



Basic information

DLT: fabric  
Name: insert-data-offer-benchmark  
Description: Benchmarking the Hyperledger Fabric network with the InsertDataOffer function  
Benchmark Rounds: 4  
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Benchmark results

[Summary](#)  
[insert-data-offer](#)  
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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	100	1	100.6	0.48	0.14	0.33	73.2
insert-data-offer-100	5	0	6.0	2.19	1.35	1.77	2.3
insert-data-offer-1000	5	0	6.0	2.17	1.33	1.74	2.3
insert-data-offer-2000	5	0	5.9	2.17	1.32	1.74	2.3

Benchmark round: insert-data-offer

Benchmarking the InsertDataOffer function with specific parameters.

```
txDuration: 1
rateControl:
  type: fixed-rate
  opts:
    tps: 100
```

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	100	1	100.6	0.48	0.14	0.33	73.2

Resource utilization for insert-data-offer

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



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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-load
  opts:
    transactionLoad: 100
    startingTps: 1
```

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	5	0	6.0	2.19	1.35	1.77	2.3

Resource utilization for insert-data-offer-100

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-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-



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		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

Benchmark round: insert-data-offer-1000

Test InsertDataOffer function with data hash size 1000 bytes

```
txDuration: 1
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 100
    startingTps: 1
```

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	5	0	6.0	2.17	1.33	1.74	2.3

Resource utilization for insert-data-offer-1000

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-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=~".+"})	ca_orderer



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(%)	[1m]) by (name)	
		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

Benchmark round: insert-data-offer-2000

Test InsertDataOffer function with data hash size 2000 bytes

```
txDuration: 1
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 100
    startingTps: 1
```

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	5	0	5.9	2.17	1.32	1.74	2.3

Resource utilization for insert-data-offer-2000

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



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		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
		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 parameters.
    chaincodeID: basic
    txDuration: 1
    rateControl:
      type: fixed-rate
      opts:
        tps: 100
    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
    rateControl:
      type: fixed-load
      opts:
        transactionLoad: 100
        startingTps: 1
    workload:
      module: benchmarks/datamanagement/workloads/insert-data-offer.js
      arguments:
        chaincodeID: basic
        byteSize: 100
  - label: insert-data-offer-1000
    description: Test InsertDataOffer function with data hash size 1000 bytes
```



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```
chaincodeID: basic
txDuration: 1
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 100
    startingTps: 1
workload:
  module: benchmarks/datamanagement/workloads/insert-data-offer.js
  arguments:
    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-load
    opts:
      transactionLoad: 100
      startingTps: 1
  workload:
    module: benchmarks/datamanagement/workloads/insert-data-offer.js
    arguments:
      chaincodeID: basic
      byteSize: 2000
```

SUT

not provided