Given:

8 HDD with …..Read/Write = 60 ms & Seek = 5 ms

Job: R9 W9 W10 W11 W13 W18 W19 W20 R21

RAID 0

|  |  |  |
| --- | --- | --- |
|  | SEEK | R/W |
| R9 | 5 | 60 |
| W9 | 5 | 60 |
| W10 | PARA | 0 |
| W11 | PARA | 0 |
| W13 | PARA | 0 |
| W18 | PARA | 0 |
| W19 | PARA | 0 |
| W20 | PARA | 0 |
| R21 | 5 | 60 |

Total runtime = seek + r/w

RAID 1

|  |  |  |
| --- | --- | --- |
|  | SEEK | R/W |
| R9 | 5 | 60 |
| W9 | 5 | 60 |
| W10 | 0 – next in line. (like a single HDD) | 60 |
| W11 | 0 – next in line. (like a single HDD) | 60 |
| W13 | 0 – next in line. (like a single HDD) | 60 |
| W18 | 5 | 60 |
| W19 | 0 – next in line. (like a single HDD) | 60 |
| W20 | 0 – next in line. (like a single HDD) | 60 |
| R21 | 5 – some will/may need to seek to the correct location | 60 |

RAID 01 – assume default setup, as depicted in the slide, that is two RAID0 (of 4HDDs) both in a RAID1 configuration.

|  |  |  |
| --- | --- | --- |
|  | SEEK | R/W |
| R9 | 5 | 60 |
| W9 | 5 | 60 |
| W10 | 0 – next in line. (like a single HDD) | 60 |
| W11 | 0 – next in line. (like a single HDD) | 60 |
| W13 | 0 – next in line. (like a single HDD) | 60 |
| W18 | 5 | 60 |
| W19 | 0 – next in line. (like a single HDD) | 60 |
| W20 | 0 – next in line. (like a single HDD) | 60 |
| R21 | 5 – some will/may need to seek to the correct location | 60 |

RAID 100 - assume default setup, as depicted in the slide that is 4 RAID1 (of 2HDDs) each pair in a RAID0 configuration, with these pairs in a further RAID0 configuration.

|  |  |  |
| --- | --- | --- |
|  | SEEK | R/W |
| R9 | 5 | 60 |
| W9 | 5 | 60 |
| W10 | PARA | 0 |
| W11 | PARA | 0 |
| W13 | PARA | 0 |
| W18 | 5 | 60 |
| W19 | PARA | 0 |
| W20 | PARA | 0 |
| R21 | 5– some will/may need to seek to the correct location | 60 |