

DLT: fabric

Name: insert-data-offer-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the InsertDataOffer function Benchmark Rounds: 4

**Details** 

# Benchmark results

Summary insert-data-offer insert-data-offer-100 insert-data-offer-2000

System under test

<u>Details</u>

# Caliper report

# Summary of performance metrics

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-data-offer	71	0	71.2	2.29	0.13	0.27	21.7
insert-data- offer-100	71	0	71.0	2.21	0.14	0.26	22.1
insert-data- offer-1000	71	0	71.2	2.25	0.16	0.33	22.2
insert-data- offer-2000	68	0	66.4	2.30	0.15	0.49	21.7

# Benchmark round: insert-data-offer

Benchmarking the InsertDataOffer function with specific parameters.

txDuration: 1
rateControl:
 type: fixed-rate
 opts:
 tps: 70

# Performance metrics for insert-data-offer

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-data- offer	71	0	71.2	2.29	0.13	0.27	21.7

# Resource utilization for insert-data-offer

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- e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		dev-peer0.org2.example.com-basic_1.0- e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		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- e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		dev-peer0.org2.example.com-basic_1.0- e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		orderer.example.com
	I	

# Hyperledger Caliper Report



#### Basic information

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		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
		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
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com

# Benchmark round: insert-data-offer-100

Test InsertDataOffer function with data hash size 100 bytes

txDuration: 1
rateControl:
 type: fixed-rate
 opts:
 tps: 70

# Performance metrics for insert-data-offer-100

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-data- offer-100	71	0	71.0	2.21	0.14	0.26	22.1

# Resource utilization for insert-data-offer-100

sum(container_memory_rss{name=~".+"}) by (name)	ca_orderer
	couchdb0
	couchdb1
	dev-peer0.org1.example.com-basic_1.0- e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
	dev-peer0.org2.example.com-basic_1.0-e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
	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-e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
	sum(rate(container_cpu_usage_seconds_total{name=~".+"}



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	Hyperledger Calip	per Report
		dev-peer0.org2.example.com-basic_1.0-e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		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
		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
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com

# Benchmark round: insert-data-offer-1000

Test InsertDataOffer function with data hash size 1000 bytes

txDuration: 1
rateControl:
 type: fixed-rate
 opts:
 tps: 70

# Performance metrics for insert-data-offer-1000

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-data- offer-1000	71	0	71.2	2.25	0.16	0.33	22.2

#### Resource utilization for insert-data-offer-1000

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-e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		dev-peer0.org2.example.com-basic_1.0-e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		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



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Summary insert-data-offer insert-data-offer-100 insert-data-offer-2000

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dev-peer0.org2.example.com-basic_1.0-		Tryperieuger Canp	
e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2  dev-peer0.org2.example.com-basic_1.0- e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2  orderer.example.com  peer0.org1.example.com  peer0.org2.example.com  peer0.org2.example.com  ca_orderer  ca_orderer			couchdb1
e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2  orderer.example.com  peer0.org1.example.com  peer0.org2.example.com  Disc Write (Container_fs_writes_bytes_total{name=~".+"}  [1m]) by (name)  ca_orderer			dev-peer0.org1.example.com-basic_1.0-e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
peer0.org1.example.com  peer0.org2.example.com  Disc Write (MB) sum(rate(container_fs_writes_bytes_total{name=~".+"} ca_orderer			dev-peer0.org2.example.com-basic_1.0-e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
Disc Write (MB) sum(rate(container_fs_writes_bytes_total{name=~".+"} ca_orderer ca_orderer			orderer.example.com
Disc Write (MB) sum(rate(container_fs_writes_bytes_total{name=~".+"} ca_orderer ca_orderer			peer0.org1.example.com
Write (MB) sum(rate(container_fs_writes_bytes_total{name=~".+"} ca_orderer			peer0.org2.example.com
couchdb0	Write		ca_orderer
			couchdb0
couchdb1			couchdb1
orderer.example.com			orderer.example.com
peer0.org1.example.com			peer0.org1.example.com
peer0.org2.example.com			peer0.org2.example.com
Disc Read (MB) sum(rate(container_fs_reads_bytes_total{name=~".+"} ca_orderer	Read		ca_orderer
couchdb0			couchdb0
couchdb1			couchdb1
orderer.example.com			orderer.example.com
peer0.org1.example.com			peer0.org1.example.com
peer0.org2.example.com			peer0.org2.example.com

# Benchmark round: insert-data-offer-2000

 $Test\ Insert Data Offer\ function\ with\ data\ hash\ size\ 2000\ bytes$ 

txDuration: 1
rateControl:
 type: fixed-rate
 opts:
 tps: 70

#### Performance metrics for insert-data-offer-2000

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
insert-data- offer-2000	68	0	66.4	2.30	0.15	0.49	21.7

#### Resource utilization for insert-data-offer-2000

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-e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		dev-peer0.org2.example.com-basic_1.0- e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com



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CPU (%)	sum(rate(container_cpu_usage_seconds_total{name=~".+"} [1m])) by (name)	ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0-e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		dev-peer0.org2.example.com-basic_1.0- e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3
		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
		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
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com

# Test Environment

# benchmark config

```
name: insert-data-offer-benchmark
description: Benchmarking the Hyperledger Fabric network with the InsertDataOffer
function
workers:
  number: 1
rounds:
     label: insert-data-offer
description: Benchmarking the InsertDataOffer function with specific
     chaincodeID: basic
txDuration: 1
     rateControl:
  type: fixed-rate
        opts:
     tps: 70
workload:
module: benchmarks/datamanagement/workloads/insert-data-offer.js
        arguments:
           chaincodeID: basic
    label: insert-data-offer-100
description: Test InsertDataOffer function with data hash size 100 bytes
chaincodeID: basic
     txDuration: 1
     txburation: I
rateControl:
type: fixed-rate
opts:
tps: 70
workload:
        \begin{tabular}{ll} module: benchmarks/datamanagement/workloads/insert-data-offer.js \\ arguments: \end{tabular}
    chaincodeID: basic
byteSize: 100
label: insert-data-offer-1000
     description: Test InsertDataOffer function with data hash size 1000 bytes chaincodeID: basic
     txDuration: 1
rateControl:
        type: fixed-rate opts:
     tps: 70
workload:
module: benchmarks/datamanagement/workloads/insert-data-offer.js
        arguments:
```



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```
ryperieager Caliper Report

chaincodeID: basic
byteSize: 1000

label: insert-data-offer-2000
description: Test InsertDataOffer function with data hash size 2000 bytes chaincodeID: basic
txDuration: 1
rateControl:
type: fixed-rate
opts:
tps: 70
workload:
module: benchmarks/datamanagement/workloads/firstit.him.
```

module: benchmarks/datamanagement/workloads/insert-data-offer.js

arguments:
 chaincodeID: basic byteSize: 2000

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not provided