

## SCALA Performance Testing on 31 Storage Nodes

### Testing hardware

#### MDS (Metadata Server)

- Two six-core Intel® Xeon® CPU
- 64 GB ECC Memory
- 2x 10 Gb Ethernet (SFP+ or 10BaseT Options)
- Dual SSD SATA write cache drives
- Total MDS for testing = 2

#### 31 x 3U 16-bay iSTORE Nodes

- Two six-core Intel® Xeon® CPU
- 64 GB DDR3 RAM
- 2x 10 Gb Ethernet (SFP+ or 10BaseT)
- 16 Enterprise SAS hard drive per storage node
- Total: 64TB (4TB Enterprise SAS Drives)
- Total iSTORE Nodes for testing = 31





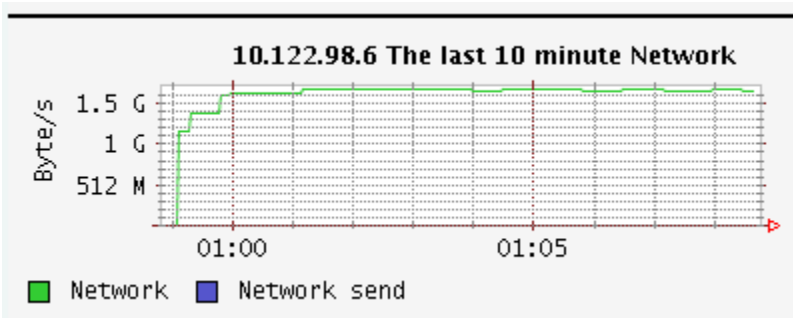
## Testing scenario I

Using copy/paste function to test the performance of a single storage node. With 10 HP Blade Servers as computing nodes, each simultaneously copying/pasting a single file of 100 GB in size.

### Scenario I results

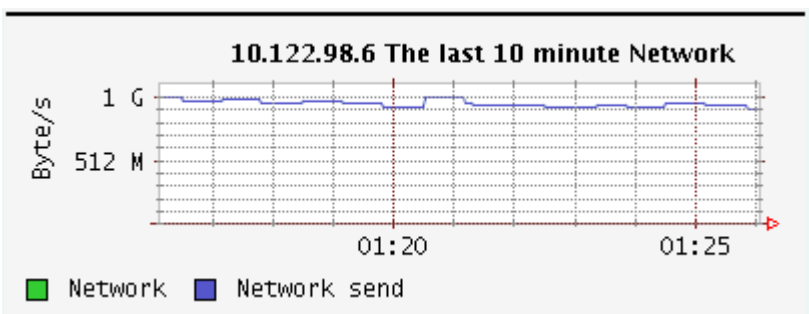
Time taken for computing nodes to copy/paste 10 (ten) 100 GB files to a single storage node: 12 minutes and 52 seconds, or 1.32 GB/s;

```
[root@hpcgg010 datapool]# time cp z0 test/
real    12m52.595s
user    0m2.387s
sys     3m7.691s
```



Time taken for a single storage node to copy/paste 10 (ten) 100 GB files to ten computing nodes: 17 minutes and 57 seconds, or 948 MB/s.

```
[root@hpcgg007 test]# time cp e0 /datapool/
real    17m57.817s
user    0m2.405s
sys     3m2.866s
```



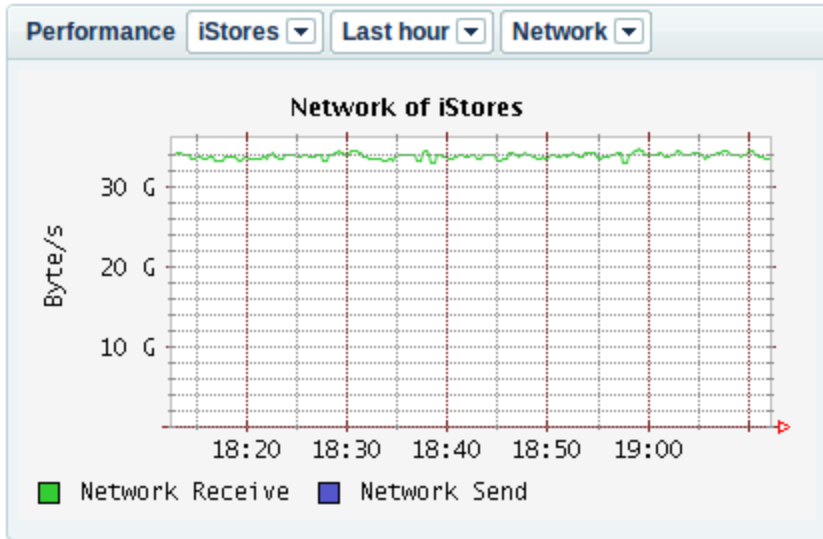


## Testing Scenario II

Using the file system benchmark Iozone, with 190 HP Blade servers as computing nodes, simulate 200 TB read/write data to test the overall storage system performance.

### Scenario II results

Aggregated write throughput is 33 GB/s



Aggregated read throughput is 24 GB/s

