

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-</u> fixed-load

<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>

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

#### 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	1474	0	24.8	2.17	0.11	0.38	24.0
insert-historical-data-offer- 2000-fixed-load	3194	0	53.8	2.18	0.11	0.29	52.1
insert-historical-data-offer- 3000-fixed-load	4065	0	68.2	2.21	0.14	0.43	66.4
insert-historical-data-offer- 4000-fixed-load	4404	0	74.2	2.21	0.13	0.56	71.9
insert-historical-data-offer- 8000-fixed-load	4435	0	74.3	2.27	0.14	0.74	72.2
insert-historical-data-offer- 16000-fixed-load	4520	0	75.7	1.78	0.14	0.86	75.2
insert-historical-data-offer- 32000-fixed-load	4559	0	74.8	2.22	0.17	1.04	72.2
insert-historical-data-offer- 64000-fixed-load	4637	0	77.3	2.62	0.18	1.30	75.6

## 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
 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	1474	0	24.8	2.17	0.11	0.38	24.0

## 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



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#### Summary

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

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

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

<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** 

	1	<u> </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-2000-fixed-load

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

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	3194	0	53.8	2.18	0.11	0.29	52.1

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

	Metric	Prometheus Query	Name
- 1			



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Benchmark Rounds: 8

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### Benchmark results

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

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

insert-historical-data-offer-3000-

insert-historical-data-offer-4000fixed-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** 

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
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-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



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## Benchmark results

#### <u>Summary</u>

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

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

insert-historical-data-offer-3000-

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

 $\frac{insert\text{-}historical\text{-}data\text{-}offer\text{-}8000\text{-}}{fixed\text{-}load}$ 

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

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

<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	4065	0	68.2	2.21	0.14	0.43	66.4

#### 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- 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



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#### Benchmark results

#### **Summary**

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

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

insert-historical-data-offer-3000-

insert-historical-data-offer-4000fixed-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** 

	orderer.example.com
	peer0.org1.example.com
	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:

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	4404	0	74.2	2.21	0.13	0.56	71.9

#### 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
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- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726570
		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



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#### Benchmark results

#### Summar

<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-4000fixed-load

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

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

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

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

# System under test

**Details** 

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	orderer.example.com
	peer0.org1.example.com
	peer0.org2.example.com
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	4435	0	74.3	2.27	0.14	0.74	72.2

### 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



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## Benchmark results

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

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

insert-historical-data-offer-3000-

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

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

insert-historical-data-offer-16000-

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

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

#### System under test

**Details** 

fixed-load

peer0.org1.example.com	
Disc Write (MB) sum(rate(container_fs_writes_bytes_total{name=~".+"} ca_orderer  couchdb0  couchdb1  dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd	
Write (MB)         sum(rate(container_fs_writes_bytes_total{name=~".+"}} ca_orderer           ca_orderer         ca_orderer           couchdb0         couchdb1           dev-peer0.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd	
couchdb1  dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcc	
dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcc	
637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcc	
dev-peer0.org2.example.com-basic_1.0-	12688726576
637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcc	12688726576
orderer.example.com	
peer0.org1.example.com	
peer0.org2.example.com	
Disc Read (MB) sum(rate(container_fs_reads_bytes_total{name=~".+"} ca_orderer	
couchdb0	
couchdb1	
dev-peer0.org1.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcc	12688726576
dev-peer0.org2.example.com-basic_1.0- 637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcc	12688726576
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	4520	0	75.7	1.78	0.14	0.86	75.2

## 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



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

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

insert-historical-data-offer-3000-

insert-historical-data-offer-4000fixed-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** 

	Hyperledger Calip	ı				
		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-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	4559	0	74.8	2.22	0.17	1.04	72.2

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



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

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

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

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

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

 $\frac{insert\text{-}historical\text{-}data\text{-}offer\text{-}8000\text{-}}{fixed\text{-}load}$ 

<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** 

#### Resource monitor: prometheus

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
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

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

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



DLT: fabric

Name: insert-historical-data-offerbenchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

function

Benchmark Rounds: 8

**Details** 

#### Benchmark results

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

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

insert-historical-data-offer-3000-

insert-historical-data-offer-4000fixed-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** 

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

transactionLoad: 150 startingTps: 1

#### 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	4637	0	77.3	2.62	0.18	1.30	75.6

#### 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- 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
	T T T T T T T T T T T T T T T T T T T	



DLT: fabric

Name: insert-historical-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertTestHistoricalDataOffer

function

Benchmark Rounds: 8

**Details** 

#### Benchmark results

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

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

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-

fixed-load

insert-historical-data-offer-64000-

fixed-load

#### System under test

**Details** 

	637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
	dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
	orderer.example.com
	peer0.org1.example.com
	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: 5
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:
       {\it module:} \ benchmarks/datamanagement/workloads/historical-data-offer.js } \\ arguments:
          chaincodeID: basic
    byteSize: 2000
label: insert-historical-data-offer-3000-fixed-load
    description: >
    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
       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
    workload:
       module: benchmarks/datamanagement/workloads/historical-data-offer.js
       arguments
         chaincodeID: basic
```



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

insert-historical-data-offer-3000-

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

<u>fixed-load</u>

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

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

insert-historical-data-offer-32000-

fixed-load

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

#### System under test

**Details** 

```
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:
     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
rateControl:
type: fixed-load
     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
```

## SUT

not provided

byteSize: 64000