



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

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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	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

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-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-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

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-e961b826e2a1772403fa1461dc69e5cc120473a06e4fe1c3c9cd9eb35cdb2ab3



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		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

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



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		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-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

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



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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 parameters.
    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
    rateControl:
      type: fixed-rate
      opts:
        tps: 70
    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
    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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```
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/insert-data-offer.js
  arguments:
    chaincodeID: basic
    byteSize: 2000
```

SUT

not provided