



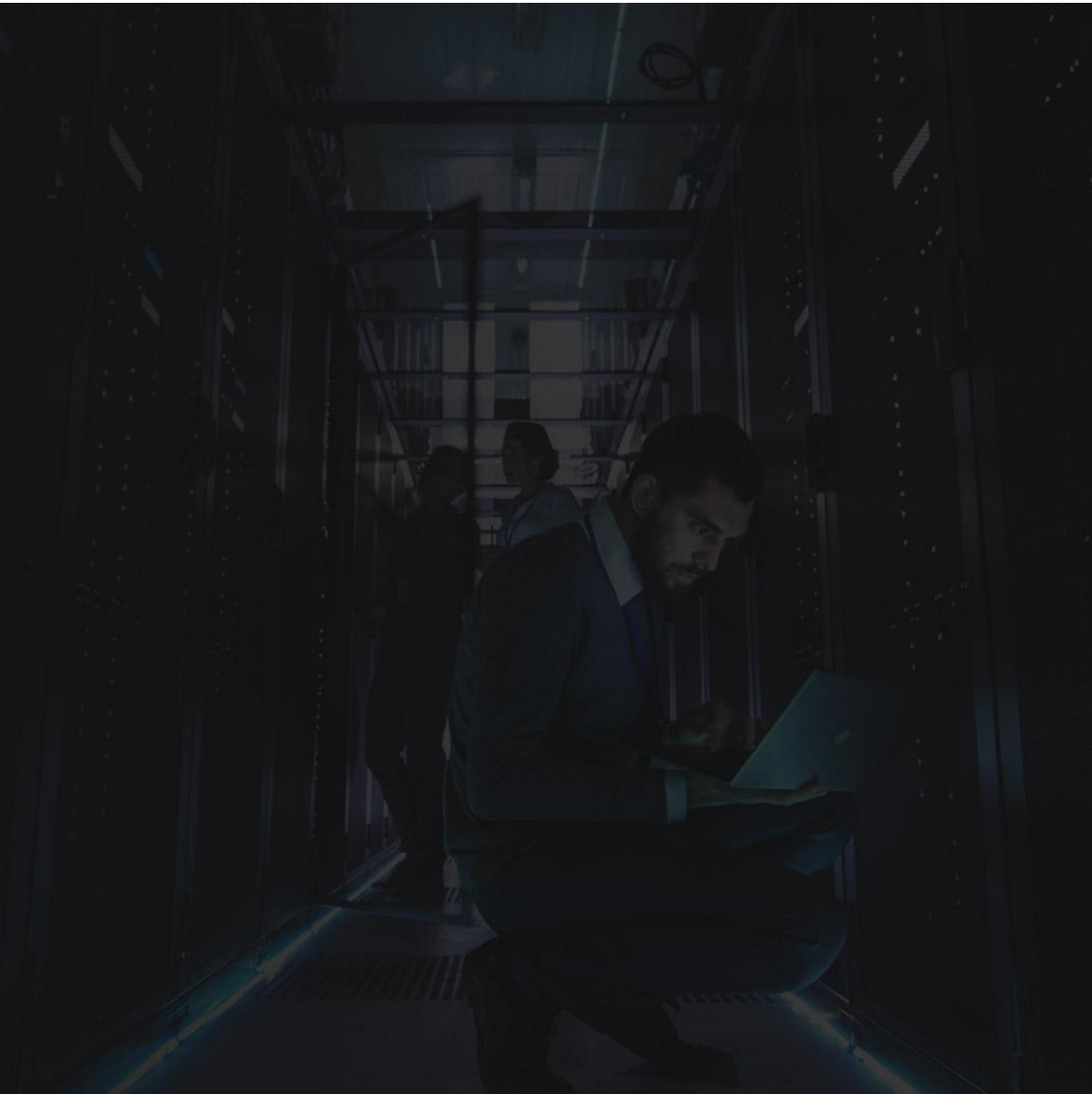
Network Topology Architectures & WANs

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Question-1

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Question-1

- + In a three-tier campus LAN design, which category of switch forwards traffic between user devices?
- + [1.2.b]

☐

A. Distribution Switches

☐

B. Core Switches

☐

C. Remote Switches

☐

D. Access Switches

☐

E. Aggregation Switches

ANSWER

- + In a three-tier campus LAN design, which category of switch forwards traffic between user devices?
- + [1.2.b]

☐

A. Distribution Switches

☐

B. Core Switches

☐

C. Remote Switches

☒

D. Access Switches

☐

E. Aggregation Switches



Question-2

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Question-2

- + Fill-in-the-blanks in the sentence below:
- + A 2-tier campus design typically implements a _____-topology at the access layer and a _____-topology at the distribution layer.
- + [1.2.a]

☐

A. Star, Partial Mesh

☐

B. Full Mesh, Star

☐

C. Partial Mesh, Full Mesh

☐

D. Star, Star

☐

E. Full Mesh, Full Mesh

ANSWER

- + Fill-in-the-blanks in the sentence below:
- + A 2-tier campus design typically implements a _____-topology at the access layer and a _____-topology at the distribution layer.
- + [1.2.a]



A. Star, Partial Mesh



B. Full Mesh, Star



C. Partial Mesh, Full Mesh



D. Star, Star



E. Full Mesh, Full Mesh



Question-3

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Question-3

+ Which of the following answers provides an alternative name for a “Collapsed Core” campus network design?

+ [1.2.a]

☐

A. 2-tier design

☐

B. 3-tier design

☐

C. Single-layer design

☐

D. Hybrid switched design

ANSWER

+ Which of the following answers provides an alternative name for a “Collapsed Core” campus network design?

+ [1.2.a]



A. 2-tier design



B. 3-tier design



C. Single-layer design



D. Hybrid switched design



Question-4

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Question-4

- + What role of switch exists in a 3-tier campus design that does not exist in a 2-tier campus design?
- + [1.2.b]

☐

A. Distribution

☐

B. Access

☐

C. Core

☐

D. Aggregation

☐

E. Edge

ANSWER

- + What role of switch exists in a 3-tier campus design that does not exist in a 2-tier campus design?
- + [1.2.b]

☐

A. Distribution

☐

B. Access

☒

C. Core

☐

D. Aggregation

☐

E. Edge



Question-5

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Question-5

+ Match the 2-Tier topology designs with their correct definitions [1.2.a]

A Hybrid

B Star

C Partial Mesh

D Full Mesh

Each node has a link to every other node

1

One central device that connects all others

2

A design that incorporates multiple design concepts

3

Connections exist between some nodes but not all

4

Answer

+ Match the 2-Tier topology designs with their correct definitions [1.2.a]

(A)	Hybrid	A design that incorporates multiple design concepts	(3)
(B)	Star	One central device that connects all others	(2)
(C)	Partial Mesh	Connections exist between some nodes but not all	(4)
(D)	Full Mesh	Each node has a link to every other node	(1)



Question-6

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Question-6

+ Which of the following statements are true about spine and leaf network topology designs?

+ *(Select three answers)*

+ [1.2.c]

☐

A. Each leaf switch must connect to every other leaf switch.

☐

B. Each spine switch must connect to every other spine switch.

☐

C. Each spine switch must connect to every leaf switch.

☐

D. A spine switch must not connect to another spine switch.

☐

E. Endpoints connect only to leaf switches

☐

F. Endpoints connect only to spine switches

ANSWER

+ Which of the following statements are true about spine and leaf network topology designs?

+ *(Select three answers)*

+ [1.2.c]

☐

A. Each leaf switch must connect to every other leaf switch.

☐

B. Each spine switch must connect to every other spine switch.

☒

C. Each spine switch must connect to every leaf switch.

☒

D. A spine switch must not connect to another spine switch.

☒

E. Endpoints connect only to leaf switches

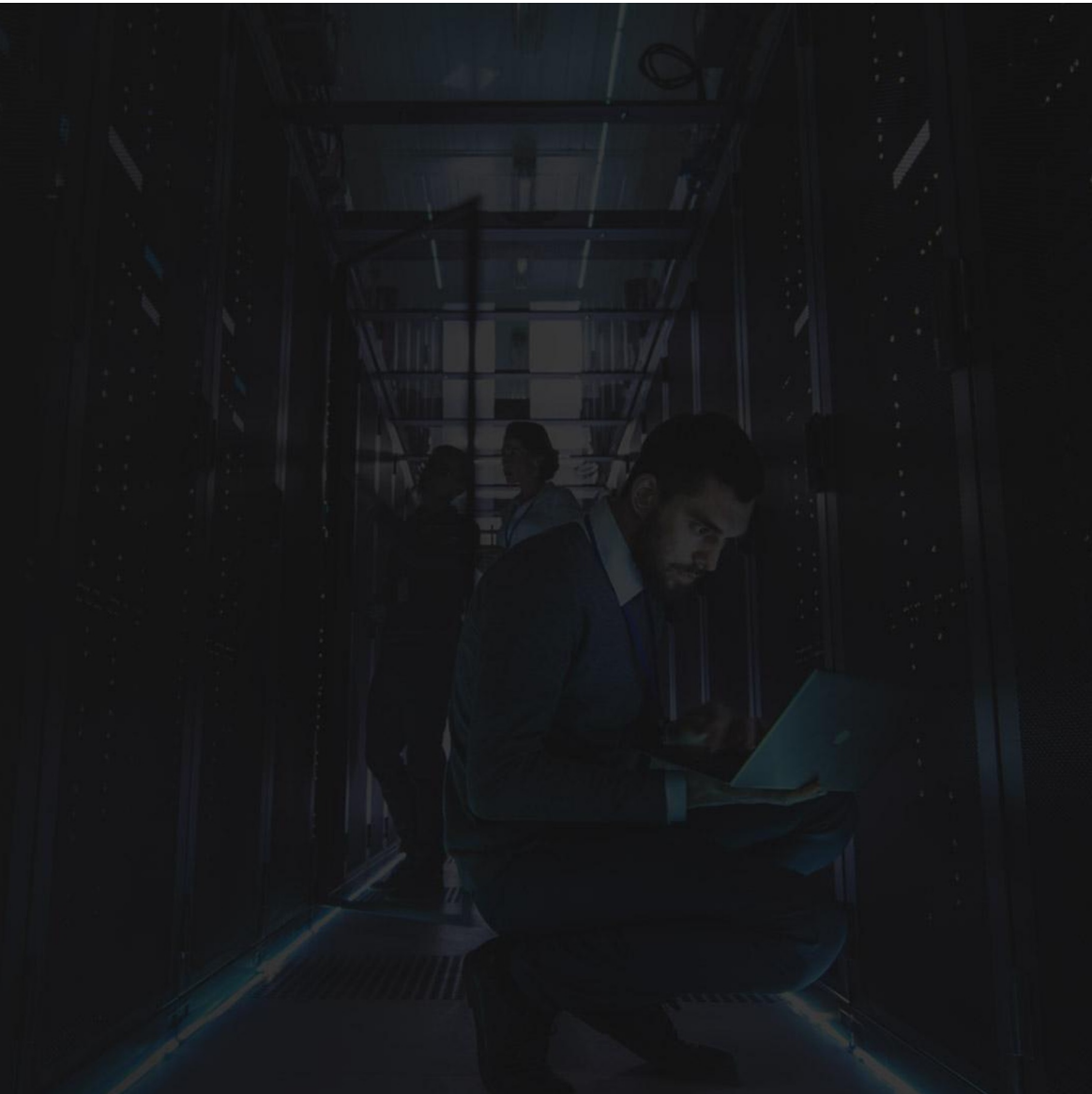
☐

F. Endpoints connect only to spine switches



Question-7

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Question-7

- + Which of the following statements comparing 2-tier designs to spine-leaf designs are true?
- + (Select two answers)
- + [1.2.a, 1.2.c]

☐

A. Unlike a 2-tier design, in a spine-leaf design the spine switches have redundant connections to each other.

☐

B. Unlike a spine-leaf design, in a 2-tier design the distribution switches have redundant connections to each other.

☐

C. Unlike a 2-tier design, in a spine-leaf design each leaf switch has a connection to every spine switch.

☐

D. Unlike a spine-leaf design, in a 2-tier design each access switch has a connection to every distribution switch.

ANSWER

- + Which of the following statements comparing 2-tier designs to spine-leaf designs are true?
- + (Select two answers)
- + [1.2.a, 1.2.c]

☐

A. Unlike a 2-tier design, in a spine-leaf design the spine switches have redundant connections to each other.

☒

B. Unlike a spine-leaf design, in a 2-tier design the distribution switches have redundant connections to each other.

☒

C. Unlike a 2-tier design, in a spine-leaf design each leaf switch has a connection to every spine switch.

☐

D. Unlike a spine-leaf design, in a 2-tier design each access switch has a connection to every distribution switch.



Question-8

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Question-8

- + When an Enterprise router or switch connects to a Metro Ethernet network, what dictates the protocols and standards that can be implemented on the Ethernet Access Link?
- + [WAN Protocols & Functionality]

☐ A. NNI

☐ B. UNI

☐ C. ENI

☐ D. NIC

☐ E. UNN

ANSWER

- + When an enterprise router or switch connects to a Metro Ethernet network, what dictates the protocols and standards that can be implemented on the Ethernet Access Link?
- + [WAN Protocols & Functionality]

☐ A. NNI

☒ B. UNI

☐ C. ENI

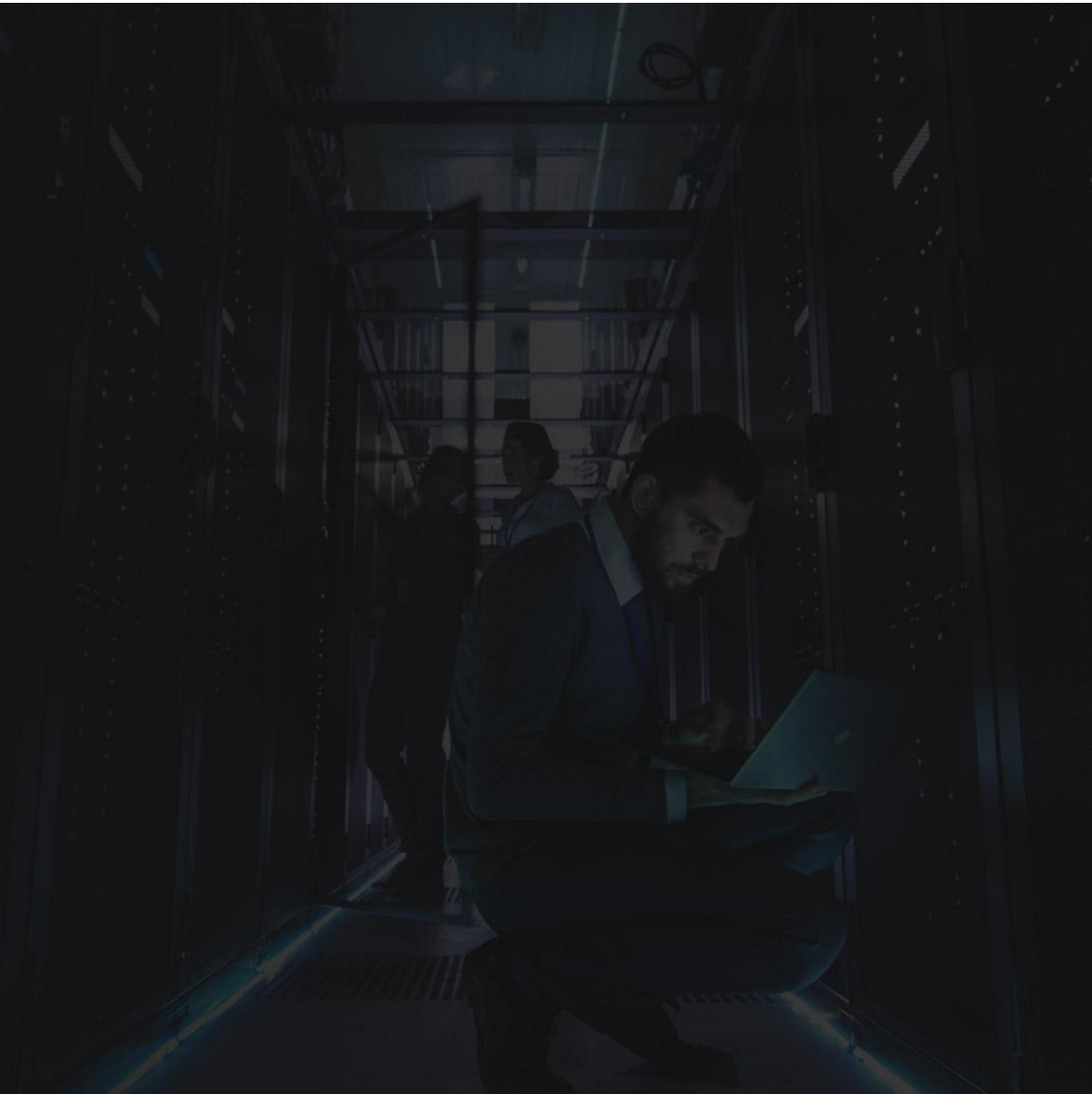
☐ D. NIC

☐ E. UNN



Question-9

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Question-9

- + In terms of Metro Ethernet, what term defines (within the Service Provider's MetroE "cloud") which user (customer) device is allowed to communicate with other user devices?
- + [WAN Protocols & Functionality]

☐ A. SVC

☐ B. NNI

☐ C. UNI

☐ D. EVC

☐ E. DDI

ANSWER

+ In terms of Metro Ethernet, what term defines (within the Service Provider's MetroE "cloud") which user (customer) device is allowed to communicate with other user devices?

+ [WAN Protocols & Functionality]

☐ A. SVC

☐ B. NNI

☐ C. UNI

☒ D. EVC

☐ E. DDI



Question-10

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Question-10

- + Which type of Metro Ethernet service supports a full mesh between all connected endpoints?
- + *[WAN Protocols & Features]*

☐

A. E-Line

☐

B. E-LAN

☐

C. E-Tree

☐

D. E-Web

☐

E. E-Mesh

ANSWER

- + Which type of Metro Ethernet service supports a full mesh between all connected endpoints?
- + *[WAN Protocols & Features]*

☐

A. E-Line

☒

B. E-LAN

☐

C. E-Tree

☐

D. E-Web

☐

E. E-Mesh



Question-11

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Question-11

+ Before which layer of the OSI model is an MPLS Label applied?

+ *[WAN Protocols & Features]*

☐

A. Before the Layer-2 header

☐

B. Before the Layer-3 header

☐

C. Before the Layer-4 header

☐

D. Before the Layer-5 header

☐

E. Before the Layer-7 header

ANSWER

+ Before which layer of the OSI model is an MPLS Label applied?

+ *[WAN Protocols & Features]*

☐

A. Before the Layer-2 header

☒

B. Before the Layer-3 header

☐

C. Before the Layer-4 header

☐

D. Before the Layer-5 header

☐

E. Before the Layer-7 header



Question-12

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Question-12

+ Which of the following statements about how Service Providers implement MPLS networks are true?

+ (Select two answers)

+ *[WAN Protocols & Features]*

☐ A. Customer edge routers form a routing relationship with provider edge routers.

☐ B. Customer edge routers form a routing relationship with other customer edge routers.

☐ C. The MPLS network provides security by encrypting customer data.

☐ D. The MPLS network provides security by isolating data between different customers

☐ E. The customer edge router applies the MPLS label to packets.

ANSWER

+ Which of the following statements about how Service Providers implement MPLS networks are true?

+ (Select two answers)

+ *[WAN Protocols & Features]*

☒ A. Customer edge routers form a routing relationship with provider edge routers.

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☒ D. The MPLS network provides security by isolating data between different customers

☐ E. The customer edge router applies the MPLS label to packets.



Question-13

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Question-13

- + Which type of access link technology is supported to connect to an MPLS network?
- + (Select one answer)
- + *[WAN Protocols & Features]*

☐

A. Ethernet

☐

B. Cable

☐

C. 4G/5G

☐

D. Serial

☐

E. All these answers are correct

ANSWER

- + Which type of access link technology is supported to connect to an MPLS network?
- + (Select one answer)
- + *[WAN Protocols & Features]*

☐

A. Ethernet

☐

B. Cable

☐

C. 4G/5G

☐

D. Serial

☒

E. All these answers are correct



Question-14

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Question-14

+ In WAN technologies implemented by Telcos, what is the acronym for the building where the Telco equipment resides?

+ [1.2.d]

☐ A. DoD

☐ B. LTIM

☐ C. FCS

☐ D. CO

☐ E. PE

ANSWER

+ In WAN technologies implemented by Telcos, what is the acronym for the building where the Telco equipment resides?

+ [1.2.d]

☐

A. DoD

☐

B. LTIM

☐

C. FCS

☒

D. CO

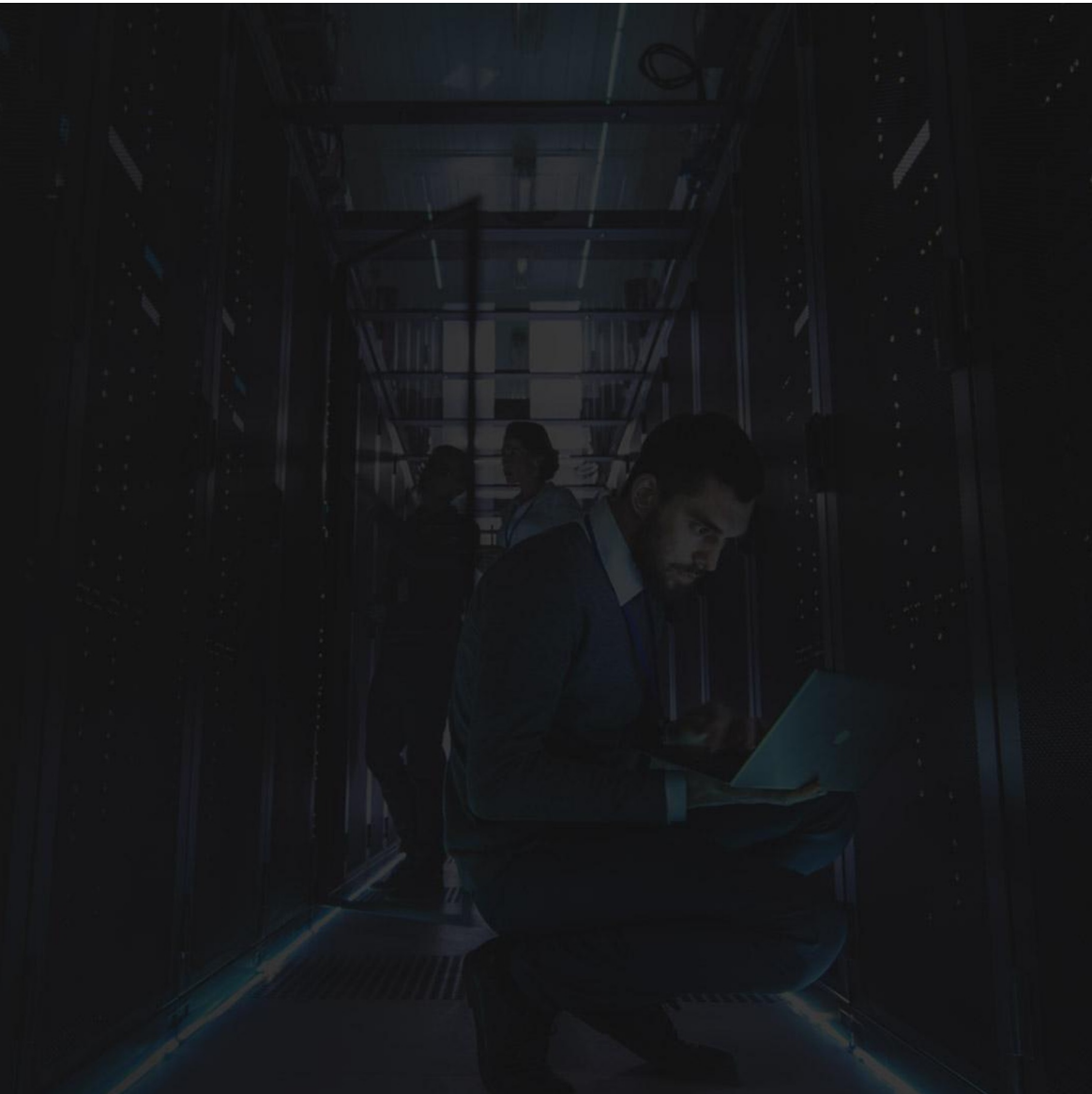
☐

E. PE



Question-15

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Question-15

+ Which of the following statements are true about leased lines?

+ (Select two answers)

+ [1.2.d]

☐ A. They sit at Layer-1 of the OSI model

☐ B. They sit at Layer-2 of the OSI model

☐ C. They define a data-link layer protocol

☐ D. They do not define a data link layer protocol

☐ E. They are primarily used for point-to-multipoint WANs

☐ F. They are primarily used for full-mesh WANs

ANSWER

- + Which of the following statements are true about leased lines?
- + (Select two answers)
- + [1.2.d]

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☐ B. They sit at Layer-2 of the OSI model

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☐ F. They are primarily used for full-mesh WANs



Question-16

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Question-16

- + Which of the following fields are used by HDLC to perform error correction?
- + [1.2.d]

☐

A. FCS

☐

B. CRC

☐

C. Type

☐

D. Control

☐

E. None of these answers are correct

ANSWER

+ Which of the following fields are used by HDLC to perform error correction?

+ [1.2.d]

☐

A. FCS

☐

B. CRC

☐

C. Type

☐

D. Control

☒

E. None of these answers are correct



Question-17

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Question-17

- + Which of the following is NOT included in the list of five criteria for a cloud computing service?
- + [1.2.f]

☐

A. On-demand self-service

☐

B. Broad network access

☐

C. Resource pooling

☐

D. Elastic routing

☐

E. Measured service

ANSWER

- + Which of the following is NOT included in the list of five criteria for a cloud computing service?
- + [1.2.f]

☐

A. On-demand self-service

☐

B. Broad network access

☐

C. Resource pooling

☒

D. Elastic routing

☐

E. Measured service



Question-18

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Question-18

+ In the context of the CCNA exam, which of the following statements about on-premise Private Clouds are true?

+ (Select the best answer)

+ [1.2.f]

- ☐ A. On-premise private cloud resources will be accessed via VPNs or dedicated WAN connections.
- ☐ B. On-premise private cloud resources are managed by a cloud provider.
- ☐ C. The users who request the resources of an on-premise private cloud, and the people that create the private cloud all work for the same company.
- ☐ D. The users who request the resources of an on-premise private cloud, and the people that create the private cloud work for different companies.

ANSWER

+ In the context of the CCNA exam, which of the following statements about on-premise Private Clouds are true?

+ (Select the best answer)

+ [1.2.f]

- ☐ A. On-premise private cloud resources will be accessed via VPNs or dedicated WAN connections.
- ☐ B. On-premise private cloud resources are managed by a cloud provider.
- ☒ C. The users who request the resources of an on-premise private cloud, and the people that create the private cloud all work for the same company.
- ☐ D. The users who request the resources of an on-premise private cloud, and the people that create the private cloud work for different companies.



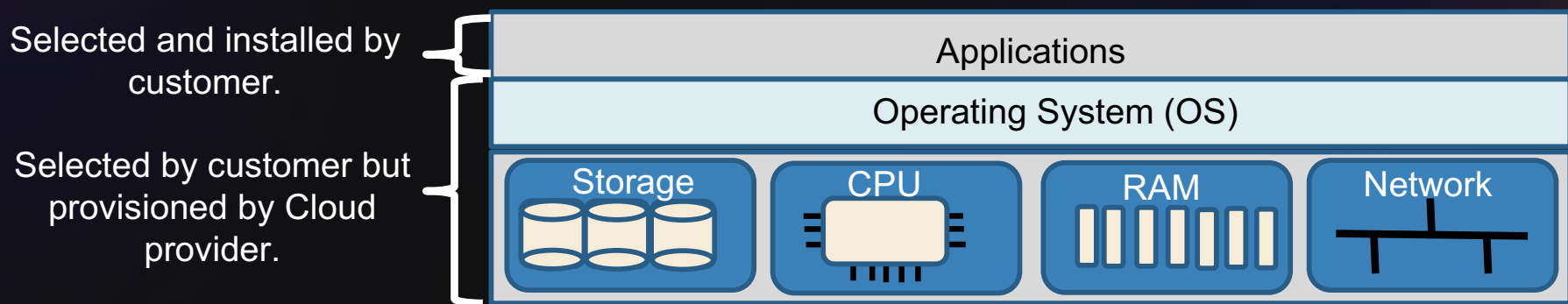
Question-19

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Question-19

+ Match the image with the correct service model. [1.2.f]

☐

A. IaaS

☐

C. PaaS

☐

E. None of these answers are correct

☐

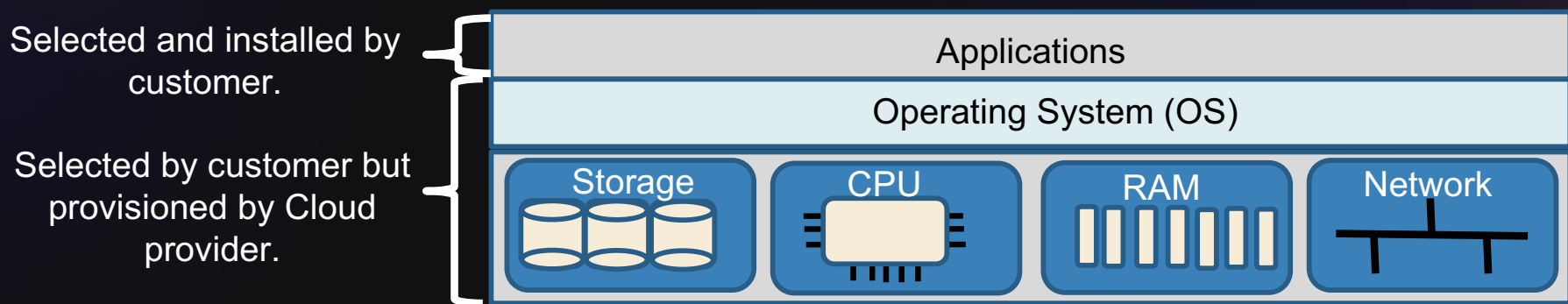
B. SaaS

☐

D. NaaS

ANSWER

+ Match the image with the correct service model. [1.2.f]



A. IaaS



C. PaaS



E. None of these answers are correct



B. SaaS



D. NaaS



Question-20

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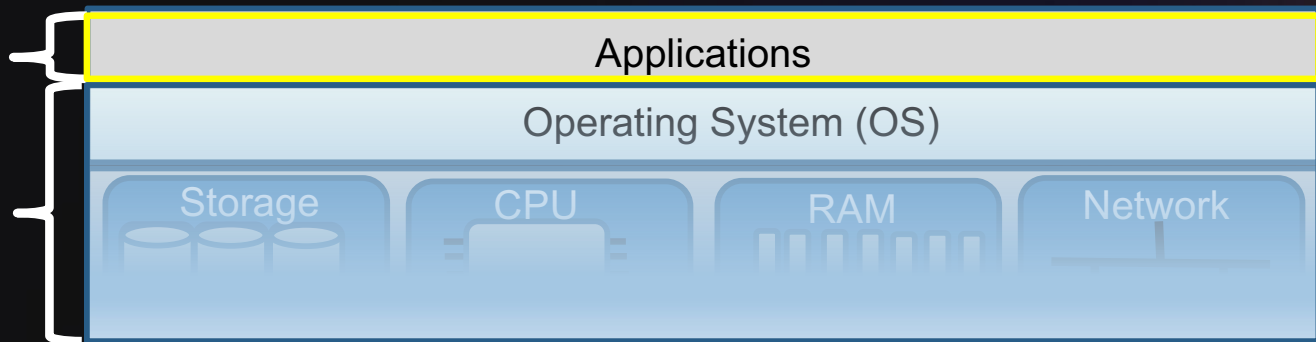


Question-20

+ Match the image with the correct service model. [1.2.f]

Selected by customer but
implemented & maintained
by Cloud provider.

Transparent to the end-
customer

☐

A. IaaS

☐

C. PaaS

☐

E. None of these
answers are
correct

☐

B. SaaS

☐

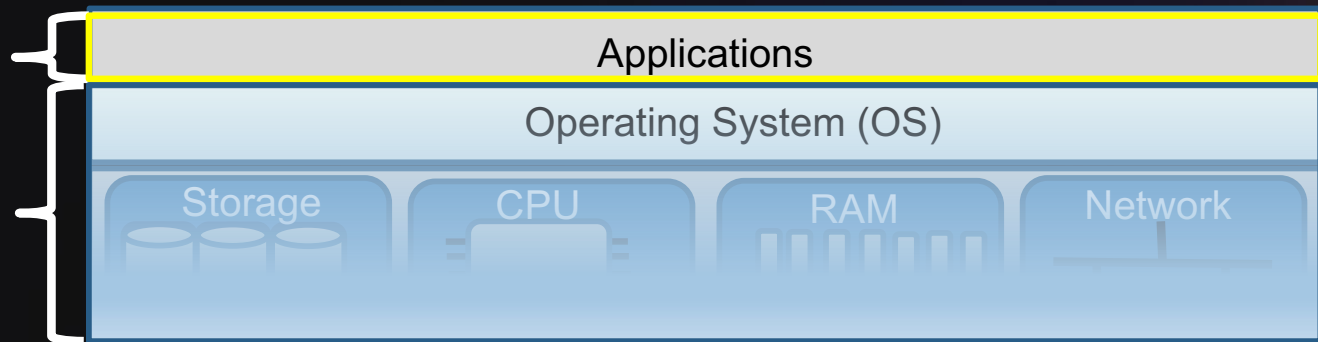
D. NaaS

ANSWER

+ Match the image with the correct service model. [1.2.f]

Selected by customer but
implemented & maintained
by Cloud provider.

Transparent to the end-
customer

☐

A. IaaS

☐

C. PaaS

☐

E. None of these
answers are
correct

☒

B. SaaS

☐

D. NaaS



Question-21

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Question-21

+ Which of the following are the possible negative consequences of moving your on-premise applications to a public cloud, and connecting to your cloud service using a public internet connection?

+ (Select three answers)

+ [1.2.f]

☐

A. No WAN SLA is available

☐

B. Delays may be incurred while waiting for a Private WAN connection

☐

C. Decreased security

☐

D. Reduced QoS capabilities

☐

E. Decreased WAN bandwidth usage

ANSWER

+ Which of the following are the possible negative consequences of moving your on-premise applications to a public cloud, and connecting to your cloud service using a public internet connection?

+ (Select three answers)

+ [1.2.f]



A. No WAN SLA is available



B. Delays may be incurred while waiting for a Private WAN connection



C. Decreased security



D. Reduced QoS capabilities

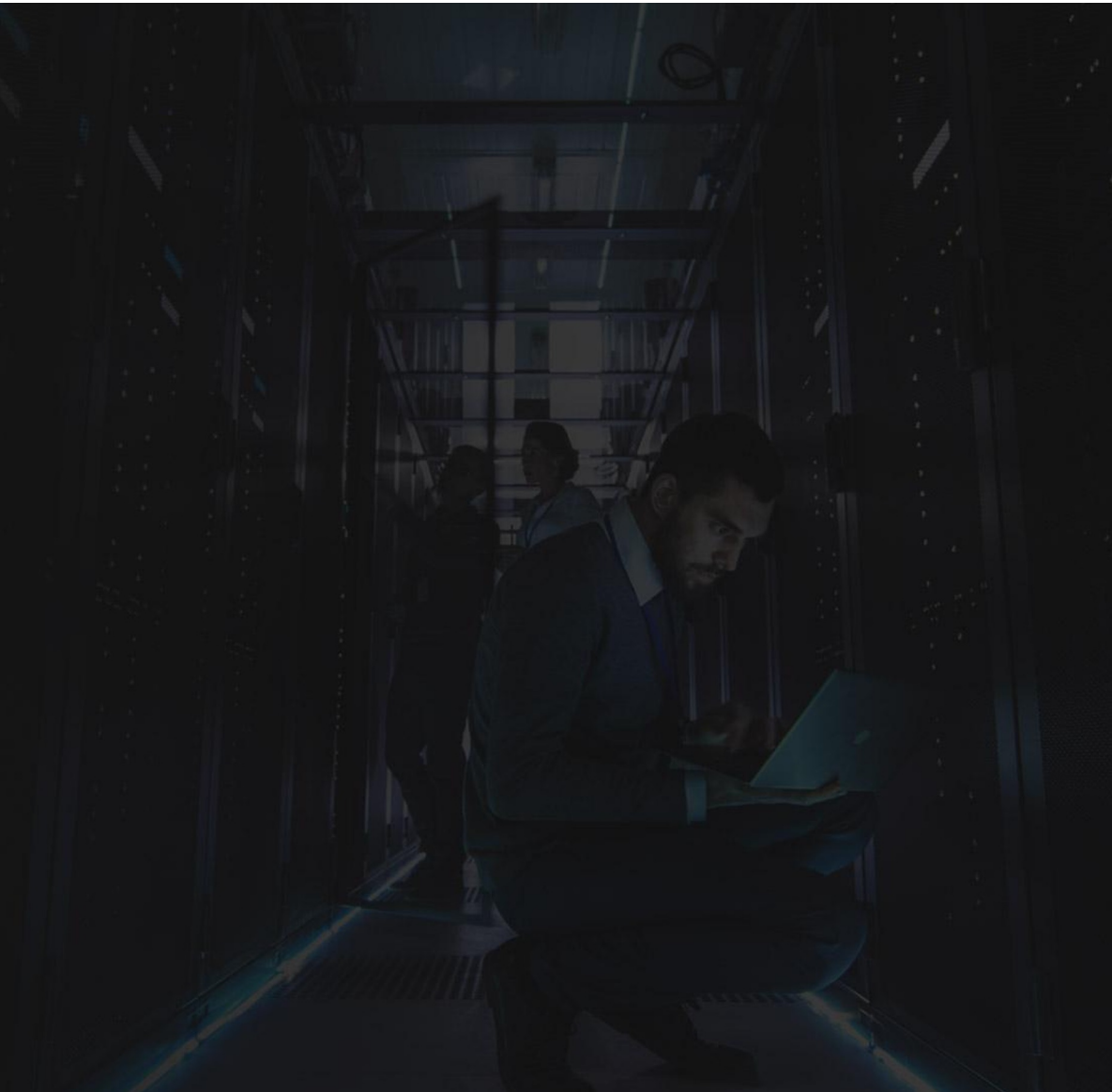


E. Decreased WAN bandwidth usage



Question-22

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Question-22

+ A provider offers private WAN connections (ie. MPLS, MetroEthernet, etc) to consumers. The same private WAN also has connections to multiple public cloud providers. This type of service is called?

+ [1.2.f]

☐

A. Multi-Private WAN

☐

B. Private NaaS

☐

C. Cloud Trajectory Service

☐

D. Intercloud Exchange

☐

E. Cloud Mesh

ANSWER

+ A provider offers private WAN connections (ie. MPLS, MetroEthernet, etc) to consumers. The same private WAN also has connections to multiple public cloud providers. This type of service is called?

+ [1.2.f]

☐

A. Multi-Private WAN

☐

B. Private NaaS

☐

C. Cloud Trajectory Service

☒

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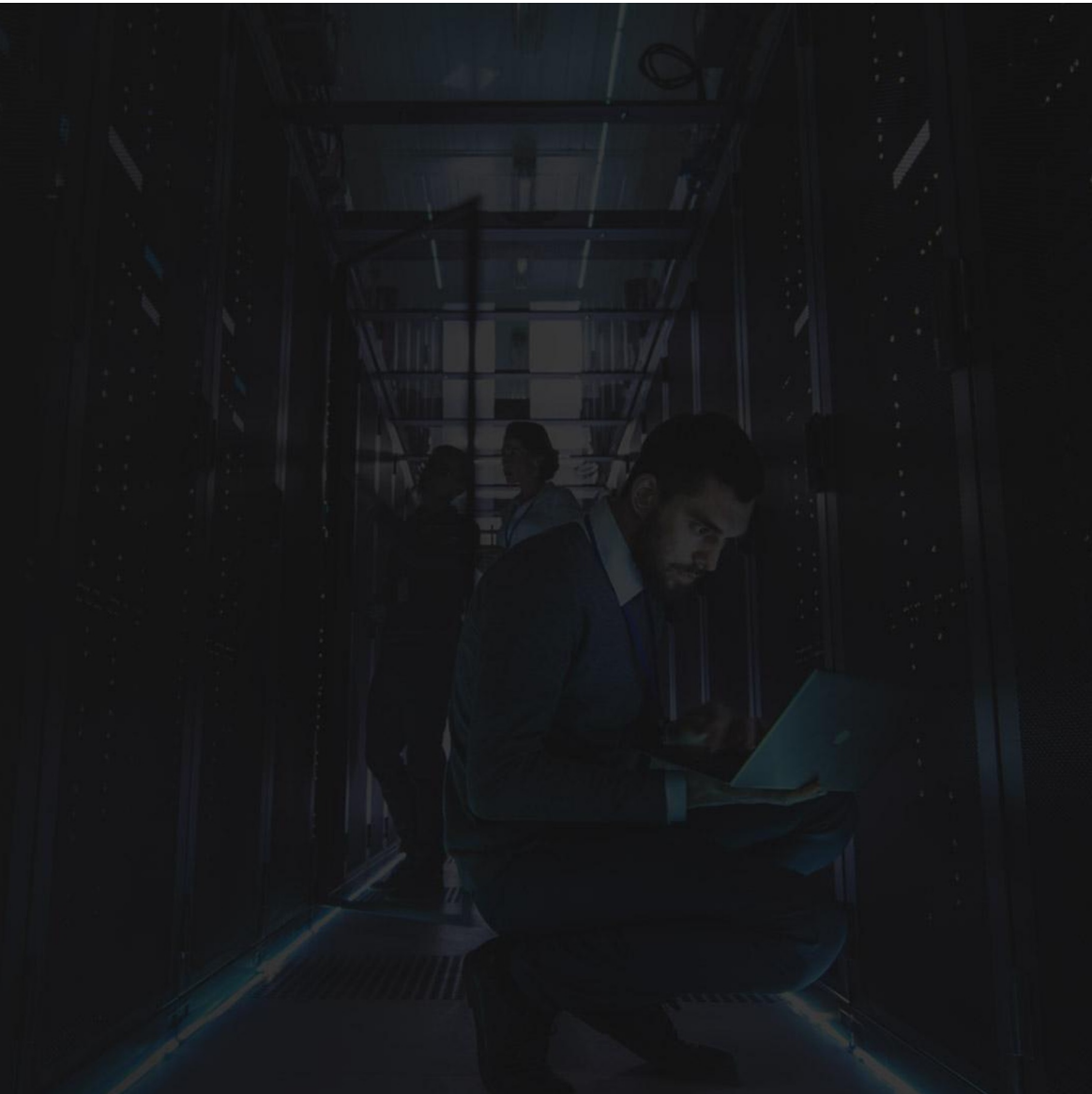
☐

E. Cloud Mesh



Question-23

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Question-23

- + Fill in each cell with either “True” or “False” as it pertains to the methods available for connecting to Public Clouds. [1.2.f]

	Internet	Internet VPN	MPLS VPN	Ethernet WAN	Intercloud Exchange
Makes data private*	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Supports QoS	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Requires Capacity Planning	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Eases Migration to a new cloud provider	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Speeds initial installation	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

* “private” could mean privacy is achieved via inherent data encryption or inherent data separation between customers

ANSWER

- + Fill in each cell with either “True” or “False” as it pertains to the methods available for connecting to Public Clouds. [1.2.f]

	Internet	Internet VPN	MPLS VPN	Ethernet WAN	Intercloud Exchange
Makes data private*	False	True	True	True	True
Supports QoS	False	False	True	True	True
Requires Capacity Planning	True	True	True	True	True
Eases Migration to a new cloud provider	True	True	False	False	True
Speeds initial installation	True	True	False	False	False

* “private” could mean privacy is achieved via inherent data encryption or inherent data separation between customers



Thanks for Watching!