sd卡读写速度测试

以下示例的速度看kps列，单位为kb/s。

磁盘读

```
echo 3 > /proc/sys/vm/drop_caches
dd if=/dev/mmcblk0p1 of=/dev/null bs=1M count=1000 &
iostat 1 -d
```

```
# dd if=/dev/mmcblk0p1 of=/dev/null bs=1M count=1000 &
# iostat 1 -d
mtdblock0           mtdblock1           mtdblock2           mmcblk0             mmcblk0p1
  kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t
    0   0   6.0      0   0   6.0      0   0   8.0   1638    2  11.5   1638    2  11.5
    0   0   0.0      0   0   0.0      0   0   0.0  24064   35  12.3  24064   35  12.3
    0   0   0.0      0   0   0.0      0   0   0.0  23040   34  11.5  23040   34  11.5
    0   0   0.0      0   0   0.0      0   0   0.0  23552   34  11.2  23552   34  11.2
    0   0   0.0      0   0   0.0      0   0   0.0  23552   35  12.3  23552   35  12.3
    0   0   0.0      0   0   0.0      0   0   0.0  23552   34  12.1  23552   34  12.1
    0   0   0.0      0   0   0.0      0   0   0.0  22812   34  10.9  22812   34  10.9
    0   0   0.0      0   0   0.0      0   0   0.0  23040   34  11.5  23040   34  11.5
    0   0   0.0      0   0   0.0      0   0   0.0  24064   35  12.6  24064   35  12.6
    0   0   0.0      0   0   0.0      0   0   0.0  23040   34  11.5  23040   34  11.5
    0   0   0.0      0   0   0.0      0   0   0.0  23552   34  12.1  23552   34  12.1
    0   0   0.0      0   0   0.0      0   0   0.0  23552   35  10.9  23552   35  10.9
    0   0   0.0      0   0   0.0      0   0   0.0  22528   33  10.9  22528   33  10.9
    0   0   0.0      0   0   0.0      0   0   0.0  24064   35  11.7  24064   35  11.7
    0   0   0.0      0   0   0.0      0   0   0.0  23040   34  12.1  23040   34  12.1
    0   0   0.0      0   0   0.0      0   0   0.0  23552   34  12.1  23552   34  12.1
    0   0   0.0      0   0   0.0      0   0   0.0  23040   34  11.5  23040   34  11.5
    0   0   0.0      0   0   0.0      0   0   0.0  23040   34  10.9  23040   34  10.9
    0   0   0.0      0   0   0.0      0   0   0.0  23552   34  11.2  23552   34  11.2
    0   0   0.0      0   0   0.0      0   0   0.0  23552   35  11.7  23552   35  11.7
    0   0   0.0      0   0   0.0      0   0   0.0  22305   33  12.4  22305   33  12.4
mtdblock0           mtdblock1           mtdblock2           mmcblk0             mmcblk0p1
  kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t
    0   0   0.0      0   0   0.0      0   0   0.0  24064   35  12.3  24064   35  12.3
    0   0   0.0      0   0   0.0      0   0   0.0  23040   34  10.6  23040   34  10.6
    0   0   0.0      0   0   0.0      0   0   0.0  23552   34  11.5  23552   34  11.5
    0   0   0.0      0   0   0.0      0   0   0.0  23040   34  11.2  23040   34  11.2
    0   0   0.0      0   0   0.0      0   0   0.0  23040   34  11.8  23040   34  11.8
    0   0   0.0      0   0   0.0      0   0   0.0  24064   35  11.7  24064   35  11.7
    0   0   0.0      0   0   0.0      0   0   0.0  23040   35  12.0  23040   35  12.0
    0   0   0.0      0   0   0.0      0   0   0.0  23552   34  11.8  23552   34  11.8
    0   0   0.0      0   0   0.0      0   0   0.0  23552   35  12.0  23552   35  12.0
    0   0   0.0      0   0   0.0      0   0   0.0  22528   33  11.8  22528   33  11.8
    0   0   0.0      0   0   0.0      0   0   0.0  24064   35  12.6  24064   35  12.6
    0   0   0.0      0   0   0.0      0   0   0.0  23040   34  12.1  23040   34  12.1
    0   0   0.0      0   0   0.0      0   0   0.0  23552   34  11.8  23552   34  11.8
    0   0   0.0      0   0   0.0      0   0   0.0  23319   35  10.9  23319   35  10.9
    0   0   0.0      0   0   0.0      0   0   0.0  22528   33  12.7  22528   33  12.7
1000+0 records in
1000+0 records out
```

磁盘写

```
echo 3 > /proc/sys/vm/drop_caches
dd if=/dev/urandom of=/dev/mmcblk0p1 bs=1M count=500 &
iostat 1 -d
```

```
# dd if=/dev/urandom of=/dev/mmcblk0p1 bs=1M count=500 &
# iostat 1 -d
mtdblock0         mtdblock1         mtdblock2            mmcblk0           mmcblk0p1
  kps tps svc_t   kps tps svc_t   kps tps svc_t     kps tps svc_t     kps tps svc_t
    0   0   6.0     0   0   6.0     0   0   8.0    2047   5   9.1    2047   5   9.1
    0   0   0.0     0   0   0.0     0   0   0.0    4224  33   8.8    4224  33   8.8
    0   0   0.0     0   0   0.0     0   0   0.0   17920 140   6.4   17920 140   6.4
    0   0   0.0     0   0   0.0     0   0   0.0   21632 169   5.9   21632 169   5.9
    0   0   0.0     0   0   0.0     0   0   0.0   21291 166   6.0   21291 166   6.0
    0   0   0.0     0   0   0.0     0   0   0.0   10496  82   5.9   10496  82   5.9
    0   0   0.0     0   0   0.0     0   0   0.0   21632 169   5.8   21632 169   5.8
    0   0   0.0     0   0   0.0     0   0   0.0   21504 168   6.0   21504 168   6.0
    0   0   0.0     0   0   0.0     0   0   0.0   11264  88   5.9   11264  88   5.9
    0   0   0.0     0   0   0.0     0   0   0.0   20864 163   5.9   20864 163   5.9
    0   0   0.0     0   0   0.0     0   0   0.0   21504 168   5.9   21504 168   5.9
    0   0   0.0     0   0   0.0     0   0   0.0   12928 101   5.8   12928 101   5.8
    0   0   0.0     0   0   0.0     0   0   0.0   19328 151   5.8   19328 151   5.8
    0   0   0.0     0   0   0.0     0   0   0.0   21632 169   5.9   21632 169   5.9
    0   0   0.0     0   0   0.0     0   0   0.0   14336 112   5.8   14336 112   5.8
    0   0   0.0     0   0   0.0     0   0   0.0   17664 138   5.9   17664 138   5.9
    0   0   0.0     0   0   0.0     0   0   0.0   21418 167   5.9   21418 167   5.9
    0   0   0.0     0   0   0.0     0   0   0.0   16000 125   5.8   16000 125   5.8
    0   0   0.0     0   0   0.0     0   0   0.0   16000 125   5.8   16000 125   5.8
    0   0   0.0     0   0   0.0     0   0   0.0   21760 170   5.9   21760 170   5.9
    0   0   0.0     0   0   0.0     0   0   0.0   17536 137   5.9   17536 137   5.9
mtdblock0         mtdblock1         mtdblock2            mmcblk0           mmcblk0p1
  kps tps svc_t   kps tps svc_t   kps tps svc_t     kps tps svc_t     kps tps svc_t
    0   0   0.0     0   0   0.0     0   0   0.0   14464 113   5.8   14464 113   5.8
    0   0   0.0     0   0   0.0     0   0   0.0   21632 169   5.9   21632 169   5.9
500+0 records in
500+0 records out
```

fat32文件读

```
mkdir /mnt/y
mount /dev/mmcblk0p1 /mnt/y
dd if=/dev/urandom of=/mnt/y/tmpfile bs=1M count=500
echo 3 > /proc/sys/vm/drop_caches
dd if=/mnt/y/tmpfile of=/dev/null &
iostat 1 -d
```

```
# dd if=/mnt/y/tmpfile of=/dev/null &
# iostat 1 -d
mtdblock0        mtdblock1        mtdblock2           mmcblk0          mmcblk0p1
  kps tps svc_t   kps tps svc_t   kps tps svc_t     kps tps svc_t     kps tps svc_t
    0   0   6.0     0   0   6.0     0   0   8.0   2005   4  10.2   2005   4  10.2
    0   0   0.0     0   0   0.0     0   0   0.0  22658 182   5.5  22658 182   5.5
    0   0   0.0     0   0   0.0     0   0   0.0  22659 183   5.5  22659 183   5.5
    0   0   0.0     0   0   0.0     0   0   0.0  22531 182   5.5  22531 182   5.5
    0   0   0.0     0   0   0.0     0   0   0.0  22658 182   5.5  22658 182   5.5
    0   0   0.0     0   0   0.0     0   0   0.0  22659 183   5.5  22659 183   5.5
    0   0   0.0     0   0   0.0     0   0   0.0  22658 182   5.5  22658 182   5.5
    0   0   0.0     0   0   0.0     0   0   0.0  22403 181   5.5  22403 181   5.5
    0   0   0.0     0   0   0.0     0   0   0.0  21547 173   5.7  21547 173   5.7
    0   0   0.0     0   0   0.0     0   0   0.0  21762 175   5.7  21762 175   5.7
    0   0   0.0     0   0   0.0     0   0   0.0  21890 174   5.7  21890 174   5.7
    0   0   0.0     0   0   0.0     0   0   0.0  22784 178   5.7  22784 178   5.7
    0   0   0.0     0   0   0.0     0   0   0.0  22656 177   5.6  22656 177   5.6
    0   0   0.0     0   0   0.0     0   0   0.0  22274 177   5.6  22274 177   5.6
    0   0   0.0     0   0   0.0     0   0   0.0  21762 175   5.7  21762 175   5.7
    0   0   0.0     0   0   0.0     0   0   0.0  21760 170   5.9  21760 170   5.9
    0   0   0.0     0   0   0.0     0   0   0.0  22016 172   5.8  22016 172   5.8
    0   0   0.0     0   0   0.0     0   0   0.0  22528 176   5.7  22528 176   5.7
    0   0   0.0     0   0   0.0     0   0   0.0  22400 175   5.7  22400 175   5.7
    0   0   0.0     0   0   0.0     0   0   0.0  21888 171   5.8  21888 171   5.8
    0   0   0.0     0   0   0.0     0   0   0.0  21760 170   5.9  21760 170   5.9
1024000+0 records in
1024000+0 records out
```

fat32文件写

```
echo 3 > /proc/sys/vm/drop_caches
dd if=/dev/urandom of=/mnt/y/tmpfile bs=1M count=500 &
iostat 1 -d
```

```
# dd if=/dev/urandom of=/mnt/y/tmpfile bs=1M count=500 &
# iostat 1 -d
mtdblock0        mtdblock1        mtdblock2        mmcblk0          mmcblk0p1
  kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t
    0   0   6.0      0   0   6.0      0   0   8.0   1575   2  11.5   1575   2  11.5
    0   0   0.0      0   0   0.0      0   0   0.0  15554  19  10.0  15554  19  10.0
    0   0   0.0      0   0   0.0      0   0   0.0  10241  12  12.5  10241  12  12.5
    0   0   0.0      0   0   0.0      0   0   0.0  18432  19   9.5  18432  19   9.5
    0   0   0.0      0   0   0.0      0   0   0.0  16384  17  10.0  16384  17  10.0
    0   0   0.0      0   0   0.0      0   0   0.0  18432  19  10.0  18432  19  10.0
    0   0   0.0      0   0   0.0      0   0   0.0   5923  12  10.0   5923  12  10.0
    0   0   0.0      0   0   0.0      0   0   0.0      3   6  11.7      3   6  11.7
    0   0   0.0      0   0   0.0      0   0   0.0  12314  19  12.1  12314  19  12.1
    0   0   0.0      0   0   0.0      0   0   0.0   8113  12  12.5   8113  12  12.5
    0   0   0.0      0   0   0.0      0   0   0.0  16384  16  10.0  16384  16  10.0
    0   0   0.0      0   0   0.0      0   0   0.0   4106  13  10.8   4106  13  10.8
    0   0   0.0      0   0   0.0      0   0   0.0  18432  18  10.0  18432  18  10.0
    0   0   0.0      0   0   0.0      0   0   0.0   4106  13  13.8   4106  13  13.8
    0   0   0.0      0   0   0.0      0   0   0.0  17408  18  10.0  17408  18  10.0
    0   0   0.0      0   0   0.0      0   0   0.0  18432  19  10.0  18432  19  10.0
    0   0   0.0      0   0   0.0      0   0   0.0  18432  19  10.0  18432  19  10.0
    0   0   0.0      0   0   0.0      0   0   0.0  12514  17  10.6  12514  17  10.6
    0   0   0.0      0   0   0.0      0   0   0.0      3   6  11.7      3   6  11.7
    0   0   0.0      0   0   0.0      0   0   0.0   6168  13  12.3   6168  13  12.3
    0   0   0.0      0   0   0.0      0   0   0.0  14338  17  10.6  14338  17  10.6
mtdblock0        mtdblock1        mtdblock2        mmcblk0          mmcblk0p1
  kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t
    0   0   0.0      0   0   0.0      0   0   0.0  11266  14  11.4  11266  14  11.4
    0   0   0.0      0   0   0.0      0   0   0.0   9226  16   9.4   9226  16   9.4
    0   0   0.0      0   0   0.0      0   0   0.0  13181  14  10.7  13181  14  10.7
    0   0   0.0      0   0   0.0      0   0   0.0   7176  15   7.3   7176  15   7.3
    0   0   0.0      0   0   0.0      0   0   0.0  14336  15  12.0  14336  15  12.0
    0   0   0.0      0   0   0.0      0   0   0.0  18433  20   9.0  18433  20   9.0
    0   0   0.0      0   0   0.0      0   0   0.0  18432  19   9.5  18432  19   9.5
    0   0   0.0      0   0   0.0      0   0   0.0  15136  16  10.6  15136  16  10.6
    0   0   0.0      0   0   0.0      0   0   0.0      4   7  10.0      4   7  10.0
    0   0   0.0      0   0   0.0      0   0   0.0   1050  10  11.0   1050  10  11.0
    0   0   0.0      0   0   0.0      0   0   0.0  18432  19  10.5  18432  19  10.5
    0   0   0.0      0   0   0.0      0   0   0.0   8194  12  10.0   8194  12  10.0
    0   0   0.0      0   0   0.0      0   0   0.0  13320  19  10.0  13320  19  10.0
    0   0   0.0      0   0   0.0      0   0   0.0   7170  10  12.0   7170  10  12.0
    0   0   0.0      0   0   0.0      0   0   0.0  13320  19  10.0  13320  19  10.0
    0   0   0.0      0   0   0.0      0   0   0.0   9126  12  14.2   9126  12  14.2
    0   0   0.0      0   0   0.0      0   0   0.0  18432  19  10.5  18432  19  10.5
    0   0   0.0      0   0   0.0      0   0   0.0  17408  18   9.4  17408  18   9.4
    0   0   0.0      0   0   0.0      0   0   0.0  18432  19  10.0  18432  19  10.0
500+0 records in
500+0 records out
```

先将sd卡分为4个分区，并将2,3,4分区分别格式化为ext2、ext3、ext4，然后按以下步骤操作文件读写

ext2文件读

```
mkdir /mnt/ext2mpt
mount /dev/mmcblk0p2 /mnt/ext2mpt
dd if=/dev/urandom of=/mnt/ext2mpt/tmpfile bs=1M count=1024
echo 3 > /proc/sys/vm/drop_caches
dd if=/mnt/ext2mpt/tmpfile of=/dev/null &
iostat 1 -d
```

```
# dd if=/mnt/ext2mpt/tmpfile of=/dev/null &
# iostat 1 -d
  mmcblk0           mmcblk0p2          mmcblk0p3          mmcblk0p4
  kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t
  253   0  8.1    253   0  8.2      0   0  2.1      0   0  3.8
22144 173  5.8  22144 173  5.8      0   0  0.0      0   0  0.0
21798 170  5.8  21798 170  5.8      0   0  0.0      0   0  0.0
22016 172  5.8  22016 172  5.8      0   0  0.0      0   0  0.0
22016 172  5.8  22016 172  5.8      0   0  0.0      0   0  0.0
22144 173  5.8  22144 173  5.8      0   0  0.0      0   0  0.0
21632 170  5.8  21632 170  5.8      0   0  0.0      0   0  0.0
21632 169  5.9  21632 169  5.9      0   0  0.0      0   0  0.0
22016 172  5.9  22016 172  5.9      0   0  0.0      0   0  0.0
22016 172  5.8  22016 172  5.8      0   0  0.0      0   0  0.0
22016 172  5.8  22016 172  5.8      0   0  0.0      0   0  0.0
22016 173  5.8  22016 173  5.8      0   0  0.0      0   0  0.0
21760 170  5.9  21760 170  5.9      0   0  0.0      0   0  0.0
21888 171  5.8  21888 171  5.8      0   0  0.0      0   0  0.0
21545 168  5.9  21545 168  5.9      0   0  0.0      0   0  0.0
21888 171  5.8  21888 171  5.8      0   0  0.0      0   0  0.0
22528 176  5.7  22528 176  5.7      0   0  0.0      0   0  0.0
22400 176  5.6  22400 176  5.6      0   0  0.0      0   0  0.0
22528 176  5.7  22528 176  5.7      0   0  0.0      0   0  0.0
22528 176  5.7  22528 176  5.7      0   0  0.0      0   0  0.0
22400 175  5.7  22400 175  5.7      0   0  0.0      0   0  0.0
  mmcblk0           mmcblk0p2          mmcblk0p3          mmcblk0p4
  kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t
22400 175  5.7  22400 175  5.7      0   0  0.0      0   0  0.0
22528 177  5.6  22528 177  5.6      0   0  0.0      0   0  0.0
22400 175  5.7  22400 175  5.7      0   0  0.0      0   0  0.0
22528 176  5.7  22528 176  5.7      0   0  0.0      0   0  0.0
22404 176  5.7  22404 176  5.7      0   0  0.0      0   0  0.0
22178 173  5.7  22178 173  5.7      0   0  0.0      0   0  0.0
22528 176  5.7  22528 176  5.7      0   0  0.0      0   0  0.0
22400 176  5.7  22400 176  5.7      0   0  0.0      0   0  0.0
22528 176  5.7  22528 176  5.7      0   0  0.0      0   0  0.0
22400 175  5.7  22400 175  5.7      0   0  0.0      0   0  0.0
22528 176  5.7  22528 176  5.7      0   0  0.0      0   0  0.0
22400 175  5.7  22400 175  5.7      0   0  0.0      0   0  0.0
22528 177  5.6  22528 177  5.6      0   0  0.0      0   0  0.0
22656 177  5.6  22656 177  5.6      0   0  0.0      0   0  0.0
22656 177  5.6  22656 177  5.6      0   0  0.0      0   0  3.8
22528 176  5.7  22528 176  5.7      0   0  0.0      0   0  0.0
22528 176  5.7  22528 176  5.7      0   0  0.0      0   0  0.0
22432 176  5.7  22432 176  5.7      0   0  0.0      0   0  0.0
22784 178  5.6  22784 178  5.6      0   0  0.0      0   0  0.0
2097152+0 records in
2097152+0 records out
```

ext2文件写

```
echo 3 > /proc/sys/vm/drop_caches
dd if=/dev/urandom of=/mnt/ext2mpt/tmpfile bs=1M count=512 &
iostat 1 -d
```

```
# iostat 1 -d
  mmcblk0          mmcblk0p2          mmcblk0p3          mmcblk0p4
  kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t
  425   2   6.2    424   2   6.2      0   0   2.1      0   0   3.8
15323  20  14.0  15323  20  14.0      0   0   0.0      0   0   0.0
19456  19  10.0  19456  19  10.0      0   0   0.0      0   0   0.0
18250  18  10.0  18250  18  10.0      0   0   0.0      0   0   0.0
16388  18  11.1  16388  18  11.1      0   0   0.0      0   0   0.0
18432  18  12.2  18432  18  12.2      0   0   0.0      0   0   0.0
18432  18  12.2  18432  18  12.2      0   0   0.0      0   0   0.0
16388  17  11.8  16388  17  11.8      0   0   0.0      0   0   0.0
18432  18  10.0  18432  18  10.0      0   0   0.0      0   0   0.0
17572  29   7.6  17572  29   7.6      0   0   0.0      0   0   0.0
16384  16  11.2  16384  16  11.2      0   0   0.0      0   0   0.0
19460  20  14.0  19460  20  14.0      0   0   0.0      0   0   0.0
18436  19  10.5  18436  19  10.5      0   0   0.0      0   0   0.0
16384  16  10.0  16384  16  10.0      0   0   0.0      0   0   0.0
18432  18  10.0  18432  18  10.0      0   0   0.0      0   0   0.0
18432  18  10.0  18432  18  10.0      0   0   0.0      0   0   0.0
16420  26  11.2  16420  26  11.2      0   0   0.0      0   0   0.0
18432  18  11.7  18432  18  11.7      0   0   0.0      0   0   0.0
18436  19  10.0  18436  19  10.0      0   0   0.0      0   0   0.0
15360  16  10.0  15360  16  10.0      0   0   0.0      0   0   0.0
512+0 records in
512+0 records out
```

ext3文件读

```
mkdir /mnt/ext3mpt
mount /dev/mmcblk0p3 /mnt/ext3mpt
dd if=/dev/urandom of=/mnt/ext3mpt/tmpfile bs=1M count=1024
echo 3 > /proc/sys/vm/drop_caches
dd if=/mnt/ext3mpt/tmpfile of=/dev/null &
iostat 1 -d
```

```
# dd if=/mnt/ext3mpt/tmpfile of=/dev/null &
# iostat 1 -d
  mmcblk0          mmcblk0p2           mmcblk0p3           mmcblk0p4
  kps tps svc_t    kps tps svc_t     kps tps svc_t     kps tps svc_t
  838   2   7.4    654   2   7.3     185   0   8.2       0   0   3.8
21652 174   5.7     0    0   0.0   21652 174   5.7       0   0   0.0
21315 172   5.7     0    0   0.0   21315 172   5.7       0   0   0.0
21908 177   5.6     0    0   0.0   21908 177   5.6       0   0   0.0
22164 178   5.6     0    0   0.0   22164 178   5.6       0   0   0.0
22168 179   5.6     0    0   0.0   22168 179   5.6       0   0   0.0
22292 179   5.6     0    0   0.0   22292 179   5.6       0   0   0.0
22168 179   5.6     0    0   0.0   22168 179   5.6       0   0   0.0
22164 179   5.6     0    0   0.0   22164 179   5.6       0   0   0.0
22292 179   5.6     0    0   0.0   22292 179   5.6       0   0   0.0
22168 179   5.6     0    0   0.0   22168 179   5.6       0   0   0.0
22292 179   5.6     0    0   0.0   22292 179   5.6       0   0   0.0
21932 182   5.5     0    0   0.0   21932 182   5.5       0   0   0.0
22164 178   5.6     0    0   0.0   22164M 178  5.6       0   0   0.0
22164 179   5.6     0    0   0.0   22164 179   5.6       0   0   0.0
22040 178   5.6     0    0   0.0   22040 178   5.6       0   0   0.0
21945 176   5.6     0    0   0.0   21945 176   5.6       0   0   0.0
22168 179   5.6     0    0   0.0   22168 179   5.6       0   0   0.0
22164 178   5.6     0    0   0.0   22164 178   5.6       0   0   0.0
22164 178   5.7     0    0   0.0   22164 178   5.7       0   0   0.0
22040 179   5.5     0    0   0.0   22040 179   5.5       0   0   0.0
  mmcblk0          mmcblk0p2           mmcblk0p3           mmcblk0p4
  kps tps svc_t    kps tps svc_t     kps tps svc_t     kps tps svc_t
22292 179   5.6     0    0   0.0   22292 179   5.6       0   0   0.0
22168 179   5.6     0    0   0.0   22168 179   5.6       0   0   0.0
22160 177   5.6     0    0   0.0   22160 177   5.6       0   0   0.0
22164 178   5.6     0    0   0.0   22164 178   5.6       0   0   0.0
22296 181   5.5     0    0   0.0   22296 181   5.5       0   0   0.0
22420 180   5.6     0    0   0.0   22420 180   5.6       0   0   0.0
22424 181   5.5     0    0   0.0   22424 181   5.5       0   0   0.0
22420 180   5.6     0    0   0.0   22420 180   5.6       0   0   0.0
22075 178   5.6     0    0   0.0   22075 178   5.6       0   0   0.0
22420 180   5.6     0    0   0.0   22420 180   5.6       0   0   0.0
21908 177   5.7     0    0   0.0   21908 177   5.7       0   0   0.0
22168 179   5.6     0    0   0.0   22168 179   5.6       0   0   0.0
22036 177   5.6     0    0   0.0   22036 177   5.6       0   0   0.0
22168 179   5.6     0    0   0.0   22168 179   5.6       0   0   0.0
22164 178   5.6     0    0   0.0   22292 178   5.6       0   0   0.0
22160 178   5.6     0    0   0.0   22032 178   5.6       0   0   0.0
22144 173   5.8     0    0   0.0   22144 173   5.8       0   0   0.0
22016 172   5.8     0    0   0.0   22016 172   5.8       0   0   0.0
22016 172   5.8     0    0   0.0   22016 172   5.8       0   0   0.0
22144 173   5.8     0    0   0.0   22144 173   5.8       0   0   0.0
21798 170   5.8     0    0   0.0   21798 170   5.8       0   0   0.0
2097152+0 records in
2097152+0 records out
```

ext3文件写

```
echo 3 > /proc/sys/vm/drop_caches
dd if=/dev/urandom of=/mnt/ext3mpt/tmpfile bs=1M count=512 &
iostat 1 -d
```

```
# dd if=/dev/urandom of=/mnt/ext3mpt/tmpfile bs=1M count=512 &
# iostat 1 -d
  mmcblk0           mmcblk0p2          mmcblk0p3          mmcblk0p4
  kps tps svc_t    kps tps svc_t      kps tps svc_t      kps tps svc_t
  964   3   6.8    640   2   7.3      324   2   6.1        0   0   3.8
19456  19  11.1      0   0   0.0    19456  19  11.1        0   0   0.0
16388  17  15.3      0   0   0.0    16388  17  15.3        0   0   0.0
17236  17  10.0      0   0   0.0    17236  17  10.0        0   0   0.0
19456  19  10.0      0   0   0.0    19456  19  10.0        0   0   0.0
18432  18  12.2      0   0   0.0    18432  18  12.2        0   0   0.0
16388  17  10.0      0   0   0.0    16388  17  10.0        0   0   0.0
18432  18  10.0      0   0   0.0    18432  18  10.0        0   0   0.0
18616  20  10.5      0   0   0.0    18616  20  10.5        0   0   0.0
15360  15  11.3      0   0   0.0    15360  15  11.3        0   0   0.0
18428  18  13.9      0   0   0.0    18428  18  13.9        0   0   0.0
18432  18  10.0      0   0   0.0    18432  18  10.0        0   0   0.0
16384  16  10.0      0   0   0.0    16384  16  10.0        0   0   0.0
18257  20  11.0      0   0   0.0    18257  20  11.5        0   0   0.0
18432  18  13.9      0   0   0.0    18432  18  13.3        0   0   0.0
16384  16  10.0      0   0   0.0    16384  16  10.0        0   0   0.0
18432  18  10.0      0   0   0.0    18432  18  10.0        0   0   0.0
18432  18  10.6      0   0   0.0    18432  18  10.6        0   0   0.0
16384  16  10.6      0   0   0.0    16384  16  10.6        0   0   0.0
18432  18  10.6      0   0   0.0    18432  18  10.6        0   0   0.0
19492  20  10.5      0   0   0.0    19492  20  10.5        0   0   0.0
  mmcblk0           mmcblk0p2          mmcblk0p3          mmcblk0p4
  kps tps svc_t    kps tps svc_t      kps tps svc_t      kps tps svc_t
14756  26   7.7      0   0   0.0    14756  26   7.7        0   0   0.0
18444  21  11.4      0   0   0.0    18444  21  11.4        0   0   0.0
18432  18  10.0      0   0   0.0    18432  18  10.0        0   0   0.0
16222  16  10.0      0   0   0.0    16222  16  10.0        0   0   0.0
18432  18  10.0      0   0   0.0    18432  18  10.0        0   0   0.0
18432  18  10.0      0   0   0.0    18432  18  10.0        0   0   0.0
15324  15  10.0      0   0   0.0    15324  15  10.0        0   0   0.0
19456  19  10.0      0   0   0.0    19456  19  10.0        0   0   0.0
512+0 records in
512+0 records out
```

ext4文件读

```
mkdir /mnt/ext4mpt
mount /dev/mmcblk0p4 /mnt/ext4mpt
dd if=/dev/urandom of=/mnt/ext4mpt/tmpfile bs=1M count=1024
echo 3 > /proc/sys/vm/drop_caches
dd if=/mnt/ext4mpt/tmpfile of=/dev/null &
iostat 1 -d
```

```
# dd if=/mnt/ext4mpt/tmpfile of=/dev/null &
# iostat 1 -d
  mmcblk0          mmcblk0p2          mmcblk0p3          mmcblk0p4
  kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t
 1355   4   7.3    594   2   7.3    592   2   7.2    168   0   8.3
21798 170   5.8      0   0   0.0      0   0   0.0  21798 170   5.8
22528 176   5.7      0   0   0.0      0   0   0.0  22528 176   5.7
22400 175   5.7      0   0   0.0      0   0   0.0  22400 175   5.7
22528 176   5.7      0   0   0.0      0   0   0.0  22528 176   5.7
22528 176   5.7      0   0   0.0      0   0   0.0  22528 176   5.7
22400 176   5.7      0   0   0.0      0   0   0.0  22400 176   5.7
22528 176   5.7      0   0   0.0      0   0   0.0  22528 176   5.7
22400 175   5.7      0   0   0.0      0   0   0.0  22400 175   5.7
22528 176   5.7      0   0   0.0      0   0   0.0  22528 176   5.7
22528 176   5.7      0   0   0.0      0   0   0.0  22528 176   5.7
22400 175   5.7      0   0   0.0      0   0   0.0  22400 175   5.7
21888 171   5.8      0   0   0.0      0   0   0.0  21888 171   5.8
21888 171   5.8      0   0   0.0      0   0   0.0  21888 171   5.8
21418 167   5.9      0   0   0.0      0   0   0.0  21418 167   5.9
21632 169   5.9      0   0   0.0      0   0   0.0  21632 169   5.9
22016 172   5.8      0   0   0.0      0   0   0.0  22016 172   5.8
22784 179   5.6      0   0   0.0      0   0   0.0  22784 179   5.6
22656 177   5.6      0   0   0.0      0   0   0.0  22656 177   5.6
22400 175   5.8      0   0   0.0      0   0   0.0  22400 175   5.8
21652 172   5.8      0   0   0.0      0   0   0.0  21652 172   5.8
  mmcblk0          mmcblk0p2          mmcblk0p3          mmcblk0p4
  kps tps svc_t    kps tps svc_t    kps tps svc_t    kps tps svc_t
22016 172   5.8      0   0   0.0      0   0   0.0  22016 172   5.8
22144 173   5.8      0   0   0.0      0   0   0.0  22144 173   5.8
22016 172   5.8      0   0   0.0      0   0   0.0  22016 172   5.8
22272 174   5.7      0   0   0.0      0   0   0.0  22272 174   5.7
22656 177   5.6      0   0   0.0      0   0   0.0  22656 177   5.6
22432 175   5.6      0   0   0.0      0   0   0.0  22432 175   5.6
22784 178   5.6      0   0   0.0      0   0   0.0  22784 178   5.6
22272 174   5.8      0   0   0.0      0   0   0.0  22272 174   5.8
22016 173   5.7      0   0   0.0      0   0   0.0  22016 173   5.7
22144 173   5.8      0   0   0.0      0   0   0.0  22144 173   5.8
22016 172   5.8      0   0   0.0      0   0   0.0  22016 172   5.8
22144 173   5.8      0   0   0.0      0   0   0.0  22144 173   5.8
22016 172   5.8      0   0   0.0      0   0   0.0  22016 172   5.8
22016 172   5.8      0   0   0.0      0   0   0.0  22016 172   5.8
22144 173   5.8      0   0   0.0      0   0   0.0  22144 173   5.8
21760 170   5.9      0   0   0.0      0   0   0.0  21760 170   5.9
21888 171   5.8      0   0   0.0      0   0   0.0  21888 171   5.8
21760 170   5.9      0   0   0.0      0   0   0.0  21760 170   5.9
19786 155   5.9      0   0   0.0      0   0   0.0  19786 155   5.9
2097152+0 records in
2097152+0 records out
```

ext4文件写

```
echo 3 > /proc/sys/vm/drop_caches
dd if=/dev/urandom of=/mnt/ext4mpt/tmpfile bs=1M count=512 &
iostat 1 -d
```

```
# dd if=/dev/urandom of=/mnt/ext4mpt/tmpfile bs=1M count=512 &
# iostat 1 -d
 mmcblk0            mmcblk0p2           mmcblk0p3           mmcblk0p4
  kps tps svc_t      kps tps svc_t      kps tps svc_t       kps tps svc_t
 1456   5   7.0      585   2   7.3      582   2   7.2        289   1   6.4
19456  19  11.6        0   0   0.0        0   0   0.0      19456  19  11.6
18432  18  11.7        0   0   0.0        0   0   0.0      18432  18  11.7
16384  16  10.0        0   0   0.0        0   0   0.0      16384  16  10.0
10198  12  10.8        0   0   0.0        0   0   0.0      10198  12  10.8
19456  19  13.2        0   0   0.0        0   0   0.0      19456  19  13.2
18432  18  10.0        0   0   0.0        0   0   0.0      18432  18  10.0
16384  16  10.6        0   0   0.0        0   0   0.0      16384  16  10.6
18432  18  10.0        0   0   0.0        0   0   0.0      18432  18  10.0
13372  17  11.2        0   0   0.0        0   0   0.0      13372  17  11.2
16384  16  14.4        0   0   0.0        0   0   0.0      16384  16  14.4
18432  18  10.0        0   0   0.0        0   0   0.0      18432  18  10.0
18432  18  10.6        0   0   0.0        0   0   0.0      18432  18  10.6
16384  16  10.0        0   0   0.0        0   0   0.0      16384  16  10.0
16412  19   8.9        0   0   0.0        0   0   0.0      16412  19   8.9
 9125   9  13.3        0   0   0.0        0   0   0.0       9125   9  13.3
18432  18  11.1        0   0   0.0        0   0   0.0      18432  18  11.1
16384  16  11.9        0   0   0.0        0   0   0.0      16384  16  11.9
17432  20   9.0        0   0   0.0        0   0   0.0      17432  20   9.0
13312  13  12.3        0   0   0.0        0   0   0.0      13312  13  12.3
15360  15  15.3        0   0   0.0        0   0   0.0      15360  15  15.3
 mmcblk0            mmcblk0p2           mmcblk0p3           mmcblk0p4
  kps tps svc_t      kps tps svc_t      kps tps svc_t       kps tps svc_t
19456  19  10.0        0   0   0.0        0   0   0.0      19456  19  10.0
18432  18  10.6        0   0   0.0        0   0   0.0      18432  18  10.6
15360  15  10.0        0   0   0.0        0   0   0.0      16384  16  10.0
19456  19  10.0        0   0   0.0        0   0   0.0      18432  18  10.0
 6168   8  10.0        0   0   0.0        0   0   0.0       6168   8  10.0
13312  13  12.3        0   0   0.0        0   0   0.0      13312  13  12.3
16222  16  11.2        0   0   0.0        0   0   0.0      16222  16  11.2
512+0 records in
512+0 records out
```

总结

磁盘读速率大约22-24 mb/s，比较稳定；磁盘写速率11mb/s到22mb/s不等，波动相对较大不过速度基本在22mb/s左右；fat32和ext2、ext3、ext4文件读速率都在21-23 mb/s，比较稳定，相对磁盘读慢一点点；ext2、ext3、ext4文件写速率在15-20mb/s之间，相对磁盘写稳定一些，但是平均速率较慢一些，可能是数据量测试不够导致，fat32文件写速率在0-19mb/s之间，有很明显的几个瓶颈点，这是windows默认支持的文件系统，可能是linux对这个文件系统的支持不足或者linux有其他突发任务导致的，可继续观测。