

Numbers and Operations: IT Software Specialist

Hewlett Packard

Job Description: Provide operating system support and consulting to our worldwide customers.

Problem:

Our data center has a total of 65 computers. Each quarter we need to report to our customers the percentage of uptime for the data center.

If we are reporting for the months August, September, and October and there are 49 computers that are up 100% of the time, what is the percentage of computers available 100%.

If the total downtime of all 65 computers totals 2,435 minutes, what is the average downtime per computer per month?

What is the total uptime percentage?

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Solution:

$$(49 \div 65) = 0.7538 \times 100 = 75.38\% \text{ computers available } 100\%$$

$$(2435 \div 65) \div 3 = 12.49 \text{ min. average downtime/computers per month}$$

$$(60 \text{ min.} \times 24 \text{ hrs.}) = \text{total minutes in a day} = 1440 \text{ minutes}$$

$$(31 \text{ days} + 30 \text{ days} + 31 \text{ days}) = \text{total days in 3 months} = 92 \text{ days}$$

$$1440 \times 92 \times 65 = 8,611,200 \text{ total possible computing minutes}$$

$$8,611,200 - 2,435 = 8,608,765 \text{ total actual computing minutes}$$

$$(8,608,765 \div 8,611,200) = .9997 \times 100 = 99.97\% \text{ uptime}$$