

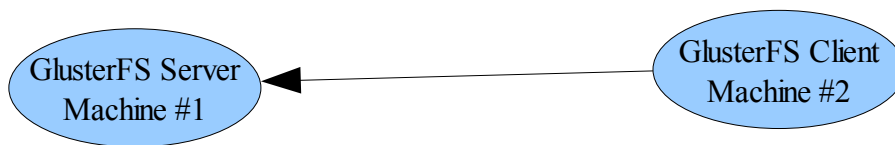
Some relative results of GlusterFS mounts and GlusterFS-NFS mounts

Configuration

- 1) GlusterFS-NFS mount setup – We used three physical servers connected over GigE ethernet. The setup was as shown in the picture below. The NFS Server is the native GlusterFS-NFS ALPHA implementation.



- 2) GlusterFS setup – We used two machines connected over GigE ethernet.



System model name: Intel(R) Xeon(R) CPU 2660.256MHz with 8GB RAM

Operation system: Fedora core 12 with Kernel v2.6.31

We ran dd command with different parameters. The average results over several runs is below -

Testcase	GlusterFS-NFS @ NFS Client (Throughput)	GlusterFS @ GlusterFS Client (Throughput)
6.6MB (Write)	79.6 MB/s	114 MB/s
6.6MB (Read)	115 MB/s	114 MB/s
66MB (Write)	77.2 MB/s	117 MB/s
66MB (Read)	117 MB/s	117 MB/s
655MB (Write)	89.1 MB/s	116 MB/s
655MB (Read)	90.1 MB/s	117 MB/s
13MB (Write)	71.6 MB/s	116 MB/s
13MB (Read)	116MB/s	116 MB/s
131MB (Write)	75.86 MB/s	117 MB/s
131MB (Read)	117 MB/s	117 MB/s
1.3GB (Write)	90.8 MB/s	115 MB/s
1.3GB (Read)	90.6 MB/s	117 MB/s
16GB (Write)	90.7 MB/s	115 MB/s
16GB (Read)	61.5 MB/s	106 MB/s

Starting GlusterFS-NFS for the test

- 1) **GlusterFS Server:** glusterfsd -f glusterfs-server.vol -l server.log
- 2) **NFS Server:** glusterfsd -f nfs-server.vol -l nfs.log
- 3) **NFS Client:** mount brick4:/quickread /mnt/nfsclient

Starting GlusterFS for the test

- 1) **GlusterFS Server:** glusterfsd -f glusterfs-server.vol -l server.log
- 2) **GlusterFS Client:** glusterfsd -f glusterfs-client.vol -l client.log /mnt/gluster

Volume Files

GlusterFS Server vol file

```
volume posix
type storage/posix
option directory /jbod/anush/export1
end-volume
```

```
volume locks
type features/locks
subvolumes posix
end-volume
```

```
volume brick
type performance/io-threads
option thread-count 8
subvolumes locks
end-volume
```

```
volume server
type protocol/server
option transport-type tcp
option transport.socket.listen-port 1801
option auth.addr.brick.allow *
subvolumes brick
end-volume
```

GlusterFS-NFS vol file

```
volume remote1
type protocol/client
option transport-type tcp
option remote-host brick3
option remote-port 1801
option remote-subvolume brick
end-volume
```

```
volume readahead
  type performance/read-ahead
  option page-count 4
  option force-atime-update off
  subvolumes remote1
end-volume
```

```
volume writebehind
  type performance/write-behind
  option window-size 1MB
  subvolumes readahead
end-volume
```

```
volume cache
  type performance/io-cache
  option cache-size 512MB
  subvolumes writebehind
end-volume
```

```
volume quickread
  type performance/quick-read
  option cache-timeout 1
  option max-file-size 512KB
  subvolumes cache
end-volume
```

```
volume nfs
  type nfs/server
  subvolumes quickread
  option rpc-auth.addr.allow *
end-volume
```

GlusterFS Client vol file

```
volume remote1
  type protocol/client
  option transport-type tcp
  option remote-host brick3
  option remote-port 1801
  option remote-subvolume brick
end-volume
```

```
volume readahead
  type performance/read-ahead
  option page-count 4
  option force-atime-update off
  subvolumes remote1
end-volume
```

```
volume writebehind
  type performance/write-behind
  option window-size 1MB
```

```
subvolumes readahead
end-volume
```

```
volume cache
type performance/io-cache
option cache-size 512MB
subvolumes writebehind
end-volume
```

```
volume quickread
type performance/quick-read
option cache-timeout 1
option max-file-size 512KB
subvolumes cache
end-volume
```

Detailed dd command output for different values -

GlusterFS mount point: /mnt/gluster

NFS Client: /mnt/nfsclient

Note: The values in the table are an average of the results. What is given below is an output for a single run so it will not match exactly with the number in the summary table.

6.6MB on GlusterFS-NFS

Command for Write:

```
dd if=/dev/zero of=/mnt/nfsclient/ddfile bs=64K count=100
100+0 records in
100+0 records out
6553600 bytes (6.6 MB) copied, 0.081544 seconds, 80.4 MB/s
```

Command for Read:

```
dd if=/mnt/nfsclient/ddfile if=/dev/zero bs=64K count=100
100+0 records in
100+0 records out
6553600 bytes (6.6 MB) copied, 0.05681 seconds, 115 MB/s
```

6.6MB on GlusterFS

Command for Write:

```
dd if=/dev/zero of=/mnt/gluster/ddfile bs=64K count=100
100+0 records in
100+0 records out
6553600 bytes (6.6 MB) copied, 0.057506 seconds, 114 MB/s
```

Command for Read:

```
dd if=/mnt/gluster/ddfile if=/dev/zero bs=64K count=100
100+0 records in
100+0 records out
6553600 bytes (6.6 MB) copied, 0.057367 seconds, 114 MB/s
```

66MB on GlusterFS-NFS

Command for Write:

```
dd if=/dev/zero of=/mnt/nfsclient/ddfile bs=64K count=1000
1000+0 records in
1000+0 records out
65536000 bytes (66 MB) copied, 0.842607 seconds, 77.8 MB/s
```

Command for Read:

```
dd if=/mnt/nfsclient/ddfile if=/dev/zero bs=64K count=1000
1000+0 records in
1000+0 records out
65536000 bytes (66 MB) copied, 0.558667 seconds, 117 MB/s
```

66MB on GlusterFS

Command for Write:

```
dd if=/dev/zero of=/mnt/gluster/ddfile bs=64K count=1000
1000+0 records in
1000+0 records out
65536000 bytes (66 MB) copied, 0.559371 seconds, 117 MB/s
```

Command for Read:

```
dd if=/mnt/gluster/ddfile if=/dev/zero bs=64K count=1000
1000+0 records in
1000+0 records out
65536000 bytes (66 MB) copied, 0.559324 seconds, 117 MB/s
```

655MB on GlusterFS-NFS

Command for Write:

```
dd if=/dev/zero of=/mnt/nfsclient/ddfile bs=64K count=10000
10000+0 records in
10000+0 records out
655360000 bytes (655 MB) copied, 7.25868 seconds, 90.3 MB/s
```

Command for Read:

```
dd if=/mnt/nfsclient/ddfile if=/dev/zero bs=64K count=10000
10000+0 records in
10000+0 records out
655360000 bytes (655 MB) copied, 7.27377 seconds, 90.1 MB/s
```

655MB on GlusterFS

Command for Write:

```
dd if=/dev/zero of=/mnt/gluster/ddfile bs=64K count=10000
10000+0 records in
10000+0 records out
655360000 bytes (655 MB) copied, 5.61925 seconds, 117 MB/s
```

Command for Read:

```
dd if=/mnt/gluster/ddfile if=/dev/zero bs=64K count=10000
10000+0 records in
10000+0 records out
655360000 bytes (655 MB) copied, 5.58108 seconds, 117 MB/s
```

13MB on GlusterFS-NFS

Command for Write:

```
dd if=/dev/zero of=/mnt/nfsclient/ddfile bs=128K count=100
100+0 records in
100+0 records out
13107200 bytes (13 MB) copied, 0.182889 seconds, 71.7 MB/s
```

Command for Read:

```
dd if=/mnt/nfsclient/ddfile if=/dev/zero bs=128K count=100
100+0 records in
100+0 records out
13107200 bytes (13 MB) copied, 0.112549 seconds, 116 MB/s
```

13MB on GlusterFS

Command for Write:

```
dd if=/dev/zero of=/mnt/gluster/ddfile bs=128K count=100
100+0 records in
100+0 records out
13107200 bytes (13 MB) copied, 0.113455 seconds, 116 MB/s
```

Command for Read:

```
dd if=/mnt/gluster/ddfile if=/dev/zero bs=128K count=100
100+0 records in
100+0 records out
13107200 bytes (13 MB) copied, 0.112889 seconds, 116 MB/s
```

131MB on GlusterFS-NFS

Command for Write:

```
dd if=/dev/zero of=/mnt/nfsclient/ddfile bs=128K count=1000
1000+0 records in
1000+0 records out
131072000 bytes (131 MB) copied, 1.72427 seconds, 76.0 MB/s
```

Command for Read:

```
dd if=/mnt/nfsclient/ddfile if=/dev/zero bs=128K count=1000
1000+0 records in
1000+0 records out
131072000 bytes (131 MB) copied, 1.11693 seconds, 117 MB/s
```

131MB on GlusterFS

Command for Write:

```
dd if=/dev/zero of=/mnt/gluster/ddfile bs=128K count=1000
1000+0 records in
1000+0 records out
131072000 bytes (131 MB) copied, 1.11737 seconds, 117 MB/s
```

Command for Read:

```
dd if=/mnt/gluster/ddfile if=/dev/zero bs=128K count=1000
1000+0 records in
1000+0 records out
131072000 bytes (131 MB) copied, 1.1171 seconds, 117 MB/s
```

1.3GB on GlusterFS-NFS

Command for Write:

```
dd if=/dev/zero of=/mnt/nfsclient/ddfile bs=128K count=10000
10000+0 records in
10000+0 records out
1310720000 bytes (1.3 GB) copied, 13.3513 seconds, 98.2 MB/s
```

Command for Read:

```
dd if=/mnt/nfsclient/ddfile if=/dev/zero bs=128K count=10000
10000+0 records in
10000+0 records out
1310720000 bytes (1.3 GB) copied, 14.3793 seconds, 91.2 MB/s
```

1.3GB on GlusterFS

Command for Write:

```
dd if=/dev/zero of=/mnt/gluster/ddfile bs=128K count=10000
10000+0 records in
10000+0 records out
1310720000 bytes (1.3 GB) copied, 11.3366 seconds, 116 MB/s
```

Command for Read:

```
dd if=/mnt/gluster/ddfile if=/dev/zero bs=128K count=10000
10000+0 records in
10000+0 records out
1310720000 bytes (1.3 GB) copied, 11.156 seconds, 117 MB/s
```

16GB on GlusterFS-NFS

Command for Write:

```
dd if=/dev/zero of=/mnt/nfsclient/ddfile bs=256kB count=64000
64000+0 records in
64000+0 records out
1638400000 bytes (16 GB) copied, 180.669 seconds, 90.7 MB/s
```

Command for Read:

```
dd if=/mnt/nfsclient/ddfile if=/dev/zero bs=256kB count=64000
64000+0 records in
64000+0 records out
1638400000 bytes (16 GB) copied, 266.211 seconds, 61.5 MB/s
```

16GB on GlusterFS

Command for Write:

```
dd if=/dev/zero of=/mnt/gluster/ddfile bs=256kB count=64000
64000+0 records in
64000+0 records out
1638400000 bytes (16 GB) copied, 142.587 seconds, 115 MB/s
```

Command for Read:

```
dd if=/mnt/gluster/ddfile if=/dev/zero bs=256kB count=64000
64000+0 records in
64000+0 records out
1638400000 bytes (16 GB) copied, 155.118 seconds, 106 MB/s
```