

DLT: fabric

Name: journey-schedule-

benchmark

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

Details

Benchmark results

Summary

journey-schedule-1-100 bytesize journey-schedule-2-1000 bytesize journey-schedule-3-2000 bytesize

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	198	1	99.4	2.22	0.13	0.41	48.0
journey-schedule-2- 1000 bytesize	201	0	100.5	2.24	0.11	0.36	47.4
journey-schedule-3- 2000 bytesize	194	0	96.8	2.26	0.11	0.42	46.6

Benchmark round: journey-schedule-1-100 bytesize

Benchmarking the JourneySchedule function with specific parameters.

txDuration: 2
rateControl:
 type: fixed-rate
 opts:
 tps: 100

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	198	1	99.4	2.22	0.13	0.41	48.0

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: 100

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	201	0	100.5	2.24	0.11	0.36	47.4

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
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
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Benchmark round: journey-schedule-3-2000 bytesize

Yet another test case for JourneySchedule function.

txDuration: 2
rateControl:
 type: fixed-rate
 opts:
 tps: 100

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	194	0	96.8	2.26	0.11	0.42	46.6

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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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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(%)	[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: 100
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: 100
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: 100
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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journey-schedule-1-100 bytesize journey-schedule-2-1000 bytesize journey-schedule-3-2000 bytesize

System under test

Details

not provided