

- Test script : **test.sh**
- Test log files are placed in **test_log** folder in the source code
- **time** command of Linux is used to calculate the performance
- Buffer size is set to a maximum of **4096** bytes for every read / write
- Every access is repeated **200** times
- For multiple clients case, we ran tests with **2 or 3** clients accessing simultaneously.

Test Case 1 : Relay Test Case

compute-0-0 <-----> compute-0-1 <-----> compute-0-2 <-----> compute-0-3

Here we try to search a file from compute-0-0 and the file is served by compute-0-3. This is to test that the request are relayed properly.

| Relay | | | |
|--------------------------|-----------------------|------------------|-----------------|
| File Size | Requestor | Provider | Time |
| 1k | compute-0-0 | compute-0-3 | 34.53 |
| 2k | compute-0-0 | compute-0-1, 0-2 | 0.91 |
| 4k | compute-0-0 | compute-0-1 | 9.03 |
| 8k | compute-0-0 | compute-0-3 | 17.44 |
| Multiple requests | | | |
| 8k | Compute-0-0, 0-1, 0-2 | compute-0-3 | 17.438 / 17.458 |

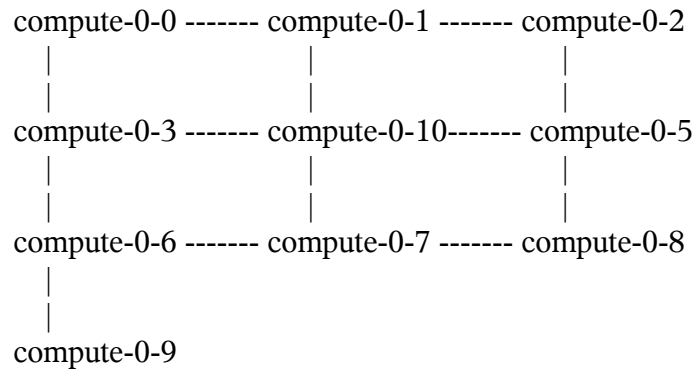
Test Case 2 : Star Test Case with 4 nodes

compute-0-0 - Peers: compute-0-1, compute-0-2, compute-0-3
 compute-0-1 - Peers: compute-0-0, compute-0-2, compute-0-3
 compute-0-2 - Peers: compute-0-0, compute-0-1, compute-0-3
 compute-0-3 - Peers: compute-0-0, compute-0-1, compute-0-2

| Star-4 | | |
|--------------------------|-----------------------|------------------|
| File Size | Requestor | Provider |
| 1k | compute-0-0 | compute-0-3 |
| 2k | compute-0-0 | compute-0-1, 0-2 |
| 4k | compute-0-0 | compute-0-1 |
| 8k | compute-0-0 | compute-0-3 |
| Multiple requests | | |
| 8k | Compute-0-0, 0-1, 0-2 | compute-0-3 |

Test Case 3 : Mesh Test Case with 10 nodes

10 Nodes : compute-0-0, compute-0-1, compute-0-2, compute-0-3, compute-0-10, compute-0-5, compute-0-6, compute-0-7, compute-0-8, compute-0-9

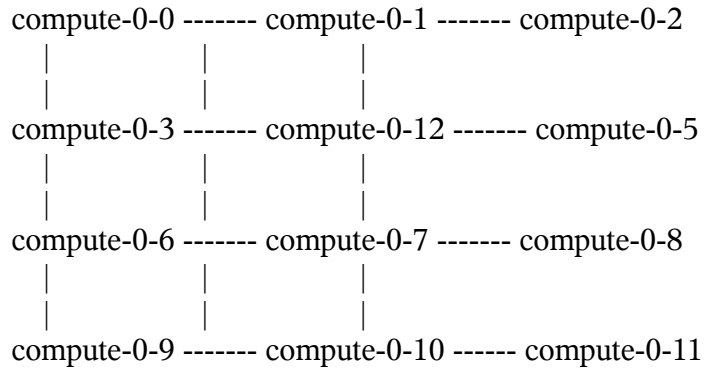


compute-0-0 - Peers : compute-0-1, compute-0-3
compute-0-1 - Peers : compute-0-0, compute-0-10, compute-0-2
compute-0-2 - Peers : compute-0-1, compute-0-5
compute-0-3 - Peers : compute-0-0, compute-0-10, compute-0-6
compute-0-10 - Peers : compute-0-1, compute-0-5, compute-0-7, compute-0-3
compute-0-5 - Peers : compute-0-2, compute-0-10, compute-0-8
compute-0-6 - Peers : compute-0-3, compute-0-7, compute-0-9
compute-0-7 - Peers : compute-0-6, compute-0-10, compute-0-8
compute-0-8 - Peers : compute-0-5, compute-0-7
compute-0-9 - Peers : compute-0-6

| Mesh-10 | | | |
|-------------------|------------------|--------------|-----------------|
| File Size | Requestor | Provider | Time |
| 1k | compute-0-1 | compute-0-3 | 34.08 |
| 2k | compute-0-3 | compute-0-10 | 1.76 |
| 4k | compute-0-7 | compute-0-1 | 9.56 |
| 8k | compute-0-0 | compute-0-9 | 17.35 |
| Multiple requests | | | |
| 8k | compute-0-0, 0-1 | compute-0-9 | 17.612 / 17.975 |

Test Case 4 : Mesh Test Case with 12 nodes

10 Nodes : compute-0-0, compute-0-1, compute-0-2, compute-0-3, compute-0-10, compute-0-5, compute-0-6, compute-0-7, compute-0-8, compute-0-9, compute-0-11, compute-0-12



compute-0-0 - Peers : compute-0-1, compute-0-3
compute-0-1 - Peers : compute-0-0, compute-0-12, compute-0-2
compute-0-2 - Peers : compute-0-1, compute-0-5
compute-0-3 - Peers : compute-0-0, compute-0-12, compute-0-6
compute-0-12 - Peers : compute-0-1, compute-0-5, compute-0-7, compute-0-3
compute-0-5 - Peers : compute-0-2, compute-0-12, compute-0-8
compute-0-6 - Peers : compute-0-3, compute-0-7, compute-0-9
compute-0-7 - Peers : compute-0-6, compute-0-12, compute-0-8, compute-0-10
compute-0-8 - Peers : compute-0-5, compute-0-7, compute-0-11
compute-0-9 - Peers : compute-0-6, compute-0-10
compute-0-10 - Peers : compute-0-9, compute-0-7, compute-0-11
compute-0-11 - Peers : compute-0-8, compute-0-10

| Mesh-12 | | | |
|-------------------|------------------|--------------|-----------------|
| File Size | Requestor | Provider | Time |
| 1k | compute-0-1 | compute-0-3 | 34.14 |
| 2k | compute-0-3 | compute-0-10 | 7.44 |
| 4k | compute-0-0 | compute-0-1 | 9.75 |
| 8k | compute-0-0 | compute-0-9 | 18.03 |
| Multiple requests | | | |
| 8k | compute-0-0, 0-1 | compute-0-3 | 17.752 / 17.891 |

Test Case 5 : Star Test Case with 10 nodes

10 Nodes : compute-0-0, compute-0-1, compute-0-2, compute-0-3, compute-0-10, compute-0-5, compute-0-6, compute-0-7, compute-0-8, compute-0-9

compute-0-0 - Peers : compute-0-1, compute-0-2, compute-0-3, compute-0-10, compute-0-5, compute-0-6, compute-0-7, compute-0-8, compute-0-9
compute-0-1 - Peers : compute-0-0, compute-0-2, compute-0-3, compute-0-10, compute-0-5, compute-0-6, compute-0-7, compute-0-8, compute-0-9
compute-0-2 - Peers : compute-0-0, compute-0-1, compute-0-3, compute-0-10, compute-0-5, compute-0-6, compute-0-7, compute-0-8, compute-0-9
compute-0-3 - Peers : compute-0-0, compute-0-1, compute-0-2, compute-0-10, compute-0-5, compute-0-6, compute-0-7, compute-0-8, compute-0-9
compute-0-10 - Peers : compute-0-0, compute-0-1, compute-0-2, compute-0-3, compute-0-5, compute-0-6, compute-0-7, compute-0-8, compute-0-9
compute-0-5 - Peers : compute-0-0, compute-0-1, compute-0-2, compute-0-3, compute-0-10, compute-0-6, compute-0-7, compute-0-8, compute-0-9
compute-0-6 - Peers : compute-0-0, compute-0-1, compute-0-2, compute-0-3, compute-0-10, compute-0-5, compute-0-7, compute-0-8, compute-0-9
compute-0-7 - Peers : compute-0-0, compute-0-1, compute-0-2, compute-0-3, compute-0-10, compute-0-5, compute-0-6, compute-0-8, compute-0-9
compute-0-8 - Peers : compute-0-0, compute-0-1, compute-0-2, compute-0-3, compute-0-10, compute-0-5, compute-0-6, compute-0-7, compute-0-9
compute-0-9 - Peers : compute-0-0, compute-0-1, compute-0-2, compute-0-3, compute-0-10, compute-0-5, compute-0-6, compute-0-7, compute-0-8

| Star-10 | | | |
|-------------------|------------------|--------------|-----------------|
| File Size | Requestor | Provider | Time |
| 1k | compute-0-0 | compute-0-3 | 36.28 |
| 2k | compute-0-0 | compute-0-10 | 3.66 |
| 4k | compute-0-0 | compute-0-1 | 11.86 |
| 8k | compute-0-0 | compute-0-9 | 19.87 |
| Multiple requests | | | |
| 8k | compute-0-0, 0-1 | compute-0-3 | 19.911 / 19.885 |