



Basic information

DLT: fabric  
Name: journey-schedule-benchmark  
Description: Benchmarking the Hyperledger Fabric network with the JourneySchedule function  
Benchmark Rounds: 3  
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Benchmark results

[Summary](#)  
[journey-schedule-1-100 bytesize](#)  
[journey-schedule-2-1000 bytesize](#)  
[journey-schedule-3-2000 bytesize](#)

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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  | 20   | 0    | 2.0             | 0.50            | 0.13            | 0.29            | 1.9              |
| journey-schedule-2-1000 bytesize | 20   | 0    | 2.0             | 0.44            | 0.17            | 0.30            | 1.9              |
| journey-schedule-3-2000 bytesize | 20   | 0    | 2.0             | 0.46            | 0.21            | 0.35            | 1.9              |

Benchmark round: journey-schedule-1-100 bytesize

Benchmarking the JourneySchedule function with specific parameters.

```
txDuration: 1
rateControl:
  type: fixed-rate
  opts:
    tps: 1
```

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 | 20   | 0    | 2.0             | 0.50            | 0.13            | 0.29            | 1.9              |

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   |



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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: 1
rateControl:
  type: fixed-rate
  opts:
    tps: 1
```

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 | 20   | 0    | 2.0             | 0.44            | 0.17            | 0.30            | 1.9              |

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_1.0-06ae9571ee4eadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8 |
|                 |  | dev-peer0.org2.example.com-basic_1.0-06ae9571ee4eadc6e98048d50ab0d2f300beed87dbecb5f570d58cf7a4fc8e8 |
|                 |  | 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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|                 |  |   |
|-----------------|--|---|
|                 |  | 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  |

Benchmark round: journey-schedule-3-2000 bytesize

Yet another test case for JourneySchedule function.

```
txDuration: 1
rateControl:
  type: fixed-rate
  opts:
    tps: 1
```

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 | 20   | 0    | 2.0             | 0.46            | 0.21            | 0.35            | 1.9              |

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=~".+"}) | ca_orderer  |



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| (%)             | [1m])) by (name)   |   |
|-----------------|--|---|
|                 |  | 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
rounds:
  - label: journey-schedule-1-100 bytesize
    description: Benchmarking the JourneySchedule function with specific parameters.
    chaincodeID: basic
    txDuration: 1
    rateControl:
      type: fixed-rate
      opts:
        tps: 1
    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: 1
    rateControl:
      type: fixed-rate
      opts:
        tps: 1
    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: 1
    rateControl:
      type: fixed-rate
      opts:
        tps: 1
    workload:
      module: benchmarks/datamanagement/workloads/create-journey.js
      arguments:
```



chaincodeID: basic  
byteSize: 2000

SUT

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not provided

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