

Worksheet 15

2/24/2025

8 Points Possible

Attempt 1



2/24/2025

NEXT UP: Review Feedback

Attempt 1 Score:

N/A



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Unlimited Attempts Allowed**Details****Q1:** Think of the advantages/disadvantages of network attached storage.**Q2:** Assume you have two independent disks mirrored disks for redundancy with:

MTBF: Mean Time Between Failures: 100,000 hours ~ 11 years.

MTTDL: Mean Time To Repair: 10 hours.

What is the mean time to Data Loss?

Answer1:

Advantages:

- Convenient sharing
- Simultaneously access for all clients

Disadvantages:

- Lower efficiency and performance compared to direct-attached storage
- Increased latency

Answer2:

MTTDL = 10 hours

MTBF = 10^5 hoursIndependent disk, $N = 2$

Mean time to data loss = $\frac{MTBF^2}{N(N-1)} \times MTTDL = \frac{(10^5)^2}{2(2-1)} \times 10 = \frac{10^{10}}{2 \times 10} = 0.5 \times 10^9 = 5 \times 10^8$ years (Ans)