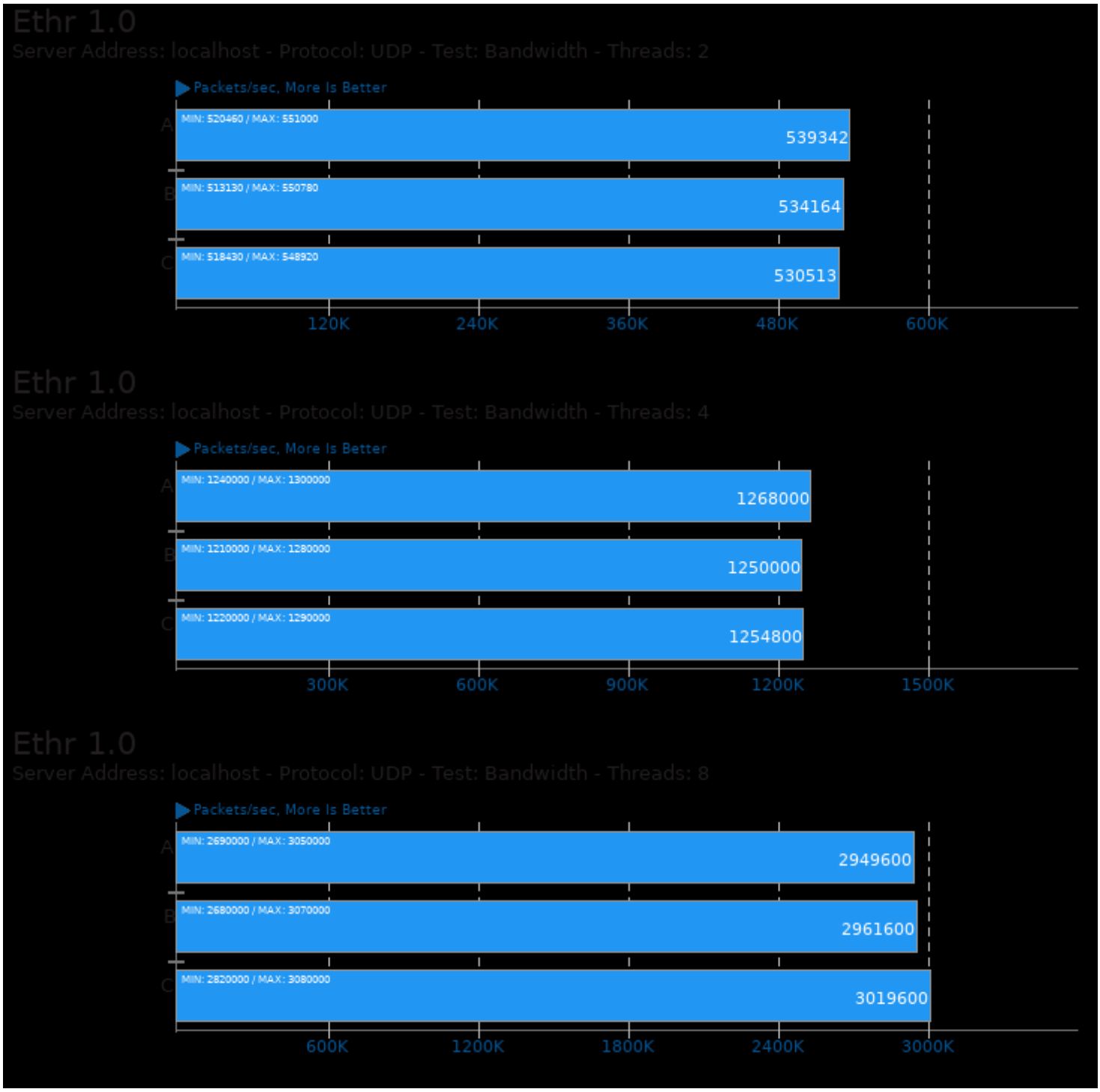
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Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Bandwidth - Threads: 4
Gbits/sec, More Is Better
A
MIN: 84.62 / MAX: 90.98
88.54
B
MIN: 79.86 / MAX: 91.6
86.95
C
MIN: 86.3 / MAX: 90.59
87.82
20
40
60
80
100
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Bandwidth - Threads: 8
Gbits/sec, More Is Better
A
MIN: 82.13 / MAX: 85.67
83.79
B
MIN: 78.89 / MAX: 83.84
81.96
C
MIN: 79.46 / MAX: 85.92
82.71
20
40
60
80
100
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Bandwidth - Threads: 16
Gbits/sec, More Is Better
A
MIN: 3.19 / MAX: 65.45
35.47
SE +/- 27.99, N = 2
B
MIN: 3.15 / MAX: 64.98
35.29
SE +/- 27.86, N = 2
C
MIN: 3.11 / MAX: 64.74
35.40
SE +/- 27.96, N = 2
8
16
24
32
40

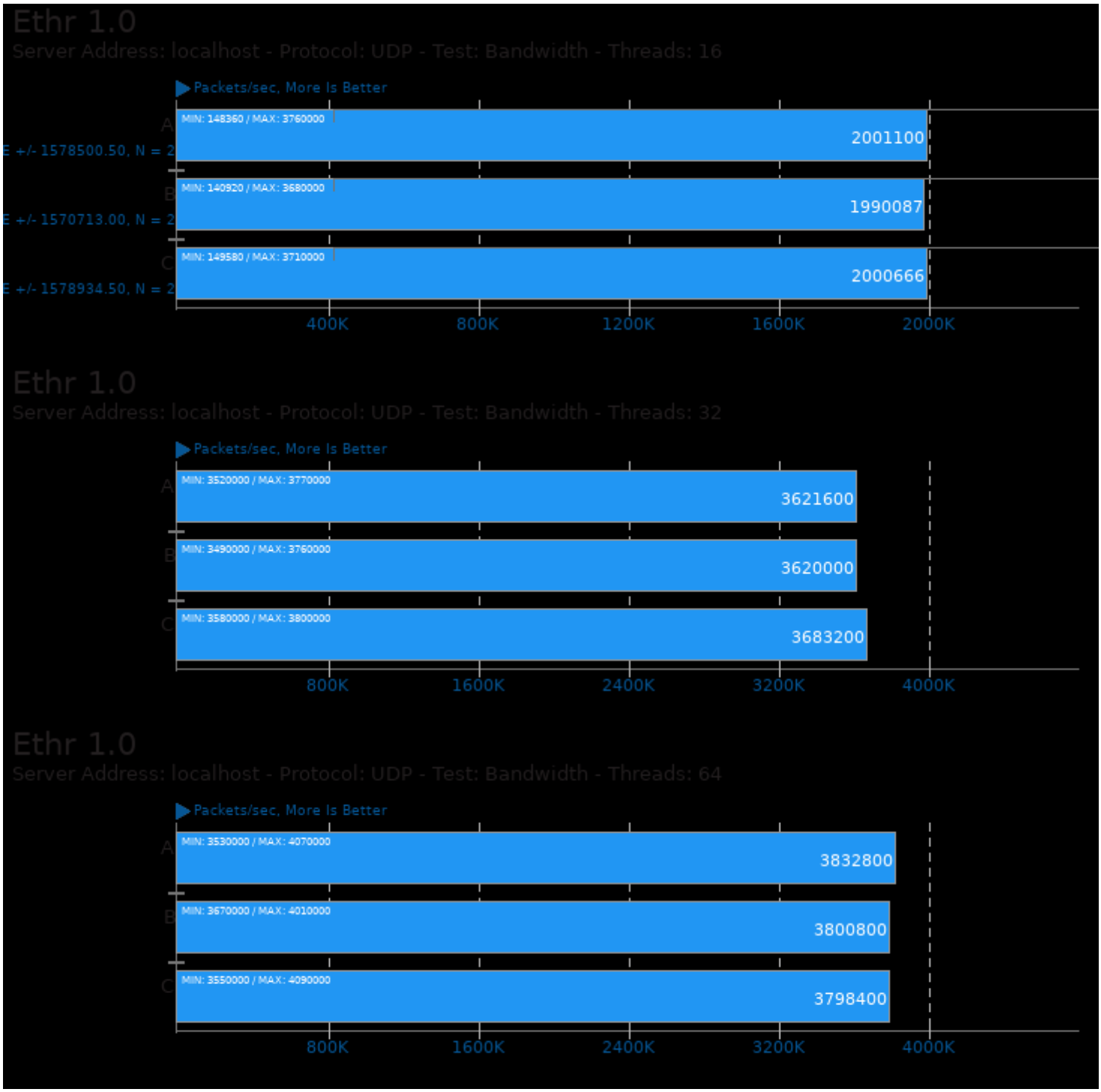
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Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Bandwidth - Threads: 32
Gbits/sec, More Is Better
A
MIN: 54.41 / MAX: 60.3
56.51
B
MIN: 54.37 / MAX: 58.92
56.41
C
MIN: 55.16 / MAX: 58.03
56.63
13
26
39
52
65
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Bandwidth - Threads: 64
Gbits/sec, More Is Better
A
MIN: 50.38 / MAX: 55.41
52.54
B
MIN: 49.84 / MAX: 55.72
52.29
C
MIN: 45.68 / MAX: 58.71
52.29
12
24
36
48
60
Ethr 1.0
Server Address: localhost - Protocol: UDP - Test: Bandwidth - Threads: 1
Packets/sec, More Is Better
A
MIN: 301470 / MAX: 325270
312969
B
MIN: 288280 / MAX: 319140
303768
C
MIN: 284720 / MAX: 320750
307188
70K
140K
210K
280K
350K

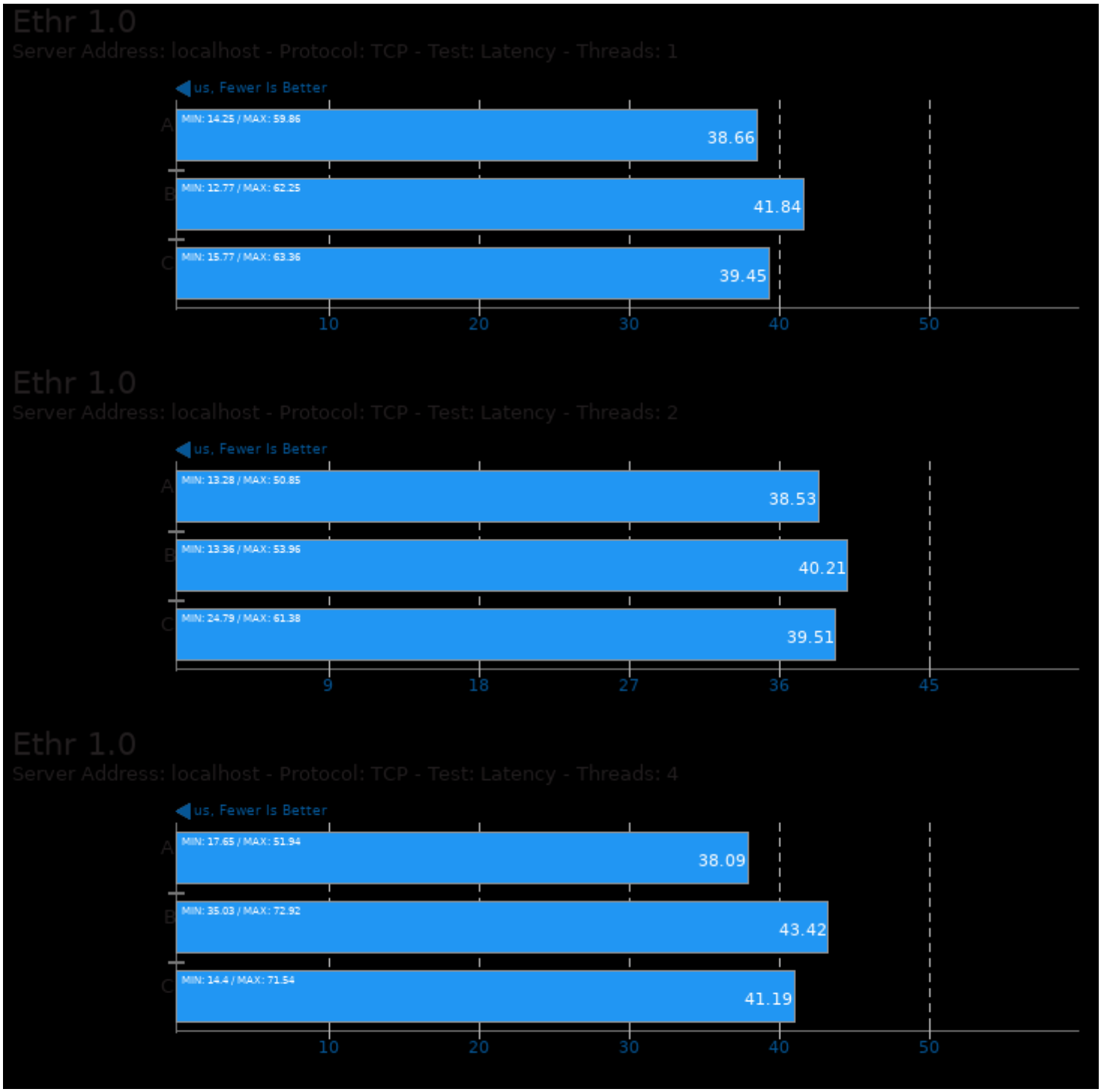
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Ethr 1.0
Server Address: localhost - Protocol: UDP - Test: Bandwidth - Threads: 2
Packets/sec, More Is Better
A
MIN: 520460 / MAX: 551000
539342
B
MIN: 513130 / MAX: 550780
534164
C
MIN: 518430 / MAX: 548920
530513
120K
240K
360K
480K
600K
Ethr 1.0
Server Address: localhost - Protocol: UDP - Test: Bandwidth - Threads: 4
Packets/sec, More Is Better
A
MIN: 1240000 / MAX: 1300000
1268000
B
MIN: 1210000 / MAX: 1280000
1250000
C
MIN: 1220000 / MAX: 1290000
1254800
300K
600K
900K
1200K
1500K
Ethr 1.0
Server Address: localhost - Protocol: UDP - Test: Bandwidth - Threads: 8
Packets/sec, More Is Better
A
MIN: 2690000 / MAX: 3050000
2949600
B
MIN: 2680000 / MAX: 3070000
2961600
C
MIN: 2820000 / MAX: 3080000
3019600
600K
1200K
1800K
2400K
3000K

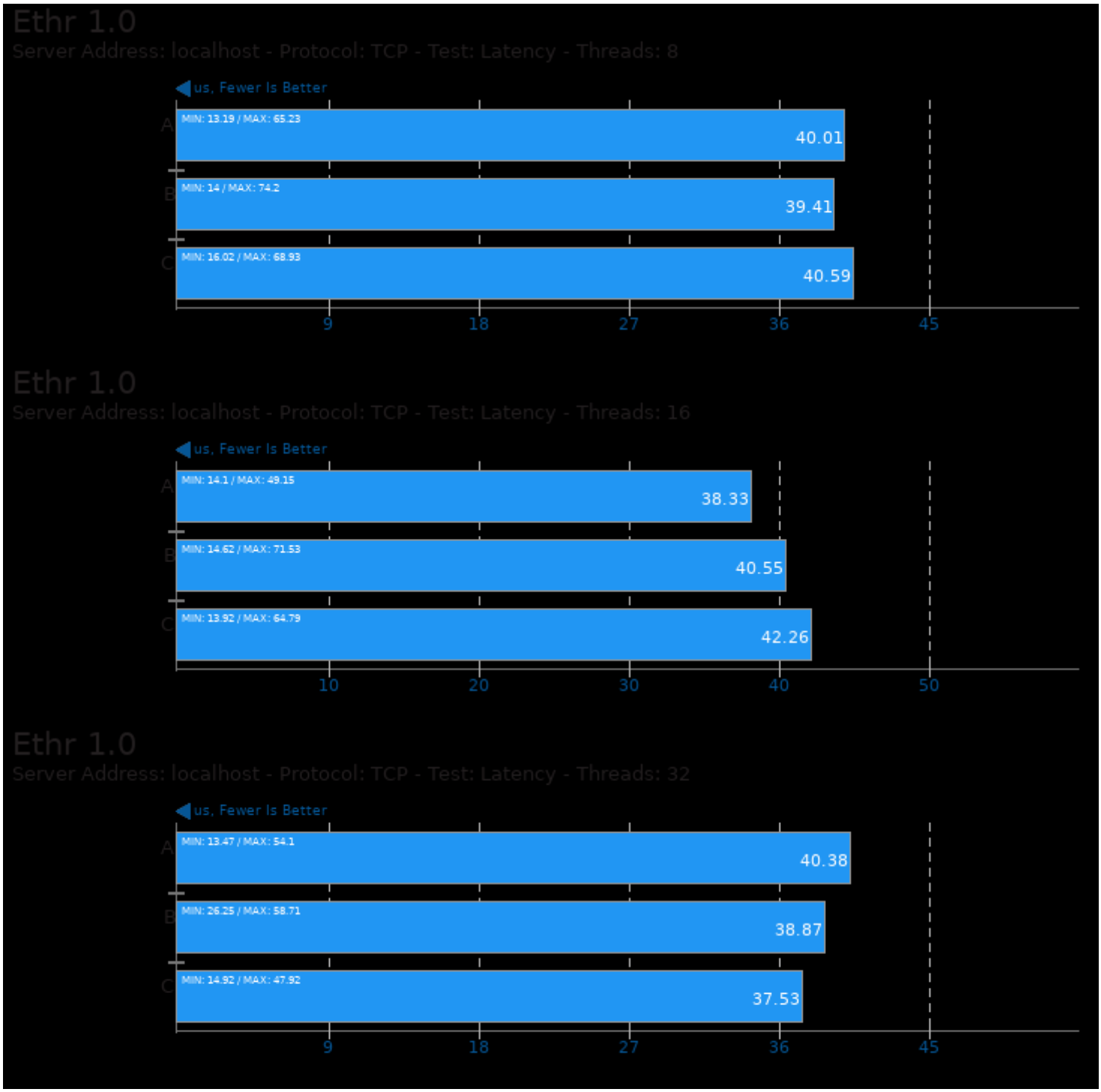
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Ethr 1.0
Server Address: localhost - Protocol: UDP - Test: Bandwidth - Threads: 16
Packets/sec, More Is Better
MIN: 148360 / MAX: 3760000
2001100
MIN: 140920 / MAX: 3680000
1990087
MIN: 149580 / MAX: 3710000
2000666
400K
800K
1200K
1600K
2000K
Ethr 1.0
Server Address: localhost - Protocol: UDP - Test: Bandwidth - Threads: 32
Packets/sec, More Is Better
MIN: 3520000 / MAX: 3770000
3621600
MIN: 3490000 / MAX: 3760000
3620000
MIN: 3580000 / MAX: 3800000
3683200
800K
1600K
2400K
3200K
4000K
Ethr 1.0
Server Address: localhost - Protocol: UDP - Test: Bandwidth - Threads: 64
Packets/sec, More Is Better
MIN: 3530000 / MAX: 4070000
3832800
MIN: 3670000 / MAX: 4010000
3800800
MIN: 3550000 / MAX: 4090000
3798400
800K
1600K
2400K
3200K
4000K

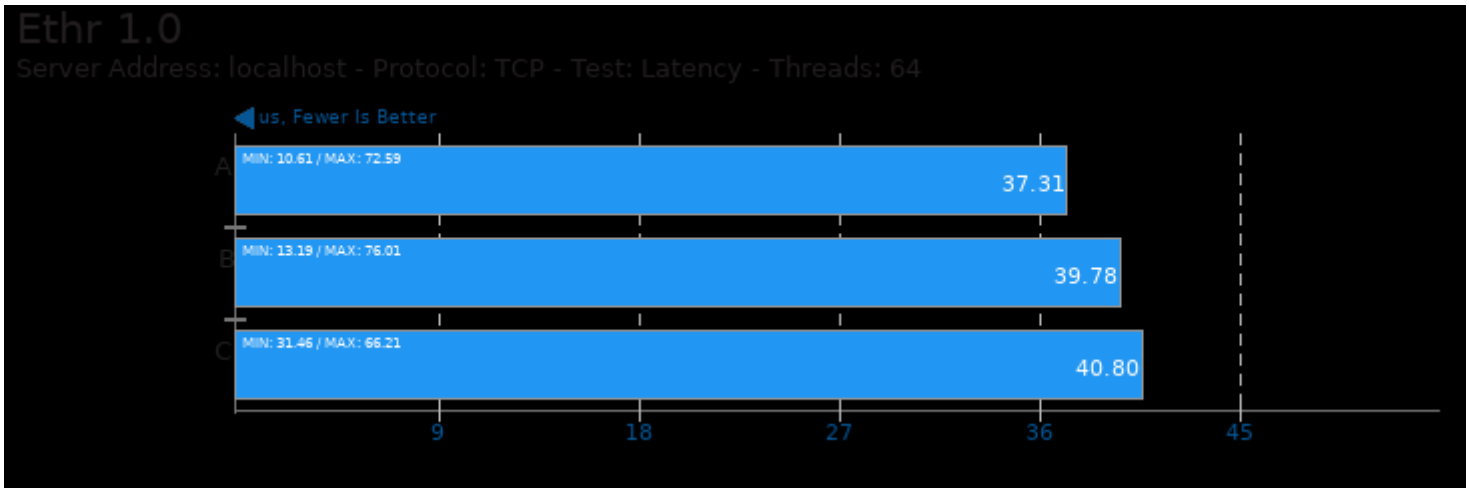
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Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 1
us, Fewer Is Better
A
MIN: 14.25 / MAX: 59.86
38.66
B
MIN: 12.77 / MAX: 62.25
41.84
C
MIN: 15.77 / MAX: 63.36
39.45
10
20
30
40
50
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 2
us, Fewer Is Better
A
MIN: 13.28 / MAX: 50.85
38.53
B
MIN: 13.36 / MAX: 53.96
40.21
C
MIN: 24.79 / MAX: 61.38
39.51
9
18
27
36
45
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 4
us, Fewer Is Better
A
MIN: 17.65 / MAX: 51.94
38.09
B
MIN: 35.03 / MAX: 72.92
43.42
C
MIN: 14.4 / MAX: 71.54
41.19
10
20
30
40
50

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Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 8
us, Fewer Is Better
A
MIN: 13.19 / MAX: 65.23
40.01
B
MIN: 14 / MAX: 74.2
39.41
C
MIN: 16.02 / MAX: 68.93
40.59
9
18
27
36
45
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 16
us, Fewer Is Better
A
MIN: 14.1 / MAX: 49.15
38.33
B
MIN: 14.62 / MAX: 71.53
40.55
C
MIN: 13.92 / MAX: 64.79
42.26
10
20
30
40
50
Ethr 1.0
Server Address: localhost - Protocol: TCP - Test: Latency - Threads: 32
us, Fewer Is Better
A
MIN: 13.47 / MAX: 54.1
40.38
B
MIN: 26.25 / MAX: 58.71
38.87
C
MIN: 14.92 / MAX: 47.92
37.53
9
18
27
36
45

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This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 13:54.