

DLT: fabric

Name: journey-schedule-

benchmark

Description: Benchmarking the Hyperledger Fabric network with the JourneySchedule function Benchmark Rounds: 3

Details

Benchmark results

Summary

j<u>ourney-schedule-1-100 bytesize</u> j<u>ourney-schedule-2-1000 bytesize</u> j<u>ourney-schedule-3-2000 bytesize</u>

System under test

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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)
journey-schedule-1-100 bytesize	317	1	159.5	2.32	0.15	0.99	74.6
journey-schedule-2- 1000 bytesize	343	1	172.0	2.33	0.16	1.11	80.9
journey-schedule-3- 2000 bytesize	361	1	180.9	2.42	0.12	1.19	82.1

Benchmark round: journey-schedule-1-100 bytesize

Benchmarking the JourneySchedule function with specific parameters.

txDuration: 2
rateControl:
 type: fixed-rate
 opts:
 tps: 200

Performance metrics for journey-schedule-1-100 bytesize

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
journey-schedule-1- 100 bytesize	317	1	159.5	2.32	0.15	0.99	74.6

Resource utilization for journey-schedule-1-100 bytesize

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: journey-schedule-2-1000 bytesize

Another test case for JourneySchedule function.

txDuration: 2
rateControl:
 type: fixed-rate
 opts:
 tps: 200

Performance metrics for journey-schedule-2-1000 bytesize

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
journey-schedule-2- 1000 bytesize	343	1	172.0	2.33	0.16	1.11	80.9

Resource utilization for journey-schedule-2-1000 bytesize

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

Benchmark round: journey-schedule-3-2000 bytesize

Yet another test case for JourneySchedule function.

txDuration: 2
rateControl:
 type: fixed-rate
 opts:
 tps: 200

Performance metrics for journey-schedule-3-2000 bytesize

Name	Succ	Fail	Send Rate (TPS)	Max Latency (s)	Min Latency (s)	Avg Latency (s)	Throughput (TPS)
journey-schedule-3- 2000 bytesize	361	1	180.9	2.42	0.12	1.19	82.1

Resource utilization for journey-schedule-3-2000 bytesize

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

Test Environment

benchmark config

```
name: journey-schedule-benchmark
description: Benchmarking the Hyperledger Fabric network with the JourneySchedule
function
workers:
  number: 1
rounds:
     label: journey-schedule-1-100 bytesize
description: Benchmarking the JourneySchedule function with specific parameters.
     chaincodeID: basic
     txDuration: 2
rateControl:
        type: fixed-rate
opts:
     tps: 200
workload:
        module: benchmarks/datamanagement/workloads/create-journey.js
        arguments:
   chaincodeID: basic
    byteSize: 100
label: journey-schedule-2-1000 bytesize
description: Another test case for JourneySchedule function.
     chaincodeID: basic
txDuration: 2
     rateControl:
type: fixed-rate
opts:
     tps: 200
workload:
        module: benchmarks/datamanagement/workloads/create-journey.js
        arguments:
   chaincodeID: basic
    byteSize: 1000
label: journey-schedule-3-2000 bytesize
description: Yet another test case for JourneySchedule function.
chaincodeID: basic
     txDuration: 2
     rateControl:
  type: fixed-rate
        opts:
     tps: 200
workload:
        \begin{tabular}{ll} module: benchmarks/datamanagement/workloads/create-journey.js \\ arguments: \end{tabular}
```



chaincodeID: basic byteSize: 2000

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Basic information

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System under test

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not provided