

Jeremy Glebe
Operating Systems Matrix Project
11/27/18

Summary:

The matrix multiplication completed in 37 minutes on a 8 core processor (clocked at 2.8 GHz) and completed in 47 minutes on a 4 core processor (clocked at 3.3GHz). This reflects the fact that threading in C++ is really SOFTWARE threading. If we were running one thread on each core, the 4 core would outperform the 8 core because there's only 4 threads and the 4 core is has higher clock speeds. In addition, the extra cores allowed for a LOT less strain on the first machine. The first machine could run this program and still be used to browse the internet at the same time. The second machine froze and was not usable for any other purposes for the entire duration of its run time. Full machine specs below.

First Test:

----- System Information

Time of this report: 11/27/2018, 12:54:47
Machine name: DESKTOP-9717KKG
Machine Id: {29DC2BB0-E97E-4B4D-8F51-7B3AA28B89F2}
Operating System: Windows 10 Home 64-bit (10.0, Build 17134) (17134.rs4_release.180410-1804)
Language: English (Regional Setting: English)
System Manufacturer: Alienware
System Model: Alienware 17 R4
BIOS: 1.0.2 (type: UEFI)

Processor: Intel(R) Core(TM) i7-7700HQ CPU @ 2.80GHz (8 CPUs), ~2.8GHz

Memory: 16384MB RAM

Available OS Memory: 16246MB RAM
Page File: 10320MB used, 22310MB available
Windows Dir: C:\Windows
DirectX Version: DirectX 12
DX Setup Parameters: Not found
User DPI Setting: 96 DPI (100 percent)
System DPI Setting: 96 DPI (100 percent)
DWM DPI Scaling: Disabled
Miracast: Available, with HDCP
Microsoft Graphics Hybrid: Supported
DxDiag Version: 10.00.17134.0001 64bit Unicode

Matrix Multiplication Time Measured: 37.009 minutes (2.22056e+006 ms)

Second Test:

----- **System Information** -----

Time of this report: 11/27/2018, 12:55:19

Machine name: BO119-LAB-0014

Operating System: Windows 7 Professional 64-bit (6.1, Build 7601) Service Pack 1
(7601.win7sp1_ldr.170913-0600)

Language: English (Regional Setting: English)

System Manufacturer: Dell Inc.

System Model: OptiPlex 3020

BIOS: BIOS Date: 11/17/14 22:35:21 Ver: A06.00

Processor: Intel(R) Core(TM) i5-4590 CPU @ 3.30GHz (4 CPUs), ~3.3GHz

Memory: 8192MB RAM

Available OS Memory: 8144MB RAM

Page File: 3185MB used, 13101MB available

Windows Dir: C:\Windows

DirectX Version: DirectX 11

DX Setup Parameters: Not found

User DPI Setting: Using System DPI

System DPI Setting: 96 DPI (100 percent)

DWM DPI Scaling: Disabled

DxDiag Version: 6.01.7601.17514 32bit Unicode

Matrix Multiplication Time Measured: 47.462 minutes (2.84769e+006 ms)