HCIBench Report

Test Case Name:	fio-8vmdk-100ws-256k-0rdpct-0randompct-1threads-50compress-50dedupe-1691011148
Report Date:	2023-08-02 22:52:24 +0000
Generated by:	HCIBench_2.8.2

Performance Results

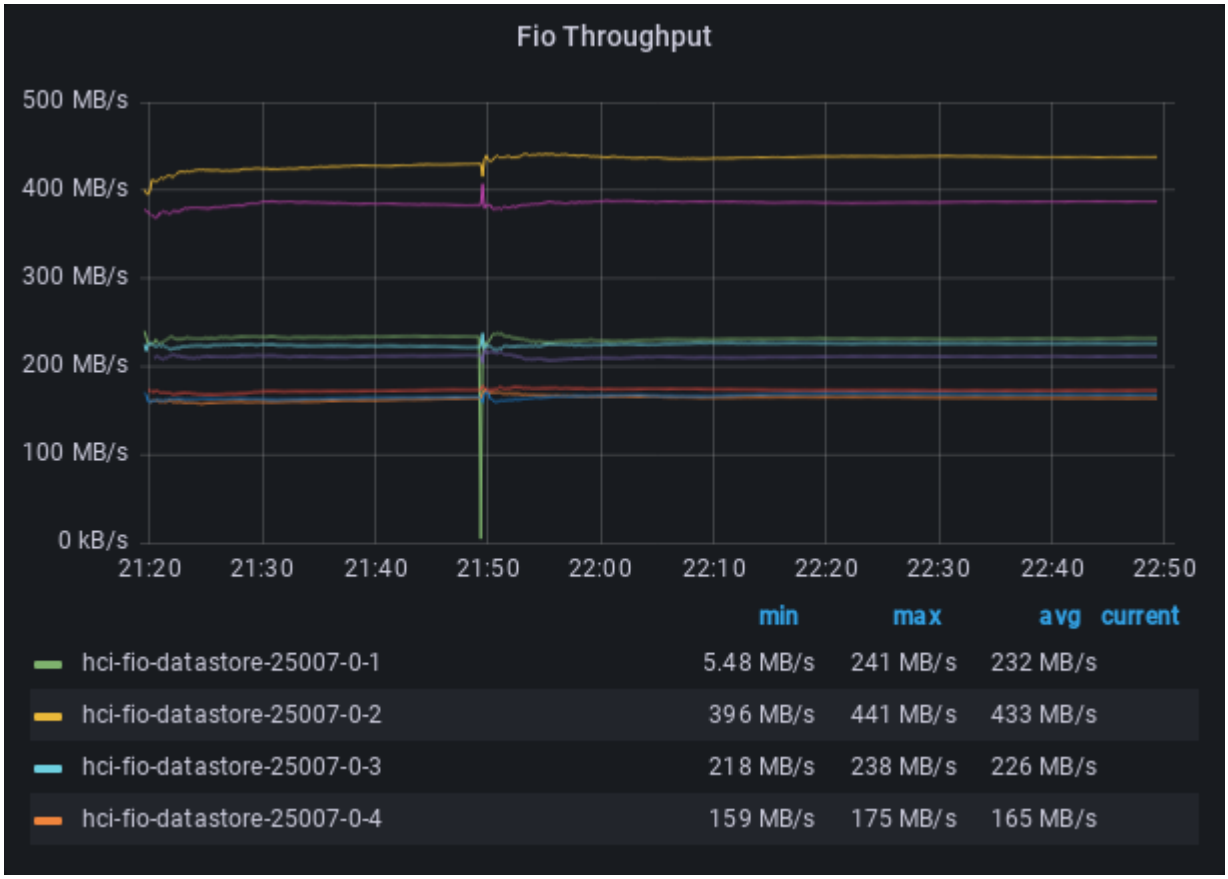
Datastore: vsanDatastore
==========
JOB_NAME: job0
Number of VMs: 8
I/O per Second: 7826.22 IO/S
Throughput: 1956.00 MB/s
Read Latency: 0.00 ms
Write Latency: 9.21 ms
95th Percentile Read Latency: 0.00 ms
95th Percentile Write Latency: 52.00 ms
==========

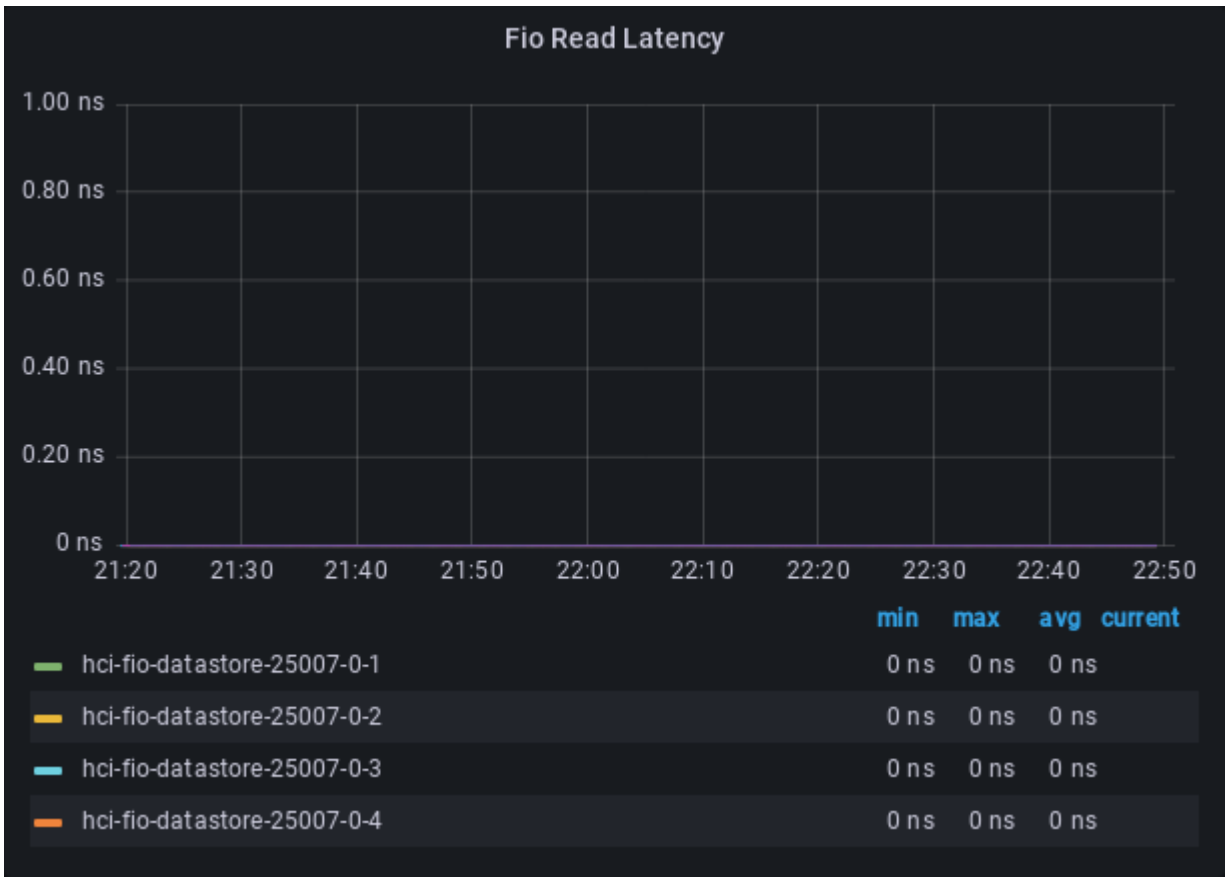
Resource Usage

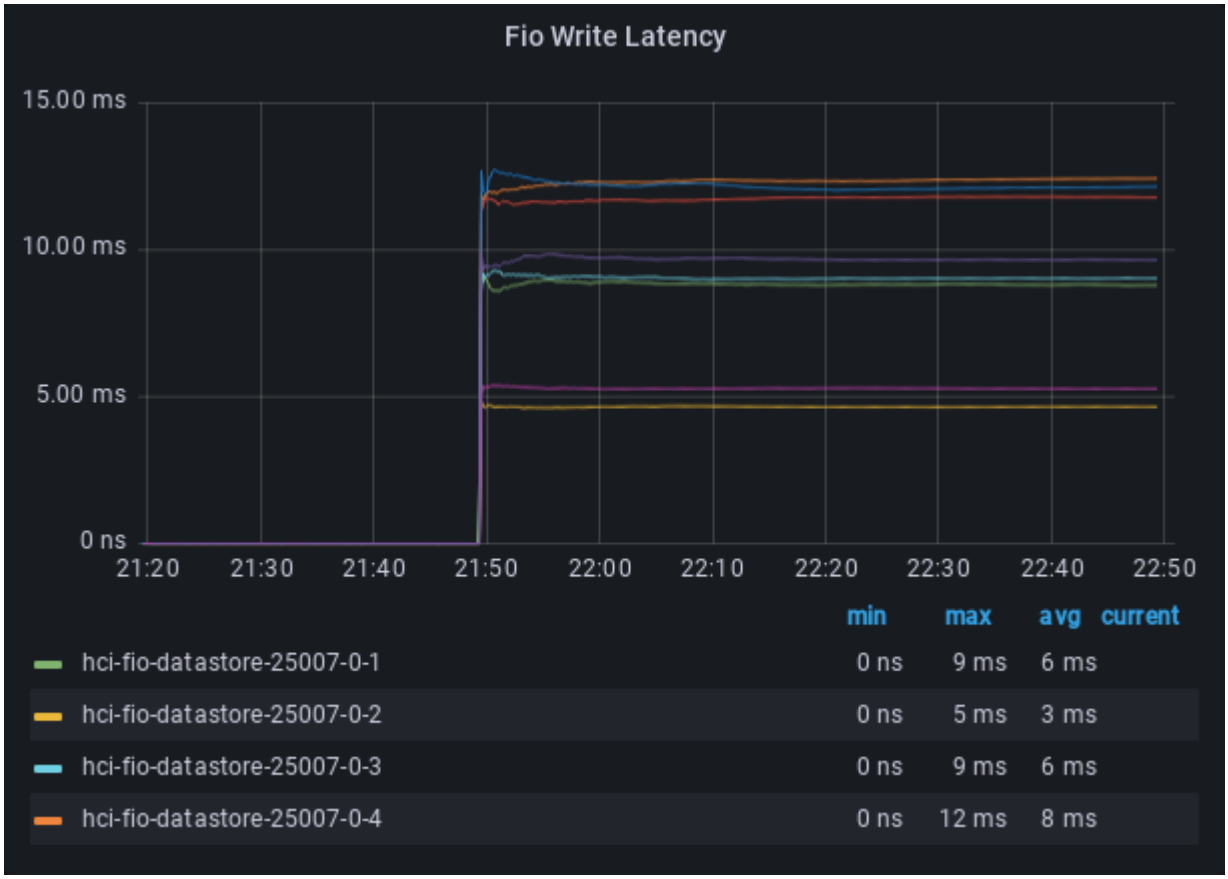
Cluster	cpu.usage	cpu.utilization	mem.usage
Management	42.81%	20.65%	91.03%

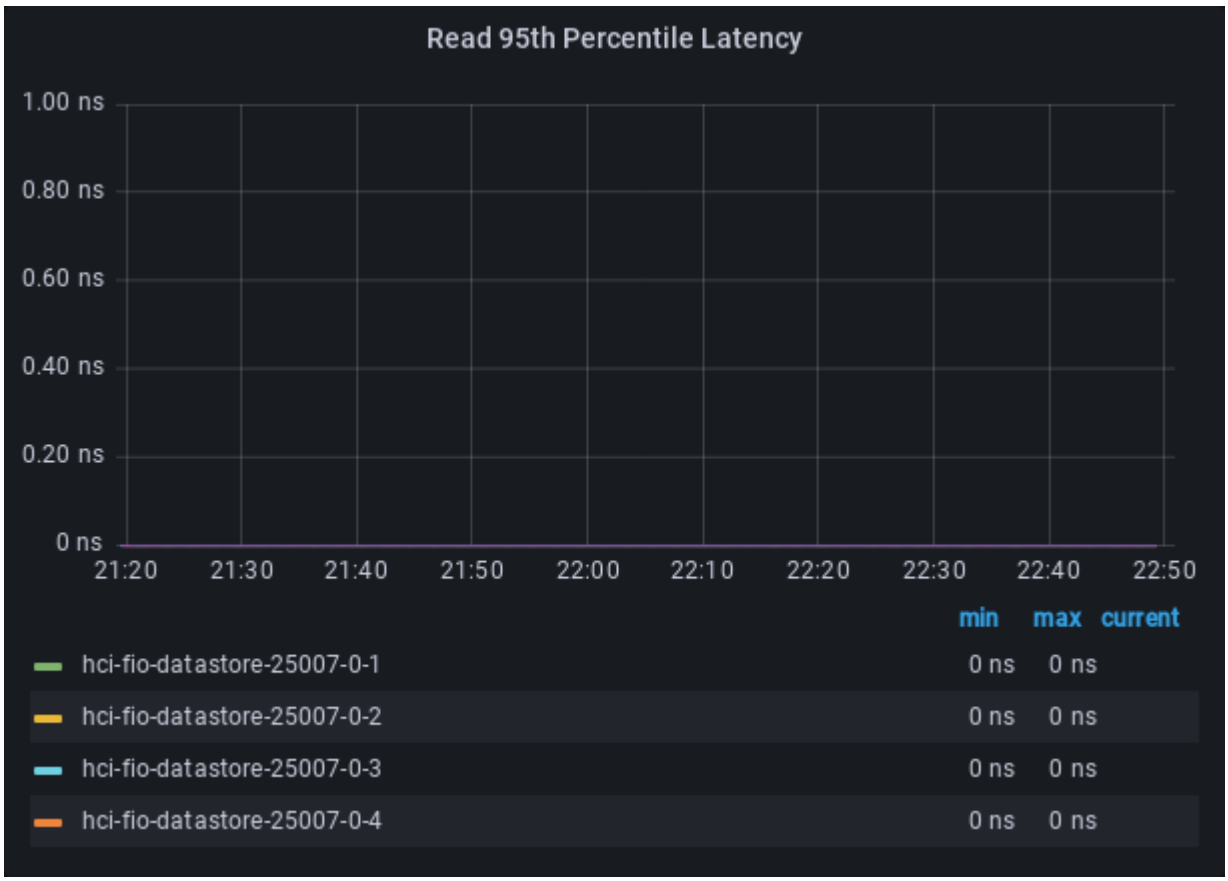
Performance Charts

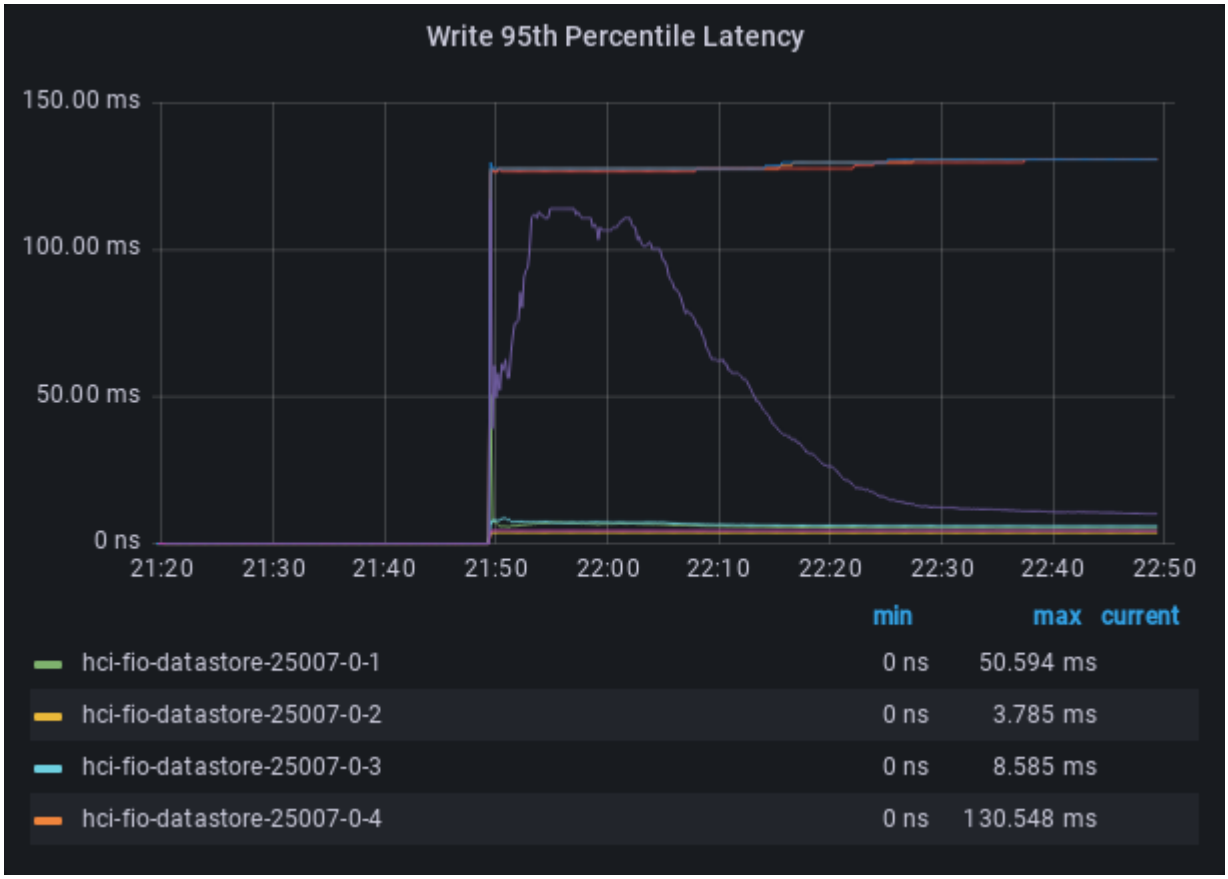
HCIBench

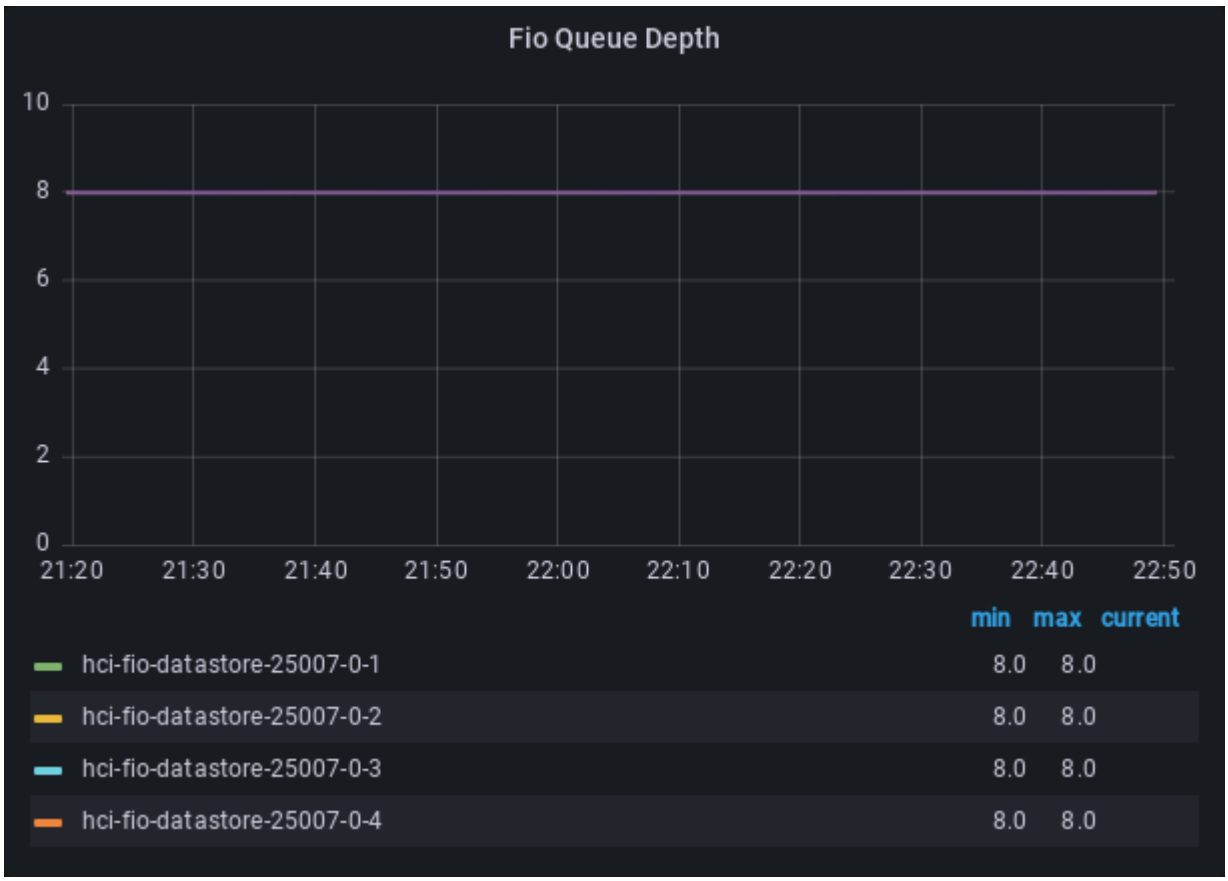

Fio Throughput
500 MB/s
400 MB/s
300 MB/s
200 MB/s
100 MB/s
0 kB/s
21:20
21:30
21:40
21:50
22:00
22:10
22:20
22:30
22:40
22:50
min
max
avg
current
hci-fio-datastore-25007-0-1 5.48 MB/s 241 MB/s 232 MB/s
hci-fio-datastore-25007-0-2 396 MB/s 441 MB/s 433 MB/s
hci-fio-datastore-25007-0-3 218 MB/s 238 MB/s 226 MB/s
hci-fio-datastore-25007-0-4 159 MB/s 175 MB/s 165 MB/s


Fio Read Latency
1.00 ns
0.80 ns
0.60 ns
0.40 ns
0.20 ns
0 ns
21:20
21:30
21:40
21:50
22:00
22:10
22:20
22:30
22:40
22:50
min
max
avg
current
hci-fio-datastore-25007-0-1 0 ns 0 ns 0 ns
hci-fio-datastore-25007-0-2 0 ns 0 ns 0 ns
hci-fio-datastore-25007-0-3 0 ns 0 ns 0 ns
hci-fio-datastore-25007-0-4 0 ns 0 ns 0 ns


Fio Write Latency
15.00 ms
10.00 ms
5.00 ms
0 ns
21:20
21:30
21:40
21:50
22:00
22:10
22:20
22:30
22:40
22:50
min
max
avg
current
hci-fio-datastore-25007-0-1
0 ns
9 ms
6 ms
hci-fio-datastore-25007-0-2
0 ns
5 ms
3 ms
hci-fio-datastore-25007-0-3
0 ns
9 ms
6 ms
hci-fio-datastore-25007-0-4
0 ns
12 ms
8 ms


Read 95th Percentile Latency
1.00 ns
0.80 ns
0.60 ns
0.40 ns
0.20 ns
0 ns
21:20
21:30
21:40
21:50
22:00
22:10
22:20
22:30
22:40
22:50
min
max
current
hci-fio-datastore-25007-0-1
0 ns
0 ns
hci-fio-datastore-25007-0-2
0 ns
0 ns
hci-fio-datastore-25007-0-3
0 ns
0 ns
hci-fio-datastore-25007-0-4
0 ns
0 ns


Write 95th Percentile Latency
150.00 ms
100.00 ms
50.00 ms
0 ns
21:20
21:30
21:40
21:50
22:00
22:10
22:20
22:30
22:40
22:50
min
max
current
hci-fio-datastore-25007-0-1 0 ns 50.594 ms
hci-fio-datastore-25007-0-2 0 ns 3.785 ms
hci-fio-datastore-25007-0-3 0 ns 8.585 ms
hci-fio-datastore-25007-0-4 0 ns 130.548 ms


Fio Queue Depth
10
8
6
4
2
0
21:20
21:30
21:40
21:50
22:00
22:10
22:20
22:30
22:40
22:50
min
max
current
hci-fio-datastore-25007-0-1 8.0 8.0
hci-fio-datastore-25007-0-2 8.0 8.0
hci-fio-datastore-25007-0-3 8.0 8.0
hci-fio-datastore-25007-0-4 8.0 8.0

Dashboards Links

Fio Benchmark Dashboard in Grafana
vSAN Observer Dashboard
vSAN Overview Dashboard in Grafana

HCIBench Configurations

Delete Guest VMs after Testing: false
Multi-Write VMDK: false
Size of Data Disk in GB: 14
Virtual Disk Preparation Method: RANDOM
Datastore Name: vsanDatastore
Clear Read/Write Cache/Buffer Before Test: false
Use Internal Static IP: false
Number of vCPU per VM: 4
Number of Data Disk per VM: 8
Storage Policy Name: Datastore Default Policy
Directly Deploy on Hosts: false
vSAN Debug Mode: false
Workload Parameter File Source: /opt/tmp/tmp1691005230
Datacenter Name: Datacenter
Size(GB) of RAM per VM: 8
Cluster Name: Management
Reuse Existing VMs: false
Network Name: Desktop
Easy Run: true
Easy Run Workloads: 256k0r
vCenter IP/Hostname: 10.0.1.111
Tool to Use: fio
Guest VM Name Prefix: hci-fio
Test Name: easy-run-1691005230
Number of Guest VMs: 8
VM Folder Name: HCIBench

vSAN Configurations

Local vSAN Datastore Name: vsanDatastore
vSAN ESA Enabled: False
vSAN Type: All-Flash
Number of Hosts: 4
Disk Groups per Host: 1
Total Cache Disk Size: 2400 GB
Capacity Disk per Disk Group: 1
Space Efficiency: Deduplication/Compression
Data At-Rest Encryption: false
Data In-Transit Encryption: false
Fault Tolerance Preference: RAID-1(Mirroring)-Performance
Host Primary Fault Tolerance: 1
Host Secondary Fault Tolerance: 0
Checksum Disabled: False

Capacity: 7630 GB
Freespace: 3939 GB
Local: 'True'
==========
Cluster Hosts Map

Management:
- vdr-esxmgt03.vdr.one
- vdr-esxmgt02.vdr.one
- vdr-esxmgt01.vdr.one
- vdr-esxmgt04.vdr.one

Benchmark Tool Configurations

```
; Auto generated FIO parameter file
; block_size: 256k
; testing_time: 3600
; warmup_time: 1800
; nb_disks: 8
; io_rate: None
; read_pct: 0
; random_pct: 0
; working_set: 100
; nb_threads: 1
; buffer_compress_pct: 50
; dedupe_pct: 50

[global]
runtime=3600
time_based=1
ramp_time=1800
direct=1
buffered=0
fsync=0
readwrite=write
random_generator=tausworthe64
blocksize=256K
buffer_compress_percentage=50
dedupe_percentage=50
ioengine=libaio
group_reporting
lat_percentiles=1
continue_on_error=all

[job0]
filename=/dev/sda
size=100%
iodepth=1

[job1]
filename=/dev/sdb
size=100%
iodepth=1

[job2]
filename=/dev/sdc
size=100%
iodepth=1

[job3]
filename=/dev/sdd
size=100%
```

```
iodepth=1

[job4]
filename=/dev/sde
size=100%
iodepth=1

[job5]
filename=/dev/sdf
size=100%
iodepth=1

[job6]
filename=/dev/sdg
size=100%
iodepth=1

[job7]
filename=/dev/sdh
size=100%
iodepth=1
```