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**Chapter 1 Q&A**

1. ***Explain the term network management in one sentence.***

***Answer:*** Network management is the use of [hardware](http://en.wikipedia.org/wiki/Computer_hardware) and [software](http://en.wikipedia.org/wiki/Software) to maintain reliable operation, monitors, and administrate a [computer network](http://en.wikipedia.org/wiki/Computer_network).

1. ***We used a patient in intensive care as one analogy to explain network management. Can you think of areas in network management that this analogy does not capture?*** ***Answer:*** An area that the analogy did not capture is the administration of [computer hardware](http://en.wikipedia.org/wiki/Computer_hardware) and software systems that make up a [computer network](http://en.wikipedia.org/wiki/Computer_network)
2. ***Can you think of other areas in which you would expect analogies to network management to apply?***

***Answer:*** Monitoring and control are involved in many areas as security, transportation and utility companies.

1. ***Give two examples of how network management can help an enterprise IT department save money.***

***Answer:*** One example is that network management can do routine tasks with out have a person involved. Another example is being more efficient with network operation. Software can spot deficiency and correct the problem faster to maintain reliable operation.

1. ***Give two examples of how network management can help service provider increase revenue.***

***Answer:*** Service provisioning system can allow service providers the capability to proved faster hook up for customers to use the service and collect revenue quicker. Network management provides new service that result in new revenue by the use of software.

**6. *A famous requirement for availability is “five nines.” This refers to the requirement that a device or a service must be available 99.999 percent of the time. Assume that you have a device with hardware availability of 99.9995 percent. Now assume that an operational error is made that causes the device to go offline for 5 minutes until the error is corrected.Calculated over a period of a month, how much has the operational error just caused availability to drop?***

***Answer:*** (30 24 60 60) = 2,592,000 seconds in a month. The rate of 99.9995 percent will be 2,591,987 seconds. It is available for 2,591,687 seconds

1. ***How does the perspective under which network management is approached often differ for an enterprise IT department compared to a service provider?***

***Answer:*** Service provider will invest more in custom infrastructure. Enterprise IT department will have loss money to buy custom and relay on commercial infrastructure or third-party management application.

1. ***Name at least two factors that can be important to the business success of a third-party management application vendor that potentially has to compete with a network management offering of a network equipment vendor.***

***Answer:*** Third-party management software applications most fill the management application gap that equipment vendors leave open to succeed. Third-party management software applications must be able to support multiple vendors.

1. ***What does the term swivel-chair syndrome refer to, and why is this undesired?***

***Answer:*** It refers to the problem of a lack of integration between management applications, each vendors has it different management applications that leads to “swivel-chair syndrome”, an operator has move from one application to the other. Swivel-chair syndrome is undesirable because it led to inefficiencies.

1. ***Name two or more reasons for network management applications to be approached as distributed systems.***

***Answer:*** Management applications are distributed because they are involved in communication among multiple network equipment. Management applications help to address scaling requirements that might require the need to add hardware.

**Chapter 2 Q&A**

**1. *Is running a network only a matter of network management technology, or are there other considerations?***

 ***Answer:*** No, running a network is also a matter of organization, procedures, and human factors.

**2. *What does Pat’s employer use to track the resolution of problems in the network?***

***Answer:*** Problems are tracked through trouble tickets. Trouble tickets contain all the information pertaining to the problem and the procedures that have been taken to resolve it.

**3. *How does the integration of the work order system with the trouble ticket system make Pat’s job easier?***

 ***Answer:*** It saves Pat time from having to enter take each employee what they did, how long they took to complete, etc. Also allows her to easily check on the status of the resolution of the problem in the trouble ticket.

***4. Which network provider do you think will be more vulnerable to human failures by operations personnel, Pat’s or Chris’s?***

 ***Answer:*** Chris will be more vulnerable to human failures by operations personnel because Chris makes his own procedures and policies of doing thing. If Chris is suck no one will know what procedures to follow and disruptions the company’s operations.

**5. *Which of the following can be used as management tools? A. alarm management system, B. spreadsheet, C. pencil and piece of paper, D. all of them.***

 ***Answer:*** The correct answer is D.

1. ***In how many different places does Chris need to maintain the same phone number, and why could this be an issue?***

***Answer:*** Chris need to maintain the same phone number in four different places (company directory, number inventory, and IP PBX and voice-mail configuration). The phone number should maintain in different places because different people may accuses the numbers in different ways.

1. ***When Chris is worried about compromised security of his company’s network, does the threat come from outside attackers or from within the network?***

  **Answer:** The threat come from within the network.

**8. *Connectivity between different company sites is provided by an outside MSP. Why is Chris nevertheless concerned with monitoring traffic statistics across these outside connections?***

**Answer:** Chris need to make sure his company in getting what they pay for from MSP.

**9. *When Sandy wants to implement a security policy for the Internet Data Center, at what different levels does she take security into account?***

**Answer:** Sandy sould take security into account in all level.

**10. *Why is Sandy interested in “old” performance data and traffic statistics, even though she is not monitoring actual network operations?***

**Answer:** She uses the performance data and traffic statistics to see how the different components in the data center where working.