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Java Ubuntu 18.04.2 LTS

Intel Core i9-7980XE testing with a ASUS PRIME X299-A (1704 BIOS) and NVIDIA GeForce GTX TITAN X 12GB on Ubuntu 18.04 via the Phoronix Test Suite.

Automated Executive Summary

1.8.0_191-8u191-b12-2ubuntu0.18.04.1-b12 had the most wins, coming in first place for 61% of the tests.

Based on the geometric mean of all complete results, the fastest (1.8.0_191-8u191-b12-2ubuntu0.18.04.1-b12) was 1.048x the speed of the slowest (11.0.2+9-Ubuntu-3ubuntu118.04.3). OpenJDK 12.0.1+12 was 0.96x the speed of 1.8.0_191-8u191-b12-2ubuntu0.18.04.1-b12 and 11.0.2+9-Ubuntu-3ubuntu118.04.3 was 0.994x the speed of OpenJDK 12.0.1+12.

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

SPECjbb 2015 (SPECjbb2015-Composite max-jOPS) at 1.438x
Java SciMark (Computational Test: Dense LU Matrix Factorization) at 1.238x
SPECjbb 2015 (SPECjbb2015-Composite critical-jOPS) at 1.199x
Java 2D Microbenchmark (Rendering Test: Text Rendering) at 1.189x
DaCapo Benchmark (Java Test: Jython) at 1.183x
Sunflow Rendering System (Global Illumination + Image Synthesis) at 1.13x
Java SciMark (Computational Test: Jacobi Successive Over-Relaxation) at 1.105x

Java SciMark (Computational Test: Composite) at 1.087x
DaCapo Benchmark (Java Test: H2) at 1.069x
Java SciMark (Computational Test: Fast Fourier Transform) at 1.053x.

Test Systems:

11.0.2+9-Ubuntu-3ubuntu118.04.3

1.8.0_191-8u191-b12-2ubuntu0.18.04.1-b12

OpenJDK 12.0.1+12

Processor: Intel Core i9-7980XE @ 4.20GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A (1704 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 16384MB, Disk: Samsung SSD 970 EVO 500GB, Graphics: NVIDIA GeForce GTX TITAN X 12GB (1001/3505MHz), Audio: Realtek ALC1220, Monitor: ASUS PB278, Network: Intel I219-V

OS: Ubuntu 18.04, Kernel: 4.18.0-17-generic (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.20.1, Display Driver: NVIDIA 390.116, OpenGL: 4.6.0, Compiler: GCC 7.3.0, File-System: ext4, Screen Resolution: 2560x1440

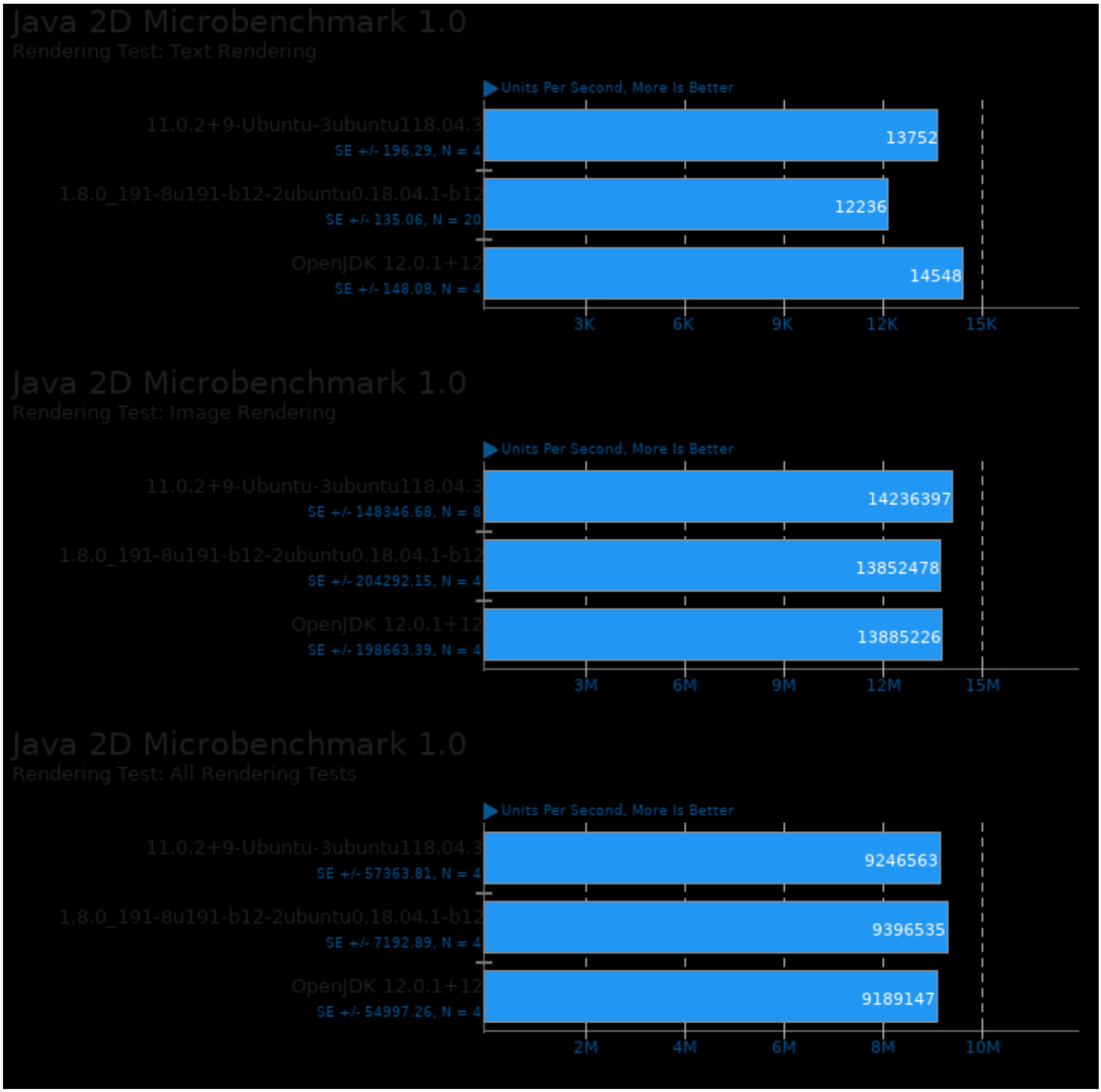
Processor Notes: Scaling Governor: intel_pstate powersave
Java Notes: OpenJDK Runtime Environment (build 12.0.1+12)
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW STIBP + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

	11.0.2+9-Ubuntu-3ubuntu118.04.3	1.8.0_191-8u191-b12-2ubuntu0.18.04.1-b12	OpenJDK 12.0.1+12
Java 2D Microbenchmark - Text Rendering (Units/sec)	13752	**12236**	**14548**
Normalized	94.53%	84.11%	100%
Standard Deviation	2.9%	4.9%	2%
Java 2D Microbenchmark - Image Rendering (Units/sec)	**14236397**	**13852478**	13885226
Normalized	100%	97.3%	97.53%
Standard Deviation	2.9%	2.9%	2.9%
Java 2D Microbenchmark - A.R.T (Units/sec)	9246563	**9396535**	**9189147**
Normalized	98.4%	100%	97.79%
Standard Deviation	1.2%	0.2%	1.2%
Java 2D Microbenchmark - V.G.R (Units/sec)	**7801852**	**7885321**	7835820
Normalized	98.94%	100%	99.37%
Standard Deviation	0.8%	0.8%	0.5%
Java SciMark - Composite (Mflops)	**2243**	**2439**	2251
Normalized	91.96%	100%	92.29%

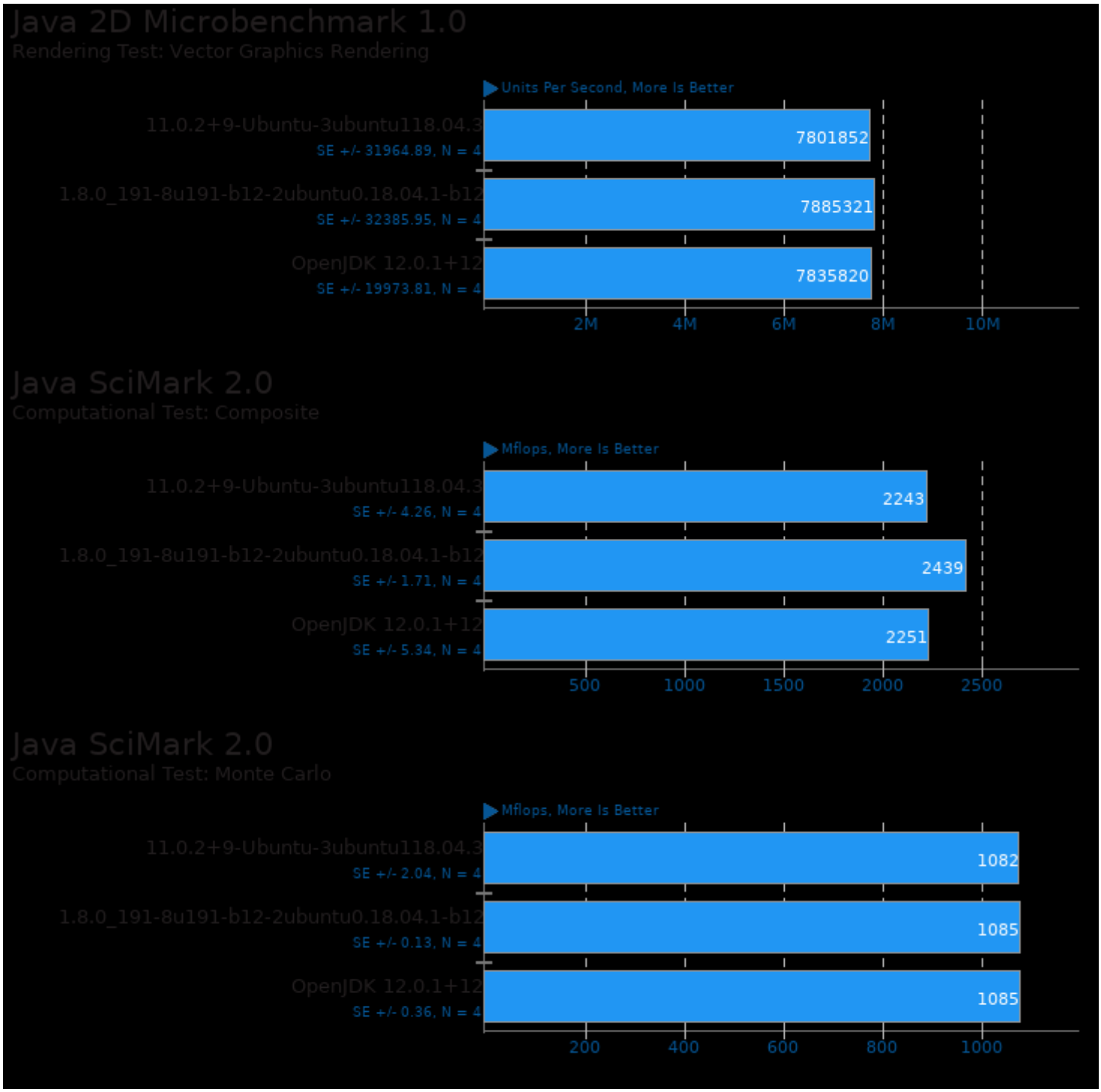
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Standard Deviation	0.4%	0.1%	0.5%
Java SciMark - Monte Carlo (Mflops)	**1082**	**1085**	**1085**
Normalized	99.72%	100%	100%
Standard Deviation	0.4%	0%	0.1%
Java SciMark - F.F.T (Mflops)	**1332**	**1403**	1345
Normalized	94.94%	100%	95.87%
Standard Deviation	0.7%	0.6%	0.9%
Java SciMark - S.M.M (Mflops)	**2452**	2529	**2563**
Normalized	95.67%	98.67%	100%
Standard Deviation	0.3%	0%	0.1%
Java SciMark - D.L.M.F (Mflops)	4586	**5578**	**4505**
Normalized	82.22%	100%	80.76%
Standard Deviation	0.8%	0.2%	1%
Java SciMark - J.S.O.R (Mflops)	**1765**	**1598**	1755
Normalized	100%	90.54%	99.43%
Standard Deviation	0.2%	0.3%	1.2%
Bork File Encrypter - F.E.T (sec)	**6.48**	**6.73**	6.53
Normalized	100%	96.29%	99.23%
Standard Deviation	5.9%	0.4%	5.8%
DaCapo Benchmark - H2 (msec)	**6548**	**7000**	6557
Normalized	100%	93.54%	99.86%
Standard Deviation	3%	1.5%	2.8%
DaCapo Benchmark - Jython (msec)	**5664**	**4789**	5573
Normalized	84.55%	100%	85.93%
Standard Deviation	1.1%	0.9%	2%
DaCapo Benchmark - Tradesoap (msec)	**4901**	**5068**	5034
Normalized	100%	96.7%	97.36%
Standard Deviation	2.1%	0.9%	0.9%
DaCapo Benchmark - Tradebeans (msec)	8836	**8516**	**8844**
Normalized	96.38%	100%	96.29%
Standard Deviation	0.3%	0.3%	1.4%
Sunflow Rendering System - G.I.I.S (sec)	**1.04**	**0.92**	1.00
Normalized	88.46%	100%	92%
Standard Deviation	2.5%	1.6%	5.8%
SPECjbb 2015 - S.C.m.j (jOPS)	26012	**35774**	**24869**
Normalized	72.71%	100%	69.52%
SPECjbb 2015 - S.C.c.j (jOPS)	**6009**	**7207**	6418
Normalized	83.38%	100%	89.05%

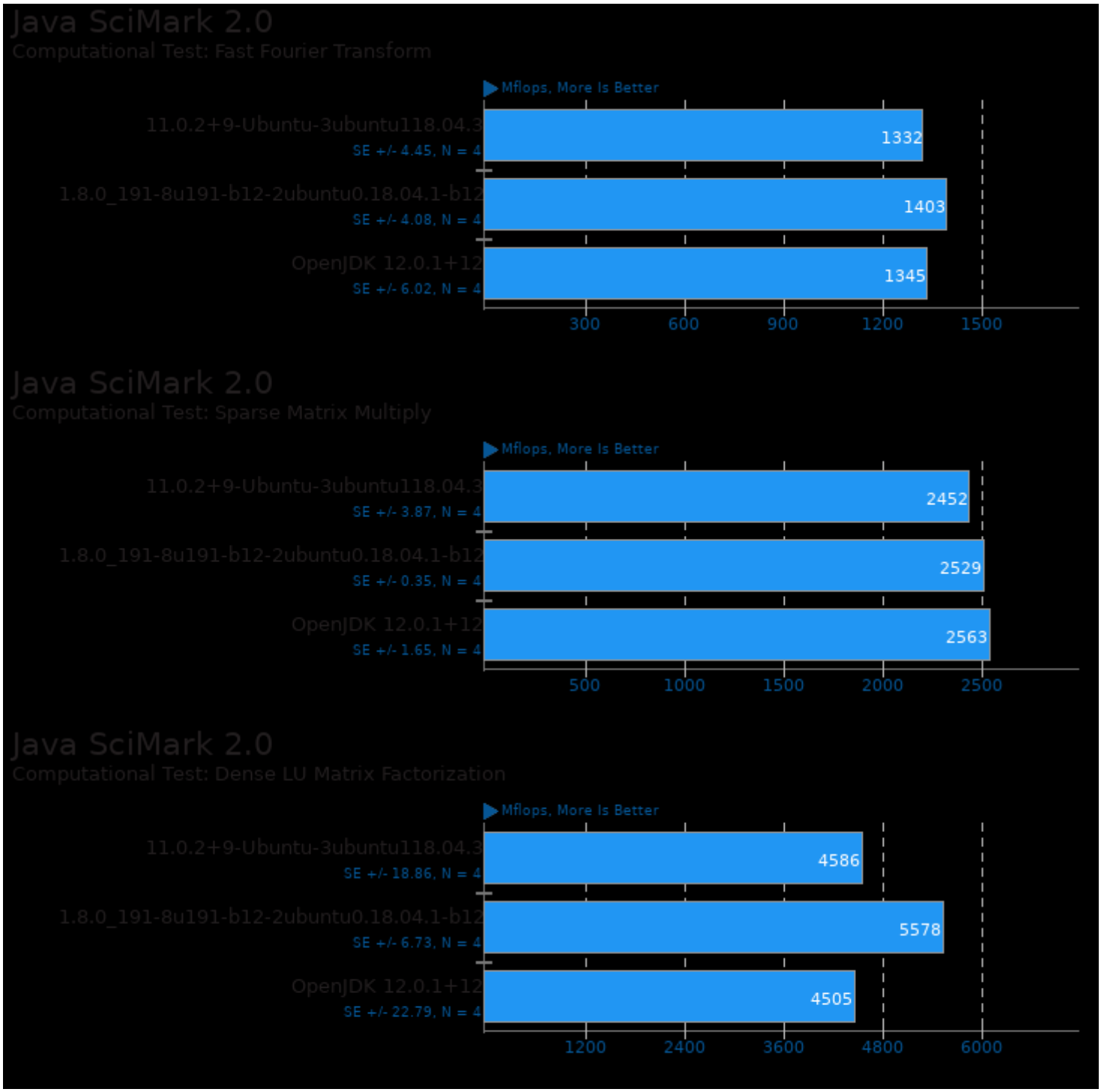
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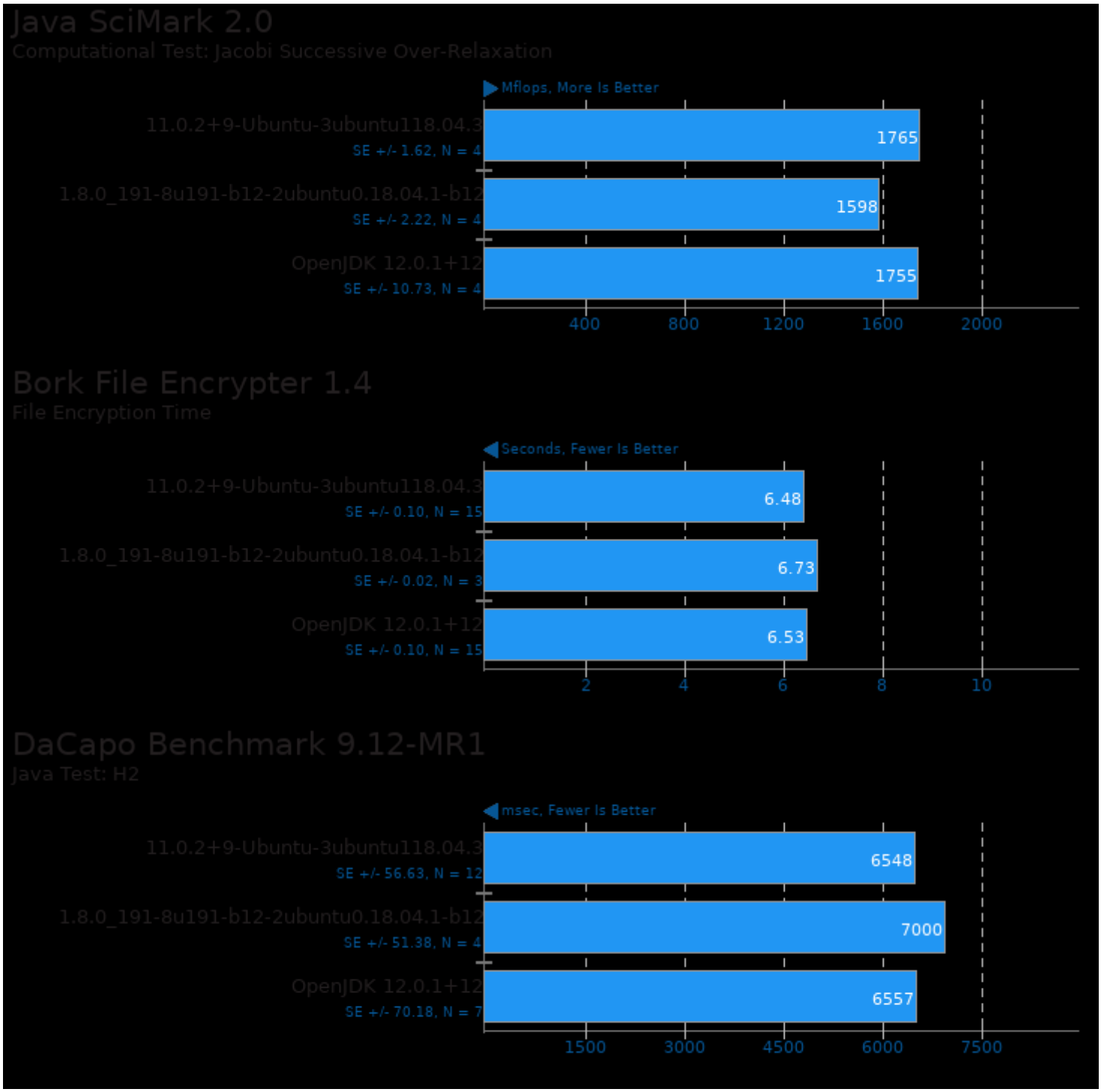
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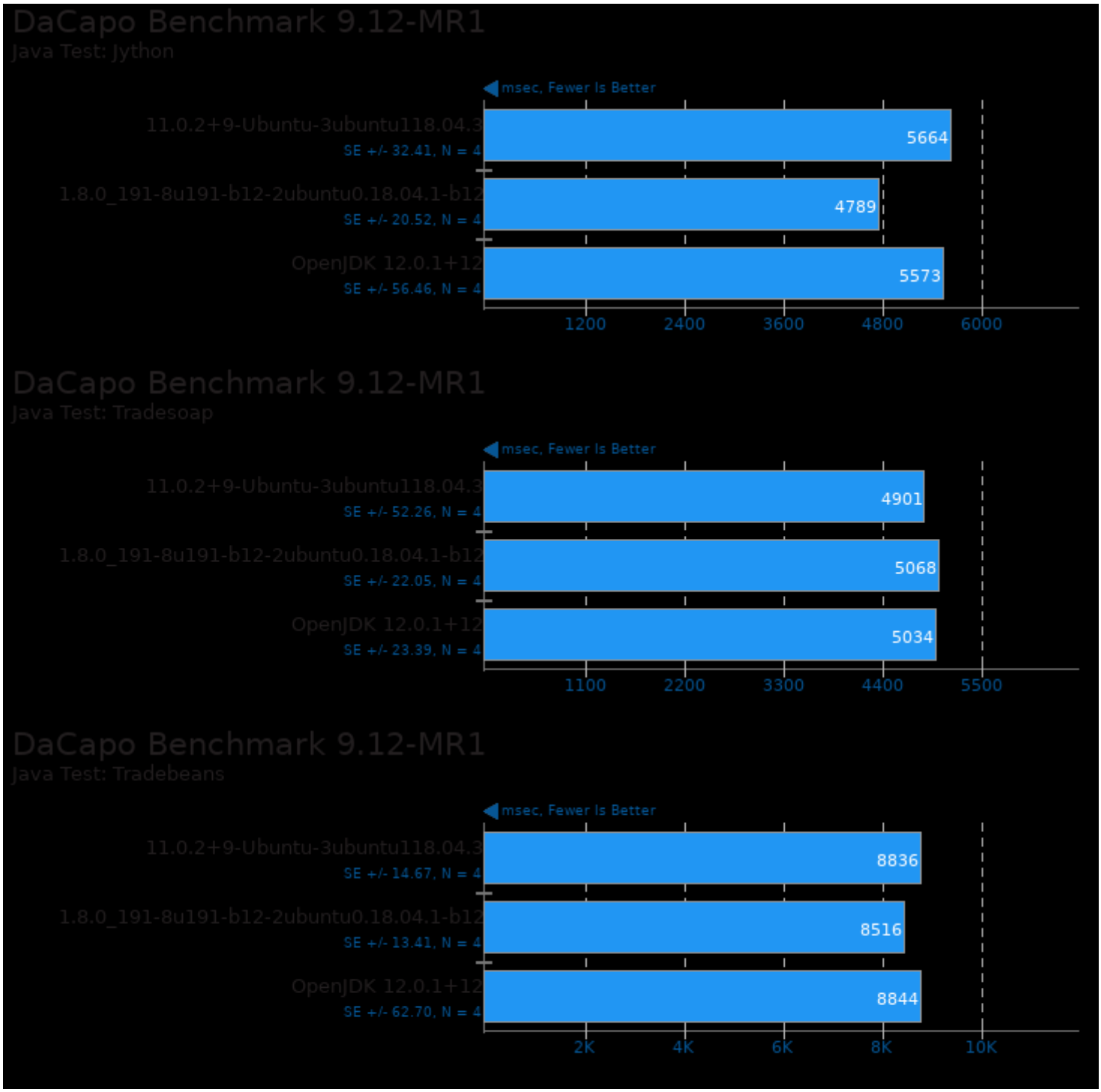
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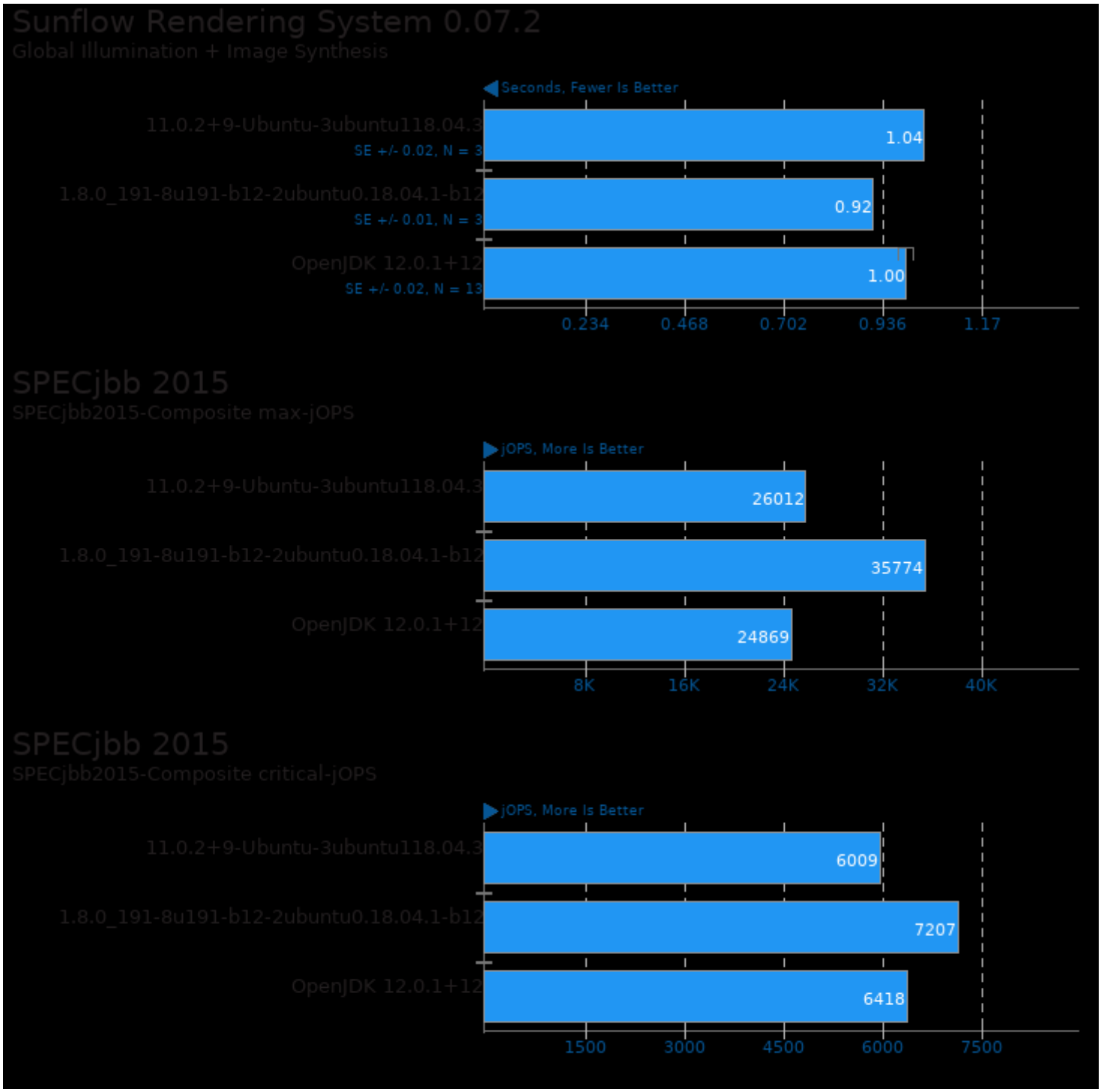
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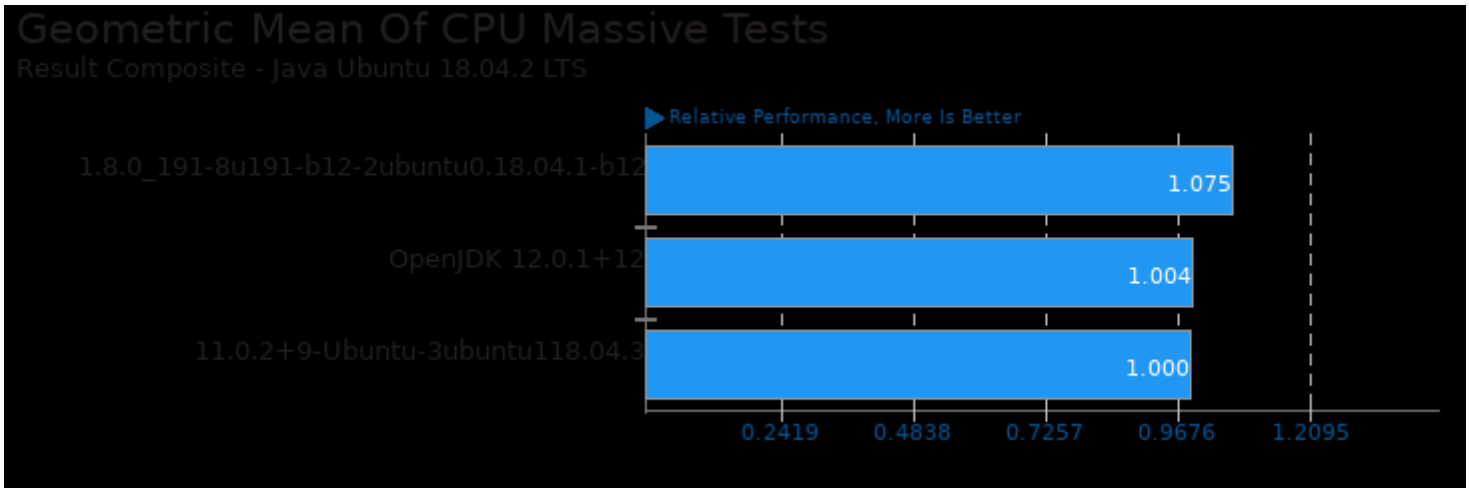


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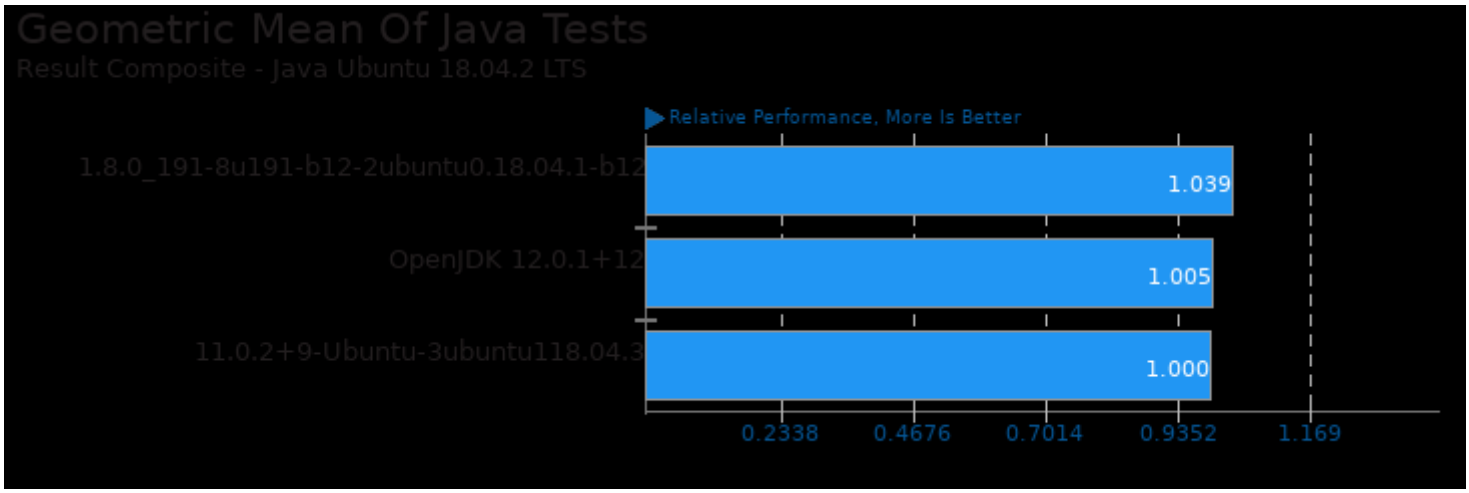


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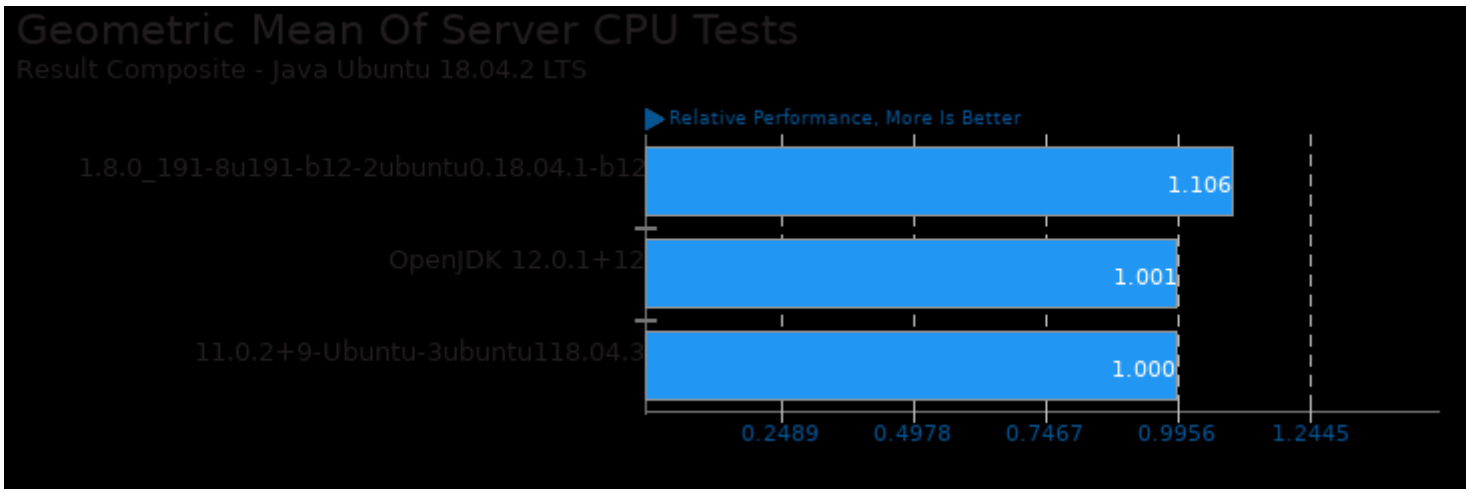
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/dacapobench, pts/java-scimark2 and pts/spec-jbb2015

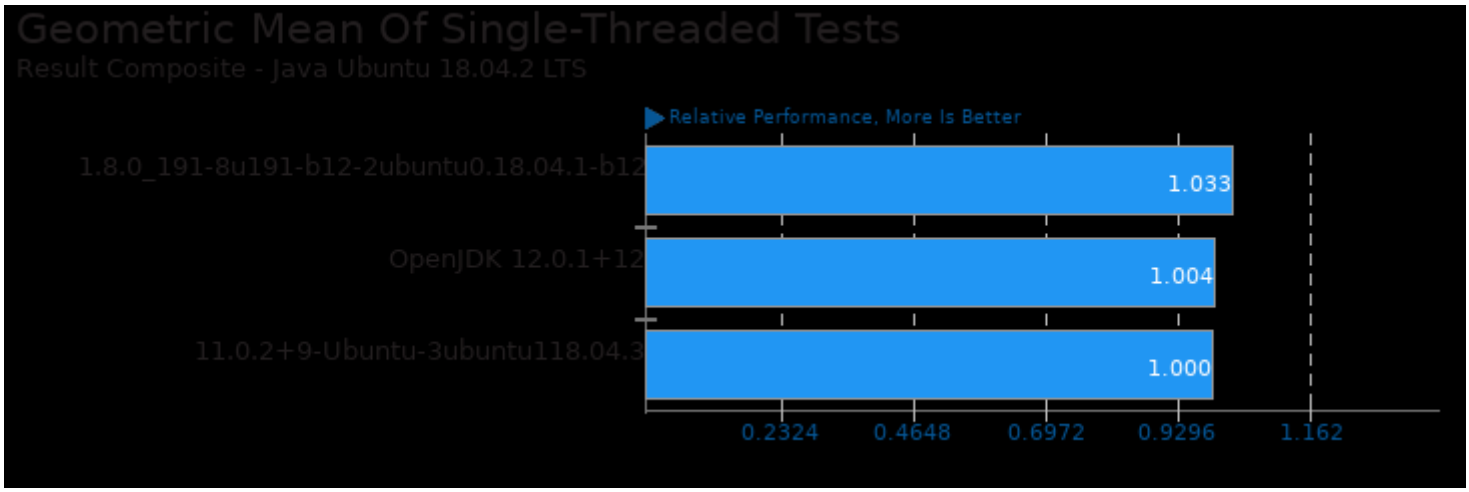


Geometric mean based upon tests: pts/sunflow, pts/bork, pts/java-scimark2 and pts/dacapobench



Geometric mean based upon tests: pts/dacapobench and pts/spec-jbb2015

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Geometric mean based upon tests: pts/java-scimark2 and pts/bork

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 16:56.