

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	3610	0	59.8	0.78	0.11	0.34	59.5
journey-schedule-2- 1000 bytesize	3610	0	59.9	1.88	0.14	0.74	58.4
journey-schedule-3- 2000 bytesize	3610	0	60.0	7.59	0.18	3.49	53.5

Benchmark round: journey-schedule-1-100 bytesize

Benchmarking the JourneySchedule function with specific parameters.

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

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	3610	0	59.8	0.78	0.11	0.34	59.5

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- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
		dev-peer0.org2.example.com-basic_1.0- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
		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- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
		dev-peer0.org2.example.com-basic_1.0- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
		orderer.example.com
		7.0



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

Benchmark round: journey-schedule-2-1000 bytesize

Another test case for JourneySchedule function.

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

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	3610	0	59.9	1.88	0.14	0.74	58.4

Resource utilization for journey-schedule-2-1000 bytesize

Resource monitor: prometheus

	- I	
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- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
		dev-peer0.org2.example.com-basic_1.0- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
		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- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8



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Summary

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

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	dev-peer0.org2.example.com-basic_1.0- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
	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: 60
rateControl:
 type: fixed-rate
 opts:
 tps: 60

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	3610	0	60.0	7.59	0.18	3.49	53.5

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- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
		dev-peer0.org2.example.com-basic_1.0- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
		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



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	Hyperleager Calif	per Report
		couchdb0
		couchdb1
		dev-peer0.org1.example.com-basic_1.0- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
		dev-peer0.org2.example.com-basic_1.0- 06ae9571ee4eeadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8
		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: 10
     label: journey-schedule-1-100 bytesize
description: Benchmarking the JourneySchedule function with specific
parameters.
chaincodeID: basic
     txDuration: 60 rateControl:
       type: fixed-rate opts:
     tps: 60
workload:
module: benchmarks/datamanagement/workloads/create-journey.js
        arguments:
           chaincodeID: basic
           byteSize: 100
    bytesize: 100
label: journey-schedule-2-1000 bytesize
description: Another test case for JourneySchedule function.
chaincodeID: basic
txDuration: 60
     rateControl:
type: fixed-rate
opts:
     tps: 60 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: 60
      rateControl:
        type: fixed-rate
     opts:
tps: 60
workload:
        module: benchmarks/datamanagement/workloads/create-journey.js
           chaincodeID: basic
byteSize: 2000
```

SUT



not provided

Basic information

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

System under test

<u>Details</u>