



Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

- [Summary](#)
- [sensor-query-evaluate-100](#)
- [sensor-query-evaluate-1000](#)
- [sensor-query-evaluate-2000](#)
- [sensor-query-evaluate-4000](#)
- [sensor-query-evaluate-8000](#)
- [sensor-query-evaluate-16000](#)
- [sensor-query-evaluate-32000](#)
- [sensor-query-evaluate-64000](#)
- [sensor-query-evaluate-8000-fixed-tps](#)

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)
sensor-query-evaluate-100	300	0	7.7	40.45	11.05	34.98	3.8
sensor-query-evaluate-1000	300	0	7.8	39.25	1.30	34.22	3.9
sensor-query-evaluate-2000	300	0	7.9	38.42	2.19	33.53	3.9
sensor-query-evaluate-4000	300	0	8.2	38.15	5.81	33.60	4.0
sensor-query-evaluate-8000	300	0	8.1	38.65	3.54	33.70	4.0
sensor-query-evaluate-16000	300	0	8.2	38.84	0.48	33.96	4.0
sensor-query-evaluate-32000	300	0	8.3	38.57	2.34	33.95	4.0
sensor-query-evaluate-64000	300	0	8.4	37.82	1.00	33.31	4.1
sensor-query-evaluate-8000-fixed-tps	0	21150	294.4	-	-	-	167.2

Benchmark round: sensor-query-evaluate-100

Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 100 bytes.

```
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 50
```

Performance metrics for sensor-query-evaluate-100

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
sensor-query-evaluate-100	300	0	7.7	40.45	11.05	34.98	3.8

Resource utilization for sensor-query-evaluate-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_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com



Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

[Summary](#)
[sensor-query-evaluate-100](#)
[sensor-query-evaluate-1000](#)
[sensor-query-evaluate-2000](#)
[sensor-query-evaluate-4000](#)
[sensor-query-evaluate-8000](#)
[sensor-query-evaluate-16000](#)
[sensor-query-evaluate-32000](#)
[sensor-query-evaluate-64000](#)
[sensor-query-evaluate-8000-fixed-tps](#)

System under test

[Details](#)

		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: sensor-query-evaluate-1000

Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 1000 bytes.

```
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 70
```

Performance metrics for sensor-query-evaluate-1000

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
sensor-query-evaluate-1000	300	0	7.8	39.25	1.30	34.22	3.9

Resource utilization for sensor-query-evaluate-1000



Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

- [Summary](#)
- [sensor-query-evaluate-100](#)
- [sensor-query-evaluate-1000](#)
- [sensor-query-evaluate-2000](#)
- [sensor-query-evaluate-4000](#)
- [sensor-query-evaluate-8000](#)
- [sensor-query-evaluate-16000](#)
- [sensor-query-evaluate-32000](#)
- [sensor-query-evaluate-64000](#)
- [sensor-query-evaluate-8000-fixed-tps](#)

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
CPU (%)	sum(rate(container_cpu_usage_seconds_total{name=~".+"}[1m])) by (name)	peer0.org1.example.com
		peer0.org2.example.com
		ca_orderer
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
Disc Write (MB)	sum(rate(container_fs_writes_bytes_total{name=~".+"}[1m])) by (name)	dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
		peer0.org1.example.com
		peer0.org2.example.com
		ca_orderer
		couchdb0
Disc Read (MB)	sum(rate(container_fs_reads_bytes_total{name=~".+"}[1m])) by (name)	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: sensor-query-evaluate-2000

Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 2000 bytes.



txDuration: 60
rateControl:
 type: fixed-load
 opts:
 transactionLoad: 90

Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

- [Summary](#)
- [sensor-query-evaluate-100](#)
- [sensor-query-evaluate-1000](#)
- [sensor-query-evaluate-2000](#)
- [sensor-query-evaluate-4000](#)
- [sensor-query-evaluate-8000](#)
- [sensor-query-evaluate-16000](#)
- [sensor-query-evaluate-32000](#)
- [sensor-query-evaluate-64000](#)
- [sensor-query-evaluate-8000-fixed-tps](#)

System under test

[Details](#)

Performance metrics for sensor-query-evaluate-2000

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
sensor-query-evaluate-2000	300	0	7.9	38.42	2.19	33.53	3.9

Resource utilization for sensor-query-evaluate-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_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		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-



Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

- [Summary](#)
- [sensor-query-evaluate-100](#)
- [sensor-query-evaluate-1000](#)
- [sensor-query-evaluate-2000](#)
- [sensor-query-evaluate-4000](#)
- [sensor-query-evaluate-8000](#)
- [sensor-query-evaluate-16000](#)
- [sensor-query-evaluate-32000](#)
- [sensor-query-evaluate-64000](#)
- [sensor-query-evaluate-8000-fixed-tps](#)

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

Benchmark round: sensor-query-evaluate-4000

Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 4000 bytes.

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

Performance metrics for sensor-query-evaluate-4000

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
sensor-query-evaluate-4000	300	0	8.2	38.15	5.81	33.60	4.0

Resource utilization for sensor-query-evaluate-4000

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-



Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

- [Summary](#)
- [sensor-query-evaluate-100](#)
- [sensor-query-evaluate-1000](#)
- [sensor-query-evaluate-2000](#)
- [sensor-query-evaluate-4000](#)
- [sensor-query-evaluate-8000](#)
- [sensor-query-evaluate-16000](#)
- [sensor-query-evaluate-32000](#)
- [sensor-query-evaluate-64000](#)
- [sensor-query-evaluate-8000-fixed-tps](#)

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
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: sensor-query-evaluate-8000

Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 8000 bytes.

```
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 150
```

Performance metrics for sensor-query-evaluate-8000

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
sensor-query-evaluate-8000	300	0	8.1	38.65	3.54	33.70	4.0

Resource utilization for sensor-query-evaluate-8000

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-



Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

- [Summary](#)
- [sensor-query-evaluate-100](#)
- [sensor-query-evaluate-1000](#)
- [sensor-query-evaluate-2000](#)
- [sensor-query-evaluate-4000](#)
- [sensor-query-evaluate-8000](#)
- [sensor-query-evaluate-16000](#)
- [sensor-query-evaluate-32000](#)
- [sensor-query-evaluate-64000](#)
- [sensor-query-evaluate-8000-fixed-tps](#)

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
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: sensor-query-evaluate-16000

Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 16000 bytes.

```
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 200
```

Performance metrics for sensor-query-evaluate-16000

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
sensor-query-evaluate-16000	300	0	8.2	38.84	0.48	33.96	4.0

Resource utilization for sensor-query-evaluate-16000

Resource monitor: prometheus

Metric	Prometheus Query	Name
Avg Memory (MB)	sum(container_memory_rss{name=~".+"}) by (name)	ca_orderer
		couchdb0
		couchdb1



Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

- [Summary](#)
- [sensor-query-evaluate-100](#)
- [sensor-query-evaluate-1000](#)
- [sensor-query-evaluate-2000](#)
- [sensor-query-evaluate-4000](#)
- [sensor-query-evaluate-8000](#)
- [sensor-query-evaluate-16000](#)
- [sensor-query-evaluate-32000](#)
- [sensor-query-evaluate-64000](#)
- [sensor-query-evaluate-8000-fixed-tps](#)

System under test

[Details](#)

		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: sensor-query-evaluate-32000

Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 32000 bytes.

```
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 250
```

Performance metrics for sensor-query-evaluate-32000

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
------	------	------	-----------------	-----------------	-----------------	-----------------	------------------



sensor-query-evaluate-32000	300	0	8.3	38.57	2.34	33.95	4.0
-----------------------------	-----	---	-----	-------	------	-------	-----

Resource utilization for sensor-query-evaluate-32000

Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

[Summary](#)
[sensor-query-evaluate-100](#)
[sensor-query-evaluate-1000](#)
[sensor-query-evaluate-2000](#)
[sensor-query-evaluate-4000](#)
[sensor-query-evaluate-8000](#)
[sensor-query-evaluate-16000](#)
[sensor-query-evaluate-32000](#)
[sensor-query-evaluate-64000](#)
[sensor-query-evaluate-8000-fixed-tps](#)

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
		peer0.org2.example.com



Benchmark round: sensor-query-evaluate-64000

Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 64000 bytes.

Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

txDuration: 60
rateControl:
 type: fixed-load
 opts:
 transactionLoad: 300

Performance metrics for sensor-query-evaluate-64000

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
sensor-query-evaluate-64000	300	0	8.4	37.82	1.00	33.31	4.1

Benchmark results

- [Summary](#)
- [sensor-query-evaluate-100](#)
- [sensor-query-evaluate-1000](#)
- [sensor-query-evaluate-2000](#)
- [sensor-query-evaluate-4000](#)
- [sensor-query-evaluate-8000](#)
- [sensor-query-evaluate-16000](#)
- [sensor-query-evaluate-32000](#)
- [sensor-query-evaluate-64000](#)
- [sensor-query-evaluate-8000-fixed-tps](#)

System under test

[Details](#)

Resource utilization for sensor-query-evaluate-64000

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.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
	peer0.org1.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.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
	peer0.org1.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.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
	peer0.org1.example.com	peer0.org1.example.com
		peer0.org2.example.com
Disc Read	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.org1.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		dev-peer0.org2.example.com-basic_1.0-637b908e08b257332d955d5b7eadeac170c68a9499b6070bb44fcd2688726576
		orderer.example.com
	peer0.org1.example.com	peer0.org1.example.com
		peer0.org2.example.com



Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

[Summary](#)
[sensor-query-evaluate-100](#)
[sensor-query-evaluate-1000](#)
[sensor-query-evaluate-2000](#)
[sensor-query-evaluate-4000](#)
[sensor-query-evaluate-8000](#)
[sensor-query-evaluate-16000](#)
[sensor-query-evaluate-32000](#)
[sensor-query-evaluate-64000](#)
[sensor-query-evaluate-8000-fixed-tps](#)

System under test

[Details](#)

(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

Benchmark round: sensor-query-evaluate-8000-fixed-tps

Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 8000 bytes at a fixed TPS.

```
txDuration: 60
rateControl:
  type: fixed-rate
  opts:
    tps: 350
```

Performance metrics for sensor-query-evaluate-8000-fixed-tps

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
sensor-query-evaluate-8000-fixed-tps	0	21150	294.4	-	-	-	167.2

Resource utilization for sensor-query-evaluate-8000-fixed-tps

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	sum(rate(container_fs_writes_bytes_total{name=~".+"}[1m])) by (name)	ca_orderer



Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

- [Summary](#)
- [sensor-query-evaluate-100](#)
- [sensor-query-evaluate-1000](#)
- [sensor-query-evaluate-2000](#)
- [sensor-query-evaluate-4000](#)
- [sensor-query-evaluate-8000](#)
- [sensor-query-evaluate-16000](#)
- [sensor-query-evaluate-32000](#)
- [sensor-query-evaluate-64000](#)
- [sensor-query-evaluate-8000-fixed-tps](#)

System under test

[Details](#)

(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
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

Test Environment

benchmark config

```
name: sensor-query
description: >-
  This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
workers:
  number: 150
rounds:
  - label: sensor-query-evaluate-100
    description: >-
      Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 100 bytes.
    chaincodeID: basic
    txDuration: 60
    rateControl:
      type: fixed-load
      opts:
        transactionLoad: 50
    workload:
      module: benchmarks/datamanagement/workloads/sensor-query.js
      arguments:
        chaincodeID: basic
        create_sizes:
          - 100
          - 1000
          - 2000
          - 4000
          - 8000
          - 16000
          - 32000
          - 64000
        byteSize: 100
        consensus: false
  - label: sensor-query-evaluate-1000
    description: >-
      Test an evaluateTransaction() Gateway method against the NodeJS `basic` Smart Contract method named `sensorQuery`. This method performs a getState on an item that matches an asset of size 1000 bytes.
    chaincodeID: basic
    txDuration: 60
    rateControl:
      type: fixed-load
      opts:
        transactionLoad: 70
    workload:
      module: benchmarks/datamanagement/workloads/sensor-query.js
      arguments:
        chaincodeID: basic
        noSetup: true
        byteSize: 1000
        consensus: false
  - label: sensor-query-evaluate-2000
    description: >-
      Test an evaluateTransaction() Gateway method against the NodeJS `basic`
```



Basic information

DLT: fabric

Name: sensor-query

Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.

Benchmark Rounds: 9

[Details](#)

Benchmark results

[Summary](#)

[sensor-query-evaluate-100](#)

[sensor-query-evaluate-1000](#)

[sensor-query-evaluate-2000](#)

[sensor-query-evaluate-4000](#)

[sensor-query-evaluate-8000](#)

[sensor-query-evaluate-16000](#)

[sensor-query-evaluate-32000](#)

[sensor-query-evaluate-64000](#)

[sensor-query-evaluate-8000-fixed-tps](#)

System under test

[Details](#)

```

Smart Contract method named `sensorQuery`. This method performs a getState
on an item that matches an asset of size 2000 bytes.
chaincodeID: basic
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 90
workload:
  module: benchmarks/datamanagement/workloads/sensor-query.js
  arguments:
    chaincodeID: basic
    noSetup: true
    byteSize: 2000
    consensus: false
- label: sensor-query-evaluate-4000
description: >-
  Test an evaluateTransaction() Gateway method against the NodeJS `basic`
  Smart Contract method named `sensorQuery`. This method performs a getState
  on an item that matches an asset of size 4000 bytes.
chaincodeID: basic
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 120
workload:
  module: benchmarks/datamanagement/workloads/sensor-query.js
  arguments:
    chaincodeID: basic
    noSetup: true
    byteSize: 4000
    consensus: false
- label: sensor-query-evaluate-8000
description: >-
  Test an evaluateTransaction() Gateway method against the NodeJS `basic`
  Smart Contract method named `sensorQuery`. This method performs a getState
  on an item that matches an asset of size 8000 bytes.
chaincodeID: basic
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 150
workload:
  module: benchmarks/datamanagement/workloads/sensor-query.js
  arguments:
    chaincodeID: basic
    noSetup: true
    byteSize: 8000
    consensus: false
- label: sensor-query-evaluate-16000
description: >-
  Test an evaluateTransaction() Gateway method against the NodeJS `basic`
  Smart Contract method named `sensorQuery`. This method performs a getState
  on an item that matches an asset of size 16000 bytes.
chaincodeID: basic
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 200
workload:
  module: benchmarks/datamanagement/workloads/sensor-query.js
  arguments:
    chaincodeID: basic
    noSetup: true
    byteSize: 16000
    consensus: false
- label: sensor-query-evaluate-32000
description: >-
  Test an evaluateTransaction() Gateway method against the NodeJS `basic`
  Smart Contract method named `sensorQuery`. This method performs a getState
  on an item that matches an asset of size 32000 bytes.
chaincodeID: basic
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 250
workload:
  module: benchmarks/datamanagement/workloads/sensor-query.js
  arguments:
    chaincodeID: basic
    noSetup: true
    byteSize: 32000
    consensus: false
- label: sensor-query-evaluate-64000
description: >-
  Test an evaluateTransaction() Gateway method against the NodeJS `basic`
  Smart Contract method named `sensorQuery`. This method performs a getState
  on an item that matches an asset of size 64000 bytes.
chaincodeID: basic
txDuration: 60
rateControl:
  type: fixed-load
  opts:
    transactionLoad: 300
workload:
  module: benchmarks/datamanagement/workloads/sensor-query.js
  arguments:
    chaincodeID: basic
    noSetup: true
    byteSize: 64000
    consensus: false
- label: sensor-query-evaluate-8000-fixed-tps
description: >-
  Test an evaluateTransaction() Gateway method against the NodeJS `basic`
  Smart Contract method named `sensorQuery`. This method performs a getState

```



Basic information

DLT: fabric
Name: sensor-query
Description: This testcase is to determine the large numbers of consumer query the sensor from application to check the scalability on hyperledger. Successive rounds create and retrieve assets of larger byteSize.
Benchmark Rounds: 9
[Details](#)

Benchmark results

- [Summary](#)
- [sensor-query-evaluate-100](#)
- [sensor-query-evaluate-1000](#)
- [sensor-query-evaluate-2000](#)
- [sensor-query-evaluate-4000](#)
- [sensor-query-evaluate-8000](#)
- [sensor-query-evaluate-16000](#)
- [sensor-query-evaluate-32000](#)
- [sensor-query-evaluate-64000](#)
- [sensor-query-evaluate-8000-fixed-tps](#)

System under test

[Details](#)

on an item that matches an asset of size 8000 bytes at a fixed TPS.
chaincodeID: basic
txDuration: 60
rateControl:
 type: fixed-rate
 opts:
 tps: 350
workload:
 module: benchmarks/datamanagement/workloads/sensor-query.js
 arguments:
 chaincodeID: basic
 noSetup: true
 byteSize: 8000
 consensus: false

SUT

not provided