

Units of measurement

Bytes

- denoted with “B”
- derivatives obtained by multiplying by 1024

Bits

- denoted with “b”

Sectors

- no special designation
- standard sector - 512 bytes

$$2^{10} = 1024$$

$$1 \text{ KB} = 1024 \text{ Bytes}$$

$$1 \text{ MB} = 1024 \text{ KB}$$

Sector – important unit in data recovery

Used for

- object size in sectors
- object location in LBA (Logical Block Address)

Sectors can be

- 512-byte sectors (“standard” sectors)
- physical sectors

Terms

- LBA
 - sector
 - physical sector
- } interchangeable with 512-byte sectors;
otherwise qualification needed

Useful correlations

- 1 KB = 1024 B
- 1 MB = 1024 KB
- 1 MB contains 2048 sectors of 512 bytes
- Bits
 - 1/8 of Byte
 - minimum discrete information unit
- Needed for
 - estimating network bandwidth \rightarrow 1 Gbps = 1024/8 MBps
 - entropy analysis of RAIDs \rightarrow entropy in bits per Byte (b/B)