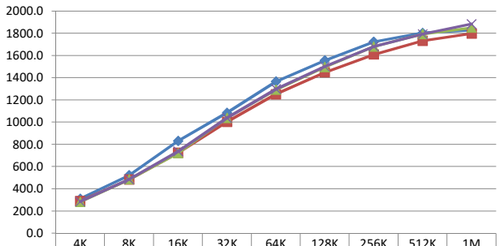
Life Testing Results of Intel Optane SSD 900P
(Sequential Write)

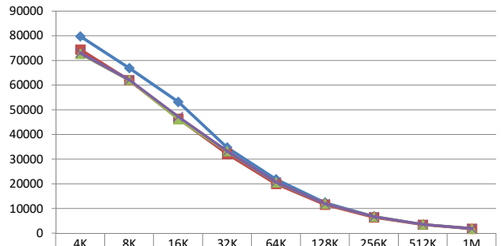
Testing Platform: Intel S2600CW / Intel Xeon CPU E5-2698 v3@2.30GHz x1 / Samsung 16GB DDR4-2133 RDIMM x4 (Total 64GB Memory) / Windows Server 2012 Standard / Intel NVMe driver
Testing Tool: Microsoft Diskspd v2.0.17
Testing Target: Intel Optane SSD 900P 280GB PCI-E HHHL
QxTy: Testing with y Threads where each thread has a queue depth of x.

Data Rate (MB/s) -- Q1T1



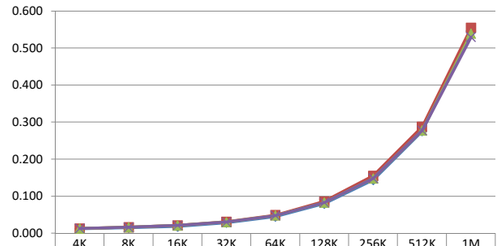
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	311.5	522.7	831.3	1085.9	1366.8	1556.1	1724.3	1805.0	1829.6
50% Worn	290.6	484.0	725.7	1003.7	1252.4	1448.6	1609.7	1733.8	1799.3
100% Worn	284.1	485.3	722.0	1039.0	1292.2	1497.4	1681.9	1794.3	1850.9
110% Worn	285.3	485.8	737.6	1037.9	1298.1	1502.0	1681.8	1792.9	1884.2

IOPS -- Q1T1



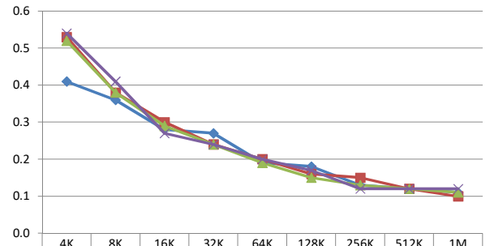
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	79755	66909	53201	34748	21869	12449	6897	3610	1830
50% Worn	74393	61950	46445	32119	20038	11589	6439	3468	1799
100% Worn	72739	62121	46210	33246	20676	11979	6727	3589	1851
110% Worn	73029	62178	47205	33214	20769	12016	6727	3586	1884

Avg. Latency (ms) -- Q1T1



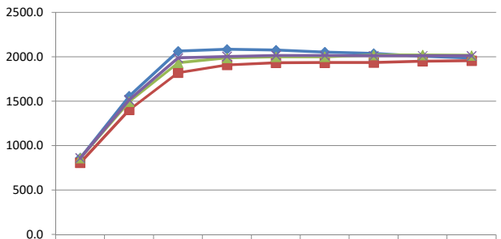
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.012	0.015	0.018	0.028	0.045	0.080	0.144	0.276	0.546
50% Worn	0.013	0.016	0.021	0.031	0.049	0.086	0.155	0.288	0.555
100% Worn	0.013	0.016	0.021	0.030	0.048	0.083	0.148	0.278	0.539
110% Worn	0.013	0.016	0.021	0.030	0.048	0.083	0.148	0.278	0.530

Avg. CPU Usage (%) -- Q1T1



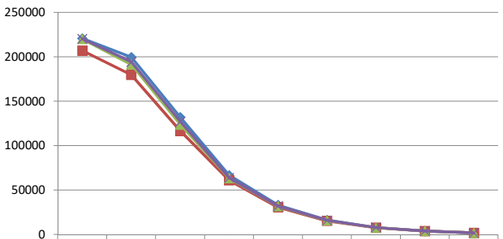
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1
50% Worn	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1
100% Worn	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1
110% Worn	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1

Data Rate (MB/s) -- Q4T1



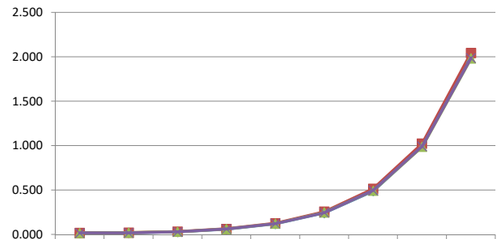
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	863.0	1560.1	2063.7	2086.0	2076.1	2054.3	2038.8	2007.1	1986.8
50% Worn	808.5	1405.4	1822.5	1911.4	1932.2	1934.9	1937.3	1951.5	1957.0
100% Worn	859.9	1496.4	1933.9	1987.8	1999.4	2001.8	2021.5	2021.3	2017.0
110% Worn	861.2	1518.8	1988.1	2004.8	2015.6	2015.2	2012.1	2012.1	2011.4

IOPS -- Q4T1



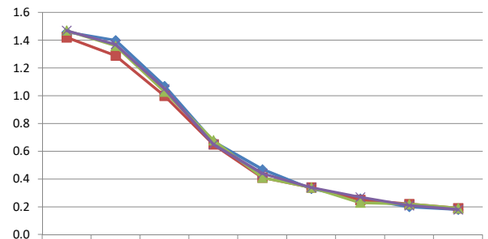
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	220939	199694	132079	66753	33218	16435	8155	4014	1987
50% Worn	206988	179894	116638	61165	30915	15479	7749	3903	1957
100% Worn	220124	191544	123768	63610	31991	16015	8086	4043	2017
110% Worn	220466	194403	127241	64154	32249	16122	8048	4024	2011

Avg. Latency (ms) -- Q4T1



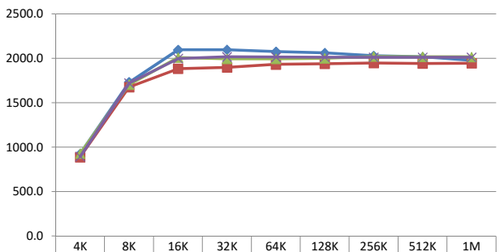
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.018	0.020	0.030	0.060	0.120	0.243	0.490	0.996	2.013
50% Worn	0.019	0.022	0.034	0.065	0.129	0.258	0.516	1.025	2.044
100% Worn	0.018	0.021	0.032	0.063	0.125	0.250	0.494	0.989	1.983
110% Worn	0.018	0.020	0.031	0.062	0.124	0.248	0.497	0.994	1.988

Avg. CPU Usage (%) -- Q4T1



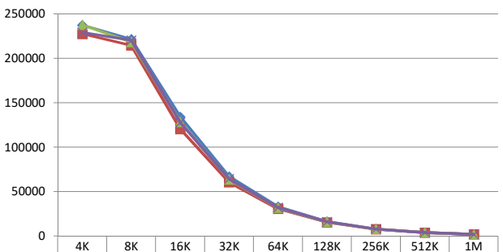
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1.5	1.4	1.1	0.7	0.5	0.3	0.3	0.2	0.2
50% Worn	1.4	1.3	1.0	0.7	0.4	0.3	0.3	0.2	0.2
100% Worn	1.5	1.4	1.0	0.7	0.4	0.3	0.2	0.2	0.2
110% Worn	1.5	1.4	1.1	0.7	0.4	0.3	0.3	0.2	0.2

Data Rate (MB/s) -- Q16T1



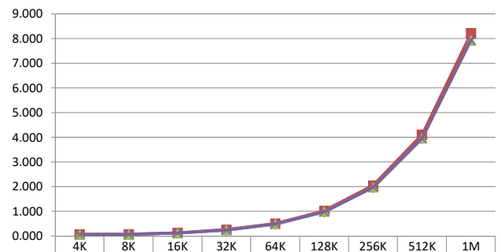
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	927.9	1732.9	2096.4	2097.4	2076.1	2062.5	2028.7	2017.3	1977.5
50% Worn	889.8	1678.0	1884.2	1897.9	1931.9	1940.2	1948.6	1943.1	1945.7
100% Worn	929.3	1707.0	2010.1	1995.2	1996.1	2001.4	2021.2	2018.9	2017.0
110% Worn	896.1	1722.7	1998.3	2017.8	2014.8	2013.6	2012.3	2012.7	2012.9

IOPS -- Q16T1



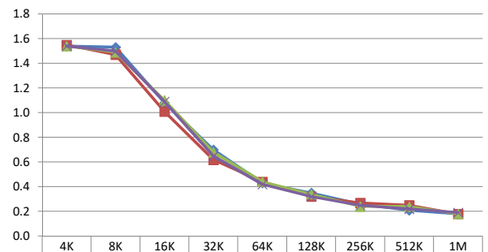
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	237535	221815	134170	67116	33217	16500	8115	4035	1978
50% Worn	227785	214779	120587	60733	30911	15522	7794	3886	1946
100% Worn	237888	218491	128646	63847	31937	16012	8085	4038	2017
110% Worn	229402	220509	127889	64569	32236	16109	8049	4025	2013

Avg. Latency (ms) -- Q16T1



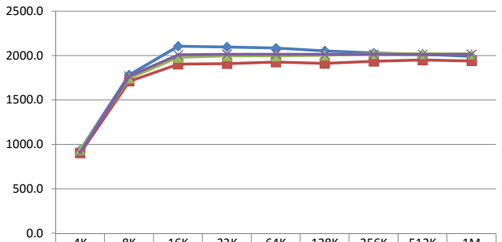
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.067	0.072	0.119	0.238	0.481	0.969	1.971	3.965	8.090
50% Worn	0.070	0.074	0.133	0.263	0.517	1.031	2.053	4.117	8.224
100% Worn	0.067	0.073	0.124	0.250	0.501	0.999	1.979	3.962	7.932
110% Worn	0.070	0.072	0.125	0.248	0.496	0.993	1.987	3.974	7.949

Avg. CPU Usage (%) -- Q16T1



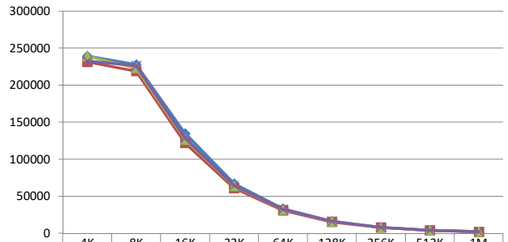
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1.5	1.5	1.1	0.7	0.4	0.4	0.3	0.2	0.2
50% Worn	1.6	1.5	1.0	0.6	0.4	0.3	0.3	0.3	0.2
100% Worn	1.5	1.5	1.1	0.7	0.4	0.3	0.2	0.2	0.2
110% Worn	1.5	1.5	1.1	0.7	0.4	0.3	0.3	0.2	0.2

Data Rate (MB/s) -- Q32T1



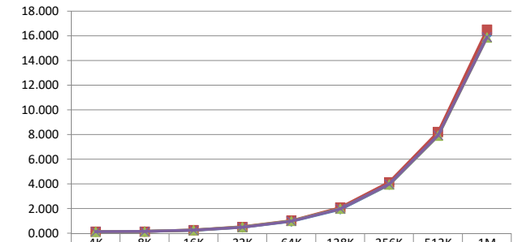
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	936.1	1782.4	2105.1	2097.3	2083.1	2053.2	2028.1	2014.1	1991.9
50% Worn	904.5	1711.3	1904.5	1909.3	1925.7	1911.2	1935.3	1950.7	1939.6
100% Worn	934.7	1744.3	1978.5	1995.9	1995.3	2002.4	2020.7	2019.5	2016.8
110% Worn	908.7	1768.3	2007.1	2014.6	2014.4	2013.5	2013.7	2012.0	2013.1

IOPS -- Q32T1



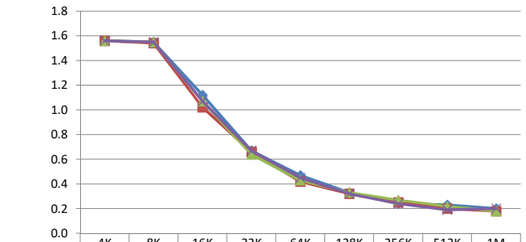
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	239629	228151	134724	67115	33329	16425	8113	4028	1992
50% Worn	231553	219045	121886	61097	30811	15290	7741	3901	1940
100% Worn	239271	223270	126621	63869	31925	16020	8083	4039	2017
110% Worn	232623	226337	128456	64468	32230	16108	8055	4024	2013

Avg. Latency (ms) -- Q32T1



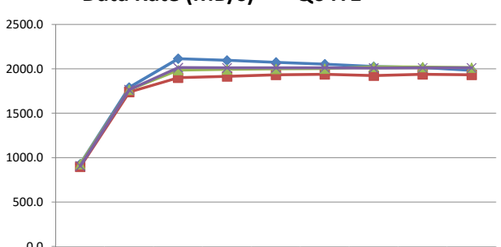
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.129	0.140	0.237	0.477	0.960	1.948	3.944	7.944	16.067
50% Worn	0.134	0.146	0.262	0.524	1.038	2.093	4.133	8.201	16.498
100% Worn	0.129	0.143	0.253	0.501	1.002	1.998	3.959	7.922	15.865
110% Worn	0.133	0.140	0.249	0.496	0.993	1.986	3.973	7.953	15.895

Avg. CPU Usage (%) -- Q32T1



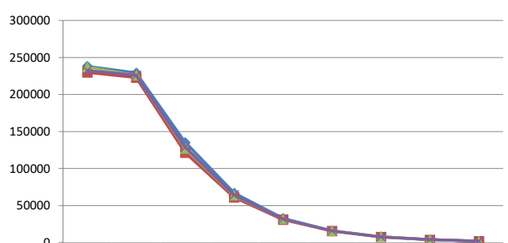
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1.6	1.6	1.1	0.7	0.5	0.3	0.2	0.2	0.2
50% Worn	1.6	1.5	1.0	0.7	0.4	0.3	0.3	0.2	0.2
100% Worn	1.6	1.6	1.1	0.6	0.4	0.3	0.3	0.2	0.2
110% Worn	1.6	1.6	1.1	0.7	0.5	0.3	0.2	0.2	0.2

Data Rate (MB/s) -- Q64T1



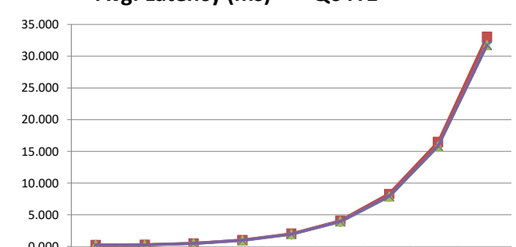
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	931.5	1792.1	2115.6	2095.8	2073.5	2054.2	2027.1	2014.8	1983.1
50% Worn	898.1	1741.7	1900.2	1915.0	1934.8	1939.6	1925.7	1939.4	1932.8
100% Worn	927.0	1765.6	1986.9	1994.3	2000.1	2003.5	2023.1	2020.5	2015.7
110% Worn	908.3	1766.4	2014.5	2013.7	2013.6	2013.8	2010.4	2012.9	2013.4

IOPS -- Q64T1



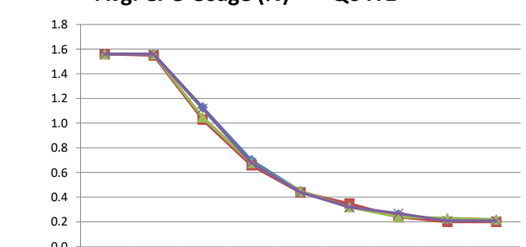
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	238458	229386	135400	67065	33176	16433	8108	4030	1983
50% Worn	229902	222936	121613	61279	30957	15516	7703	3879	1933
100% Worn	237310	225996	127160	63818	32001	16028	8092	4041	2016
110% Worn	232524	226094	128929	64437	32217	16110	8042	4026	2013

Avg. Latency (ms) -- Q64T1



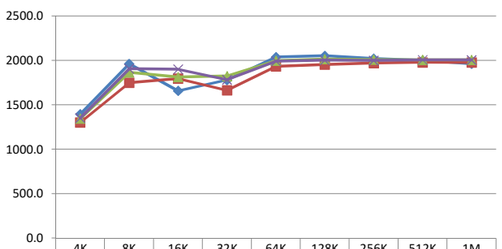
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.264	0.274	0.473	0.954	1.929	3.895	7.891	15.881	32.272
50% Worn	0.274	0.287	0.526	1.044	2.067	4.124	8.308	16.502	33.113
100% Worn	0.265	0.282	0.503	1.003	1.999	3.992	7.909	15.840	31.746
110% Worn	0.271	0.279	0.496	0.993	1.986	3.972	7.957	15.899	31.788

Avg. CPU Usage (%) -- Q64T1



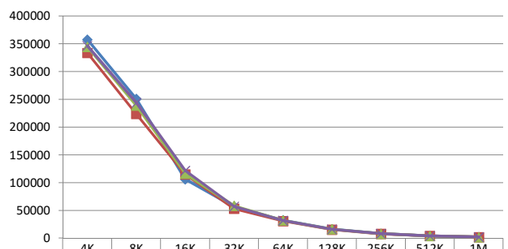
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1.6	1.6	1.1	0.7	0.5	0.3	0.3	0.2	0.2
50% Worn	1.6	1.6	1.0	0.7	0.4	0.4	0.2	0.2	0.2
100% Worn	1.6	1.6	1.1	0.7	0.5	0.3	0.2	0.2	0.2
110% Worn	1.6	1.6	1.1	0.7	0.4	0.3	0.3	0.2	0.2

Data Rate (MB/s) -- Q1T8



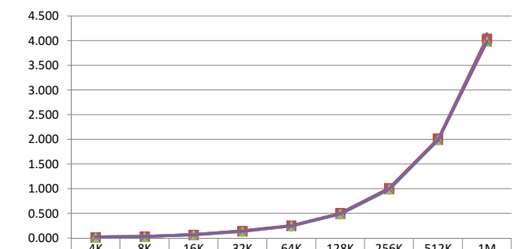
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1396.9	1961.9	1659.6	1781.7	2038.1	2053.0	2021.8	2001.0	1963.8
50% Worn	1303.1	1749.5	1797.4	1665.3	1933.4	1954.8	1971.0	1979.1	1978.5
100% Worn	1345.9	1865.2	1814.0	1824.4	1998.8	2014.7	2010.8	2007.1	2006.6
110% Worn	1352.7	1907.2	1901.7	1784.5	1992.4	2003.3	2000.4	2007.2	2006.0

IOPS -- Q1T8



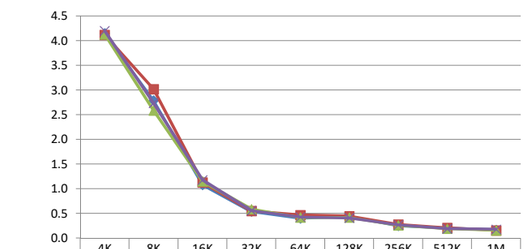
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	357610	251118	106217	57014	32610	16424	8087	4002	1964
50% Worn	333606	223932	115031	53288	30934	15638	7884	3958	1979
100% Worn	344559	238743	116095	58382	31981	16117	8043	4014	2007
110% Worn	346296	244124	121706	57103	31879	16026	8002	4014	2006

Avg. Latency (ms) -- Q1T8



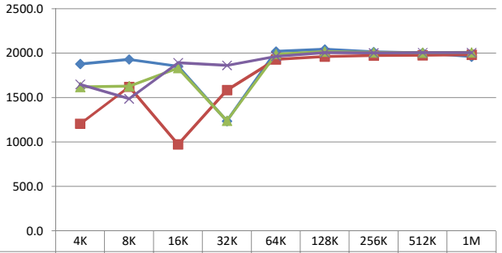
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.022	0.031	0.075	0.140	0.245	0.486	0.988	1.997	4.072
50% Worn	0.023	0.035	0.069	0.149	0.258	0.510	1.013	2.020	4.042
100% Worn	0.023	0.033	0.068	0.136	0.249	0.495	0.993	1.991	3.985
110% Worn	0.023	0.032	0.065	0.139	0.250	0.498	0.998	1.991	3.987

Avg. CPU Usage (%) -- Q1T8



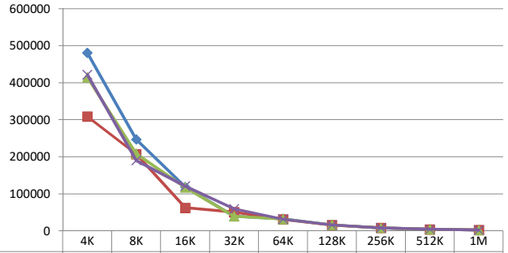
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	4.2	2.8	1.1	0.5	0.4	0.4	0.3	0.2	0.2
50% Worn	4.1	3.0	1.1	0.6	0.5	0.5	0.3	0.2	0.2
100% Worn	4.1	2.6	1.2	0.6	0.4	0.4	0.3	0.2	0.2
110% Worn	4.2	2.7	1.2	0.6	0.4	0.4	0.3	0.2	0.2

Data Rate (MB/s) -- Q4T8



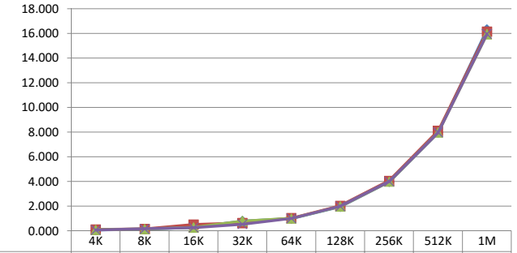
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1877.9	1930.1	1853.7	1236.2	2019.0	2042.4	2013.3	2003.2	1960.7
50% Worn	1205.7	1621.3	972.5	1585.7	1928.9	1962.8	1972.8	1975.7	1982.0
100% Worn	1620.3	1628.2	1832.2	1239.2	1989.3	2015.9	2008.6	2005.0	2007.0
110% Worn	1647.9	1487.2	1891.1	1862.6	1965.7	2004.1	2001.8	2005.7	2005.0

IOPS -- Q4T8



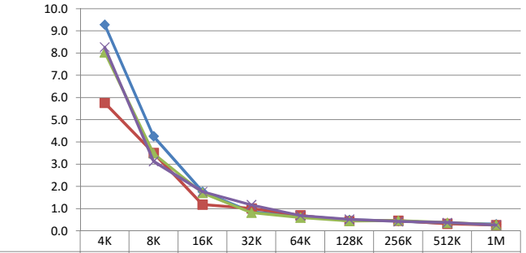
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	480740	247055	118637	39559	32304	16339	8053	4006	1961
50% Worn	308651	207529	62238	50742	30863	15702	7891	3951	1982
100% Worn	414785	208412	117262	39654	31828	16127	8034	4010	2007
110% Worn	421855	190356	121032	59603	31451	16033	8007	4011	2005

Avg. Latency (ms) -- Q4T8



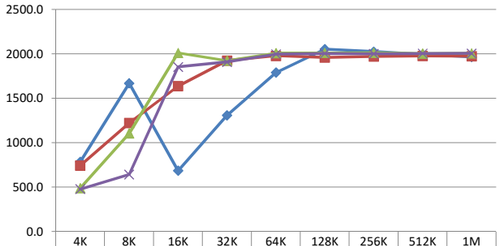
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.066	0.129	0.269	0.808	0.990	1.958	3.973	7.987	16.317
50% Worn	0.103	0.154	0.514	0.630	1.037	2.037	4.055	8.096	16.141
100% Worn	0.077	0.153	0.273	0.807	1.005	1.984	3.982	7.980	15.943
110% Worn	0.076	0.168	0.264	0.536	1.017	1.995	3.996	7.977	15.962

Avg. CPU Usage (%) -- Q4T8



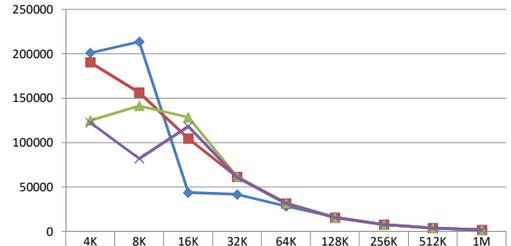
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	9.3	4.3	1.8	0.9	0.7	0.5	0.4	0.3	0.3
50% Worn	5.8	3.5	1.2	1.0	0.7	0.4	0.5	0.3	0.3
100% Worn	8.0	3.5	1.7	0.8	0.6	0.4	0.5	0.4	0.3
110% Worn	8.3	3.1	1.8	1.2	0.7	0.5	0.4	0.4	0.3

Data Rate (MB/s) -- Q16T8



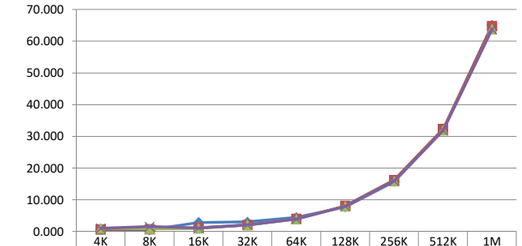
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	785.9	1669.8	685.4	1308.8	1790.9	2054.0	2026.3	1994.5	1965.7
50% Worn	744.2	1222.7	1639.3	1925.6	1979.1	1960.7	1972.3	1977.0	1975.6
100% Worn	488.9	1106.4	2011.0	1924.2	2009.9	2010.4	2012.3	2004.1	2005.6
110% Worn	479.0	643.1	1853.7	1909.5	1998.9	2005.0	2001.9	2004.9	2005.6

IOPS -- Q16T8



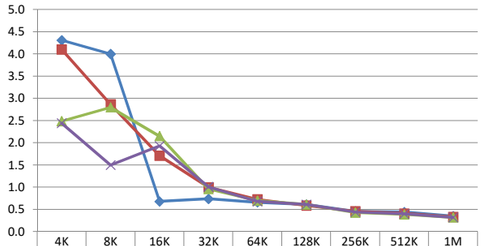
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	201197	213734	43865	41883	28655	16432	8105	3989	1966
50% Worn	190504	156512	104916	61620	31665	15685	7889	3954	1976
100% Worn	125167	141615	128702	61576	32159	16083	8049	4008	2006
110% Worn	122623	82310	118636	61104	31982	16040	8008	4010	2006

Avg. Latency (ms) -- Q16T8



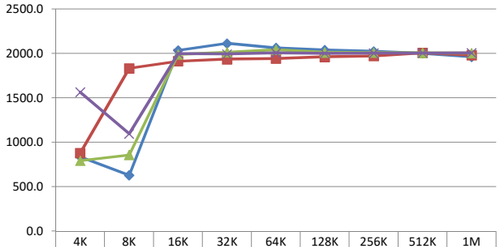
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.636	0.599	2.917	3.056	4.467	7.791	15.793	32.082	65.110
50% Worn	0.672	0.818	1.220	2.077	4.042	8.160	16.225	32.373	64.782
100% Worn	1.022	0.904	0.994	2.079	3.980	7.960	15.904	31.938	63.828
110% Worn	1.043	1.555	1.079	2.095	4.002	7.978	15.982	31.924	63.819

Avg. CPU Usage (%) -- Q16T8



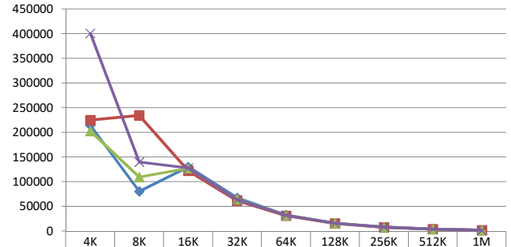
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	4.3	4.0	0.7	0.7	0.7	0.6	0.5	0.4	0.4
50% Worn	4.1	2.9	1.7	1.0	0.7	0.6	0.5	0.4	0.3
100% Worn	2.5	2.8	2.2	1.0	0.7	0.6	0.4	0.4	0.3
110% Worn	2.4	1.5	1.9	1.0	0.7	0.6	0.4	0.4	0.3

Data Rate (MB/s) -- Q32T8



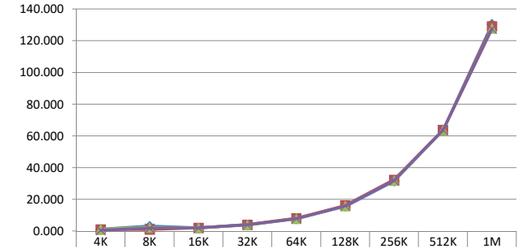
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	837.7	630.9	2035.3	2113.4	2063.4	2039.4	2023.0	2001.1	1962.1
50% Worn	878.9	1833.0	1913.6	1934.9	1942.8	1961.3	1970.9	2006.9	1980.6
100% Worn	793.2	857.6	1990.2	2012.9	2041.4	2011.8	2009.4	2006.9	2005.0
110% Worn	1565.2	1096.1	1998.9	1993.6	2005.6	2002.1	2003.3	2004.8	2006.2

IOPS -- Q32T8



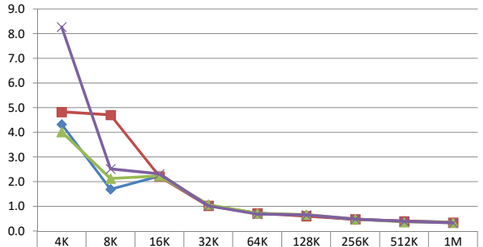
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	214456	80755	130260	67627	33014	16315	8092	4002	1962
50% Worn	224993	234625	122469	61917	31085	15690	7884	4014	1981
100% Worn	203070	109777	127375	64414	32663	16094	8038	4014	2005
110% Worn	400689	140304	127932	63795	32089	16016	8013	4010	2006

Avg. Latency (ms) -- Q32T8



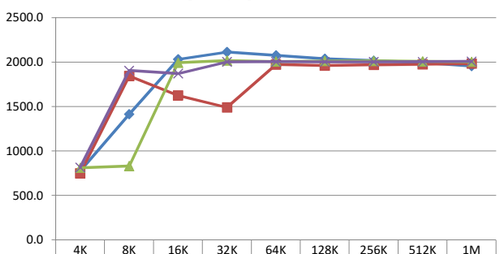
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1.193	3.170	1.965	3.786	7.754	15.688	31.633	63.971	130.475
50% Worn	1.138	1.091	2.090	4.135	8.236	16.317	32.472	63.759	129.200
100% Worn	1.260	2.332	2.010	3.974	7.838	15.906	31.848	63.786	127.703
110% Worn	0.639	1.824	2.000	4.012	7.978	15.985	31.949	63.840	127.618

Avg. CPU Usage (%) -- Q32T8



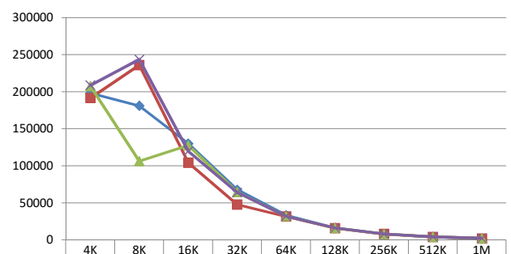
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	4.3	1.7	2.2	1.1	0.7	0.6	0.5	0.4	0.4
50% Worn	4.8	4.7	2.2	1.0	0.7	0.6	0.5	0.4	0.4
100% Worn	4.0	2.1	2.2	1.1	0.7	0.7	0.5	0.4	0.4
110% Worn	8.3	2.5	2.3	1.0	0.7	0.7	0.5	0.4	0.3

Data Rate (MB/s) -- Q64T8



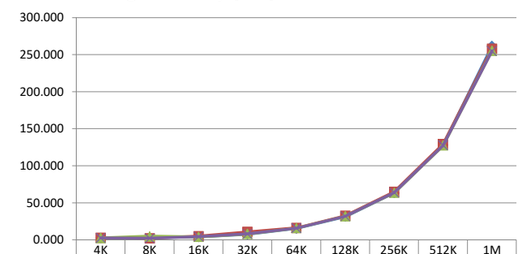
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	773.6	1415.3	2032.1	2114.3	2076.9	2038.7	2015.8	1994.9	1956.0
50% Worn	748.7	1844.7	1626.4	1491.3	1973.7	1962.8	1971.3	1977.3	1983.0
100% Worn	811.2	830.9	1992.8	2017.9	2006.8	2012.2	2013.7	2007.9	2003.6
110% Worn	815.8	1904.7	1870.8	2003.5	2004.5	2003.6	2003.9	2004.3	2008.1

IOPS -- Q64T8



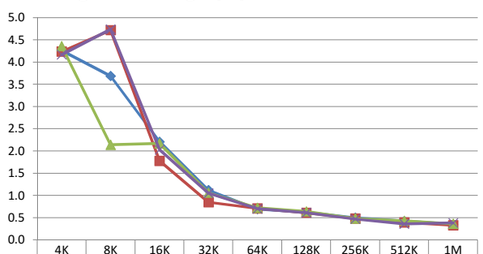
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	198054	181155	130055	67657	33231	16310	8063	3990	1956
50% Worn	191675	236122	104090	47723	31580	15702	7885	3955	1983
100% Worn	207661	106359	127541	64571	32109	16098	8055	4016	2004
110% Worn	208838	243803	119729	64111	32072	16029	8016	4009	2008

Avg. Latency (ms) -- Q64T8



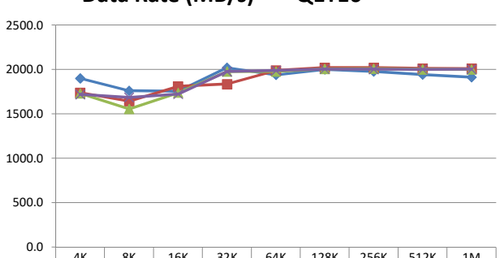
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	2.585	2.826	3.937	7.566	15.408	31.393	63.508	128.333	261.879
50% Worn	2.671	2.168	4.918	10.727	16.213	32.605	64.915	129.408	258.061
100% Worn	2.466	4.813	4.014	7.929	15.948	31.803	63.576	127.522	255.526
110% Worn	2.451	2.100	4.276	7.986	15.963	31.947	63.868	127.737	255.001

Avg. CPU Usage (%) -- Q64T8



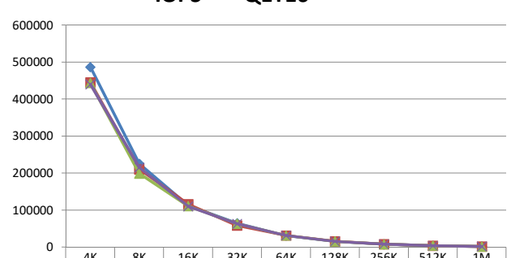
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	4.3	3.7	2.2	1.1	0.7	0.6	0.5	0.4	0.4
50% Worn	4.2	4.7	1.8	0.9	0.7	0.6	0.5	0.4	0.3
100% Worn	4.4	2.1	2.2	1.1	0.7	0.6	0.5	0.4	0.4
110% Worn	4.2	4.7	2.0	1.1	0.7	0.6	0.5	0.4	0.4

Data Rate (MB/s) -- Q1T16



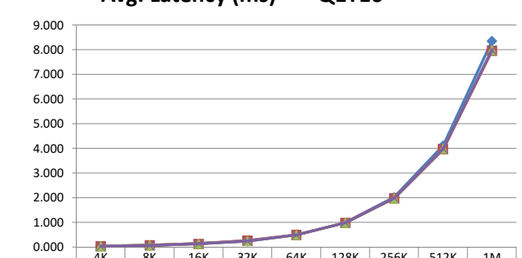
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1900.8	1760.4	1756.5	2020.9	1940.6	2001.9	1978.7	1941.6	1914.0
50% Worn	1739.7	1645.1	1809.6	1836.0	1988.3	2019.9	2020.2	2011.1	2008.9
100% Worn	1732.3	1556.6	1738.8	1977.3	1978.4	2006.9	2008.8	2002.2	2001.2
110% Worn	1719.5	1686.0	1723.3	1976.6	1987.5	2003.9	2002.7	2001.7	2002.5

IOPS -- Q1T16



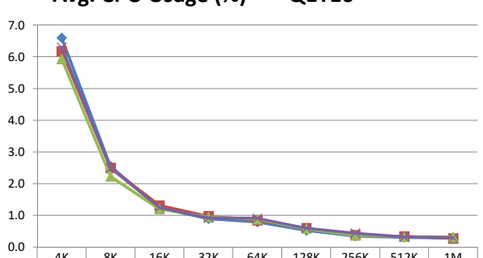
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	486601	225329	112418	64668	31049	16016	7915	3883	1914
50% Worn	445357	210578	115815	58753	31813	16159	8081	4022	2009
100% Worn	443460	199251	111282	63275	31654	16055	8035	4004	2001
110% Worn	440186	215805	110290	63252	31800	16031	8011	4003	2003

Avg. Latency (ms) -- Q1T16



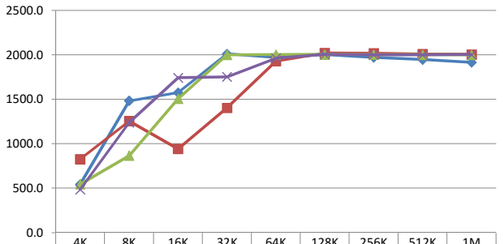
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.032	0.070	0.142	0.247	0.514	0.998	2.020	4.118	8.356
50% Worn	0.035	0.075	0.138	0.271	0.502	0.989	1.978	3.976	7.964
100% Worn	0.035	0.080	0.143	0.252	0.504	0.995	1.989	3.994	7.992
110% Worn	0.036	0.073	0.144	0.252	0.502	0.997	1.996	3.995	7.989

Avg. CPU Usage (%) -- Q1T16



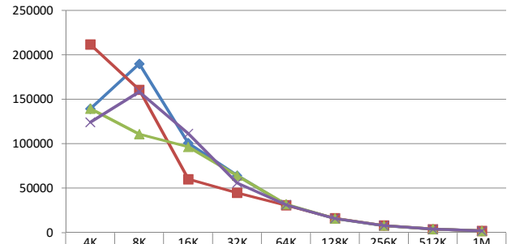
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	6.6	2.6	1.2	0.9	0.8	0.5	0.4	0.3	0.3
50% Worn	6.2	2.5	1.3	1.0	0.9	0.6	0.4	0.3	0.3
100% Worn	5.9	2.2	1.2	1.0	0.9	0.6	0.4	0.3	0.3
110% Worn	6.3	2.5	1.3	0.9	0.9	0.6	0.4	0.3	0.3

Data Rate (MB/s) -- Q4T16



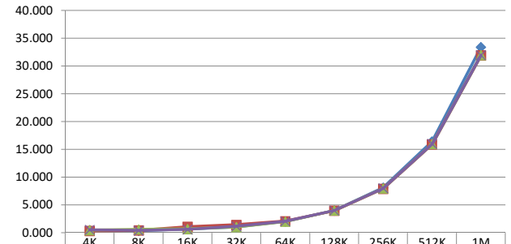
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	545.1	1484.6	1575.5	2011.0	1970.8	2002.6	1972.6	1947.3	1916.1
50% Worn	827.7	1256.5	942.7	1403.7	1930.8	2021.5	2019.5	2010.8	2005.5
100% Worn	545.6	867.7	1507.5	2002.1	2003.5	2006.1	2003.4	2002.8	2001.0
110% Worn	485.6	1239.9	1743.1	1752.9	1963.8	2006.4	2001.0	2001.0	2002.5

IOPS -- Q4T16



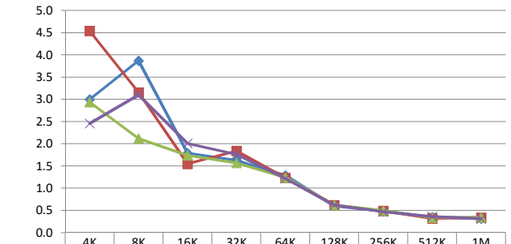
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	139550	190035	100829	64352	31532	16020	7890	3895	1916
50% Worn	211882	160827	60336	44917	30893	16172	8078	4022	2006
100% Worn	139666	111066	96482	64068	32056	16049	8014	4006	2001
110% Worn	124323	158706	111556	56092	31421	16051	8004	4002	2002

Avg. Latency (ms) -- Q4T16



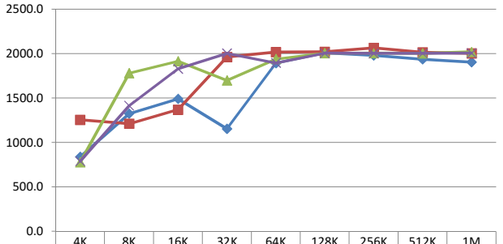
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.458	0.337	0.634	0.994	2.029	3.994	8.110	16.430	33.409
50% Worn	0.302	0.398	1.060	1.424	2.071	3.957	7.921	15.912	31.907
100% Worn	0.458	0.576	0.663	0.999	1.996	3.987	7.986	15.978	31.977
110% Worn	0.514	0.403	0.573	1.140	2.036	3.987	7.996	15.993	31.960

Avg. CPU Usage (%) -- Q4T16



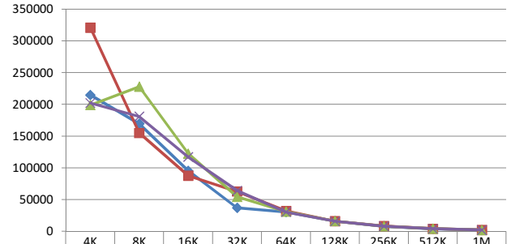
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	3.0	3.9	1.8	1.6	1.3	0.6	0.5	0.4	0.3
50% Worn	4.5	3.2	1.6	1.8	1.2	0.6	0.5	0.3	0.3
100% Worn	2.9	2.1	1.7	1.6	1.2	0.6	0.5	0.3	0.3
110% Worn	2.5	3.1	2.0	1.8	1.2	0.6	0.5	0.4	0.3

Data Rate (MB/s) -- Q16T16



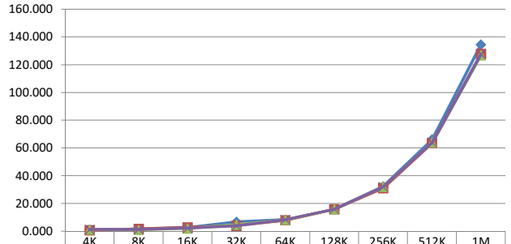
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	839.3	1324.7	1490.2	1154.3	1893.3	2008.8	1980.0	1935.4	1903.5
50% Worn	1253.4	1211.1	1370.0	1962.4	2016.2	2020.8	2064.6	2014.1	2003.6
100% Worn	777.3	1781.1	1914.0	1697.6	1939.4	2005.9	2004.1	2001.9	2018.7
110% Worn	790.0	1414.2	1828.8	2003.4	1894.3	2004.3	2001.9	2001.7	2005.1

IOPS -- Q16T16



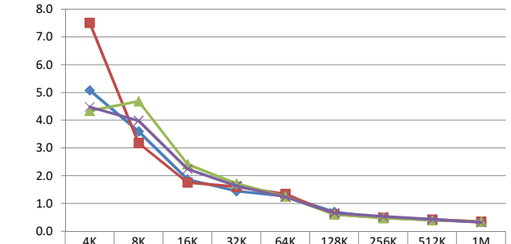
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	214867	169557	95370	36937	30293	16071	7920	3871	1904
50% Worn	320862	155023	87677	62797	32259	16167	8258	4028	2004
100% Worn	198978	227978	122498	54322	31031	16047	8017	4004	2019
110% Worn	202250	181020	117042	64108	30309	16035	8008	4003	2005

Avg. Latency (ms) -- Q16T16



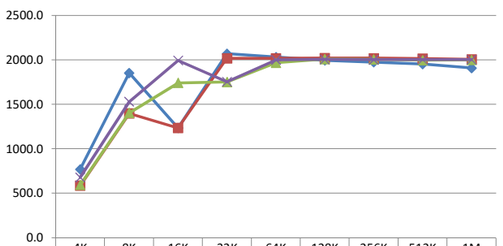
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1.191	1.510	2.683	6.930	8.450	15.931	32.322	66.140	134.538
50% Worn	0.798	1.651	2.920	4.076	7.936	15.837	30.998	63.560	127.759
100% Worn	1.286	1.123	2.089	4.713	8.248	15.955	31.938	63.947	126.811
110% Worn	1.265	1.414	2.187	3.993	8.444	15.965	31.971	63.945	127.682

Avg. CPU Usage (%) -- Q16T16



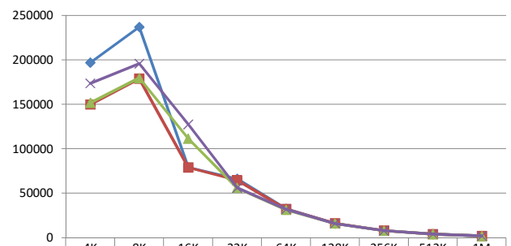
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	5.1	3.6	1.9	1.5	1.3	0.7	0.5	0.4	0.3
50% Worn	7.5	3.2	1.8	1.6	1.4	0.6	0.5	0.4	0.4
100% Worn	4.3	4.7	2.4	1.7	1.3	0.6	0.5	0.4	0.4
110% Worn	4.5	4.0	2.3	1.6	1.2	0.7	0.5	0.4	0.3

Data Rate (MB/s) -- Q32T16



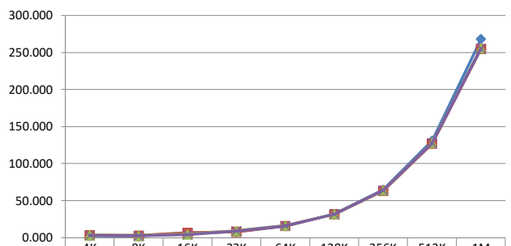
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	770.2	1853.5	1236.2	2071.3	2031.9	1995.8	1974.8	1953.5	1909.7
50% Worn	585.9	1398.0	1235.1	2019.1	2018.4	2022.2	2020.0	2014.2	2006.7
100% Worn	593.2	1404.4	1742.0	1752.3	1967.3	2008.7	2006.9	1996.6	2000.6
110% Worn	678.6	1530.2	1994.0	1756.1	2002.1	2005.5	2002.2	2003.3	2004.5

IOPS -- Q32T16



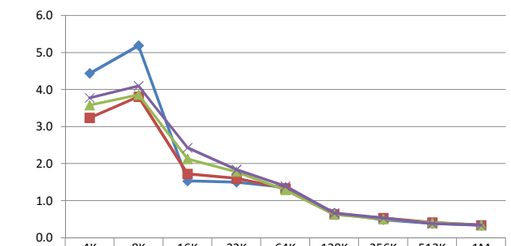
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	197166	237242	79115	66282	32510	15966	7899	3907	1910
50% Worn	149996	178942	79049	64610	32295	16178	8080	4028	2007
100% Worn	151864	179764	111490	56072	31477	16070	8028	3993	2001
110% Worn	173728	195868	127613	56195	32034	16044	8009	4007	2004

Avg. Latency (ms) -- Q32T16



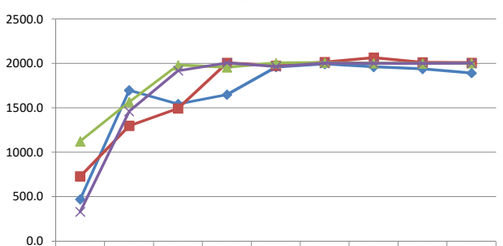
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	2.597	2.158	6.471	7.723	15.748	32.072	64.811	131.041	268.179
50% Worn	3.413	2.861	6.478	7.924	15.854	31.642	63.373	127.080	255.069
100% Worn	3.371	2.848	4.592	9.131	16.265	31.862	63.787	128.211	255.921
110% Worn	2.947	2.613	4.012	9.110	15.982	31.909	63.937	127.811	255.376

Avg. CPU Usage (%) -- Q32T16



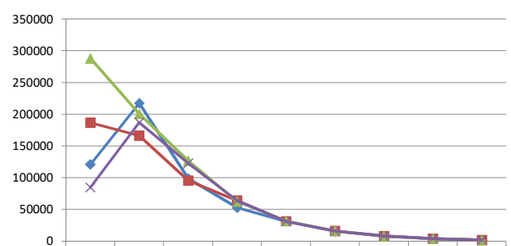
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	4.4	5.2	1.5	1.5	1.4	0.7	0.5	0.4	0.3
50% Worn	3.2	3.8	1.7	1.6	1.3	0.6	0.5	0.4	0.3
100% Worn	3.6	3.9	2.1	1.8	1.3	0.6	0.5	0.4	0.3
110% Worn	3.8	4.1	2.4	1.8	1.4	0.7	0.5	0.4	0.3

Data Rate (MB/s) -- Q64T16



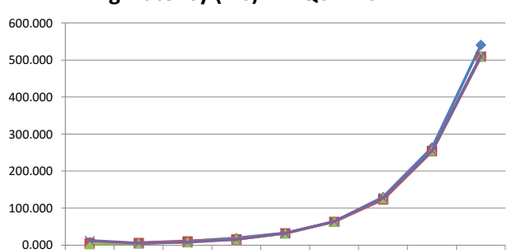
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	473.1	1699.8	1544.4	1651.1	1961.2	1994.1	1962.8	1939.0	1892.9
50% Worn	729.6	1300.0	1495.0	2006.6	1976.2	2016.6	2065.2	2012.6	2009.4
100% Worn	1125.7	1567.0	1981.8	1957.8	2005.2	2009.3	2004.4	2000.9	2002.8
110% Worn	331.4	1461.8	1920.2	2007.0	1965.1	2002.3	2001.5	2002.0	2004.1

IOPS -- Q64T16



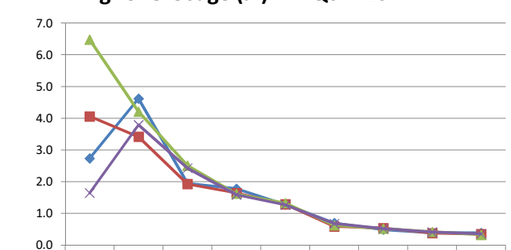
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	121106	217574	98842	52836	31379	15953	7851	3878	1893
50% Worn	186780	166403	95683	64211	31620	16133	8261	4025	2009
100% Worn	288168	200578	126834	62648	32083	16074	8018	4002	2003
110% Worn	84829	187116	122895	64225	31441	16018	8006	4004	2004

Avg. Latency (ms) -- Q64T16



	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	8.454	4.707	10.360	19.383	32.635	64.193	130.422	264.125	541.142
50% Worn	5.482	6.154	10.701	15.945	32.389	63.462	123.973	254.352	509.716
100% Worn	3.553	5.105	8.075	16.347	31.918	63.713	127.706	255.901	511.231
110% Worn	12.071	5.473	8.332	15.942	32.568	63.917	127.906	255.777	510.762

Avg. CPU Usage (%) -- Q64T16

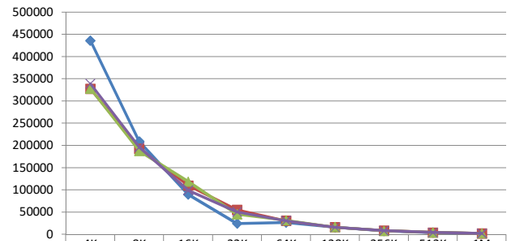


	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	2.7	4.6	1.9	1.8	1.3	0.7	0.5	0.4	0.4
50% Worn	4.1	3.4	1.9	1.7	1.3	0.6	0.5	0.4	0.4
100% Worn	6.5	4.2	2.5	1.6	1.3	0.6	0.5	0.4	0.3
110% Worn	1.7	3.8	2.4	1.6	1.3	0.7	0.5	0.4	0.4

Data Rate (MB/s) -- Q1T32

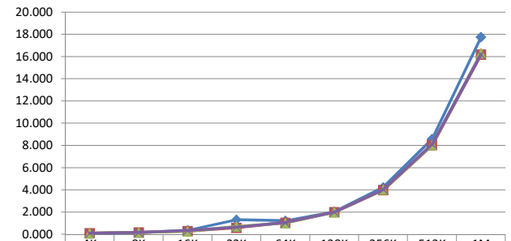
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1703.2	1632.0	1400.0	755.6	1646.1	1955.7	1899.9	1890.4	1838.1
50% Worn	1279.2	1503.3	1715.3	1723.2	1911.2	2013.3	2016.8	2018.0	2015.7
100% Worn	1280.9	1466.1	1851.8	1407.4	1964.5	2006.4	2004.7	2014.2	2001.3
110% Worn	1325.2	1534.0	1548.2	1582.3	1913.1	2000.3	1996.2	1999.3	2013.6

IOPS -- Q1T32



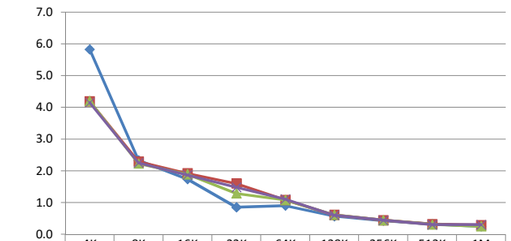
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	436011	208901	89597	24180	26338	15646	7599	3781	1838
50% Worn	327480	192427	109782	55142	30579	16107	8067	4036	2016
100% Worn	327903	187666	118516	45038	31431	16052	8019	4028	2001
110% Worn	339250	196346	99084	50635	30610	16003	7985	3999	2014

Avg. Latency (ms) -- Q1T32



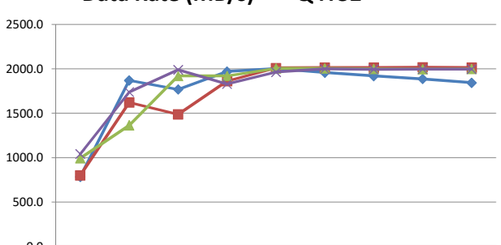
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.073	0.153	0.356	1.322	1.214	2.044	4.230	8.574	17.755
50% Worn	0.097	0.166	0.290	0.579	1.045	1.985	3.985	8.029	16.192
100% Worn	0.097	0.170	0.269	0.709	1.017	1.992	4.009	8.046	16.309
110% Worn	0.094	0.162	0.322	0.630	1.044	1.998	4.026	8.107	16.203

Avg. CPU Usage (%) -- Q1T32



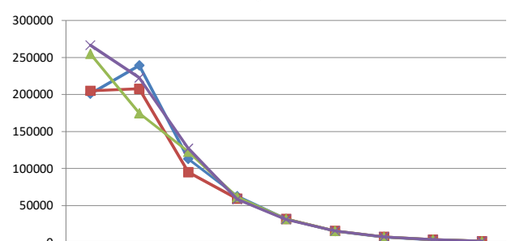
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	5.8	2.3	1.7	0.9	0.9	0.6	0.4	0.3	0.3
50% Worn	4.2	2.3	1.9	1.6	1.1	0.6	0.4	0.3	0.3
100% Worn	4.2	2.2	1.9	1.3	1.1	0.6	0.4	0.3	0.3
110% Worn	4.2	2.3	1.9	1.5	1.1	0.6	0.4	0.3	0.3

Data Rate (MB/s) -- Q4T32



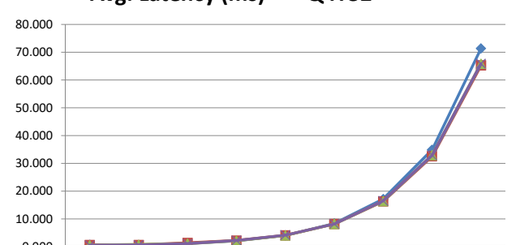
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	786.0	1871.1	1769.7	1971.8	2002.6	1959.2	1920.7	1887.5	1845.1
50% Worn	801.4	1623.1	1489.8	1862.9	2011.4	2014.6	2016.5	2019.4	2016.5
100% Worn	995.8	1366.9	1920.4	1921.1	2007.0	2007.3	2001.4	1997.4	1999.3
110% Worn	1042.4	1740.8	1991.1	1832.3	1964.4	2000.7	1995.8	1997.7	1998.4

IOPS -- Q4T32



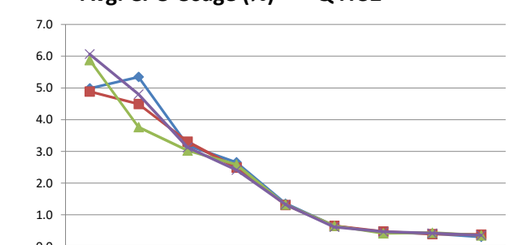
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	201208	239506	113259	63098	32042	15674	7683	3775	1845
50% Worn	205151	207754	95350	59613	32183	16117	8066	4039	2016
100% Worn	254932	174970	122907	61475	32113	16058	8006	3995	1999
110% Worn	266851	222828	127429	58634	31431	16006	7983	3995	1998

Avg. Latency (ms) -- Q4T32



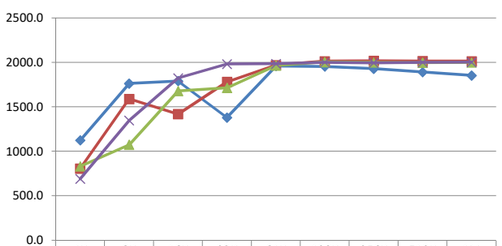
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	0.655	0.549	1.162	2.087	4.110	8.404	17.146	34.897	71.398
50% Worn	0.642	0.634	1.381	2.209	4.093	8.173	16.331	32.618	65.326
100% Worn	0.516	0.752	1.072	2.143	4.102	8.203	16.455	32.977	65.885
110% Worn	0.493	0.591	1.034	2.246	4.191	8.230	16.501	32.970	65.918

Avg. CPU Usage (%) -- Q4T32



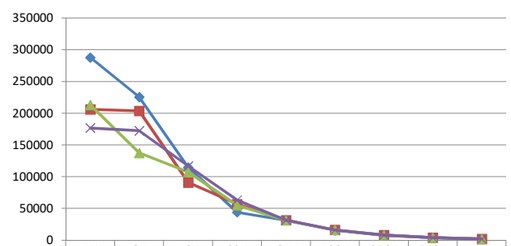
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	5.0	5.4	3.2	2.7	1.4	0.7	0.5	0.4	0.3
50% Worn	4.9	4.5	3.3	2.5	1.3	0.7	0.5	0.4	0.4
100% Worn	5.9	3.8	3.0	2.6	1.3	0.7	0.4	0.4	0.4
110% Worn	6.1	4.8	3.1	2.4	1.3	0.6	0.5	0.4	0.4

Data Rate (MB/s) -- Q16T32



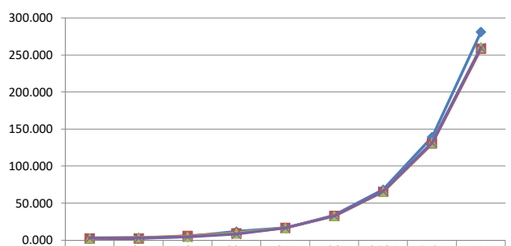
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1124.1	1763.3	1791.3	1380.1	1961.2	1955.2	1929.3	1892.0	1854.1
50% Worn	805.5	1591.4	1419.9	1782.8	1971.9	2014.5	2017.6	2016.8	2015.3
100% Worn	832.1	1074.4	1678.8	1715.2	1966.6	2006.0	1999.9	1998.0	2000.2
110% Worn	690.3	1347.9	1824.1	1982.1	1985.0	2001.3	1995.9	2001.6	2004.4

IOPS -- Q16T32



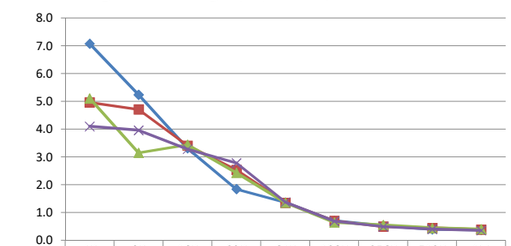
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	287762	225706	114645	44163	31379	15641	7717	3784	1854
50% Worn	206214	203695	90876	57050	31551	16116	8070	4034	2015
100% Worn	213018	137524	107446	54886	31465	16048	8000	3996	2000
110% Worn	176710	172530	116743	63427	31761	16011	7984	4003	2004

Avg. Latency (ms) -- Q16T32



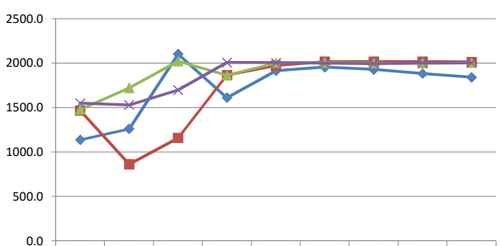
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1.831	2.335	4.596	11.933	16.796	33.690	68.284	139.275	281.324
50% Worn	2.555	2.587	5.798	9.235	16.705	32.696	65.292	130.632	258.821
100% Worn	2.474	3.832	4.905	9.602	16.748	32.834	65.869	131.859	260.750
110% Worn	2.982	3.054	4.514	8.308	16.592	32.911	65.999	131.609	260.108

Avg. CPU Usage (%) -- Q16T32



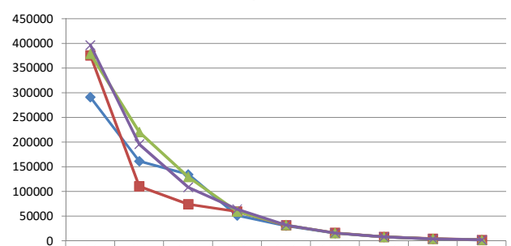
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	7.1	5.2	3.3	1.8	1.4	0.7	0.5	0.4	0.4
50% Worn	5.0	4.7	3.4	2.5	1.4	0.7	0.5	0.4	0.4
100% Worn	5.1	3.2	3.4	2.4	1.4	0.6	0.6	0.4	0.4
110% Worn	4.1	4.0	3.3	2.8	1.4	0.7	0.5	0.4	0.4

Data Rate (MB/s) -- Q32T32



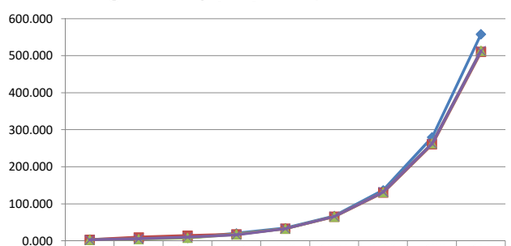
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1137.4	1260.7	2103.0	1612.4	1916.2	1954.7	1928.5	1881.5	1841.1
50% Worn	1467.3	863.9	1158.6	1863.8	1972.0	2015.9	2018.5	2017.4	2012.8
100% Worn	1479.6	1722.0	2024.0	1864.6	2003.9	2005.2	2000.8	1997.9	2003.2
110% Worn	1549.3	1530.0	1698.3	2007.0	2004.4	1998.3	1994.3	2001.7	2002.9

IOPS -- Q32T32



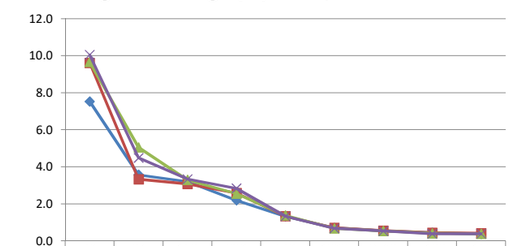
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	291186	161375	134593	51596	30660	15637	7714	3763	1841
50% Worn	375630	110581	74153	59642	31552	16127	8074	4035	2013
100% Worn	378776	220420	129538	59668	32063	16041	8003	3996	2003
110% Worn	396626	195838	108690	64226	32070	15986	7977	4003	2003

Avg. Latency (ms) -- Q32T32



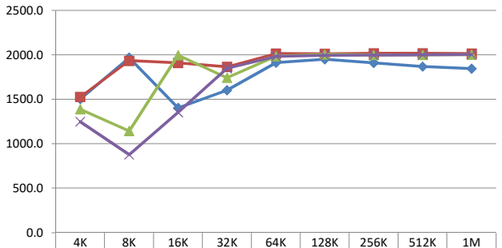
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	3.619	6.530	7.830	20.425	34.371	67.400	136.631	279.942	558.374
50% Worn	2.806	9.580	14.215	17.674	33.405	65.348	130.525	260.984	511.020
100% Worn	2.783	4.780	8.137	17.664	32.873	65.698	131.678	263.494	513.316
110% Worn	2.657	5.383	9.698	16.409	32.866	65.919	132.097	263.002	513.454

Avg. CPU Usage (%) -- Q32T32



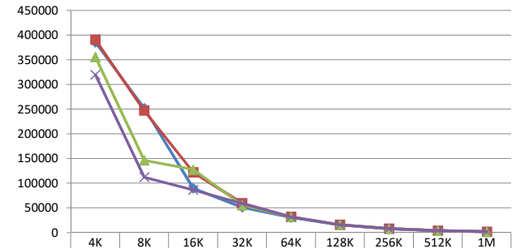
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	7.5	3.6	3.2	2.2	1.3	0.7	0.5	0.4	0.4
50% Worn	9.6	3.3	3.1	2.6	1.3	0.7	0.6	0.4	0.4
100% Worn	9.7	5.1	3.3	2.6	1.4	0.7	0.5	0.4	0.4
110% Worn	10.1	4.5	3.3	2.8	1.3	0.7	0.5	0.4	0.4

Data Rate (MB/s) -- Q64T32



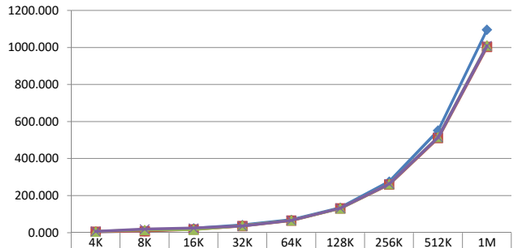
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	1505.3	1969.8	1404.3	1603.2	1913.2	1952.1	1911.0	1870.1	1846.8
50% Worn	1528.1	1935.4	1909.5	1865.4	2014.2	2012.7	2018.1	2017.7	2016.7
100% Worn	1389.5	1144.8	1998.0	1744.4	1985.9	2006.4	2001.1	1999.7	2002.9
110% Worn	1250.1	878.1	1353.7	1848.8	1984.7	1996.2	1997.1	2001.7	2004.3

IOPS -- Q64T32



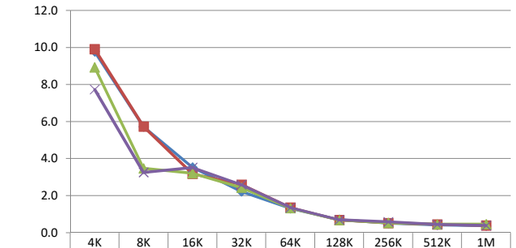
	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	385362	252140	89877	51302	30611	15617	7644	3740	1847
50% Worn	391198	247725	122208	59691	32228	16102	8073	4035	2017
100% Worn	355721	146530	127873	55820	31774	16051	8004	3999	2003
110% Worn	320025	112398	86636	59161	31755	15969	7988	4003	2004

Avg. Latency (ms) -- Q64T32



	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	5.479	8.361	23.454	41.084	68.872	134.977	275.641	552.240	1096.239
50% Worn	5.414	8.548	17.249	35.317	65.404	130.895	260.969	511.422	1003.690
100% Worn	5.948	14.384	16.484	37.770	66.331	131.317	263.164	516.061	1010.526
110% Worn	6.621	18.755	24.336	35.625	66.380	131.966	263.648	515.525	1009.739

Avg. CPU Usage (%) -- Q64T32



	4K	8K	16K	32K	64K	128K	256K	512K	1M
0% Worn	9.8	5.7	3.5	2.2	1.3	0.7	0.5	0.4	0.4
50% Worn	9.9	5.7	3.2	2.6	1.4	0.7	0.5	0.4	0.4
100% Worn	8.9	3.5	3.2	2.4	1.3	0.7	0.5	0.5	0.5
110% Worn	7.7	3.3	3.5	2.6	1.4	0.7	0.6	0.4	0.4