

## Appendix A: System Information for Benchmarking

The following system details are provided to support reproducibility of the performance measurements reported in this work. All benchmarks were conducted on a local machine with the specifications shown below. Information was collected via standard system commands at time of receiving reviewer comments.

### Operating System

```
$ lsb_release -a
```

```
Distributor ID: Ubuntu
Description:   Ubuntu 22.04.5 LTS
Release:      22.04
Codename:     jammy
```

### CPU

```
$ lscpu
```

```
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:         39 bits physical, 48 bits virtual
Byte Order:            Little Endian
CPU(s):                16
On-line CPU(s) list:   0-15
Vendor ID:             GenuineIntel
Model name:            11th Gen Intel(R) Core(TM) i7-11700K @ 3.60GHz
CPU family:            6
Model:                 167
Thread(s) per core:    2
Core(s) per socket:    8
Socket(s):             1
Stepping:              1
CPU max MHz:           5100.0000
CPU min MHz:           800.0000
BogoMIPS:              7200.00
```

### Memory

```
$ free -h
```

	total	used	free	shared	buff/cache	available
Mem:	125Gi	3.4Gi	112Gi	585Mi	9.7Gi	120Gi
Swap:	2.0Gi	0B	2.0Gi			

### Internet Speed

```
$ speedtest-cli
```

```
Retrieving speedtest.net configuration...
Testing from Astound Broadband (168.91.196.6)...
Retrieving speedtest.net server list...
Selecting best server based on ping...
Hosted by Sangoma (Chicago, IL) [17.63 km]: 18.388 ms
Testing download speed.....
Download: 21.58 Mbit/s
```

Testing upload speed.....  
Upload: 27.43 Mbit/s

## Filesystem Usage

\$ df -h

Filesystem	Size	Used	Avail	Use%	Mounted on
tmpfs	13G	2.6M	13G	1%	/run
/dev/nvme0n1p2	468G	242G	203G	55%	/
tmpfs	63G	14M	63G	1%	/dev/shm
tmpfs	5.0M	4.0K	5.0M	1%	/run/lock
efivarfs	192K	88K	100K	47%	/sys/firmware/efi/efivars
/dev/nvme0n1p1	511M	6.1M	505M	2%	/boot/efi
tmpfs	13G	132K	13G	1%	/run/user/1000
/dev/sda1	3.6T	3.2T	295G	92%	/media/steppe/hdd

## I/O Performance

sudo hdparm -Tt /dev/nvme0n1p2

Timing cached reads: 44096 MB in 2.00 seconds = 22095.91 MB/sec  
Timing buffered disk reads: 4470 MB in 3.00 seconds = 1489.83 MB/sec

All files were stored on the following drive.

sudo hdparm -Tt /dev/sda1

Timing cached reads: 45870 MB in 2.00 seconds = 22935.00 MB/sec  
Timing buffered disk reads: 514 MB in 3.01 seconds = 170.77 MB/sec