

DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

function

Benchmark Rounds: 8

Details

Benchmark results

Summary

<u>insert-historical-data-offer-1000-fixed-load</u>

<u>insert-historical-data-offer-2000-fixed-load</u>

<u>insert-historical-data-offer-3000-fixed-load</u>

insert-historical-data-offer-4000-fixed-load

insert-historical-data-offer-8000-fixed-load

<u>insert-historical-data-offer-16000-fixed-load</u>

<u>insert-historical-data-offer-32000-fixed-load</u>

<u>insert-historical-data-offer-64000-fixed-load</u>

System under test

Details

Caliper report

Summary of performance metrics

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-historical-data-offer- 1000-fixed-load	1631	0	35.3	3.43	0.14	1.22	33.8
insert-historical-data-offer- 2000-fixed-load	1692	0	36.8	3.31	0.13	1.28	35.4
insert-historical-data-offer- 3000-fixed-load	1751	0	36.5	3.77	0.13	1.44	34.9
insert-historical-data-offer- 4000-fixed-load	1738	0	38.2	4.25	0.14	1.56	37.5
insert-historical-data-offer- 8000-fixed-load	1671	0	35.9	4.32	0.15	1.67	34.3
insert-historical-data-offer- 16000-fixed-load	1860	0	40.2	4.88	0.15	1.94	40.1
insert-historical-data-offer- 32000-fixed-load	1739	0	38.2	5.04	0.14	2.12	37.0
insert-historical-data-offer- 64000-fixed-load	1873	0	39.3	4.93	0.14	2.20	37.9

Benchmark round: insert-historical-data-offer-1000-fixed-load

Benchmarking the InsertTestHistoricalDataOffer function with a data size of 1000 bytes at a fixed load.

txDuration: 60
rateControl:
 type: fixed-load
onto.

opts: transactionLoad: 10 startingTps: 1

Performance metrics for insert-historical-data-offer-1000-fixed-load

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-historical-data-offer- 1000-fixed-load	1631	0	35.3	3.43	0.14	1.22	33.8

Resource utilization for insert-historical-data-offer-1000-fixed-load

Metric	Prometheus Query	Name
Avg Memory (MB)	sum(container_memory_rss{name=~".+"}) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com



Basic information

DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

function

Benchmark Rounds: 8

Details

Benchmark results

Summary

<u>insert-historical-data-offer-1000-fixed-load</u>

insert-historical-data-offer-2000fixed-load

<u>insert-historical-data-offer-3000-fixed-load</u>

insert-historical-data-offer-4000-fixed-load

<u>insert-historical-data-offer-8000-fixed-load</u>

<u>insert-historical-data-offer-16000-fixed-load</u>

insert-historical-data-offer-32000fixed-load

<u>insert-historical-data-offer-64000-fixed-load</u>

System under test

Detail

CPU (%)	sum(rate(container_cpu_usage_seconds_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Write (MB) sum(rate(container_fs_writes_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer	
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Read (MB)	sum(rate(container_fs_reads_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com

Benchmark round: insert-historical-data-offer-2000-fixed-load

Benchmarking the InsertTestHistoricalDataOffer function with a data size of 2000 bytes at a fixed load.

txDuration: 60
rateControl:
 type: fixed-load
 opts:
 transactionLoad: 20
 startingTps: 1

Performance metrics for insert-historical-data-offer-2000-fixed-load

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-historical-data-offer- 2000-fixed-load	1692	0	36.8	3.31	0.13	1.28	35.4

Resource utilization for insert-historical-data-offer-2000-fixed-load

Metric	Prometheus Query	Name
Avg	sum(container_memory_rss{name=~".+"}) by (name)	ca_orderer



DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

unction

Benchmark Rounds: 8

Details

Benchmark results

Summary

<u>insert-historical-data-offer-1000-fixed-load</u>

<u>insert-historical-data-offer-2000-fixed-load</u>

<u>insert-historical-data-offer-3000-fixed-load</u>

insert-historical-data-offer-4000-fixed-load

<u>insert-historical-data-offer-8000-fixed-load</u>

insert-historical-data-offer-16000fixed-load

insert-historical-data-offer-32000fixed-load

<u>insert-historical-data-offer-64000-fixed-load</u>

System under test

Details

	Hyperledger Cali	per Neport
Memory (MB)		
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
CPU (%)	sum(rate(container_cpu_usage_seconds_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc sum(rate(container_fs_writes_bytes_total{name} [1m])) by (name)	sum(rate(container_fs_writes_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Read (MB)	sum(rate(container_fs_reads_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com

Benchmark round: insert-historical-data-offer-3000-fixed-load

Benchmarking the InsertTestHistoricalDataOffer function with a data size of 3000 bytes at a fixed load.

txDuration: 60
rateControl:
 type: fixed-load
 opts:
 transactionLoad: 40
 startingTps: 1



DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

unction

Benchmark Rounds: 8

Details

Benchmark results

Summary

 $\frac{insert\text{-}historical\text{-}data\text{-}offer\text{-}1000\text{-}}{fixed\text{-}load}$

<u>insert-historical-data-offer-2000-fixed-load</u>

<u>insert-historical-data-offer-3000-fixed-load</u>

<u>insert-historical-data-offer-4000-fixed-load</u>

<u>insert-historical-data-offer-8000-fixed-load</u>

<u>insert-historical-data-offer-16000-fixed-load</u>

<u>insert-historical-data-offer-32000-fixed-load</u>

<u>insert-historical-data-offer-64000-fixed-load</u>

System under test

Details

Performance metrics for insert-historical-data-offer-3000-fixed-load

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-historical-data-offer- 3000-fixed-load	1751	0	36.5	3.77	0.13	1.44	34.9

Resource utilization for insert-historical-data-offer-3000-fixed-load

Metric	Prometheus Query	Name
Avg Memory (MB)	sum(container_memory_rss{name=~".+"}) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726570
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
CPU (%)	sum(rate(container_cpu_usage_seconds_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726570
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
	sum(rate(container_fs_writes_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Read (MB)	sum(rate(container_fs_reads_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		orderer.example.com
		peer0.org1.example.com



DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

function

Benchmark Rounds: 8

Details

Benchmark results

Summary

<u>insert-historical-data-offer-1000-fixed-load</u>

<u>insert-historical-data-offer-2000-fixed-load</u>

<u>insert-historical-data-offer-3000-fixed-load</u>

insert-historical-data-offer-4000-

<u>fixed-load</u> <u>insert-historical-data-offer-8000-</u>

fixed-load

<u>insert-historical-data-offer-16000-fixed-load</u>

<u>insert-historical-data-offer-32000-fixed-load</u>

<u>insert-historical-data-offer-64000-fixed-load</u>

System under test

Details

 I .	l .
	peer0.org2.example.com

Benchmark round: insert-historical-data-offer-4000-fixed-load

Benchmarking the InsertTestHistoricalDataOffer function with a data size of 4000 bytes at a fixed load.

txDuration: 60
rateControl:
 type: fixed-load
 opts:

opts: transactionLoad: 60 startingTps: 1

Performance metrics for insert-historical-data-offer-4000-fixed-load

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-historical-data-offer- 4000-fixed-load	1738	0	38.2	4.25	0.14	1.56	37.5

Resource utilization for insert-historical-data-offer-4000-fixed-load

Metric	Prometheus Query	Name
Avg Memory (MB)	sum(container_memory_rss{name=~".+"}) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
	sum(rate(container_cpu_usage_seconds_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Write (MB)	sum(rate(container_fs_writes_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com



Basic information

DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

unction

Benchmark Rounds: 8

Details

Benchmark results

Summary

<u>insert-historical-data-offer-1000-fixed-load</u>

insert-historical-data-offer-2000fixed-load

<u>insert-historical-data-offer-3000-</u> fixed-load

insert-historical-data-offer-4000-fixed-load

insert-historical-data-offer-8000-

fixed-load

<u>insert-historical-data-offer-16000-fixed-load</u>

<u>insert-historical-data-offer-32000-fixed-load</u>

<u>insert-historical-data-offer-64000-fixed-load</u>

System under test

Details

	Tryperieager can	
		peer0.org2.example.com
Disc Read (MB)	sum(rate(container_fs_reads_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com

Benchmark round: insert-historical-data-offer-8000-fixed-load

Benchmarking the InsertTestHistoricalDataOffer function with a data size of $8000\ bytes$ at a fixed load.

txDuration: 60
rateControl:
 type: fixed-load
 opts:
 transactionLoad: 80
 startingTps: 1

Performance metrics for insert-historical-data-offer-8000-fixed-load

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-historical-data-offer- 8000-fixed-load	1671	0	35.9	4.32	0.15	1.67	34.3

Resource utilization for insert-historical-data-offer-8000-fixed-load

Metric	Prometheus Query	Name
Avg Memory (MB)	sum(container_memory_rss{name=~".+"}) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
CPU (%)	sum(rate(container_cpu_usage_seconds_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com



Basic information

DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

unction

Benchmark Rounds: 8

Details

Benchmark results

Summary

<u>insert-historical-data-offer-1000-fixed-load</u>

<u>insert-historical-data-offer-2000-fixed-load</u>

insert-historical-data-offer-3000-fixed-load

insert-historical-data-offer-4000-fixed-load

insert-historical-data-offer-8000-

fixed-load

<u>insert-historical-data-offer-16000-fixed-load</u>

<u>insert-historical-data-offer-32000-fixed-load</u>

<u>insert-historical-data-offer-64000-fixed-load</u>

System under test

Details

Disc Write (MB)	sum(rate(container_fs_writes_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Read (MB)	sum(rate(container_fs_reads_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com

Benchmark round: insert-historical-data-offer-16000-fixed-load

Benchmarking the InsertTestHistoricalDataOffer function with a data size of 16000 bytes at a fixed load.

txDuration: 60
rateControl:
 type: fixed-load
 opts:
 transactionLoad: 100

startingTps: 1

Performance metrics for insert-historical-data-offer-16000-fixed-load

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-historical-data-offer- 16000-fixed-load	1860	0	40.2	4.88	0.15	1.94	40.1

Resource utilization for insert-historical-data-offer-16000-fixed-load

Metric	Prometheus Query	Name
Avg Memory (MB)	sum(container_memory_rss{name=~".+"}) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com



Basic information

DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

unction

Benchmark Rounds: 8

Details

Benchmark results

Summary

<u>insert-historical-data-offer-1000-fixed-load</u>

<u>insert-historical-data-offer-2000-fixed-load</u>

<u>insert-historical-data-offer-3000-fixed-load</u>

insert-historical-data-offer-4000-fixed-load

<u>insert-historical-data-offer-8000-fixed-load</u>

<u>insert-historical-data-offer-16000-fixed-load</u>

insert-historical-data-offer-32000fixed-load

<u>insert-historical-data-offer-64000-fixed-load</u>

System under test

<u>Details</u>

CPU (%)	sum(rate(container_cpu_usage_seconds_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Write (MB)	sum(rate(container_fs_writes_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Read (MB)	sum(rate(container_fs_reads_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com

Benchmark round: insert-historical-data-offer-32000-fixed-load

Benchmarking the InsertTestHistoricalDataOffer function with a data size of 32000 bytes at a fixed load.

txDuration: 60
rateControl:
 type: fixed-load
 opts:
 transactionLoad: 120

startingTps: 1

Performance metrics for insert-historical-data-offer-32000-fixed-load

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-historical-data-offer- 32000-fixed-load	1739	0	38.2	5.04	0.14	2.12	37.0

$Resource\ utilization\ for\ insert-historical-data-offer-32000-fixed-load$

Metric	Prometheus Query	Name
Avg	sum(container_memory_rss{name=~".+"}) by (name)	ca_orderer



DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

unction

Benchmark Rounds: 8

Details

Benchmark results

Summary

<u>insert-historical-data-offer-1000-fixed-load</u>

insert-historical-data-offer-2000fixed-load

<u>insert-historical-data-offer-3000-fixed-load</u>

<u>insert-historical-data-offer-4000-</u> fixed-load

<u>insert-historical-data-offer-8000-fixed-load</u>

<u>insert-historical-data-offer-16000-fixed-load</u>

<u>insert-historical-data-offer-32000-fixed-load</u>

<u>insert-historical-data-offer-64000-fixed-load</u>

System under test

Details

Memory (MB)	Hyperleager Call	· .
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
CPU (%)	sum(rate(container_cpu_usage_seconds_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Write (MB)	sum(rate(container_fs_writes_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Read (MB)	sum(rate(container_fs_reads_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com

Benchmark round: insert-historical-data-offer-64000-fixed-load

Benchmarking the InsertTestHistoricalDataOffer function with a data size of 64000 bytes at a fixed load.

txDuration: 60
rateControl:
 type: fixed-load
 opts:
 transactionLoad: 150
 startingTps: 1



DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

unction

Benchmark Rounds: 8

Details

Benchmark results

Summary

 $\frac{insert\text{-}historical\text{-}data\text{-}offer\text{-}1000\text{-}}{fixed\text{-}load}$

<u>insert-historical-data-offer-2000-fixed-load</u>

insert-historical-data-offer-3000fixed-load insert-historical-data-offer-4000-

fixed-load insert-historical-data-offer-8000-

fixed-load insert-historical-data-offer-16000-

fixed-load insert-historical-data-offer-32000-

<u>fixed-load</u> <u>insert-historical-data-offer-64000-fixed-load</u>

System under test

Details

Performance metrics for insert-historical-data-offer-64000-fixed-load

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-historical-data-offer- 64000-fixed-load	1873	0	39.3	4.93	0.14	2.20	37.9

Resource utilization for insert-historical-data-offer-64000-fixed-load

Metric	Prometheus Query	Name
Avg Memory (MB)	sum(container_memory_rss{name=~".+"}) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
CPU (%)	sum(rate(container_cpu_usage_seconds_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726570
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Write (MB)	sum(rate(container_fs_writes_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
Disc Read (MB)	sum(rate(container_fs_reads_bytes_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd268872657
		orderer.example.com
		peer0.org1.example.com



DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

unction

Benchmark Rounds: 8

Details

Benchmark results

Summary

insert-historical-data-offer-1000-

fixed-load

insert-historical-data-offer-2000-fixed-load

11Xea-10aa

<u>insert-historical-data-offer-3000-</u> fixed-load

HXeu-Ioac

insert-historical-data-offer-4000-

fixed-load

insert-historical-data-offer-8000-

fixed-load

insert-historical-data-offer-16000-

fixed-load

insert-historical-data-offer-32000-

fixed-load

insert-historical-data-offer-64000-

fixed-load

System under test

Details

 1	
	peer0.org2.example.com

Test Environment

benchmark config

```
name: insert-historical-data-offer-benchmark
description: >-
Benchmarking the Hyperledger Fabric network with the
  InsertTestHistoricalDataOffer function
workers:
  number: 100
rounds:
     label: insert-historical-data-offer-1000-fixed-load
    description: >
       Benchmarking the InsertTestHistoricalDataOffer function with a data size
     of 1000 bytes at a fixed load. chaincodeID: basic
    txDuration: 60 rateControl:
       type: fixed-load
       opts:
         transactionLoad: 10
startingTps: 1
    workload:
       module: benchmarks/datamanagement/workloads/historical-data-offer.js
       arguments:
         chaincodeID: basic
    byteSize: 1000
label: insert-historical-data-offer-2000-fixed-load
description: >-
       Benchmarking the InsertTestHistoricalDataOffer function with a data size
       of 2000 bytes at a fixed load.
     chaincodeID: basic
txDuration: 60
     rateControl:
       type: fixed-load opts:
         transactionLoad: 20
          startingTps: 1
    workload:
       module: benchmarks/datamanagement/workloads/historical-data-offer.js
       arguments:
chaincodeID: basic
    byteSize: 2000
label: insert-historical-data-offer-3000-fixed-load
       Benchmarking the InsertTestHistoricalDataOffer function with a data size of 3000 bytes at a fixed load.
    chaincodeID: basic
txDuration: 60
     rateControl:
type: fixed-load
opts:
         transactionLoad: 40
         startingTps: 1
    workload:
       module: benchmarks/datamanagement/workloads/historical-data-offer.js
       arguments:
   chaincodeID: basic
    byteSize: 3000 label: insert-historical-data-offer-4000-fixed-load
    description: >-
   Benchmarking the InsertTestHistoricalDataOffer function with a data size
    of 4000 bytes at a fixed load.
chaincodeID: basic
txDuration: 60
     rateControl:
       type: fixed-load
       opts:
         transactionLoad: 60
         startingTps: 1
    workload:
       module: benchmarks/datamanagement/workloads/historical-data-offer.js
       arguments
          chaincodeID: basic
    byteSize: 4000
label: insert-historical-data-offer-8000-fixed-load
    description: >-
   Benchmarking the InsertTestHistoricalDataOffer function with a data size
    of 8000 bytes at a fixed load. chaincodeID: basic
    txDuration: 60
rateControl:
       type: fixed-load
       opts:
         transactionLoad: 80
          startingTps: 1
       module: benchmarks/datamanagement/workloads/historical-data-offer.js
       arguments:
         chaincodeID: basic
byteSize: 8000
    label: insert-historical-data-offer-16000-fixed-load
description: >-
     Benchmarking the InsertTestHistoricalDataOffer function with a data size of 16000 bytes at a fixed load. chaincodeID: basic
     txDuration: 60
     rateControl:
       type: fixed-load
opts:
```



DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer function

Benchmark Rounds: 8

Details

Benchmark results

Summary

insert-historical-data-offer-1000fixed-load

insert-historical-data-offer-2000fixed-load

insert-historical-data-offer-3000-

fixed-load

insert-historical-data-offer-4000-

fixed-load

insert-historical-data-offer-8000fixed-load

insert-historical-data-offer-16000fixed-load

insert-historical-data-offer-32000fixed-load

insert-historical-data-offer-64000fixed-load

System under test

Details

```
transactionLoad: 100
       startingTps: 1
  workload:
   module: benchmarks/datamanagement/workloads/historical-data-offer.js
    arguments:
chaincodeID: basic
byteSize: 16000
- label: insert-historical-data-offer-32000-fixed-load
  description: >
    Benchmarking the InsertTestHistoricalDataOffer function with a data size of 32000 bytes at a fixed load.
  chaincodeID: basic txDuration: 60
  {\tt rateControl:}
    type: fixed-load
opts:
transactionLoad: 120
  startingTps: 1
workload:
    module: benchmarks/datamanagement/workloads/historical-data-offer.js
    arguments:
   chaincodeID: basic
  byteSize: 32000
label: insert-historical-data-offer-64000-fixed-load
  description: >-
   Benchmarking the InsertTestHistoricalDataOffer function with a data size
  of 64000 bytes at a fixed load.
chaincodeID: basic
txDuration: 60
  rateControl:
    type: fixed-load
    opts:
transactionLoad: 150
       startingTps: 1
  workload:
    module: benchmarks/datamanagement/workloads/historical-data-offer.js
    arguments:
       chaincodeID: basic
byteSize: 64000
```

SUT

not provided