Memory Sizing

Thursday, 29 July 2021 3:38 PM

Memory Sizing

- **Storage** — Bytes (B) (Saved)
- **Transmission** — bits (b) (Move) Upload, Download

x ÷

1	bit			
8	bits	=	1	Byte
1024	Bytes	=	1	kiloB
1024	kB	=	1	megaB
1024	MB	=	1	gigaB
1024	GB	=	1	TeraB

1 bit ×

1024	bits	=	1	kilobits
1024	Kb	=	1	megabits
1024	mb	=	1	gigabits
1024	gb	=	1	terabits.

Formula Time of transfer = File size / Speed

48 mb = 6 MB

Factor 1:8

1B = 8bits
1 kB = 8 kb
1 MB = 8 mb
1 GB = 8 gb

File : 5 GB
Speed: 5 gbps
Time : ?

$\frac{5GB}{5gbps} = \frac{5 \times 8}{5} = \frac{40gb}{5gb} = 8$ seconds.

File : 5 MB
Speed: 5 mbps
Time : ?

$\frac{5\,MB}{5\,mbps} = \frac{5 \times 8}{5} = \frac{40\,mb}{5\,mb} = 8$ Sec.

File : 5 GB
Speed: 5 mb
Time : ?

$\frac{5GB}{5mb} = \frac{5 \times 1024}{5mb} = \frac{5120\,MB}{5m} =$

$= \frac{5120 \times 8\,mb}{5mb} = \frac{40960\,mb}{5mb} = 8192$ Sec.

$= 136.53$ min $= 2.28$ hrs.

File : 3 GB
Speed: 512 Kbps
Time : ?

$\frac{3GB}{512\,kb} = \frac{3 \times 1024}{512\,kb} = \frac{3072\,MB}{512\,kb}$

$= \frac{3072 \times 1024}{512\,kb} = \frac{3145728\,kB}{512\,kb} =$

$= \frac{25165824\,kb}{512\,kb} =$ 49152 Sec = 819.2 min = 13.65 hrs.

$\frac{3\,GB}{512\,kb} = \frac{3072\,MB}{0.5\,mb} = \frac{24576\,mb}{0.5\,mb} =$ 49152 Sec = 13.65 hr

$\frac{512\,kb}{1024} = 0.5\,mb$