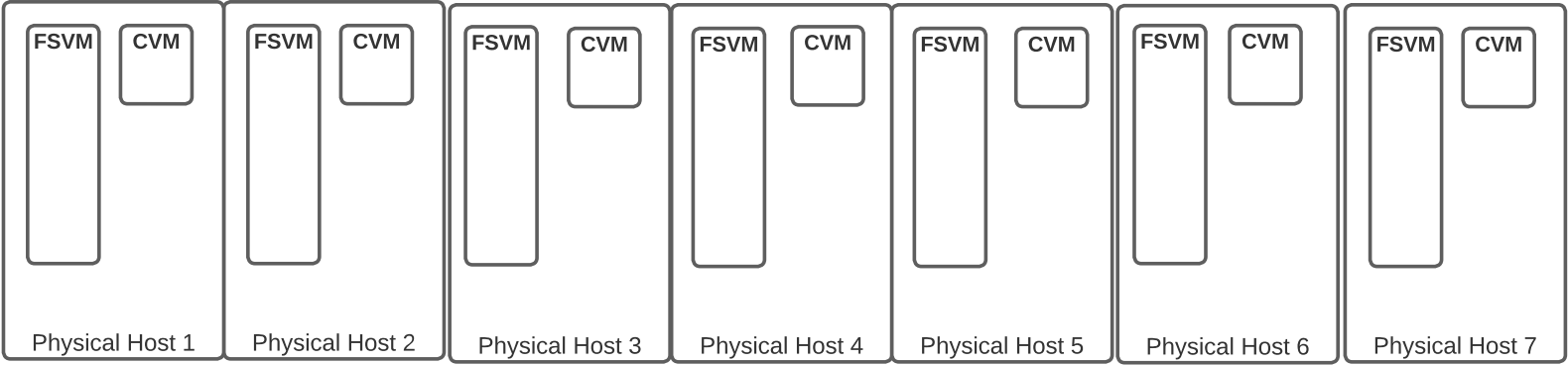
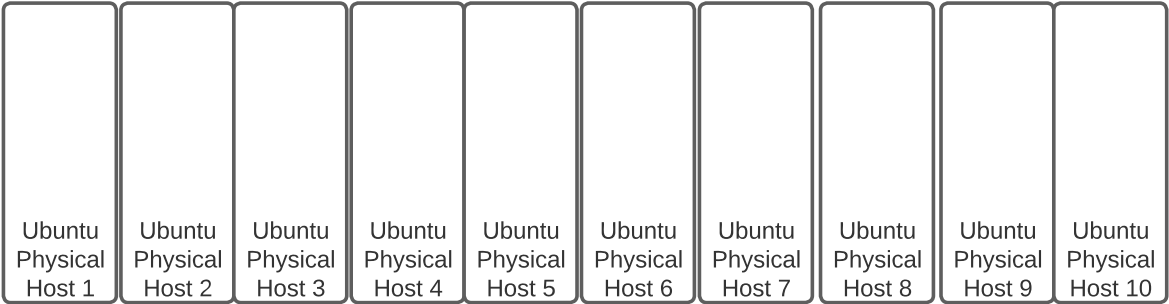


Nutanix Unified Storage (NUS) - Files deployed on [7]Dedicated Servers)



Note: All Physical Hosts Connected by 3x100Gbps (LACP) Network Links, and 1 Dedicated 100Gbps iSER Network Link

[10] Linux Ubuntu 22.04 Bare Metal Benchmark Client VMs



Note: All Physical Hosts Connected by 3x100Gbps (LACP) Network Links, but one that had 2x100

Detailed Configuration

Host - Hypervisor

- AHV Version: el8.nutanix.20230302.101026
- 2 x 32 cpus Intel(R) Xeon(R) Platinum 8352Y CPU @ 2.20GHz
- 768 GB physical memory, except one with 1024 GB

CVM

- 16 vcpus
- 48 GB
- AOS Version: 6.8.1
- iSER data path enabled
- Content cache/readahead/iscsi acquire locks internal disabled

FSVM

- 32 vcpus
- 384GB memory
- Numa pinned
- Files Version: 5.0.0.1
- Top level directory distribution: round robin

Share & Data layout

- Distributed share
- 20 top level directories per FSVM
- 55 vdisks Per FSVM for the Share
- Sequential workload type for share

Clients

- Ubuntu OS - Ubuntu 22.04 LTS - Kernel: 5.15.0-118-generic
- Supermicro with Intel(R) Xeon(R) Gold 6448H
- 64 vcpus
- 512 GB memory
- swap off
- NFS mount with v4.0, nconnect=16
- sunrpc.tcp_slot_table_entries=16
- NFS read_ahead 15 MB

Switch

- All connections except iSER were connected to a single Arista switch
- Arista Networks DCS-7060CX-32S

Example Benchmark Run Command:

RDMAV_FORK_SAFE=1 nohup ./benchmark.sh run -s client_ip_list -n 20 -p checkpoint.checkpoint_folder=/mnt/nu/check -p dataset.num_files_train=187501 -p dataset.data_folder=/mnt/nu/ -p dataset.num_subfolders_train=140 -w unet3d -g h100 -p reader.read_threads=32 -p reader.prefetch_size=0 -r final-results &

Example NFS mount command from Linux client:

sudo mount -t nfs filesserver_ip:/gen2 /mnt/nu -o nconnect=16 -o vers=4.0