# Free Questions for C90.03 by certsdeals

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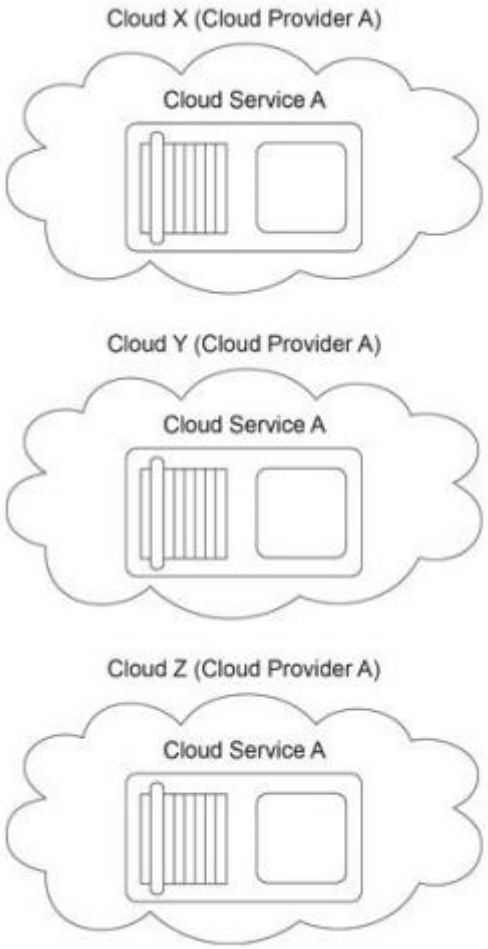
# Question 1

**Question Type:** MultipleChoice

The cloud service owner of Cloud Service A is evaluating Clouds X, Y and Z to determine which cloud environment can offer the greatest level of reliability. All three clouds are geographically dispersed across three separate time zones. As a result, each cloud experiences usage peaks at different times. Based on the metrics provided, the greater the usage of a cloud, the lower its reliability. When the cloud service owner complains to Cloud Provider A (the owner of all three clouds) that none of the clouds provide an adequate level of reliability, Cloud Provider A suggests a solution that increases resiliency.




Which of the following statements accurately describe how a cloud balancing solution can be implemented to fulfill the resiliency requirements of Cloud Service A?

## Options:

**A-** Cloud Service A is redundantly deployed in advance within Clouds X. Y and Z and is further supplemented with failover system mechanisms and specialized types of automated scaling listener mechanisms.

**B-** Using a PaaS environment, the cloud service owner can configure a primary Cloud Service A implementation on Cloud X so that when failure conditions occur, message requests from cloud service consumers are automatically routed to a redundant on-premise implementation of Cloud Service A . This requires the implementation of the failover system and resource replication mechanisms.

**C-** A type of automated scaling listener that can also be considered a cloud monitor is implemented in Clouds X, Y and Z to establish a system whereby each cloud can assume control of cloud service consumer message exchanges. This results in resilient cloud balancing, as opposed to on-demand cloud balancing.

**D-** Clouds X, Y and Z are equipped with failover system mechanisms and specialized types of automated scaling listener mechanisms in order to establish cross-cloud resiliency. Cloud Service A is configured so that Clouds X, Y and Z can dynamically generate redundant instances on-demand.

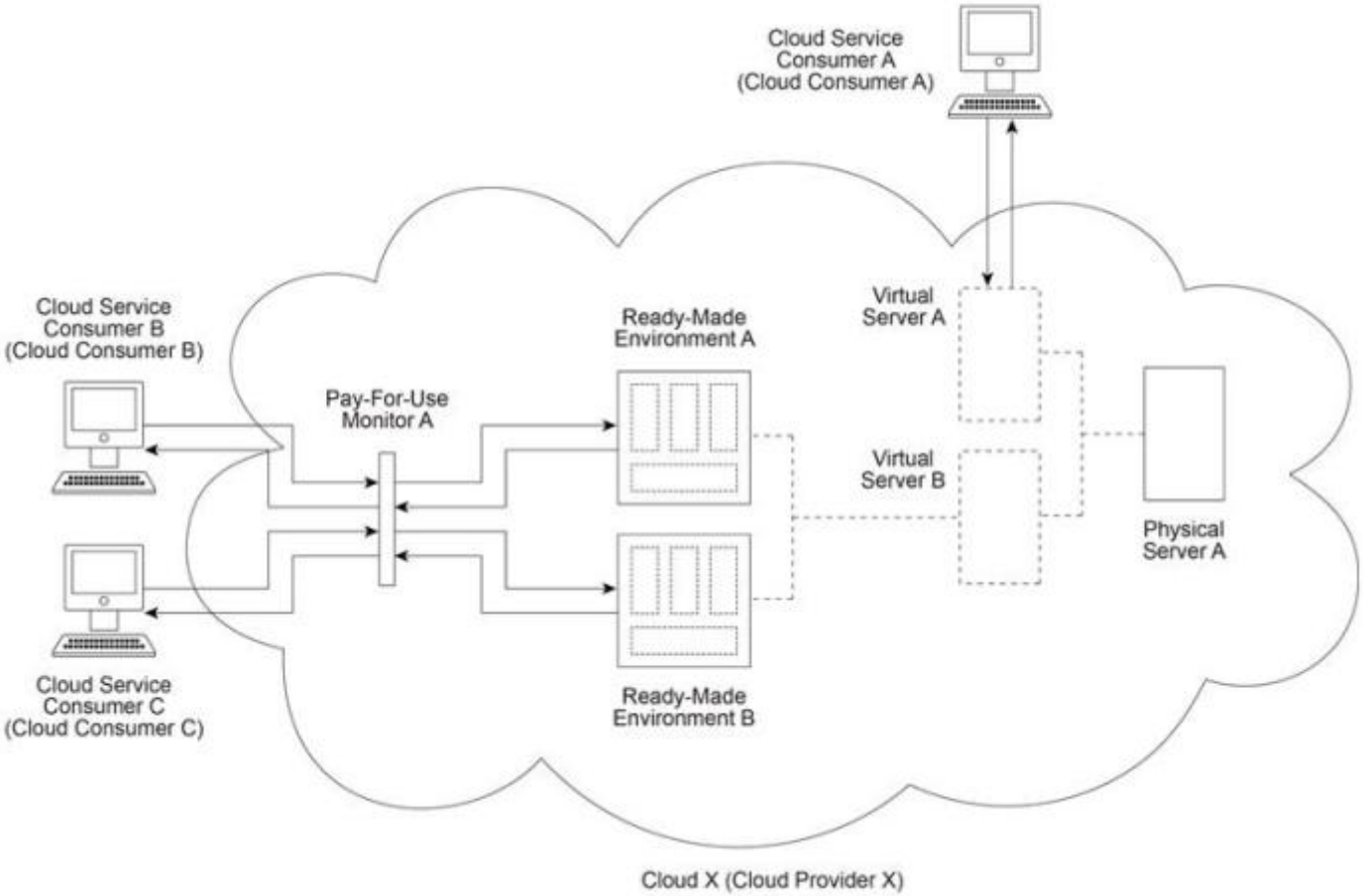
## Answer:

A, D

# Question 2

**Question Type:** MultipleChoice

Cloud X (owned by Cloud Provider X) provides Physical Server A which hosts Virtual Servers A and B. Virtual Server B hosts Ready-Made Environments A and B. Cloud Service Consumer A uses Virtual Server A as part of an IaaS leasing agreement in which Cloud Consumer A is charged a fixed monthly fee for unlimited access. Cloud Service Consumers B and C use Ready-Made Environments A and B respectively as part of a PaaS leasing agreement based on per-minute usage fees. In both cases, access is monitored via Pay-For-Use Monitor A, which keeps track of log-in and log-out times in order to calculate the usage charges that are billed to Cloud Consumers B and C . Virtual Server A begins generating a series of exceptions. Soon thereafter, Virtual Server B becomes destabilized, resulting in further exceptions being raised in Ready-Made Environments A and B. Cloud Service Consumers B and C receive a series of error messages until both of their connections are dropped Finally, Physical Server A shuts down completely. A subsequent investigation reveals that Virtual Server A was the victim of a security attack performed by a malicious cloud service consumer, the attacker generated increased loads of external communication requests on Virtual Server A and the underlying network, causing Physical Server A (along with Virtual Server B) to eventually shut down.




Which of the following statements accurately identifies the type of security threat that corresponds to the described attack - and - provides a solution that can directly mitigate this type of security threat within Cloud X?

## Options:

**A-** Virtual Server A was subjected to a denial of service attack that can be mitigated by implementing the encryption and digital signature mechanisms.

**B-** Virtual Server A was subjected to an insufficient authorization attack that can be mitigated by implementing the digital signature and hardened virtual server image mechanisms.

**C-** Virtual Server A was subjected to a denial of service attack that can be mitigated by implementing the hardened virtual server image and identity and access management mechanisms.

**D-** Virtual Server A was subjected to an insufficient authorization attack that can be mitigated by implementing the single sign-on mechanism.

### Answer:

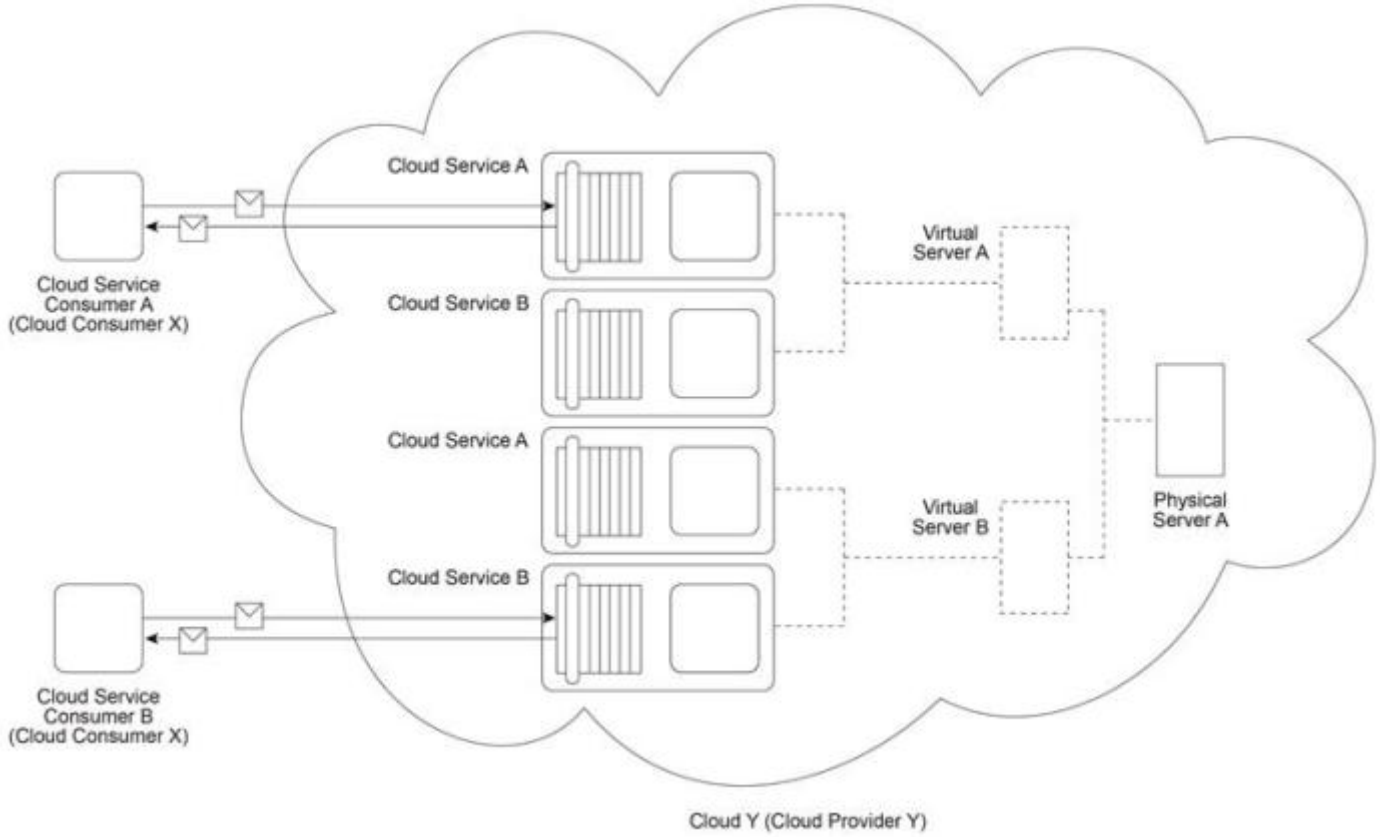
C

# Question 3

**Question Type:** MultipleChoice

Cloud Provider Y owns Cloud Y, which provides a set of cloud services, virtual servers and one physical server. Cloud Services A and B are hosted on Virtual Server A, which is hosted by Physical Server A . Physical Server A also hosts Virtual Server B, which hosts redundant implementations of Cloud Services A and B for load balancing purposes. Cloud Service Consumer A is accessing Cloud Service A located on Virtual Server A . Cloud Service Consumer B is accessing Cloud Service B located on Virtual Server B . Cloud Service Consumers A and B are both owned by Cloud Consumer X. Cloud Consumer X has recently complained that Cloud Services A

and B have become less available than what is guaranteed in their service level agreements (SLAs). Cloud Provider Y launches an investigation that reveals that Virtual Servers A and B have been subjected to denial of service attacks. This is confirmed as the cause of the decline in the availability of Cloud Services A and B.




Which of the following statements describes a solution that can increase the availability of Cloud Services A and B?

## Options:

**A-** Cloud Provider Y can implement the identity and access management mechanism to mitigate denial of service attacks and can further implement the failover system mechanism (by introducing a redundant physical server with redundant virtual servers) so that when an attack is successful on a given virtual server, a redundant virtual server can take its place.

**B-** Cloud Provider Y can move Cloud Service B to Virtual Server A, thereby positioning Virtual Server B as a redundant fallback server used when Virtual Server A is successfully attacked. Similarly, Cloud Provider Yean move Cloud Service A to Virtual Server B, so that Virtual Server A acts as a redundant fallback server for when Virtual Server B is successfully attacked.

**C-** Cloud Provider Y can implement a cloud bursting system, whereby Cloud Service A on Virtual Server B automatically takes the place of Cloud Service A on Virtual Server A when that service fails. Similarly, Cloud Service B on Virtual Server A can then automatically take the place of Cloud Service B on Virtual Server A when that service fails.

**D-** Cloud Provider Y can introduce a single sign-on mechanism for Virtual Server A to mitigate denial of service threats. The automated scaling listener can then be implemented on Virtual Server B in order to limit the number of instances of Cloud Services A and B. This will prevent Virtual Server B from overloading due to denial of service attacks.

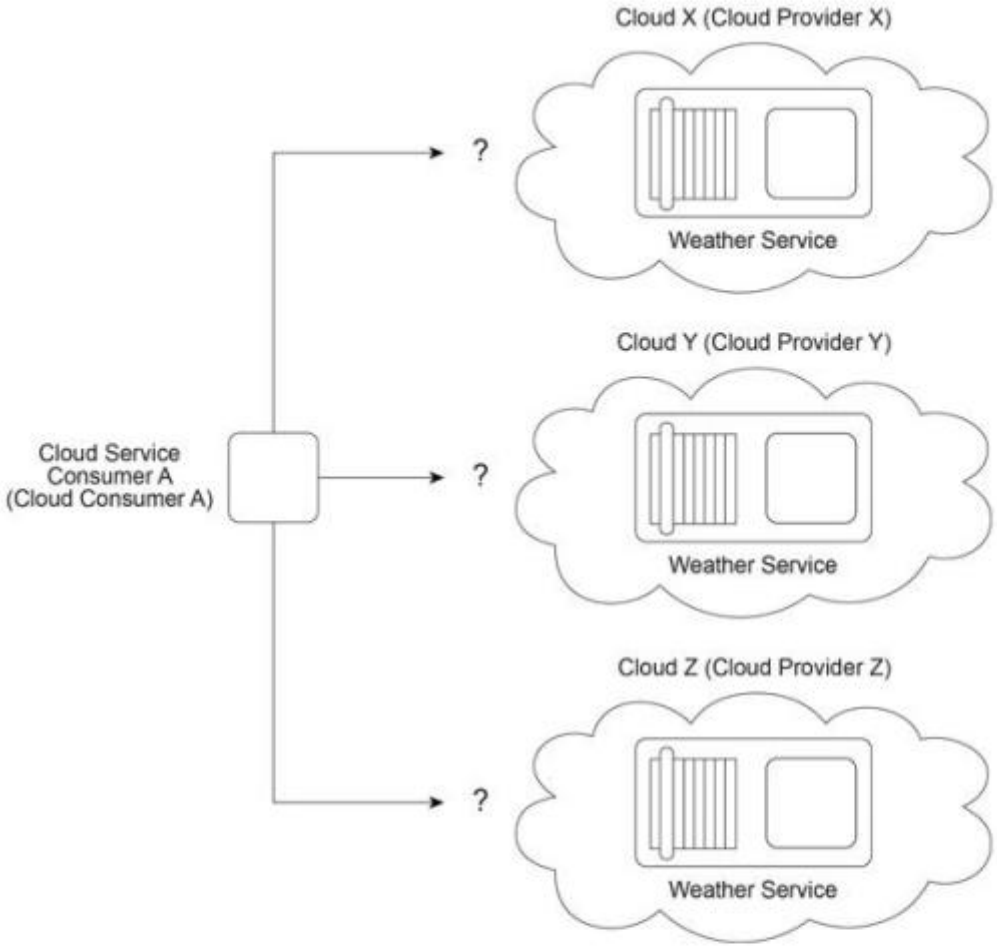
## Answer:

A

# Question 4

**Question Type:** MultipleChoice

Cloud Consumer A (the organization that owns Cloud Service Consumer A) needs regular access to an external, cloud-based Weather Service that provides up-to-date weather forecast information. Cloud Providers X, Y and Z are competing public cloud providers, each offering a Weather Service with the features required by Cloud Consumer A .




| Statistic | Cloud Provider X | Cloud Provider Y | Cloud Provider Z |
|---|---|---|---|
| Probability of network failure (%) | 20 | 25 | 30 |
| Probability of hardware failure (%) | 25 | 30 | 20 |
| Time taken to restore network failure (hours) | 40 | 35 | 30 |
| Time taken to restore hardware failure (days) | 3 | 4 | 5 |
| Downtime due to various security attacks (hours) | 48 | 46 | 56 |

Based on the provided statistics, which cloud provider can offer a Weather Service with the least amount of projected downtime?

### Options:

**A-** Cloud Provider X

**B-** Cloud Provider Y

**C-** Cloud Provider Z

**D-** Any of the three cloud providers, because their availability ratings are identical.

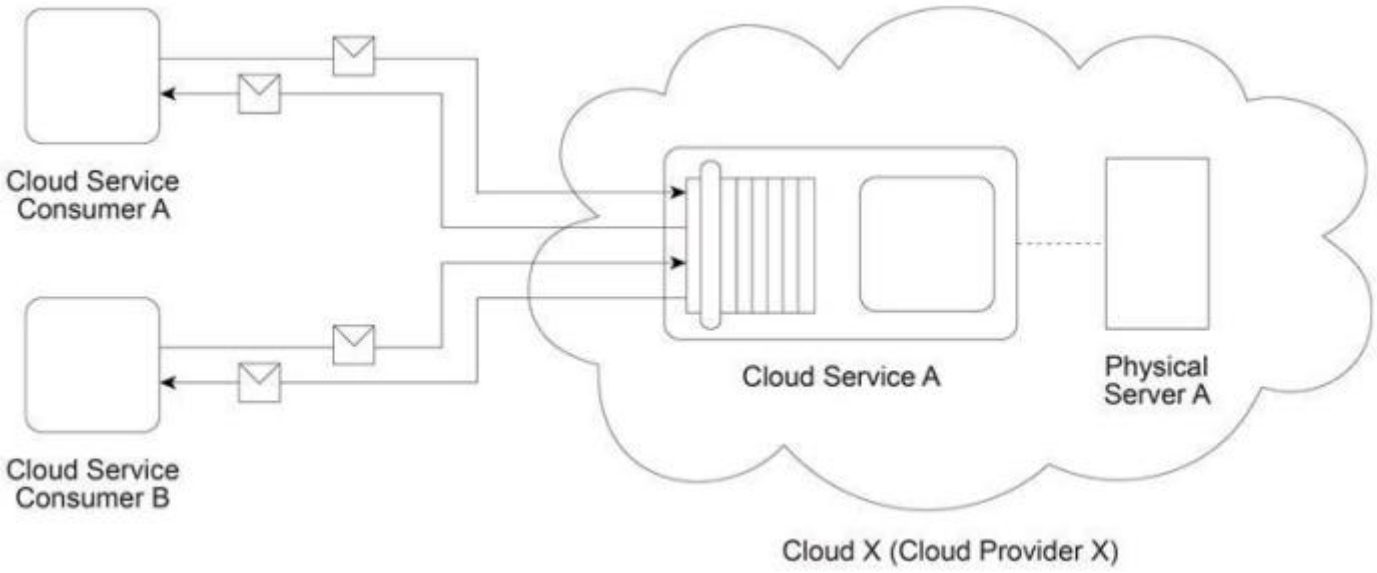
### Answer:

A

## Question 5

**Question Type:** **MultipleChoice**

Cloud Service A is being made available on public Cloud X by Cloud Provider X via the SaaS delivery model. Cloud Service A is hosted by Physical Server A that also hosts cloud services being used by different cloud service consumers (and owned by different cloud service owners). Cloud Provider X needs to make Cloud Service A available to a new group of cloud service consumers, but must do so without the increase in usage volume affecting Cloud Service Consumers A and B .




Which of the following statements does not accurately describe a solution (or a set of solutions) that addresses this requirement?

## Options:

**A-** Cloud Provider X can scale up Cloud Service A by upgrading the Physical Server A hardware to increase the server's processing power. Cloud Provider X can scale out Cloud Service A by adding redundant implementations of the service and by using the automated scaling listener mechanism.

**B-** Cloud Provider X can scale out Cloud Service A by implementing new cloud computing mechanisms, such as the virtual server and resource replication mechanisms, which can enhance the cloud's elasticity characteristic.

**C-** Cloud Provider X can upgrade its infrastructure by increasing its ability to horizontally scale IT resources that are used by Cloud Service A . Cloud Provider X can upgrade its infrastructure in order to vertically scale IT resources that are used by Cloud Service A .

**D-** Cloud Provider X can upgrade its infrastructure to increase the cloud's ubiquitous access characteristic. This will enable the cloud to provide distributed failover for IT resources across multiple devices in order to increase its ubiquitous resiliency. To achieve this, Cloud Provider X will further need to implement the failover system, state management database and resource replication mechanisms.

### Answer:

A

# Question 6

**Question Type:** MultipleChoice

A company is planning to build and launch a new SaaS product that will be available for use by the general public. It intends to build the service on-premise and then deploy it in a public cloud. The company has the following set of four requirements for the implementation of the new service:

1. The cloud service needs to exchange messages primarily by using HTTP methods and other features provided by HTTP.

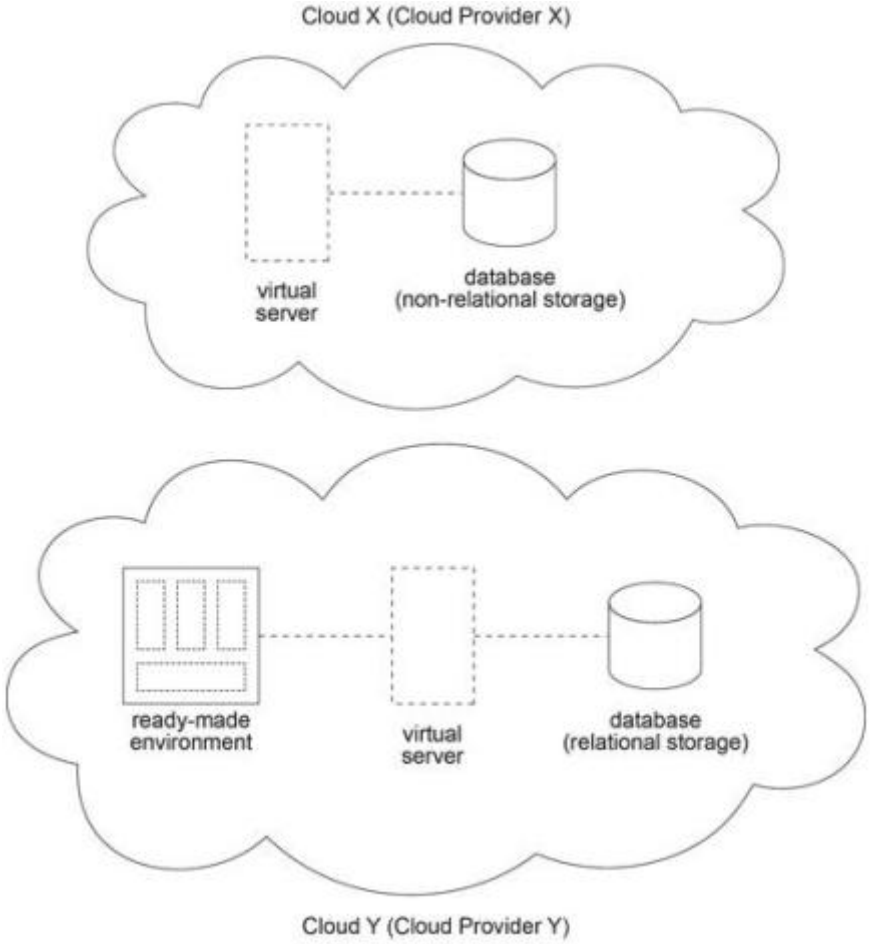
2. The cloud service needs to store highly structured data with potentially complex relationships.

3. The cloud service needs to be deployed on a dedicated virtual server that can be administered with a high level of control by the cloud consumer's own cloud resource administrator.

4. The cloud service needs to be deployed with a minimal amount of integration testing.

For this project, the company has a very limited budget. The company is assessing the IT resources that are offered by Clouds X and Y within the constraints of its limited budget.

Cloud X can offer an IaaS environment with very few proprietary characteristics that includes a database that supports only no relational storage, as well as support for the deployment and usage of REST services.



Cloud Y can offer a PaaS environment with a pre-configured virtual server that includes native support for WSDL and SOAP, as well as a database that supports only relational storage. The implementation of a new service within Cloud Y will require compliance to a high level of proprietary characteristics. As previously listed, the company has identified four specific implementation requirements for its new cloud service. Which of the following statements correctly identifies how many of the four requirements Clouds X and Y can directly fulfill?

### Options:

**A-** Cloud X fulfills 0 out of 4 requirements. Cloud Y fulfills 4 out of 4 requirements.

**B-** Cloud X fulfills 1 out of 4 requirements. Cloud Y fulfills 3 out of 4 requirements.

**C-** Cloud X fulfills 2 out of 4 requirements. Cloud Y fulfills 2 out of 4 requirements.

**D-** Cloud X fulfills 3 out of 4 requirements. Cloud Y fulfills 1 out of 4 requirements.

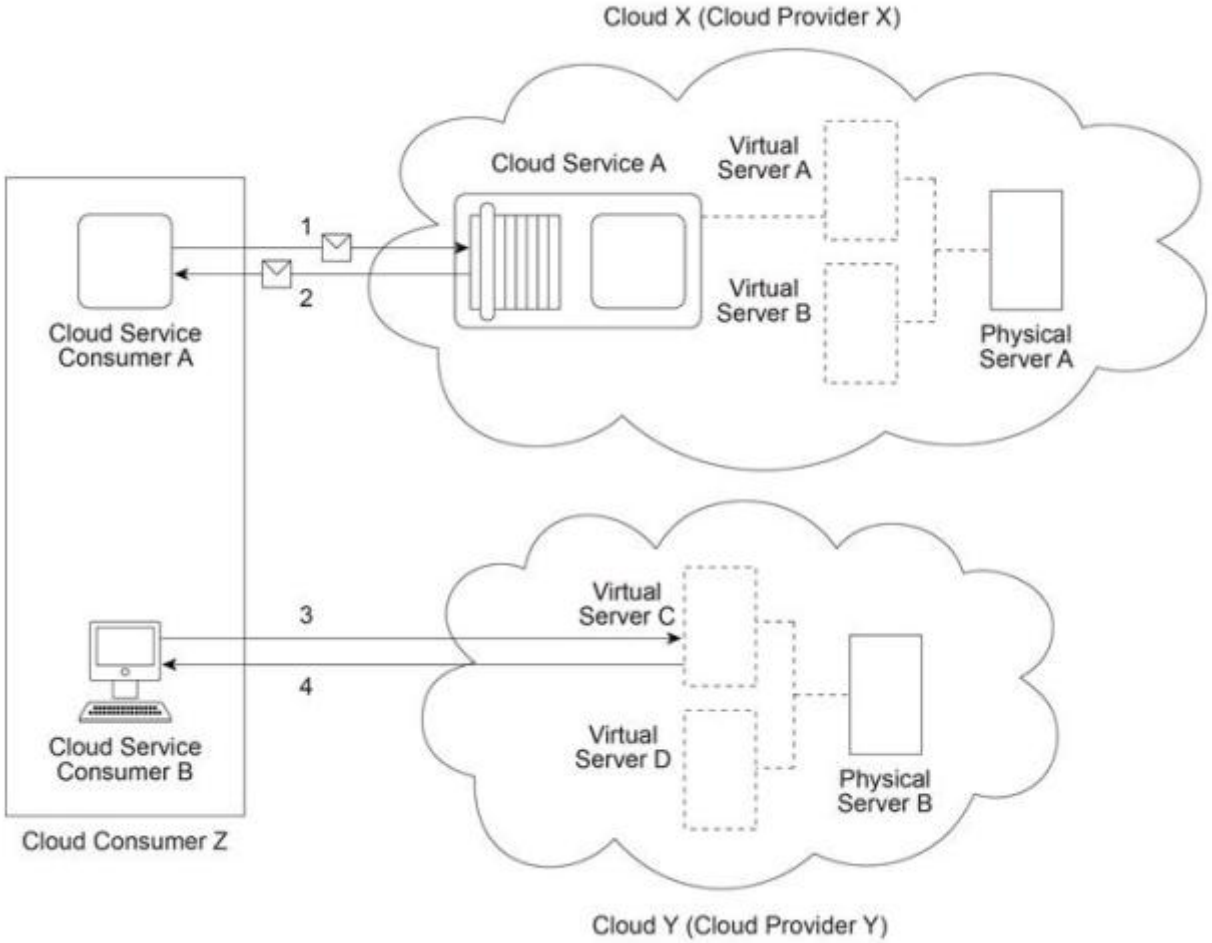
### Answer:

D

## Question 7

**Question Type:** MultipleChoice

Cloud Provider X has deployed a virtualization environment in Cloud X comprised of Physical Server A hosting Virtual Servers A and B. Cloud Provider X implements Cloud Service A on Virtual Server A and makes it available to Cloud Service Consumer A, which interacts with Cloud Service A by sending and receiving messages (1, 2). Cloud Provider Y has deployed a virtualization environment comprised of Physical Server B hosting Virtual Servers C and D. Virtual Server C is made available to Cloud Service Consumer B, which interacts with Virtual Server C (3,4) in order to prepare for the deployment of a new cloud service that will be used internally by Cloud Provider Y to process data obtained from Cloud Service A .




Cloud Consumer Z and Cloud Provider X belong to the same organization. Cloud Provider Y is a third-party organization. Which of the following statements provides a valid scenario that accurately describes the involvement of cloud deployment models, cloud delivery models, roles and/or boundaries? (Note that the correct answer represents one of multiple valid scenarios that can exist.)

## Options:

**A-** Cloud X is based on the private cloud deployment model. Cloud Service A is based on the SaaS delivery model. Cloud Y is based on the private cloud deployment model. Virtual Server C is being offered as part of the IaaS delivery model. A cloud resource administrator working for Cloud Consumer Z uses Cloud Service Consumer B to access Virtual Server C . Cloud Consumer Z is the cloud service owner of Cloud Service A . Cloud Consumer T s organizational boundary encompasses Cloud Service Consumers A and B. Cloud Consumer T s trust boundary encompasses Cloud Service Consumers A and B, Cloud Service A and Virtual Server C .

**B-** Cloud X is based on the private cloud deployment model. Cloud Service A is based on the SaaS delivery model. Cloud Y is based on the community cloud deployment model. Virtual Server C is being offered as part of the IaaS delivery model. A cloud resource administrator working for Cloud Consumer Z uses Cloud Service Consumer A to access Cloud Service A . Cloud Consumer T s organizational and trust boundaries encompass Cloud Service Consumers A and B, Cloud Service A and Virtual Server C .

**C-** Cloud X is based on the private cloud deployment model. Cloud Service A is based on the SaaS delivery model. Cloud Y is based on the public cloud deployment model. Virtual Server C is being offered as part of the IaaS delivery model. A cloud resource administrator working for Cloud Consumer Z uses Cloud Service Consumer B to access Virtual Server C . Cloud Consumer Z is the cloud service owner of Cloud Service A . Cloud Consumer Z's organizational boundary encompasses Cloud Service Consumers A and B. Cloud Consumer T s trust boundary encompasses Cloud Service Consumers A and B, Cloud Service A and Virtual Server C .

**D-** Cloud X is based on the private cloud deployment model. Cloud Service A is based on the SaaS delivery model. Cloud Y is based on the public cloud deployment model. Virtual Server C is being offered as part of the IaaS delivery model. A cloud resource administrator working for Cloud Consumer Z uses Cloud Service Consumer B to access Virtual Server C . Cloud Consumer Z' s trust boundary encompasses Cloud Service Consumers A and B, Cloud Service A and Virtual Server C . The organization that owns Cloud Consumer Z is the cloud service owner of Cloud Service A .

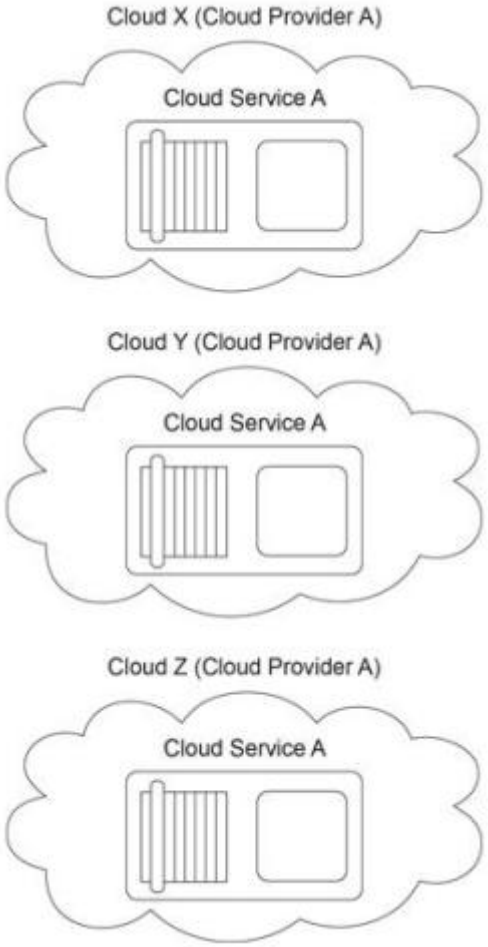
## Answer:

D

# Question 8

**Question Type:** MultipleChoice

The cloud service owner of Cloud Service A is evaluating Clouds X, Y and Z to determine which cloud environment can offer the greatest level of reliability. All three clouds are geographically dispersed across three separate time zones. As a result, each cloud experiences usage peaks at different times. Based on the metrics provided, the greater the usage of a cloud, the lower its reliability. When the cloud service owner complains to Cloud Provider A (the owner of all three clouds) that none of the clouds provide an adequate level of reliability, Cloud Provider A suggests a solution that increases resiliency.




Which of the following statements accurately describes a solution that can be used to fulfill the resiliency requirements of Cloud Service A?

## Options:

**A-** Redundant implementations of Cloud Service A are deployed in all three clouds. The failover system mechanism and a special type of automated scaling listener mechanism are implemented to establish a system whereby one redundant Cloud Service A implementation will automatically take over from another.

**B-** A cloud balancing solution is established, whereby an automated scaling listener mechanism is implemented on each cloud in such a way that every cloud can automatically scale out to another cloud. As a result, if reliability problems occur on any one cloud, the subsequent requests will be scaled out to another cloud in a manner that is transparent to cloud service consumers.

**C-** A failover system mechanism is implemented on Cloud X, which acts as the primary point of contact for cloud service consumers. Upon failure conditions occurring, the Cloud Service A implementation on Cloud X automatically hands over control of current and future message requests from cloud service consumers to Cloud Y. Cloud Y retains control of cloud service consumer communication until the next failure condition occurs, at which point it hands over control to Cloud Z. Finally, if a failure condition occurs in Cloud Z. control is handed back to Cloud X.

**D-** A cloud balancing solution is established, whereby a resource replication mechanism is implemented on each cloud. This allows Cloud Service A to be automatically replicated across cloud environments, thereby enabling each implementation of Cloud Service A to take the place of another, whenever failure conditions occur.

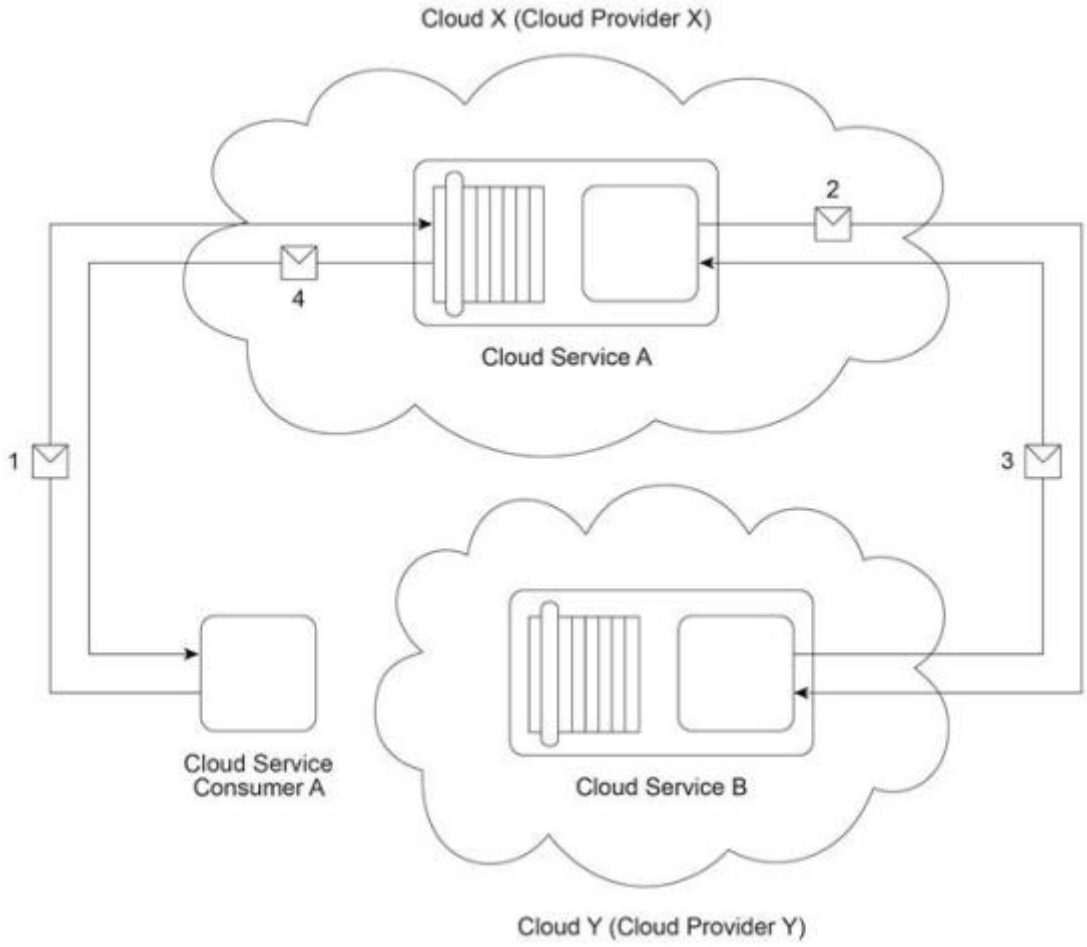
## Answer:

A

# Question 9

**Question Type:** MultipleChoice

Cloud Service Consumer A invokes Cloud Service A from Cloud X (owned by Cloud Provider X) (1). To fulfill the request from Cloud Service Consumer A, Cloud Service A needs to invoke Cloud Service B that resides on Cloud Y (owned by Cloud Provider Y) (2). After completing its processing, Cloud Service B sends a response to Cloud Service A (3). Cloud Service A verifies the response and then finally sends its response to Cloud Service Consumer A (4).



The guaranteed availability of the Cloud Service A implementation is 95% and the guaranteed availability of the Cloud Service B implementation is 95%. Which of the following statements accurately describes the actual availability that Cloud Service Consumer A can receive based on the described scenario?

## Options:

**A-** Because Cloud Service Consumer A's response message is processed by two separate cloud services, the combined availability increases as follows:
1 - (1 - 0.95) X (1 - 0.95) = 0.9975 or 99.75%

**B-** Because Cloud Service A acts as both a cloud service and cloud service consumer in order to process Cloud Service Consumer B's request message, Cloud Service A forms a dependency on Cloud Service B. As a result, the combined availability decreases, as follows:
0.95 X 0.95 = 0.9025 or 90.25%

**C-** Cloud Service Consumer A benefits from redundant cloud service implementations, thereby increasing the guaranteed availability as follows:
1 - (1 - (0.95 - 0.1)) X (1 - (0.95 - 0.1)) = 0.9775 or 97.75%

**D-** As a result of the dependency formed by Cloud Service Aon Cloud Service B, the combined availability decreases significantly as follows:
(0.95 X 0.95) - 0.1 = 0.8025 or 80.25%

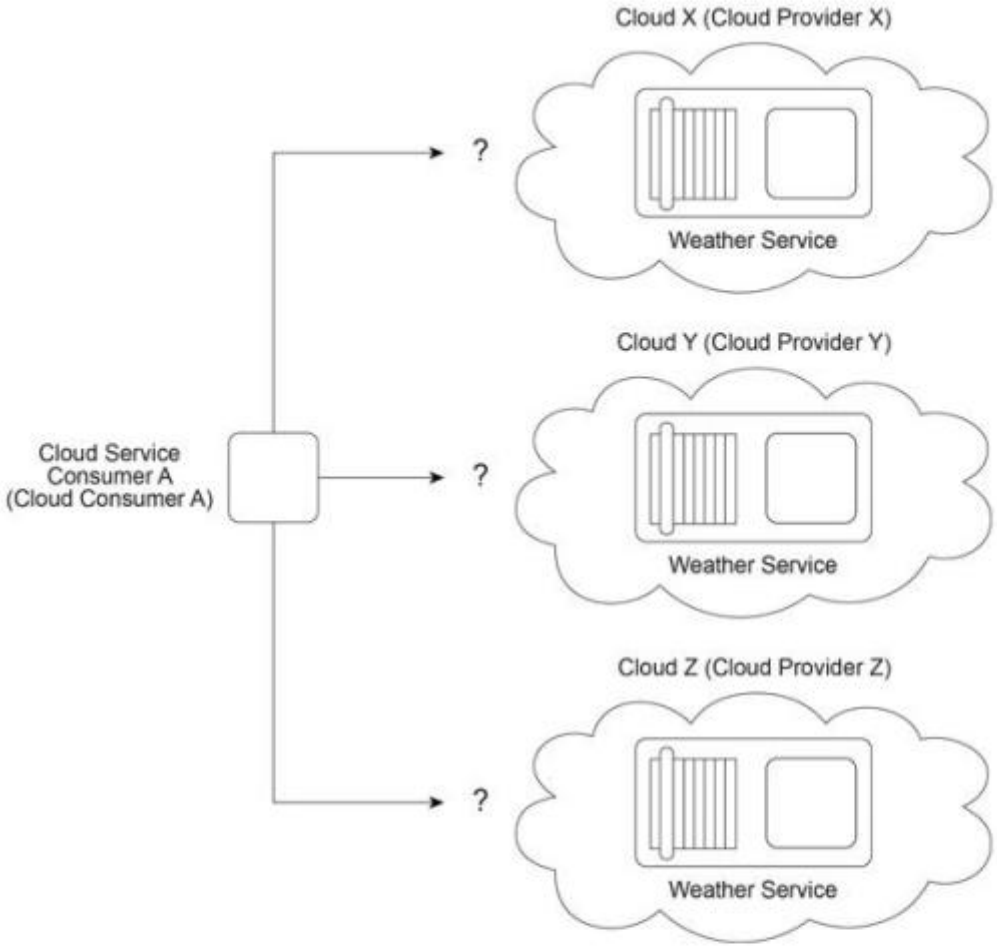
## Answer:

B

# Question 10

**Question Type:** MultipleChoice

Cloud Consumer A (the organization that owns Cloud Service Consumer A) needs regular access to an external, cloud-based Weather Service that provides up-to-date weather forecast information. Cloud Providers X, Y and Z are competing public cloud providers, each offering a Weather Service with the features required by Cloud Consumer A .




| Statistic | Cloud Provider X | Cloud Provider Y | Cloud Provider Z |
|---|---|---|---|
| Probability of network failure (%) | 20 | 25 | 30 |
| Probability of hardware failure (%) | 25 | 30 | 20 |
| Time taken to restore network failure (hours) | 40 | 35 | 30 |
| Time taken to restore hardware failure (days) | 3 | 4 | 5 |
| Downtime due to various security attacks (hours) | 48 | 46 | 56 |

Based on the provided statistics, which cloud provider can offer a Weather Service with the least amount of projected downtime?

### Options:

**A-** Cloud Provider X

**B-** Cloud Provider Y

**C-** Cloud Provider Z

**D-** Any of the three cloud providers, because their availability ratings are identical.

### Answer:

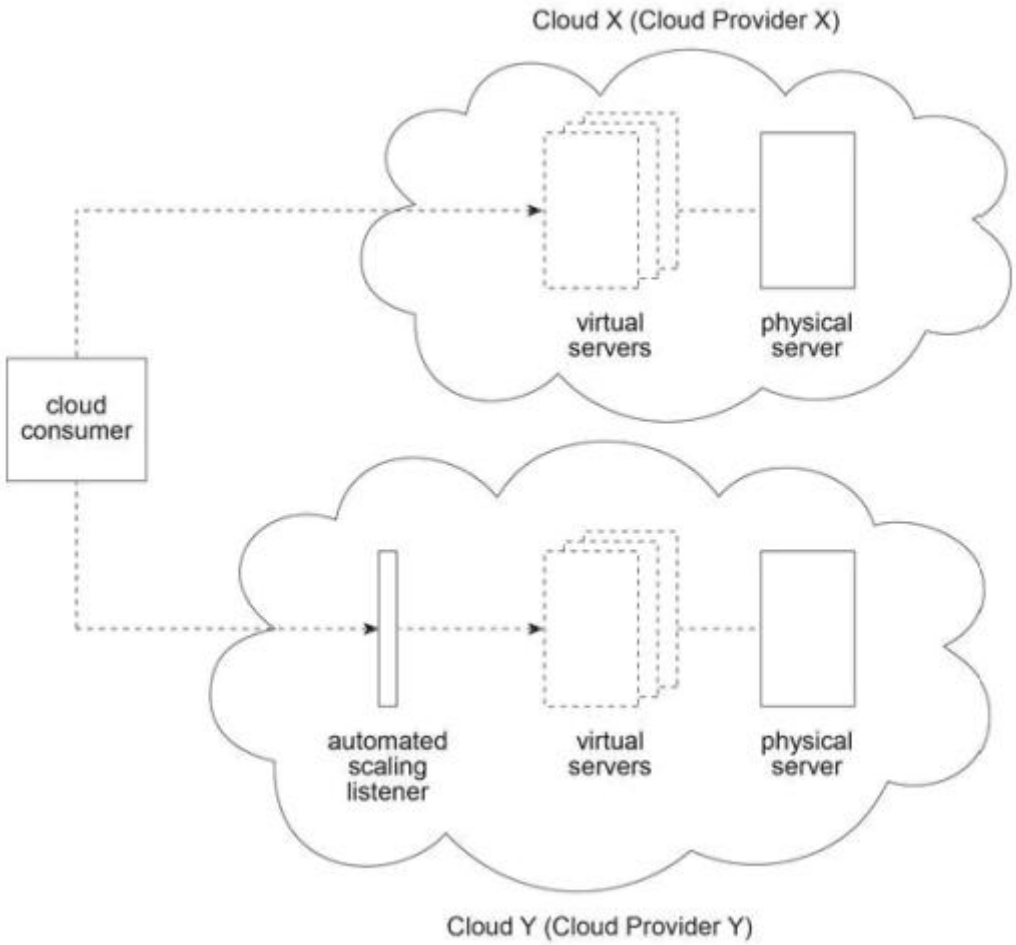
A

## Question 11

**Question Type:** MultipleChoice

A cloud consumer is interested in leasing cloud-based virtual servers. It compares the virtual servers offered by Cloud Provider X and Cloud Provider Y. Cloud X (owned by Cloud Provider X) and Cloud Y (owned by Cloud Provider Y) both provide shared physical servers that host multiple virtual servers for other cloud consumers. The virtual servers on Cloud X are accessed directly, whereas the virtual servers on Cloud Y are accessed via an automated scaling listener. On Cloud X, virtual servers are pre-configured to support a specific

amount of concurrent cloud service consumers. When this threshold is exceeded, cloud service consumer requests are rejected. Due to the use of the automated scaling listener, virtual servers on Cloud Y can provide a greater level of elasticity.




The hourly cost to the cloud consumer to use a virtual server on Cloud X is half that of the cost to use a virtual server on Cloud Y. Within a one month period, Cloud Provider X bases its hourly charge on the maximum number of virtual servers used. Within a one month

period, Cloud Provider Y bases its hourly charges on actual virtual server usage. Cloud Provider Y charges $20 for each hour that a cloud consumer uses a virtual server. The cloud consumer predicts its monthly usage requirements to be as follows:

Number Of Virtual Servers

Usage

3

20 Hours

4

30 Hours

5

50 Hours

The cloud consumer is required to choose the cloud provider with the lowest on-going cost, based on its predicted usage. Which of the following statements accurately calculates the on-going usage costs of Cloud Providers X and Y and correctly states the cloud provider that the cloud consumer must choose?

## Options:

**A-** The total usage duration is (20 + 30 + 50) x 12 hours = 1,200 hours.
The actual usage is (20 X 3) + (30 X4) + (50 X 5) server hours = 430 server hours.
The cost of using virtual servers from Cloud ProviderXis12X5X$10 = $600.

The cost of using virtual servers from Cloud Provider Y is 430 X $20 = $8,600.
The cloud consumer must therefore choose Cloud Provider X.

**B-** The total usage duration is (20 + 30 + 50) hours = 100 hours.
The actual usage is (20 + 30 + 50) X 5 server hours = 500 server hours.
The cost of using virtual servers from Cloud Provider X is (500 X 5 X$10) = $25,000.
The cost of using virtual servers from Cloud Provider Y is (500 X $20) = $10,600.
The cloud consumer must therefore choose Cloud Provider Y.

**C-** The total usage duration is (3 x 20) + (4 x 30) + (5 x 50) hours = 430 hours.
The actual usage is (20 + 30 + 50) hours = 100 hours.
The cost of using virtual servers from Cloud Provider X is (430 X $10) = $4,300.
The cost of using virtual servers from Cloud Provider Y is (100 X $20) = $2,000.
The cloud consumer must therefore choose Cloud Provider Y.

**D-** The total usage duration is (20 + 30 + 50) hours = 100 hours.
The actual usage is (20X3)+ (30X4) + (50X5) hours =430 hours.
The cost of using virtual servers from Cloud Provider Xis100X5X$10 = $5,000.
The cost of using virtual servers from Cloud Provider Y is 430 X $20 = $8,600.
The cloud consumer must therefore choose Cloud Provider X.

### Answer:

D

## Question 12

**Question Type:** MultipleChoice

A company is planning to build and launch a new SaaS product that will be available for use by the general public. It intends to build the service on-premise and then deploy it in a public cloud. The company has the following set of four requirements for the implementation of the new service:

1. The cloud service needs to exchange messages primarily by using HTTP methods and other features provided by HTTP.

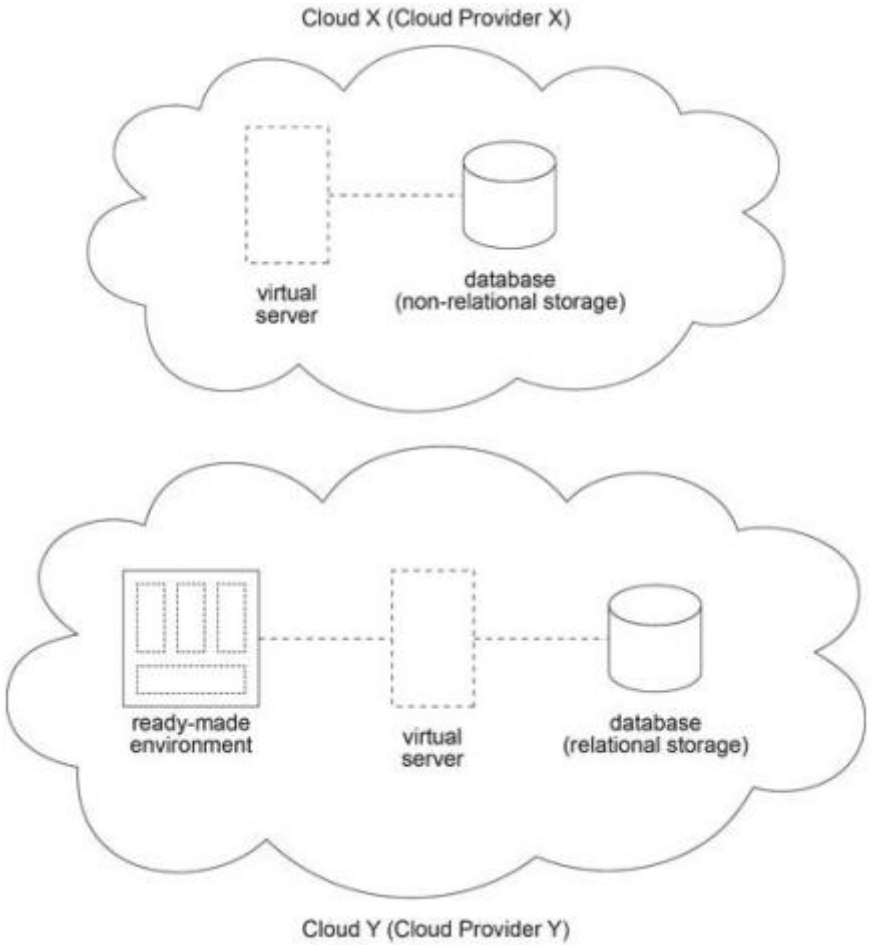
2. The cloud service needs to store highly structured data with potentially complex relationships.

3. The cloud service needs to be deployed on a dedicated virtual server that can be administered with a high level of control by the cloud consumer's own cloud resource administrator.

4. The cloud service needs to be deployed with a minimal amount of integration testing.

For this project, the company has a very limited budget. The company is assessing the IT resources that are offered by Clouds X and Y within the constraints of its limited budget.

Cloud X can offer an IaaS environment with very few proprietary characteristics that includes a database that supports only no relational storage, as well as support for the deployment and usage of REST services.




Cloud Y can offer a PaaS environment with a pre-configured virtual server that includes native support for WSDL and SOAP, as well as a database that supports only relational storage. The implementation of a new service within Cloud Y will require compliance to a high level of proprietary characteristics. As previously listed, the company has identified four specific implementation requirements for its new cloud service. Which of the following statements correctly identifies how many of the four requirements Clouds X and Y can directly fulfill?

## Options:

**A-** Cloud X fulfills 0 out of 4 requirements. Cloud Y fulfills 4 out of 4 requirements.

**B-** Cloud X fulfills 1 out of 4 requirements. Cloud Y fulfills 3 out of 4 requirements.

**C-** Cloud X fulfills 2 out of 4 requirements. Cloud Y fulfills 2 out of 4 requirements.

**D-** Cloud X fulfills 3 out of 4 requirements. Cloud Y fulfills 1 out of 4 requirements.

## Answer:

D