

SOA

Exam C90-06A

Cloud Architecture Lab

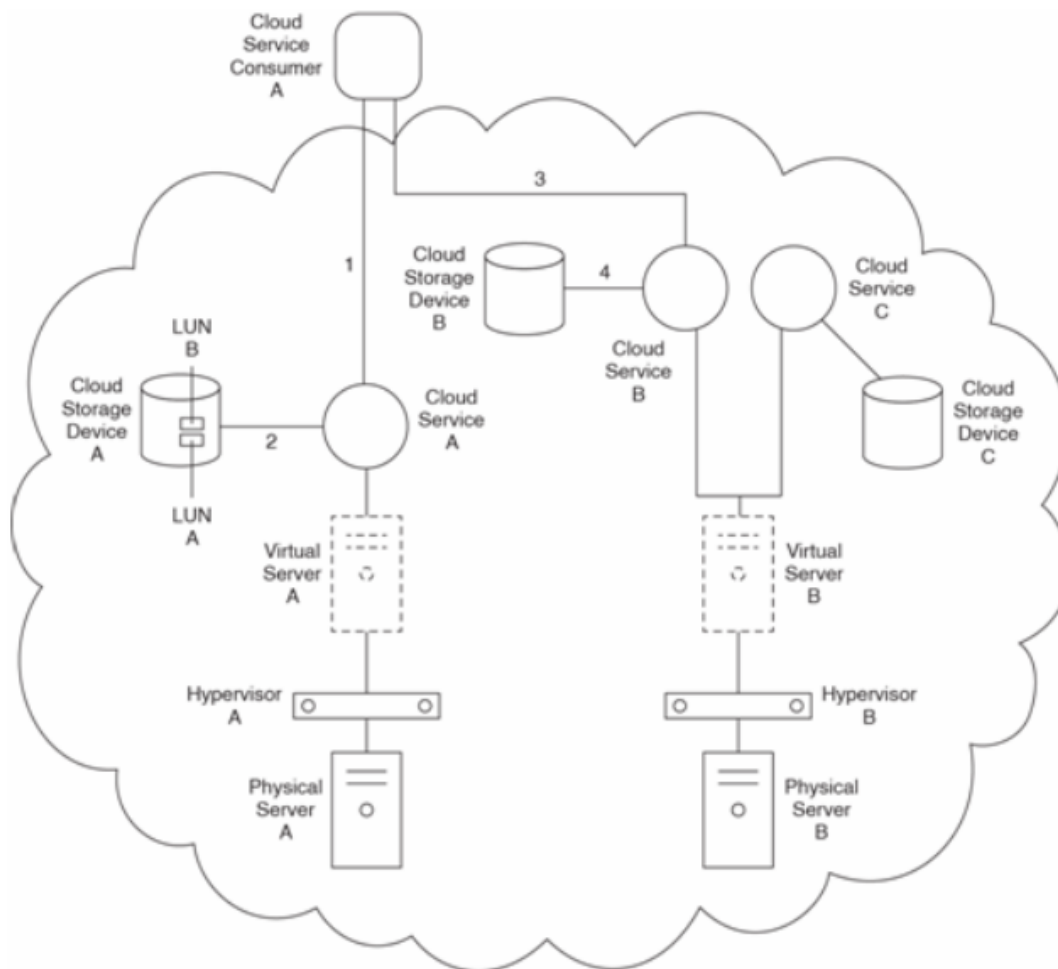
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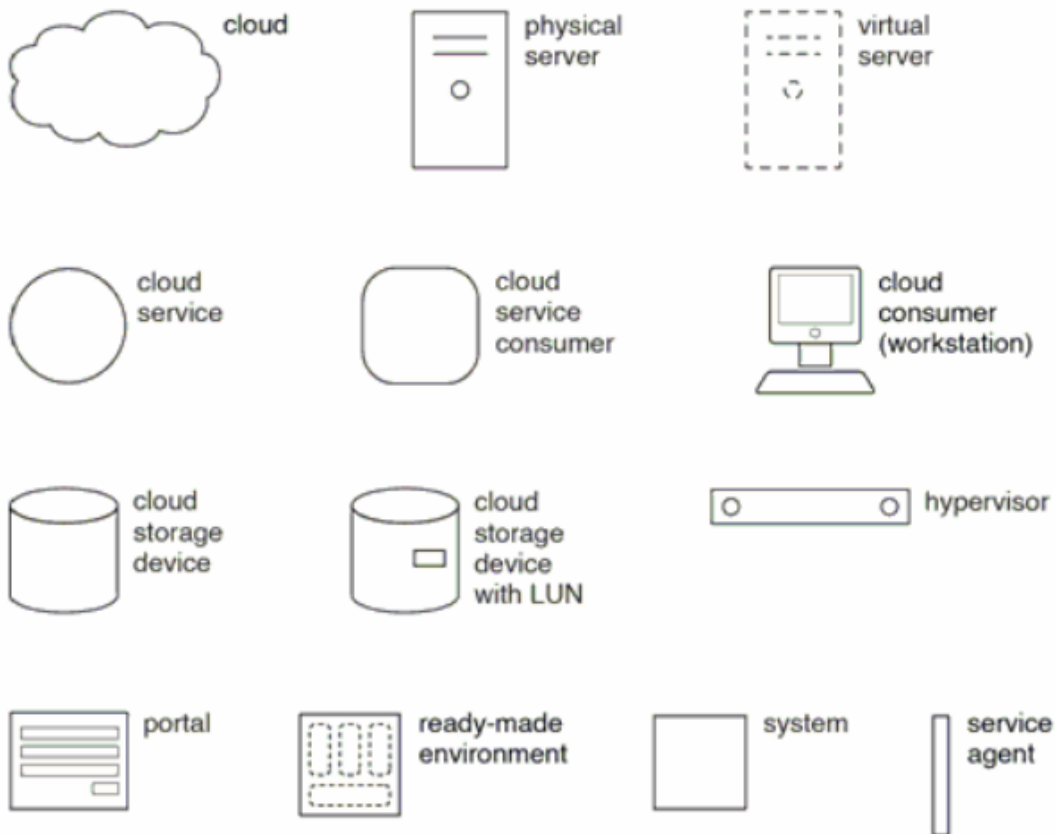
[Total Questions: 15]

Question No : 1

Cloud Service A requires access to Cloud Storage Device A, which contains LUNs A and B. Cloud Service A is hosted by Virtual Server A, which resides on Hypervisor A on Physical Server A. Virtual Server B hosts Cloud Service B and Cloud Service C. Physical Server A. Virtual Server B hosts Cloud Service B and Cloud Service C.

Cloud Service Consumer A accesses Cloud Service A (1), which then accesses LUN A or B on Cloud Storage Device A (2). After receiving the requested data from Cloud Service A, Cloud Service Consumer A forwards the data to Cloud Service B (3), which then writes it to Cloud Storage Device B (4).





Cloud Service Consumer A belongs to Organization A.

Organization A uses LUN A and LUN B on Cloud Storage Device A to store their important client account data. Cloud Storage Device A is a low-performance cloud storage device, which begins to cause performance issues as more data is added to LUNs A and B and as Cloud Service Consumer A performs data access requests more frequently. Organization A asks that its cloud architecture be upgraded to process increased quantities of data and higher volumes of data requests.

Organization A has been leasing a PaaS environment that it used to build Cloud Service A, which it would like to make available to the general public. Organization A needs to establish a system capable of monitoring usage of Cloud Service A for billing purposes.

The cloud provider is using a usage data collection and reporting system that gathers information on Organization A's hosted IT resources approximately ten hours after the time of usage. One day, Organization A attempts to retrieve information on whether Virtual Server B has available Cloud Service C instances. They discover that they are unable to obtain the current status of Virtual Server B. Organization A demands a system that provides instant availability reporting.

Which of the following statements lists the patterns that can be applied to solve these three requirements and problems?

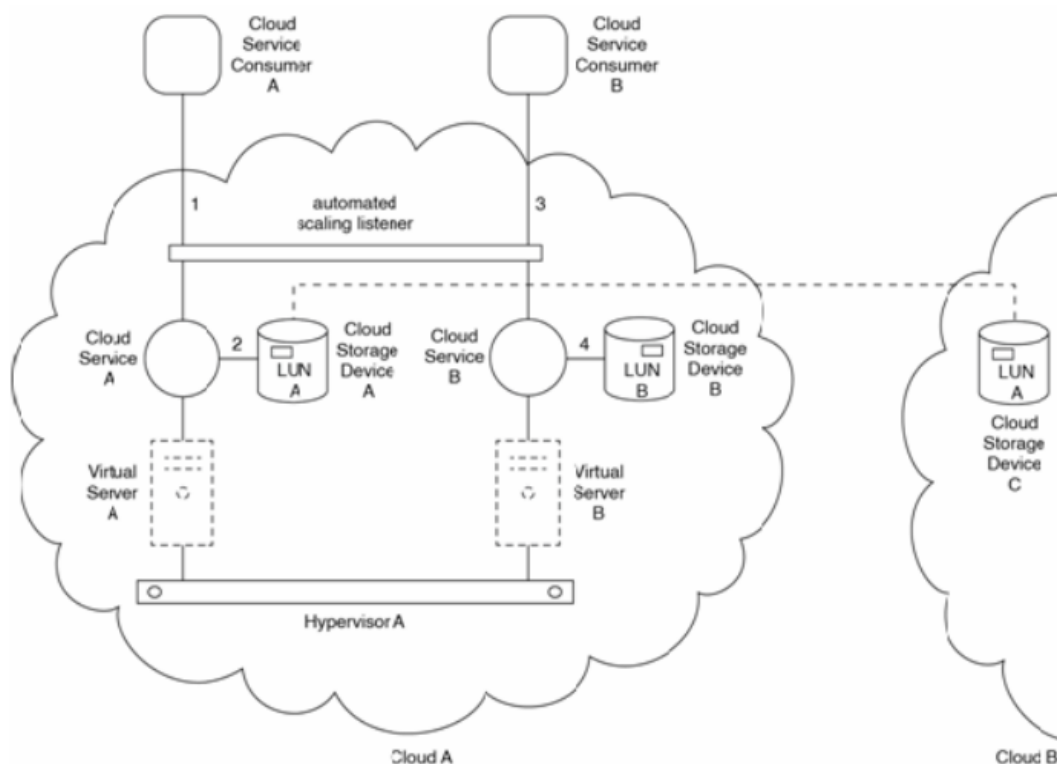
Which of the following statements lists the patterns that can be applied to solve these three requirements and problems?

- A. Cross-Storage Device Vertical Tiering, Pay-as-You-Go, Self-Provisioning
- B. Service Load Balancing, Pay-as-You-Go, Multipath Resource Access
- C. Intra-Storage Device Vertical Data Tiering, Usage Monitoring, Centralized Remote Administration
- D. None of the above.

Answer: D

Question No : 2

Cloud Service A is hosted by Virtual Server A. Cloud Storage Device A contains LUN A. Cloud Storage Device A is a multi-tiered cloud storage device with different types of disk groups that perform at different levels. LUN A is located in the disk group with the highest performance level. Cloud Service B is hosted by Virtual Server B. Virtual Servers A and B are hosted by Hypervisor A, which is installed on a physical server (not shown) that resides in Cloud A. A redundant implementation of LUN A is replicated synchronously to Cloud Storage Device C. Cloud Storage Device C does not support multiple types of disk groups and resides in Cloud B, which is located in a different geographic region than Cloud A. Requests that cloud service consumers send to Cloud Services A and B are intercepted by an automated scaling listener responsible for initiating scaling activities.



Cloud Service Consumer A issues a request to Cloud Service A (1). To process the request, Cloud Service A accesses LUN A on Cloud Storage Device A (2). Cloud Service Consumer B issues a request to Cloud Service B (3). To process the request, Cloud Service B accesses LUN B on Cloud Storage Device B (4).

When Cloud Service Consumer A accesses Cloud Service A, there is usually no noticeable performance fluctuation, even during peak usage periods. However, recently, Cloud Storage Device A became unexpectedly unavailable, requiring that Cloud Service A access LUN A on Cloud Storage Device C instead. During the following outage period for Cloud Storage Device A, Cloud Service Consumer A encounters inconsistent performance from Cloud Service A, including unusual delays that occur whenever the data requested by Cloud Consumer A isn't cached and Cloud Service A is required to retrieve the data from LUN A.

Which of the following statements describes a solution that can address this problem?

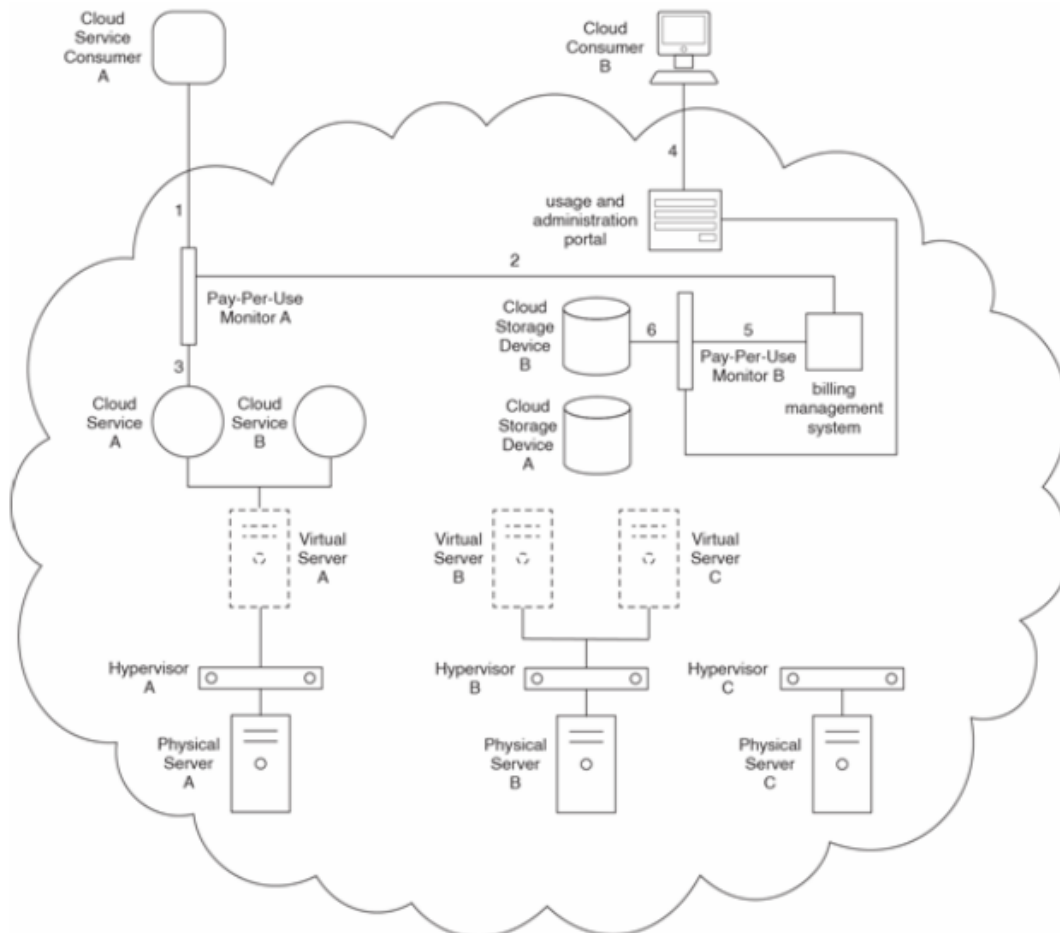
- A.** The Storage Maintenance Window pattern can be applied so that future outages of Cloud Storage Device A do not occur unexpectedly. The Resource Pooling and Resource Reservation patterns can be further applied to establish a resource pool on Cloud A that has resources reserved specifically for Cloud Service A. This will prevent other cloud service consumers, such as Cloud Service Consumer B, from competing for Cloud Service A's resources.
- B.** The Shared Resources pattern can be applied to prevent Cloud Service A from encountering performance issues when IT resources hosted by Hypervisor A are accessed by other cloud service consumers. The Cross-Storage Device Vertical Tiering pattern can be applied to enable Cloud Storage Device A to scale to a higher performance disk type when an outage occurs.
- C.** The Cloud Balancing pattern can be applied to enable Cloud Service A to switch over to Cloud Storage Device C if Cloud Storage Device A becomes unavailable. The Dynamic Data Normalization pattern can be further applied to streamline and reduce the quantity of the data being stored by LUN A within Cloud Storage Device A, so as to correspondingly reduce the performance impacts during high usage volumes.
- D.** None of the above.

Answer: D

Question No : 3

Virtual Server A is hosted by Hypervisor A, which resides on Physical Server A. Virtual Server A hosts Cloud Services A and B. Virtual Server B is hosted by Hypervisor B on Physical Server B. Physical Server C is currently not being used.

Cloud Service Consumer A sends a request to Cloud Service A that is intercepted by Pay-Per-Use Monitor A (1), which collects billing-related usage data that is later forwarded to the billing management system (2). Cloud Service A receives and processes the request (3). Cloud Consumer B accesses the usage and administration portal (4) to access data on Cloud Storage Device B. Pay-Per-Use Monitor B intercepts the data access to collect and forward billing-related usage data to the billing management system (5). Cloud Storage Device B processes the data access request from Cloud Consumer B (6).



Cloud Service Consumer A and Cloud Consumer B belong to Organization A.

Cloud Storage Device B is accessed on a regular basis by Cloud Consumer B. However, managers at Organization A receive reports from their cloud resource administrator that Cloud Storage Device B is unavailable for longer periods and more frequently than what they expected, based on the SLA availability guarantee they were provided by the cloud provider. This results in wasted time when the cloud resource administrator attempts to upload or access data and then discovers that Cloud Storage Device B is unavailable. The cloud resource administrator requires a means of checking for the availability of Cloud Storage Device B prior to attempting access.

As the workload increases on Physical Server B, Cloud Consumer B begins to receive runtime exceptions and degraded data access performance from Cloud Storage Device B.