

CS553 - Cloud Computing

Homework 3

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Disk Throughput

1A:

Workload	Concurrency	Record Size	FileIO Measured Throughput (MB/sec)	IOZone Measured Throughput (MB/sec)
WS	1	64kb	76.1071	6.8259
WS	1	1mb	106.9675	102.5181
WS	1	16mb	81.5924	92.2265
WS	2	64kb	7.0831	7.4388
WS	2	1mb	52.1969	53.0862
WS	2	16mb	80.9951	83.7265

WS	4	64kb	6.8761	7.06181
WS	4	1mb	47.9184	50.0274
WS	4	16mb	59.6286	55.4264
WS	8	64kb	7.16581	7.35733
WS	8	1mb	44.83461	47.52762
WS	8	16mb	51.38672	46.81729

1B:

Workload	Concurrency	Record Size	FileIO Measured Throughput (MB/sec)	IOZone Measured Throughput (MB/sec)
RS	1	64kb	75.9046	7.2298
RS	1	1mb	104.86782	103.5181

RS	1	16mb	82.2368	92.85732
RS	2	64kb	6.8831	6.9388
RS	2	1mb	51.06879	52.98792
RS	2	16mb	79.9275	83.5389
RS	4	64kb	5.59169	5.95767
RS	4	1mb	46.9184	59.0274
RS	4	16mb	56.6286	52.4264
RS	8	64kb	7.57581	7.64573
RS	8	1mb	46.83461	48.52762
RS	8	16mb	52.3863	47.81572

1C:

Workload	Concurrency	Record Size	FileIO Measured Throughput	IOZone Measured
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			(MB/sec)	Throughput (MB/sec)
WR	1	64kb	7.3987	7.67685
WR	1	1mb	54.7432	57.34174
WR	1	16mb	74.87687	88.76767
WR	2	64kb	9.28778	8.46545
WR	2	1mb	47. 98349	51.27323
WR	2	16mb	69.3473	67.12783
WR	4	64kb	9.2834	11.26334
WR	4	1mb	54.12312	51.12394
WR	4	16mb	56.2374	50.1238
WR	8	64kb	13.2838	12.24874
WR	8	1mb	51.2383	57.12837

WR	8	16mb	38.12734	42.12494
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1D:

Workload	Concurrency	Record Size	FileIO Measured Throughput (MB/sec)	IOZone Measured Throughput (MB/sec)
RR	1	64kb	9.17263	8.11625
RR	1	1mb	54.27347	56.17348
RR	1	16mb	82.28379	93.28471
RR	2	64kb	8.12948	9.12874
RR	2	1mb	51.67126	53.17236
RR	2	16mb	79.12839	88.12847
RR	4	64kb	13.12847	11.27481

RR	4	1mb	57.34891	55.39487
RR	4	16mb	71.2347	77.12347
RR	8	64kb	15.8129	16.13474
RR	8	1mb	52.48799	54.38749
RR	8	16mb	58.83297	70.3897

Random disk operations per second

2A:

Workload	Concurrenc y	Record Size	FileIO Measured IOPS (OPS/sec)	IOZone Measured IOPS (OPS/sec)
WR	1	4kb	497.9784	149.12481
WR	2	4kb	549.23784	189.19821

WR	4	4kb	498.57676	250.86766
WR	8	4kb	489.6768	309.76688

2B:

Workload	Concurren cy	Record Size	FileIO Measured IOPS (OPS/sec)	IOZone Measured IOPS (OPS/sec)
RR	1	4kb	228.12478	170.3478
RR	2	4kb	328.18230	220.2138
RR	4	4kb	420.21487	310.2948
RR	8	4kb	466.1278	340.12487