

HCIBench Report

Test Case Name: fio-8vmdk-100ws-4k-70rdpct-100randompct-4threads-1675292521

Report Date: 2023-02-02 00:36:32 +0000

Generated by: [HCIBench 2.8.0](#)

Performance Results

Datstore: vsanDatastore

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JOB_NAME: job0

Number of VMs: 12

I/O per Second: 30584.21 IO/S

Throughput: 119.00 MB/s

Read Latency: 7.83 ms

Write Latency: 23.73 ms

95th Percentile Read Latency: 19.00 ms

95th Percentile Write Latency: 51.00 ms

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Resource Usage

Cluster	cpu.usage	cpu.utilization	mem.usage
VSAN8-Cluster	93.64%	94.04%	88.47%

Performance Charts



Fio IOPS



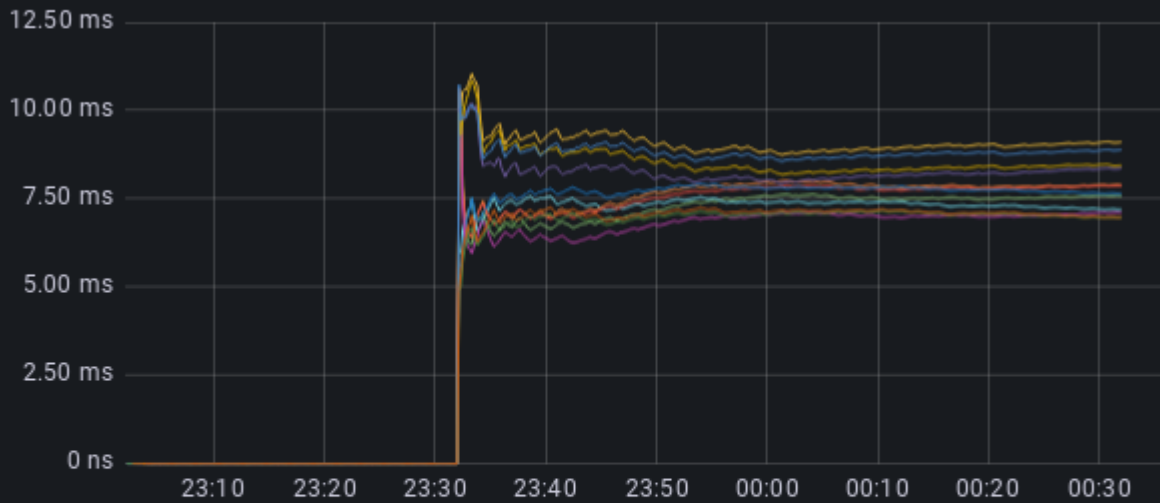
	min	max	avg current
hci-fio-datastore-1024-0-1	1.46 K	3.19 K	2.64 K
hci-fio-datastore-1024-0-2	1.77 K	2.74 K	2.25 K
hci-fio-datastore-1024-0-3	2.52 K	3.44 K	2.68 K
hci-fio-datastore-1024-0-4	1.45 K	3.04 K	2.51 K

Fio Throughput



	min	max	avg current
hci-fio-datastore-1024-0-1	2.50 MB/s	12.7 MB/s	10.5 MB/s
hci-fio-datastore-1024-0-2	3.20 MB/s	11.0 MB/s	8.97 MB/s
hci-fio-datastore-1024-0-3	10.1 MB/s	13.8 MB/s	10.7 MB/s
hci-fio-datastore-1024-0-4	2.52 MB/s	12.1 MB/s	10.0 MB/s

Fio Read Latency



	min	max	avg	current
hci-fio-datastore-1024-0-1	0 ns	10.32 ms	4.93 ms	
hci-fio-datastore-1024-0-2	0 ns	11.04 ms	6.19 ms	
hci-fio-datastore-1024-0-3	0 ns	7.57 ms	4.89 ms	
hci-fio-datastore-1024-0-4	0 ns	10.62 ms	5.21 ms	

Fio Write Latency



	min	max	avg	current
hci-fio-datastore-1024-0-1	0 ns	35 ms	15 ms	
hci-fio-datastore-1024-0-2	0 ns	35 ms	19 ms	
hci-fio-datastore-1024-0-3	0 ns	25 ms	16 ms	
hci-fio-datastore-1024-0-4	0 ns	35 ms	16 ms	

Read 95th Percentile Latency

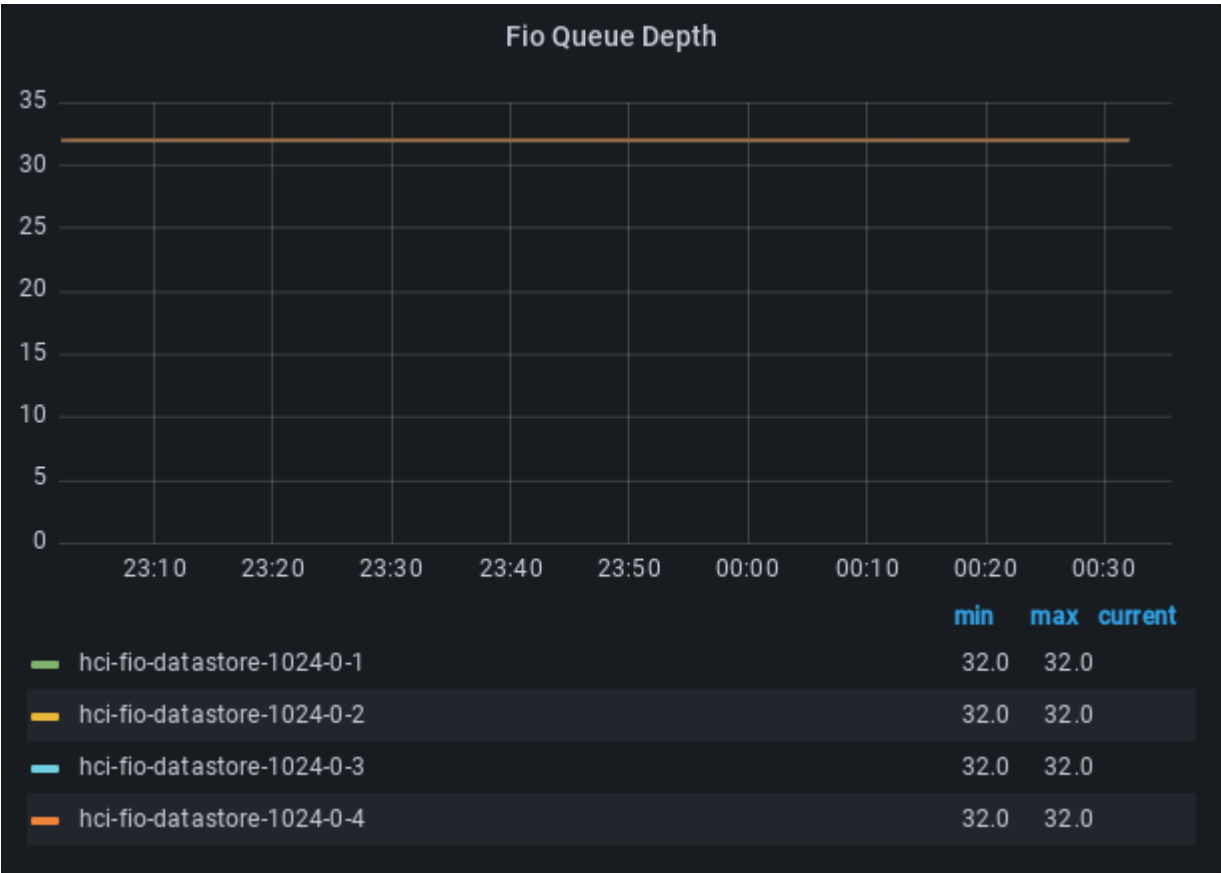


	min	max	current
hci-fio-datastore-1024-0-1	0 ns	23.20 ms	
hci-fio-datastore-1024-0-2	0 ns	28.18 ms	
hci-fio-datastore-1024-0-3	0 ns	19.01 ms	
hci-fio-datastore-1024-0-4	0 ns	26.08 ms	

Write 95th Percentile Latency



	min	max	current
hci-fio-datastore-1024-0-1	0 ns	79.167 ms	
hci-fio-datastore-1024-0-2	0 ns	72.876 ms	
hci-fio-datastore-1024-0-3	0 ns	50.594 ms	
hci-fio-datastore-1024-0-4	0 ns	74.973 ms	



Dashboards Links

- [Fio Benchmark Dashboard in Grafana](#)
- [vSAN Performance Stats in Grafana](#)
- [vSAN Performance Service Dashboard in vCenter](#)

HCIBench Configurations

vCenter IP/Hostname: vmw-vc02.aitn.local
Datacenter Name: HomeLab
Cluster Name: VSAN8-Cluster
Network Name: VMs_VLAN101
Use Internal Static IP: false
Reuse Existing VMs: true
Datastore Name: vsanDatastore
Directly Deploy on Hosts: false
Easy Run: true
Easy Run Workloads: 4k70r
4k100r
8k50r
256k0r
Storage Policy Name: Datastore Default Policy
Guest VM Name Prefix: hci-fio
Clear Read/Write Cache/Buffer Before Test: false
vSAN Debug Mode: true
Number of Guest VMs: 12
Number of vCPU per VM: 4
Size(GB) of RAM per VM: 8
Number of Data Disk per VM: 8
Size of Data Disk in GB: 1
multi_writer: false
Workload Parameter File Source: /opt/tmp/tmp1675280261
Test Name: easy-run-1675280261
Virtual Disk Preparation Method: RANDOM
Tool to Use: fio
Delete Guest VMs after Testing: false

vSAN Configurations

Local vSAN Datastore Name: vsanDatastore
vSAN ESA Enabled: True
vSAN Type: Single Tier Storage Pool
Number of Hosts: 3
Number of Disks in the Storage Pool: 6
Space Efficiency: Compression Only
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: 1564 GB
Freespace: 1372 GB
Local: 'True'

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Cluster Hosts Map

VSAN8-Cluster:
- esxi8-01.aitn.local
- esxi8-02.aitn.local
- esxi8-03.aitn.local

Benchmark Tool Configurations

```
; Auto generated FIO parameter file
; block_size: 4k
; testing_time: 3600
; warmup_time: 1800
; nb_disks: 8
; io_rate: None
; read_pct: 70
; random_pct: 100
; working_set: 100
; nb_threads: 4
```

```
[global]
runtime=3600
time_based=1
ramp_time=1800
direct=1
buffered=0
fsync=0
readwrite=randrw
rwmixread=70
percentage_random=100
random_generator=tausworthe64
blocksize=4K
ioengine=libaio
group_reporting
lat_percentiles=1
continue_on_error=all
```

```
[job0]
filename=/dev/sda
size=100%
iodepth=4
```

```
[job1]
filename=/dev/sdb
size=100%
iodepth=4
```

```
[job2]
filename=/dev/sdc
size=100%
iodepth=4
```

```
[job3]
filename=/dev/sdd
size=100%
iodepth=4
```

[[job4]
filename=/dev/sde
size=100%
iodepth=4

[[job5]
filename=/dev/sdf
size=100%
iodepth=4

[[job6]
filename=/dev/sdg
size=100%
iodepth=4

[[job7]
filename=/dev/sdh
size=100%
iodepth=4