

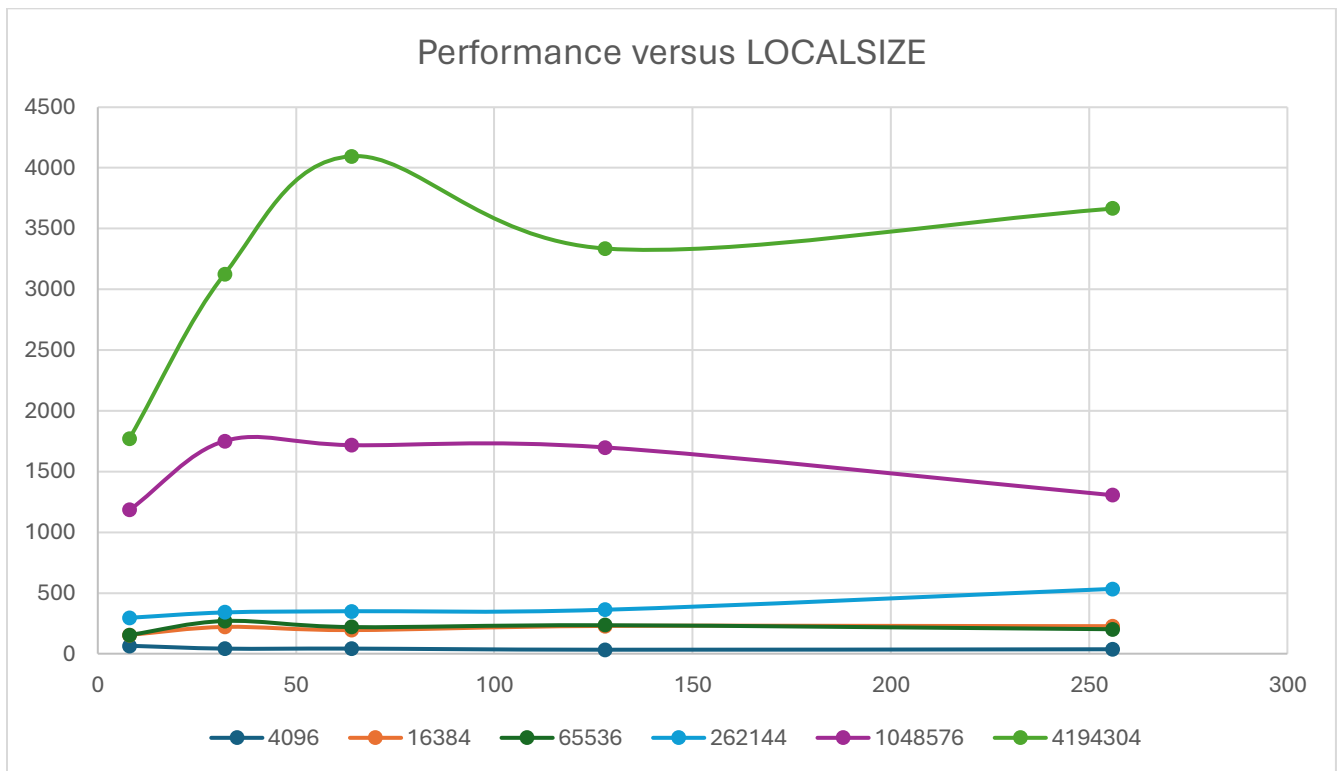
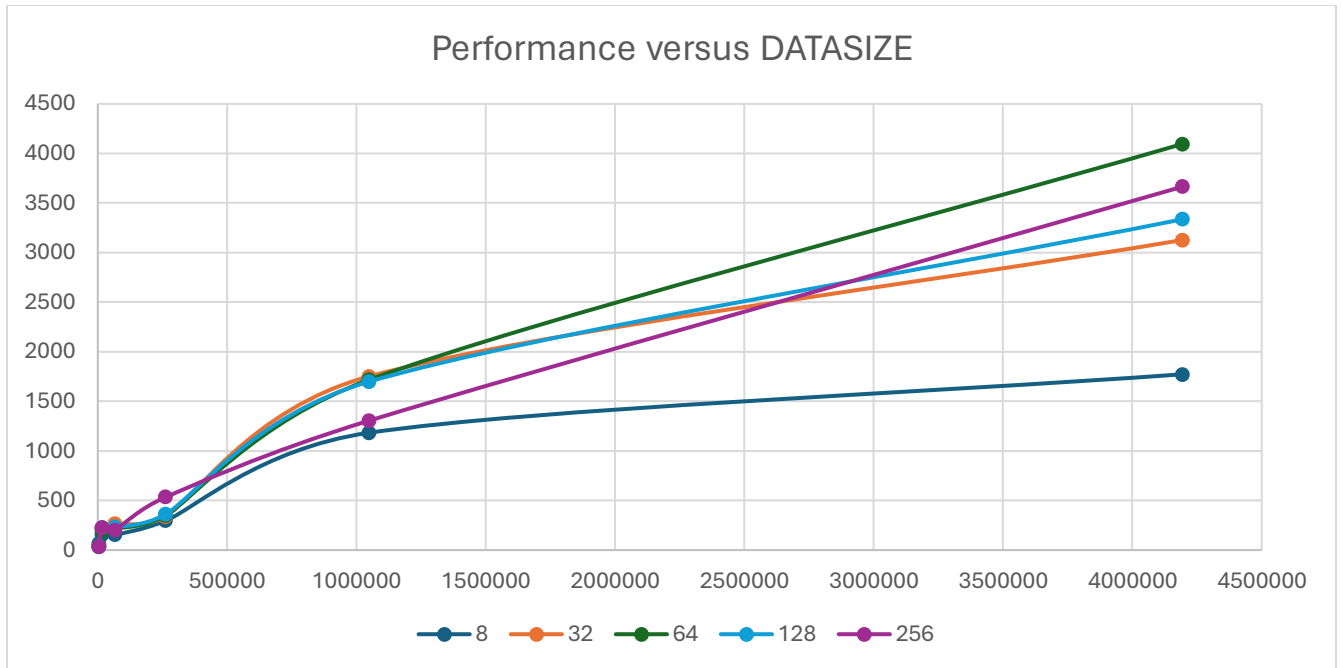
1. What machine you ran this on

I have selected Platform #0, Device #0: Vendor = NVIDIA, Type = CL_DEVICE_TYPE_GPU

2. Show the table and graphs

** m	21.07	b	1.61	**	4096	8	65.12
** m	21.07	b	1.61	**	4096	32	41.62
** m	21.07	b	1.61	**	4096	64	41.86
** m	21.07	b	1.61	**	4096	128	32.68
** m	21.07	b	1.61	**	4096	256	36.44
** m	20.89	b	1.76	**	16384	8	154.79
** m	20.89	b	1.76	**	16384	32	220.31
** m	20.89	b	1.76	**	16384	64	194.34
** m	20.89	b	1.76	**	16384	128	228.42
** m	20.89	b	1.76	**	16384	256	226.59
** m	20.96	b	1.66	**	65536	8	154.05
** m	20.96	b	1.66	**	65536	32	269.06
** m	20.96	b	1.66	**	65536	64	219.02

** m	20.96	b	1.66	**	65536 128	234.29
** m	20.96	b	1.66	**	65536 256	201.4
** m	21.04	b	1.67	**	262144	8 295.64
** m	21.04	b	1.67	**	262144	32 339.67
** m	21.04	b	1.67	**	262144	64 349.74
** m	21.04	b	1.67	**	262144	128 361.82
** m	21.04	b	1.67	**	262144	256 533.81
** m	21.04	b	1.66	**	1048576	8 1183.29
** m	21.04	b	1.66	**	1048576	32 1751.23
** m	21.04	b	1.66	**	1048576	64 1717.22
** m	21.04	b	1.66	**	1048576	128 1698.56
** m	21.04	b	1.66	**	1048576	256 1304.86
** m	21.07	b	1.66	**	4194304	8 1773.09
** m	21.07	b	1.66	**	4194304	32 3127.54
** m	21.07	b	1.66	**	4194304	64 4096.62
** m	21.07	b	1.66	**	4194304	128 3336.47
** m	21.07	b	1.66	**	4194304	256 3665.46



3. What patterns are you seeing in the performance curves? What difference does the size of data make? What difference does the size of each work-group make?

The patterns observed are that as the data size increases the performance also increases. For larger local size, the larger data size benefits best and the same is

true for vice versa. When the local size is too large for the data size, the overhead becomes significant and the performance dips.

4. Why do you think the patterns look this way?

The patterns observed are primarily due to memory and computation trade-offs, parallelism, and hardware utilization. Smaller local size has smaller overhead and the same is true for the opposite.