实验结果：

Single:

Starting 1 process

test: Laying out IO file(s) (6 file(s) / 127MB)

Jobs: 1 (f=6): [r] [-.-% done] [52928KB/0KB/0KB /s] [3308/0/0 iops] [eta 00m:00s]

test: (groupid=0, jobs=1): err= 0: pid=2495: Tue Jan 13 20:39:30 2015

read : io=131040KB, bw=55082KB/s, iops=3442, runt= 2379msec

slat (usec): min=2, max=51, avg= 4.06, stdev= 1.08

clat (usec): min=876, max=36998, avg=23219.77, stdev=4825.74

lat (usec): min=895, max=37003, avg=23224.12, stdev=4825.58

clat percentiles (usec):

| 1.00th=[ 4896], 5.00th=[ 9920], 10.00th=[17792], 20.00th=[22656],

| 30.00th=[23936], 40.00th=[24448], 50.00th=[24960], 60.00th=[25216],

| 70.00th=[25472], 80.00th=[25728], 90.00th=[25984], 95.00th=[26240],

| 99.00th=[26496], 99.50th=[29824], 99.90th=[34048], 99.95th=[35584],

| 99.99th=[37120]

bw (KB /s): min=50784, max=58944, per=97.67%, avg=53800.00, stdev=3630.59

lat (usec) : 1000=0.04%

lat (msec) : 2=0.33%, 4=0.35%, 10=4.32%, 20=9.02%, 50=85.93%

cpu : usr=3.36%, sys=1.68%, ctx=7495, majf=0, minf=343

IO depths : 1=0.1%, 2=0.1%, 4=0.1%, 8=0.1%, 16=0.2%, 32=0.4%, >=64=99.2%

submit : 0=0.0%, 4=100.0%, 8=0.0%, 16=0.0%, 32=0.0%, 64=0.0%, >=64=0.0%

complete : 0=0.0%, 4=100.0%, 8=0.0%, 16=0.0%, 32=0.0%, 64=0.0%, >=64=0.1%

issued : total=r=8190/w=0/d=0, short=r=0/w=0/d=0

latency : target=0, window=0, percentile=100.00%, depth=80

Run status group 0 (all jobs):

READ: io=131040KB, aggrb=55081KB/s, minb=55081KB/s, maxb=55081KB/s, mint=2379msec, maxt=2379msec

Disk stats (read/write):

xvdf: ios=7293/0, merge=518/0, ticks=173184/0, in\_queue=173956, util=95.85%

read : io=131040KB, bw=55478KB/s, iops=3467, runt= 2362msec

raid

Starting 1 process

test: (groupid=0, jobs=1): err= 0: pid=2536: Tue Jan 13 20:47:43 2015

read : io=131040KB, bw=192141KB/s, iops=12008, runt= 682msec

slat (usec): min=2, max=51, avg= 7.77, stdev= 2.94

clat (usec): min=322, max=24187, avg=6640.42, stdev=5203.90

lat (usec): min=330, max=24201, avg=6648.50, stdev=5203.16

clat percentiles (usec):

| 1.00th=[ 390], 5.00th=[ 474], 10.00th=[ 572], 20.00th=[ 1304],

| 30.00th=[ 2864], 40.00th=[ 4704], 50.00th=[ 5856], 60.00th=[ 7136],

| 70.00th=[ 8768], 80.00th=[11200], 90.00th=[13504], 95.00th=[16192],

| 99.00th=[22400], 99.50th=[23168], 99.90th=[23936], 99.95th=[24192],

| 99.99th=[24192]

bw (KB /s): min=201984, max=201984, per=100.00%, avg=201984.00, stdev= 0.00

lat (usec) : 500=6.31%, 750=8.30%, 1000=2.74%

lat (msec) : 2=7.28%, 4=11.05%, 10=39.11%, 20=22.88%, 50=2.33%

cpu : usr=4.11%, sys=14.68%, ctx=6860, majf=0, minf=346

IO depths : 1=0.1%, 2=0.1%, 4=0.1%, 8=0.1%, 16=0.2%, 32=0.4%, >=64=99.2%

submit : 0=0.0%, 4=100.0%, 8=0.0%, 16=0.0%, 32=0.0%, 64=0.0%, >=64=0.0%

complete : 0=0.0%, 4=100.0%, 8=0.0%, 16=0.0%, 32=0.0%, 64=0.0%, >=64=0.1%

issued : total=r=8190/w=0/d=0, short=r=0/w=0/d=0

latency : target=0, window=0, percentile=100.00%, depth=80

Run status group 0 (all jobs):

READ: io=131040KB, aggrb=192140KB/s, minb=192140KB/s, maxb=192140KB/s, mint=682msec, maxt=682msec

Disk stats (read/write):

md0: ios=9185/0, merge=0/0, ticks=0/0, in\_queue=0, util=0.00%, aggrios=2372/0, aggrmerge=16/0, aggrticks=14439/0, aggrin\_queue=14438, aggrutil=81.64%

xvdg: ios=2361/0, merge=36/0, ticks=22408/0, in\_queue=22408, util=81.64%

xvdh: ios=2363/0, merge=25/0, ticks=19264/0, in\_queue=19264, util=81.16%

xvdi: ios=2383/0, merge=3/0, ticks=9396/0, in\_queue=9392, util=78.74%

xvdj: ios=2384/0, merge=0/0, ticks=6688/0, in\_queue=6688, util=76.81%

1ms delay for raid:

read : io=131040KB, bw=191579KB/s, iops=11973, runt= 684msec

10ms

read : io=131040KB, bw=190742KB/s, iops=11921, runt= 687msec

20ms

read : io=131040KB, bw=185872KB/s, iops=11617, runt= 705msec

30ms

read : io=131040KB, bw=148403KB/s, iops=9275, runt= 883msec

40ms

read : io=131040KB, bw=105084KB/s, iops=6567, runt= 1247msec

50ms

read : io=131040KB, bw=88841KB/s, iops=5552, runt= 1475msec

100ms

read : io=131040KB, bw=42712KB/s, iops=2669, runt= 3068msec

1000ms

read : io=131040KB, bw=4359.9KB/s, iops=272, runt= 30056msec