Packet Benchmarking Numbers - Hardware Details

Hardware

Packet.net Type 3 servers and clients.

Item	Value
cpus	40
ram	128G
network	Mellanox MT27520 Family [ConnectX-3 Pro] 10000 Mbps
processor	Intel Xeon E5-2640 v3s (-HT-MCP-SMP-)
disk	1 x 2400GB NVMe (Micron 1900)

Tool and Config

Cosbench

Cosbench Workloads Config

Writes

Cached Disk (Performance)	Uncached Disk (Performance)	Cached Disk (Performance) ReWrite
1.9GiB/sec	720MiB/sec	1GiB/sec

Reads

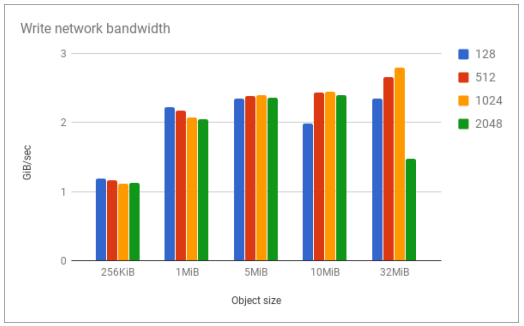
Cached Disk (Performance)	Uncached Disk (Performance)
3.8GiB/sec	1.3GiB/sec

NOTE: File size used is 10GiB, performance measured using Linux dd command.

Packet Benchmarking Numbers - Filesystem (1 server, 1 client)

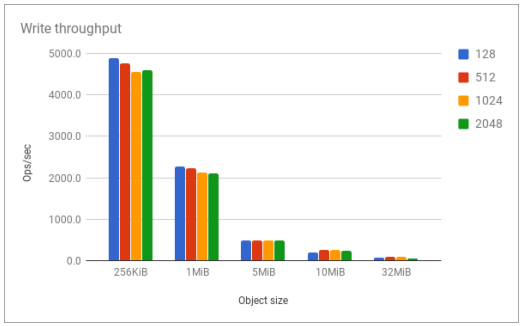
Standalone FS (1 Server, 1 Client)						
	Threads	256KiB	1MiB	5MiB	10MiB	32MiB
Write Bandwidth	128	1.19	2.22	2.35	1.98	2.35
	512	1.16	2.17	2.38	2.43	2.66
	1024	1.11	2.07	2.39	2.45	2.79
	2048	1.12	2.05	2.36	2.4	1.48

GiB/sec



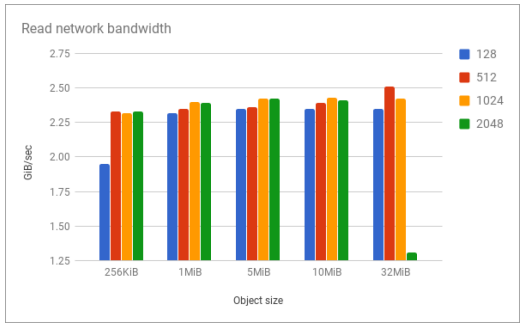
Standalone FS (1 Server, 1 Client)						
	Threads	256KiB	1MiB	5MiB	10MiB	32MiB
Write Throughput	128	4874.2	2273.3	481.3	202.8	75.2
	512	4751.4	2222.1	487.4	248.8	85.1
	1024	4546.6	2119.7	489.5	250.9	89.3
	2048	4587.5	2099.2	483.3	245.8	47.4

Ops/sec



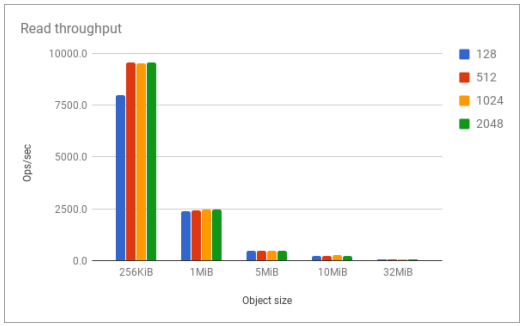
Standalone FS (1 Server, 1 Client)						
	Threads	256KiB	1MiB	5MiB	10MiB	32MiB
Write Bandwidth	128	1.95	2.32	2.35	2.35	2.35
	512	2.33	2.35	2.36	2.39	2.51
	1024	2.32	2.40	2.42	2.43	2.42
	2048	2.33	2.39	2.42	2.41	1.31

GiB/sec



Standalone FS (1 Server, 1 Client)						
	Threads	256KiB	1MiB	5MiB	10MiB	32MiB
Write Throughput	128	7987.2	2375.7	481.3	240.6	75.2
	512	9543.7	2406.4	483.3	244.7	80.3
	1024	9502.7	2457.6	495.6	248.8	77.4
	2048	9543.7	2447.4	495.6	246.8	41.9

Ops/sec



Packet Benchmarking Numbers - Distributed Erasure Code (10 servers, 10 clients)

Distributed Erasure Code (10 Servers 10 disks, 10 Clients)

Write Bandwidth

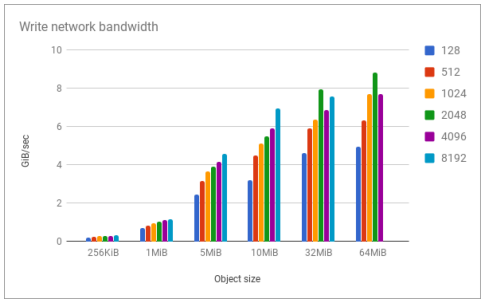
Workers	256KiB	1MiB	5MiB	10MiB	32MiB	64MiB
128	0.193	0.672	2.42	3.17	4.59	4.93
512	0.216	0.795	3.16	4.49	5.89	6.31
1024	0.2615	0.925	3.65	5.1	6.33	7.67
2048	0.271	1.02	3.9	5.47	7.92	8.8
4096	0.291	1.09	4.15	5.9	6.86	7.7
8192	0.293	1.15	4.58	6.95	7.57	NA

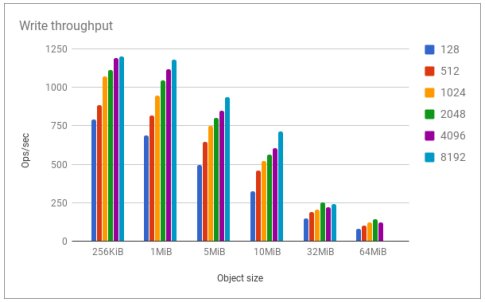
GiB/sec

Write Throughput

Workers	256KiB	1MiB	5MiB	10MiB	32MiB	64MiB
128	791	688	496	325	147	79
512	885	814	647	460	188	101
1024	1071	947	748	522	203	123
2048	1110	1044	799	560	253	141
4096	1192	1116	850	604	220	123
8192	1200	1178	938	712	242	NA

Ops/sec





Distributed Erasure Code (10 Servers 10 disks, 10 Clients)

Read Bandwidth

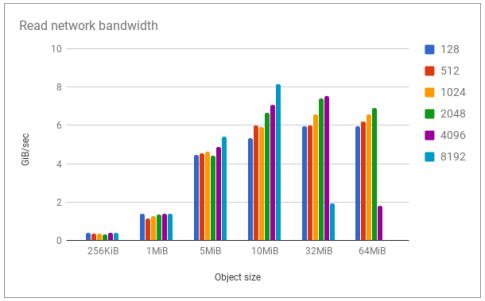
Workers	256KiB	1MiB	5MiB	10MiB	32MiB	64MiB
128	0.38	1.37	4.47	5.32	5.96	5.95
512	0.331	1.14	4.53	5.98	6	6.22
1024	0.349	1.27	4.61	5.92	6.57	6.57
2048	0.32	1.33	4.41	6.64	7.41	6.9
4096	0.375	1.4	4.88	7.08	7.52	1.81
8192	0.379	1.38	5.42	8.17	1.93	NA

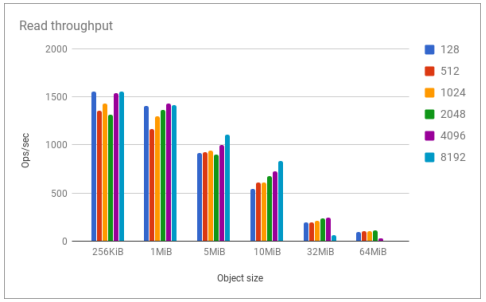
GiB/sec

Read Throughput

Workers	256KiB	1MiB	5MiB	10MiB	32MiB	64MiB
128	1556	1403	915	545	191	95
512	1356	1167	928	612	192	100
1024	1430	1300	944	606	210	105
2048	1311	1362	903	680	237	110
4096	1536	1434	999	725	241	29
8192	1552	1413	1110	837	62	NA

Ops/sec





NOTE: Orange colored boxes in read throughput indicate saturated network, at such a high concurrency we do not have enough bandwidth to serve the clients.