

Initial results with SPEC2017

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Test set

- WNs at RAL Tier1
 - SandyBridge EP (E5-2660 {2} , E5-2670 {2})
 - IvyBridge EP (E5-2650v2 {6})
 - Haswell EP (E5-2630v3 {2}, E5-2640v3 {4})
 - Broadwell EP (E5-2630v4 {2})

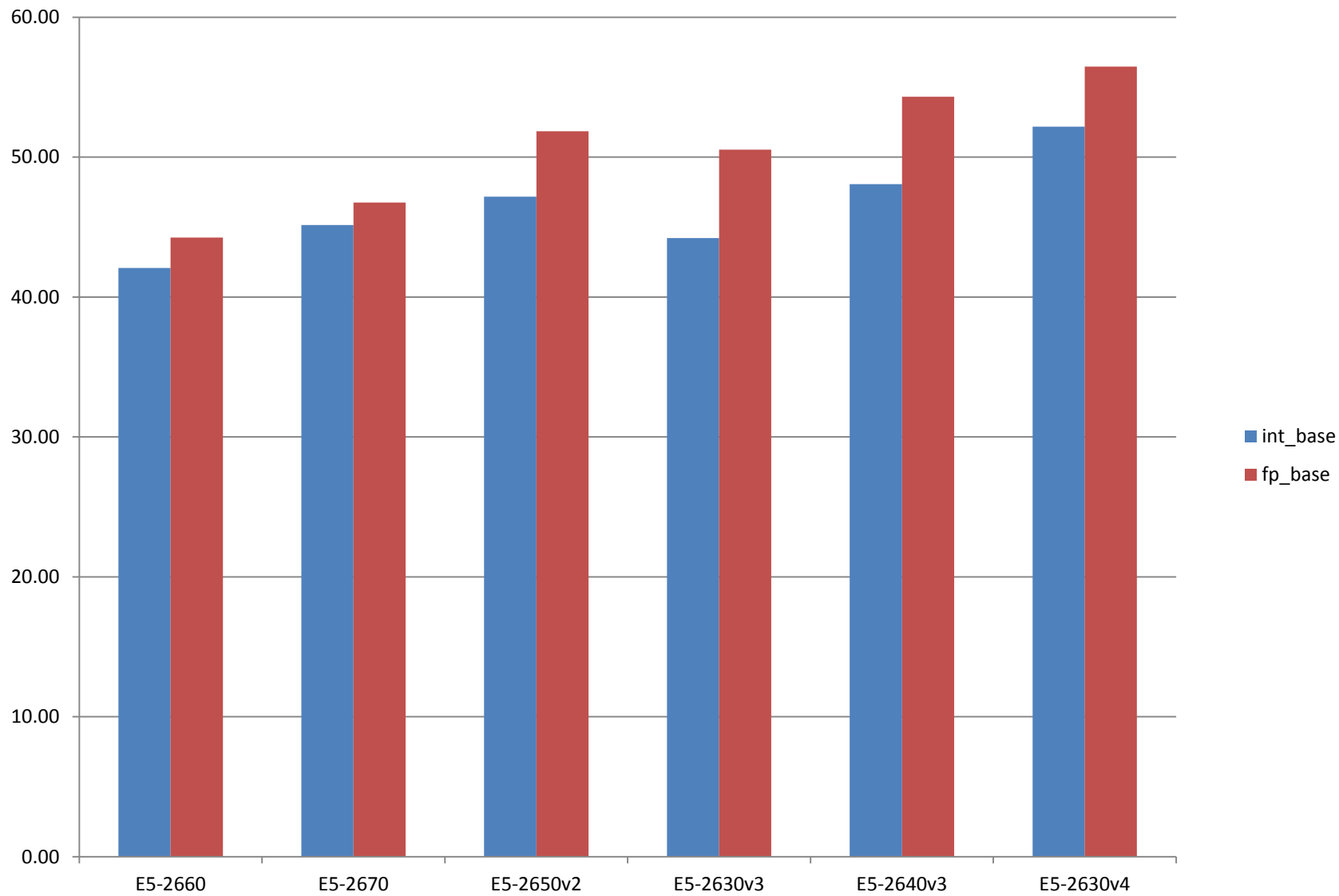
{N} = number of systems
- Typically pairs of WNs in each procurement group

Initial run – standard test

- copies, threads=1
- runlist = intrate fprate
- OPTIMIZE = -O3
- Bare metal, SL7
- gcc version 4.8.5 20150623 (Red Hat 4.8.5-11)
- 10 iterations per system for intrate, fprate
- Pre Meltdown/Spectre

Intrate, fprate results

Cores	32	32	32	32	32	32
fp_base	E5-2660	E5-2670	E5-2650v2	E5-2640v3	E5-2630v3	E5-2630v4
Sample Size (# of runs)	20	20	60	40	20	20
Average	44.25	46.75	51.85	54.32	50.54	56.47
Geometric Mean	44.24	46.74	51.85	54.32	50.54	56.47
Std.Dev (S)	0.083	0.060	0.100	0.260	0.075	0.092
Std.Dev (P)	0.054	0.059	0.099	0.257	0.073	0.090
Min	44.10	46.70	51.70	53.90	50.40	56.30
Max	44.40	46.90	52.10	54.60	50.70	56.60
Range	0.30	0.20	0.40	0.70	0.30	0.30
Per Thread	1.383	1.461	1.620	1.697	1.579	1.765
int_base	E5-2660	E5-2670	E5-2650v2	E5-2640v3	E5-2630v3	E5-2630v4
Sample Size (# of runs)	20	20	60	40	20	20
Average	42.07	45.15	47.18	48.07	44.22	52.17
Geometric Mean	42.07	45.15	47.18	48.07	44.22	52.17
Std.Dev (S)	0.113	0.095	0.080	0.097	0.089	0.126
Std.Dev (P)	0.110	0.092	0.079	0.095	0.087	0.123
Min	41.80	45.00	47.00	47.90	44.10	51.90
Max	42.30	45.40	47.40	48.30	44.40	52.40
Range	0.50	0.40	0.40	0.40	0.30	0.50
Per Thread	1.315	1.411	1.474	1.502	1.382	1.630



Recent runs

- Using Domenico's VM in docker
- WN is SL7 as before
- (Post Meltdown/Spectre patching)
- OPTIMIZE = -O3, copies=1, threads=1
- Run type = pure_rate_cpp, single iteration
- Runtime 32-45 hours

Pure_rate_cpp

