Didado

Problemas tema 4

4.1

a) t= (5000sectores*512*10^-6)/256Mb = 10ms

b) t = tbloque+tseek+tlatencia = 10+8+2 = 20ms

c) Ancho de banda = 2.56/20*10-3 =128Mb

d) t total = tfase1+tfase2+tfase3 = 8*20+0.4*ttotal+4*20 -> ttotal = 400ms y tfase2 = 160ms

e) Ancho de banda = 2.56*8Mb/20*10^-3 = 1024Mb

f) Ancho de banda = 2.56*4Mb/20*10^-3 = 523Mb

g) Speedup fase1 = 160/20 = 8(700%)

h) Speedup fase3 = 80/20 = 4(300%)

i) i Speedup apliación = 400/200 = 2(100%)

4.2

a) RAID 6: 60-2discos*300GB = 17400GB
RAID 10:(60/2)discos*300GB = 9000GB
RAID 50: (9*6)discos*300GB = 16200GB
RAID 51: (60/2 -1)discos*300GB = 8700GB

b) 100Mb * 60 discos = 6GB/s

c) 6GB/s

d) RAID 6: 100MB*58discos = 5800MB/s
RAID 10: 100MB*30discos = 3000Mb/s
RAID 50: 100MB*54discos = 5400Mb/s
RAID 51: 100MB*”29discos = 2900 MB/s

e) RAID 6: 100MB*60/6 discos = 1GB/s
RAID 10: 100MB*60/2discos = 3GB/s
RAID 50: 100Mb*60/4discos = 1.5GB/s

RAID 51: 100Mb *(60/4)/2 discos = 0.75GB/s