

Business Data Networks and Security, 11e (Panko)
Chapter 3 Network Management

1) In QoS, the S stands for _____.

- A) software
- B) security
- C) service
- D) satisfaction

Answer: C

Difficulty: Basic

Question: 1a

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology

2) QoS is quantified through _____.

- A) criteria
- B) consensus
- C) metrics
- D) none of the above

Answer: C

Difficulty: Basic

Question: 1b

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology

3) Transmission speed is normally measured in _____.

- A) bits per second
- B) bytes per second
- C) octets per second
- D) none of the above

Answer: A

Difficulty: Basic

Question: 2a

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology

4) Throughput is _____.

- A) the speed a network actually provides to users
- B) a network's rated speed
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Basic

Question: 3a

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Application of Knowledge

5) Users of an access point share the transmission capacity of the access point. The throughput a user gets is called the _____.

- A) rated speed
- B) aggregate throughput
- C) individual throughput
- D) all of the above

Answer: C

Difficulty: Deeper

Question: 3b

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Application of Knowledge

6) In a coffee shop hot spot, the rated speed is 10 Mbps. Throughput is about half of the rated speed. There are ten people using the hot spot. If you and three others are transmitting or receiving at the same time, what speed should you expect to get?

- A) 0.5 Mbps
- B) 1 Mbps
- C) 1.25 Mbps
- D) none of the above

Answer: C

Difficulty: Deeper

Question: 3c

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

7) In a coffee shop, there are ten people sharing an access point with a rated speed of 2Gbps. The throughput is half the rated speed. If each person downloading is getting an average of 200Mbps, how many people are using the Internet at that moment?

- A) 10
- B) 5
- C) 2
- D) none of the above

Answer: B

Difficulty: Deeper

Question: 3d

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

8) Trunk lines in the Internet core are _____.

- A) dedicated
- B) multiplexed
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Deeper

Question: 4a

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

9) The business benefit of multiplexing is _____.

- A) lower cost
- B) higher speed
- C) avoiding the need to send many transmission links through narrow conduits
- D) security

Answer: A

Difficulty: Basic

Question: 4c

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

10) _____ is the percentage of time that a network is available for use.

- A) Availability
- B) Downtime
- C) QoS
- D) none of the above

Answer: A

Difficulty: Basic

Question: 5a

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology

11) Which of the following usually has higher availability?

- A) data networks
- B) public switched telephone network (PSTN)
- C) Both of the above usually have equal availability.
- D) neither A nor B

Answer: B

Difficulty: Deeper

Question: 5a

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

12) Error rates can soar when the network traffic level is at a(n) _____.

- A) high level
- B) fluctuating level
- C) unregulated level
- D) none of the above

Answer: A

Difficulty: Deeper

Question: 5b

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

13) When a packet travels through a network, the time it takes to get from the sender to the receiver is called _____.

- A) latency
- B) output
- C) jitter
- D) throughput

Answer: A

Difficulty: Basic

Question: 5c

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking

14) Latency is usually measured in _____.

- A) bits per second (bps)
- B) milliseconds (ms)
- C) minutes of downtime
- D) none of the above

Answer: B

Difficulty: Basic

Question: 5d

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology

15) Variability in delay is called _____.

- A) jitter
- B) variance
- C) a QoS failure
- D) latency

Answer: A

Difficulty: Basic

Question: 5e

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Application of Knowledge

16) Jitter is a problem for _____.

- A) voice over IP (VoIP)
- B) streaming media
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Deeper

Question: 5e

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

17) Jitter is a problem for _____.

- A) downloading a file attached to an e-mail
- B) e-mail
- C) both A and B
- D) neither A nor B

Answer: D

Difficulty: Deeper

Question: 5e

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

18) Adding applications that cannot tolerate jitter may require _____.

- A) switch upgrades
- B) improved switch management
- C) improved security
- D) all of the above

Answer: A

Difficulty: Basic

Question: 5f

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Application of Knowledge

19) Guarantees for quality of service are called _____.

- A) QoS-G
- B) QoS metrics
- C) SLAs
- D) QoS guarantees

Answer: C

Difficulty: Basic

Question: 6a

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology

20) An SLA specifies the _____.

- A) best case
- B) worst case
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Deeper

Question: 6b

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology

21) An SLA specifies _____.

- A) maximum speed
- B) minimum speed
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Deeper

Question: 5c

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

22) An SLA specifies _____.

- A) maximum availability
- B) minimum availability
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Deeper

Question: 5d

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

23) An SLA specifies _____.

- A) maximum latency
- B) minimum latency
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Deeper

Question: 5d

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

24) An SLA specifies _____.

- A) maximum jitter
- B) minimum jitter
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Deeper

Question: 5f

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

25) If throughput falls substantially below a QoS guaranteed speed, the ISP _____.

- A) always pays a penalty
- B) may pay a penalty
- C) does not pay a penalty
- D) may renegotiate the QoS guarantee for speed

Answer: B

Difficulty: Deeper

Question: 5g

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

26) ISPs usually offer QoS guarantees to _____.

- A) residential customers
- B) business customers
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Basic

Question: 5i

Objective: Discuss quality of service and service level agreements.

AACSB: Applying Information Technology, Application of Knowledge

27) If you have 10 sites connected by 7 transmission links, how many rows of traffic data will you have in your traffic table?

- A) 7
- B) 10
- C) 14
- D) 20

Answer: B

Difficulty: Deeper

Question: 7f

Objective: Design network layouts based on traffic requirements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

28) If you have 10 sites connected by 7 transmission links, how many columns will you have in your traffic table?

- A) 7
- B) 10
- C) 14
- D) 20

Answer: A

Difficulty: Basic

Question: 7g

Objective: Design network layouts based on traffic requirements.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

29) _____ can be addressed by using priority.

- A) Chronic lacks of capacity
- B) Momentary traffic peaks
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Deeper

Question: 10a

Objective: Discuss how to deal with momentary traffic peaks.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

30) Momentary traffic peaks usually last a few _____ or less.

- A) milliseconds
- B) seconds
- C) minutes
- D) hours

Answer: B

Difficulty: Basic

Question: 10b

Objective: Discuss how to deal with momentary traffic peaks.

AACSB: Applying Information Technology

31) Momentary traffic peaks can lead to _____.

- A) latency
- B) packet loss
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Deeper

Question: 10c

Objective: Discuss how to deal with momentary traffic peaks.

AACSB: Applying Information Technology, Application of Knowledge

32) The damage of momentary traffic peaks can be addressed by _____.

- A) using priority
- B) adding more capacity
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Basic

Question: 10d

Objective: Discuss how to deal with momentary traffic peaks.

AACSB: Applying Information Technology, Application of Knowledge

33) Compared to priority, overprovisioning capacity can reduce _____.

- A) equipment cost
- B) management labor
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Basic

Question: 10e

Objective: Discuss how to deal with momentary traffic peaks.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

34) To handle momentary traffic peaks, which would you give higher priority to?

- A) e-mail
- B) VoIP
- C) both A and B
- D) It is impossible to say with the information provided.

Answer: B

Difficulty: Basic

Question: 10f

Objective: Discuss how to deal with momentary traffic peaks.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

35) Which of the following reduces momentary traffic peaks by controlling how much traffic is allowed into the network?

- A) overprovisioning
- B) priority
- C) QoS guarantees
- D) none of the above

Answer: D

Difficulty: Basic

Question: 10g

Objective: Discuss how to deal with momentary traffic peaks.

AACSB: Applying Information Technology, Application of Knowledge

36) Traffic shaping may _____ traffic that is undesirable.

- A) prohibit
- B) limit
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Deeper

Question: 10h

Objective: Discuss how to deal with momentary traffic peaks.

AACSB: Applying Information Technology, Application of Knowledge

37) Priority is a way to handle a chronic lack of capacity.

Answer: FALSE

Difficulty: Deeper

Question: 10i

Objective: Discuss how to deal with momentary traffic peaks.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

38) SNMP agents communicate with the _____.

- A) network visibility program
- B) network management program
- C) MIB
- D) all of the above

Answer: B

Difficulty: Deeper

Question: 11a

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Application of Knowledge

39) SNMP network management _____.

- A) increases total cost
- B) does not affect total cost
- C) decreases total cost
- D) causes arthritis

Answer: C

Difficulty: Deeper

Question: 11b

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

40) To determine if a host is reachable, you send a(n) _____.

- A) SNMP SET command
- B) MIB
- C) trap
- D) ping

Answer: D

Difficulty: Basic

Question: 12a

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

41) Ping tells you _____.

- A) that a host is reachable
- B) latency in the connection to the host
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Deeper

Question: 12b

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Application of Knowledge

42) Ping tells you _____.

- A) latency
- B) round-trip latency
- C) cumulative latency to each router along the route
- D) none of the above

Answer: B

Difficulty: Deeper

Question: 12c

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Application of Knowledge

43) Which of the following tells you the cumulative round-trip latency to each router along the route to the host?

- A) Ping
- B) Traceroute
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Basic

Question: 12e

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

44) Which of the following is NOT governed by the SNMP standard?

- A) agents
- B) MIB
- C) network management program
- D) network visibility program

Answer: D

Difficulty: Deeper

Question: 13a

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

45) In SNMP, the manager communicates directly with the managed device.

Answer: FALSE

Difficulty: Deeper

Question: 13b

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Application of Knowledge

46) SNMP Set commands can _____.

- A) ask agents for information about the managed device
- B) change router operation
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Deeper

Question: 13c

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

47) SNMP Get commands can _____.

- A) ask agents for information about the managed device
- B) change router operation
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Deeper

Question: 13c

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

48) The SNMP _____ command changes how managed devices operate.

- A) Get
- B) Set
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Basic

Question: 13c

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

49) The SNMP manager stores the information it receives from Get commands _____.

- A) in the MIB
- B) on the agent
- C) on the managed device
- D) in the cloud

Answer: A

Difficulty: Basic

Question: 13d

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Application of Knowledge

50) Using the SNMP Set command _____.

- A) saves management labor
- B) requires excellent security
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Deeper

Question: 13e

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

51) SNMP agents can initiate _____.

- A) Get commands
- B) traps
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Basic

Question: 13f

Objective: Describe centralized network management.

AACSB: Applying Information Technology

52) For analysis, network administrators usually interact primarily with _____.

- A) agents
- B) the MIB
- C) the network management program
- D) the network visualization program

Answer: D

Difficulty: Deeper

Question: 13h

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

53) Using standard configurations _____.

- A) saves money
- B) gives management agility
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Deeper

Question: 14b

Objective: Describe centralized network management.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

54) SDN holds the promise of bringing _____.

- A) lower cost
- B) lower agility
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Deeper

Question: 15a

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

55) SDN can _____.

- A) permit routing rules to be changed rapidly
- B) reduce router costs
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Deeper

Question: 15a

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

56) Creating switching tables is an example of _____.

- A) forwarding
- B) routing complexity
- C) hardwiring
- D) control

Answer: D

Difficulty: Deeper

Question: 15b

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

57) Creating routing tables is an example of _____.

- A) forwarding
- B) routing complexity
- C) hardwiring
- D) control

Answer: D

Difficulty: Deeper

Question: 15b

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

58) Routing packets is an example of _____.

- A) forwarding
- B) routing complexity
- C) hardwiring
- D) control

Answer: A

Difficulty: Deeper

Question: 15b

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

59) Control is done on individual switches and routers in _____.

- A) traditional operation
- B) SDN
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Deeper

Question: 15c

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Application of Knowledge

60) Forwarding functions are located in routers in _____.

- A) traditional operation
- B) SDN
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Deeper

Question: 15c

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Application of Knowledge

61) In SDN, a switch receives its forwarding table rules directly from _____.

- A) the SDN controller
- B) an SDN management application
- C) another switch
- D) an SNMP manager

Answer: A

Difficulty: Deeper

Question: 15c

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

62) In SDN, which device manages the control function for individual devices?

- A) SNMP manager console
- B) forwarding device itself
- C) SDN policy server
- D) SDN controller

Answer: D

Difficulty: Deeper

Question: 15d

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

63) Communication between SDN applications and SDN controllers is governed by _____.

- A) northbound APIs
- B) southbound APIs
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Deeper

Question: 15e

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

64) Communication between SDN controllers and routers is governed by _____.

- A) northbound APIs
- B) southbound APIs
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Deeper

Question: 15e

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

65) Routers and switches must support _____.

- A) northbound APIs
- B) Southbound APIs
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Deeper

Question: 15g

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

66) In SDN, applications _____.

- A) increase network management labor
- B) are required to make SDN work effectively
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Basic

Question: 15h

Objective: Describe software-defined networking.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge