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YARDSTICK
2019

YARDSTICK IS A FRAMEWORK FOR BENCHMARKS ON DISTRIBUTED SYSTEMS.

THE FRAMEWORK COMES WITH A SET OF PROBES THAT COLLECT VARIOUS METRICS DURING THE BENCHMARK EXECUTION ON THROUGHPUT AND LATENCY AS DETAILED BELOW:

ThroughputLatencyProbe – measures throughput and latency

DStatProbe - collects information provided by Linux/Unix 'dstat' command, such as various network, CPU, or memory metrics

VmStatProbe – collects information provided by Linux/Unix 'vmstat' command (which is a subset of 'dstat' command), such as various network, CPU, or memory metrics

PercentileProbe – tracks the latency of each individual request and collects the time frame bucket

The results obtained below provide throughput and latency during benchmark execution on InsightEdge version 15.0 enterprise edition as depicted below:
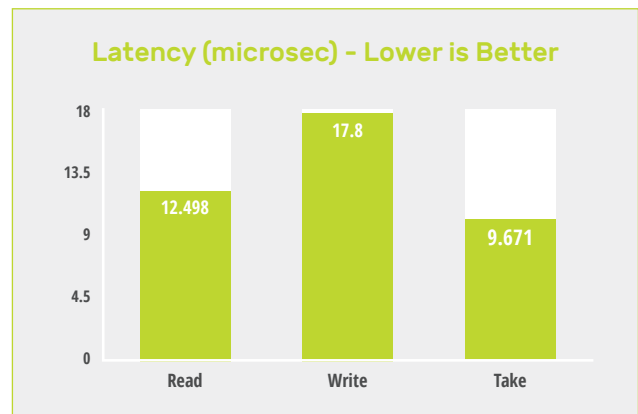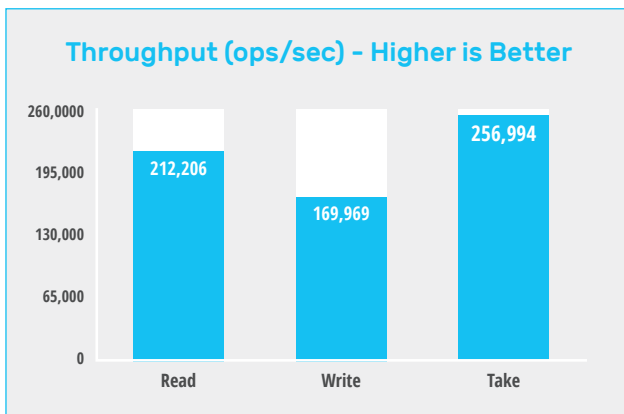

For additional details, please **click here** ›
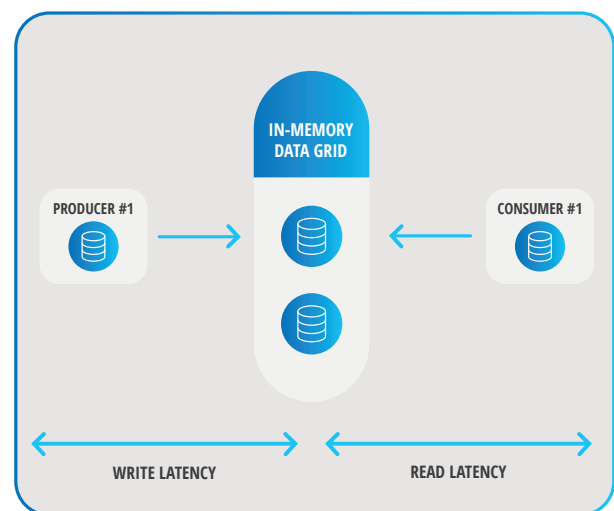
YARDSTICK CONFIGURATION

Specification	Description
Nodes	1 Local Client, 1 Server
Threads	4
Objects	1M
Object Size	1KB
InsightEdge	15.0 Release

HARDWARE SPECIFICATION

Specification	Description
AWS Instance Type	m1.large
RAM	7.5 GiB
CPU	2 vCPUs

RESULT SUMMARY

Benchmark Name	Throughput (ops/sec)	Latency (microsec)
Atomic Read	212,206	12.50
Atomic Write	169,969	17.80
Atomic Take (Read&Delete)	256,994	9.67

Throughput (ops/sec) - Higher is Better

	Read	Write	Take
	212,206	169,969	256,994

Latency (microsec) - Lower is Better

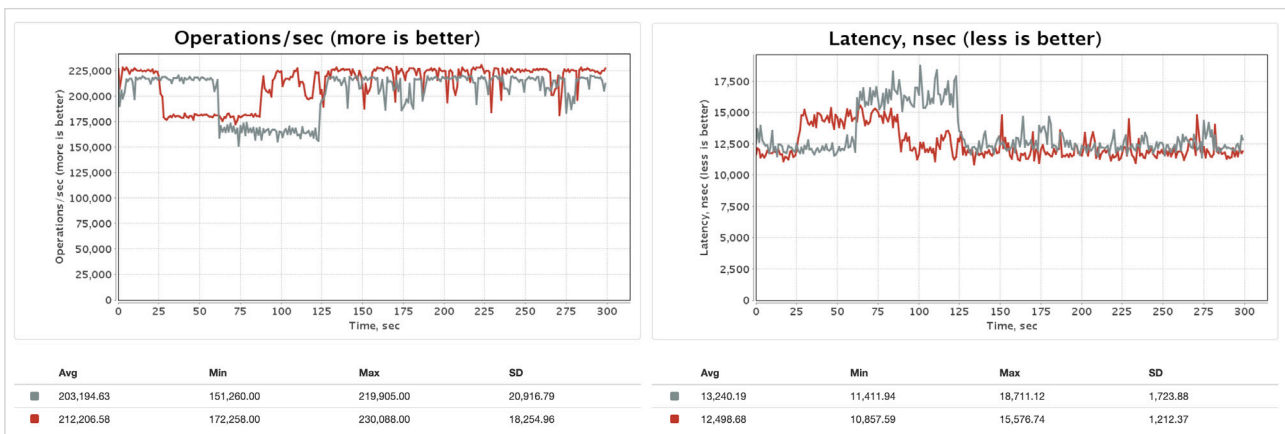|	Read	Write	Take
	12.498	17.8	9.671

BENCHMARK RESULTS SUMMARY

Atomic Read - Read 100% Workload

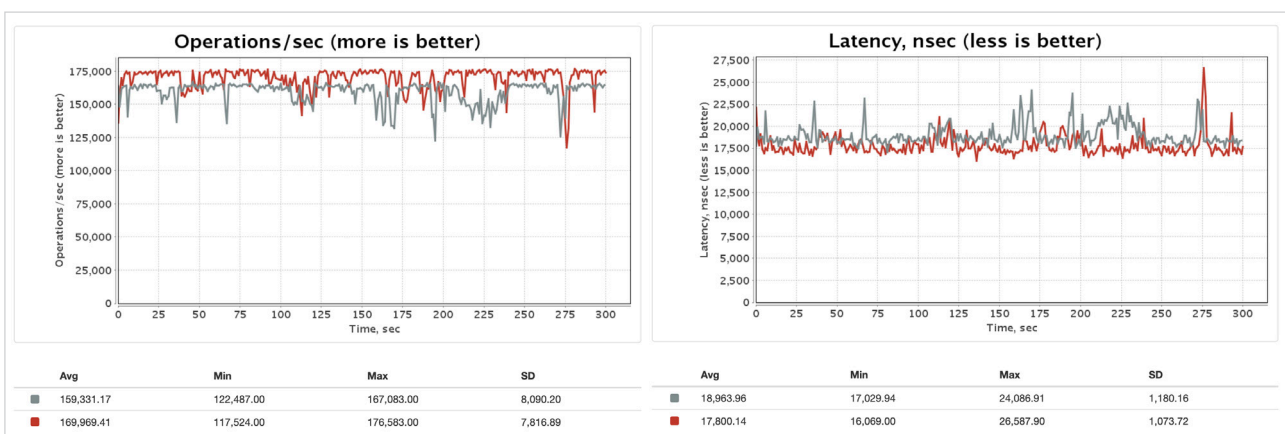Results show that atomic read operations in GigaSpaces performed in average 212,206 operations per second.

	AVG	MIN	MAX	STD DEV
Throughput (ops/sec)	212,206	172,258	230,088	18,254
Latency (nanosec)	12,498	10,857	15,576	1,212

	Avg	Min	Max	SD
■	203,194.63	151,260.00	219,905.00	20,916.79
■	212,206.58	172,258.00	230,088.00	18,254.96

	Avg	Min	Max	SD
■	13,240.19	11,411.94	18,711.12	1,723.88
■	12,498.68	10,857.59	15,576.74	1,212.37

Atomic Write - Write 100% Workload

Results show that atomic write operations in GigaSpaces performed in average 169,969 operations per second.

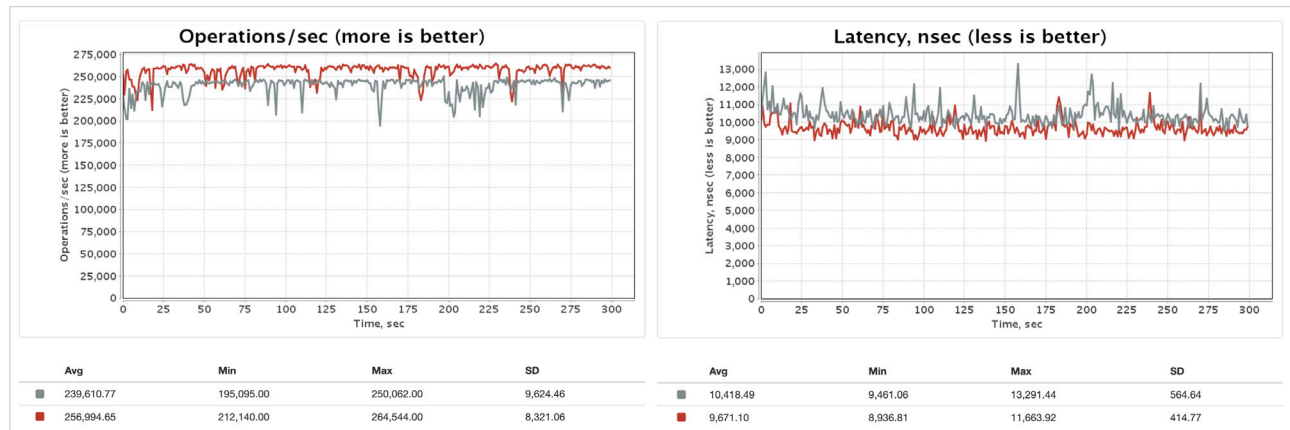|	AVG	MIN	MAX	STD DEV
Throughput (ops/sec)	169,969	117,524	176,583	7,816
Latency (nanosec)	17,800	16,069	26,587	1,073

	Avg	Min	Max	SD
■	159,331.17	122,487.00	167,083.00	8,090.20
■	169,969.41	117,524.00	176,583.00	7,816.89

	Avg	Min	Max	SD
■	18,963.96	17,029.94	24,086.91	1,180.16
■	17,800.14	16,069.00	26,587.90	1,073.72

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Atomic Take – Take 100% Workload

Results show that atomic take operations in GigaSpaces performed in average 256,994 operations per second.

	AVG	MIN	MAX	STD DEV
Throughput (ops/sec)	256,994	212,140	264,544	8,321
Latency (nanosec)	9,671	8,936	11,663	414

Operations/sec (more is better)

Latency, nsec (less is better)

	Avg	Min	Max	SD
▪	239,610.77	195,095.00	250,062.00	9,624.46
▪	256,994.65	212,140.00	264,544.00	8,321.06

	Avg	Min	Max	SD
▪	10,418.49	9,461.06	13,291.44	564.64
▪	9,671.10	8,936.81	11,663.92	414.77

ABOUT GIGASPACES

GigaSpaces provides the fastest big data analytics processing platform to run services and machine learning models in production at scale. The in-memory software platform helps enterprises seamlessly introduce new applications that need to ingest, process and analyze huge amounts of data at extreme speeds, across any environment. Hundreds of Tier-1 and Fortune-listed organizations worldwide across financial services, retail, transportation, telecom, healthcare, and more trust GigaSpaces for real-time decision making on streaming, transactional and historical data. GigaSpaces offices are located in the US, Europe and Israel serving customers such as Morgan Stanley, Bank of America, CSX, Blue Cross Blue Shield, Bank of China, Daiwa Capital, Goldman Sachs, Société Générale, Crédit Agricole, Avanza Bank, SITA, Charles Schwab, Avaya, Deutsche Bank, Frequentis, UBS and more.

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