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## 問題集

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**Exam : 70-473**

**Title : Designing and Implementing  
Cloud Data Platform**

**Version : DEMO**

## 1. Topic 1, Proseware, Inc.

### Overview

#### General Overview

Proseware, Inc. is a software engineering company that has 100 employees. Proseware has sales, marketing, accounts, human resources IT, and development departments.

The IT department has one team dedicated to managing the internal resources and one team dedicated to managing customer resources, which are located in the company's hosting environment.

Proseware develops websites, basic web apps, and custom web apps. The websites and the apps are hosted and maintained in the hosting environment of Proseware.

#### Physical Locations

Proseware has two offices located in Seattle and Montreal. The Seattle office contains all of the hardware required to host its customers' websites, web apps, and databases. The Seattle office contains the IT team for the hosting environment.

The Montreal office contains all of the hardware required to host the company's internal applications, databases, and websites.

Each office connects directly t

o the Internet. Testing reveals that the minimum latency from the offices to Microsoft Azure is 20 ms.

#### Existing Environment

Internal Microsoft SQL Server Environment

Proseware uses a custom customer relationship management (CRM) application.

The internal Microsoft SQL Server environment contains two physical servers named CRM-A and CRM-B. Both servers run SQL Server 2012 Standard and host databases for the CRM application.

CRM-A hosts the principal instance and CRM-B hosts the mirrored instance of the CRM database. RM-A also hosts databases for several other applications that are used by the company's internal applications.

CRM-A has a quad core processor and 12 GB of RAM. CRM- has a dual core processor and 8 GB of RAM.

#### Custom Web Applications Environment

Some Proseware customers request custom web-based applications that require more than just databases, such as SQL Server Integration Services (SSIS) and CLR stored procedures.

Proseware uses a Hyper-V server named Host1. Host1 has four instances of SQL Server 2014 Enterprise in the host operating system. The instances are mirrored on a server named Host2.

Host1 also hosts four virtual machines named VM1, VM2, VM3, and VM4. VM1 has SQL Server 2005 Standard installed. VM2 has SQL Server 2005 Enterprise Edition installed. VM3 has SQL Server 2008 Standard Edition installed. VM4 has SQL Server 2008 R2 Standard Edition installed.

Host1 uses a SAN to store all of the data and log files for the four SQL Server instances and the four virtual machines.

#### Websites and Basic Web Apps Environment

Proseware has two physical servers named WebServer1 and WebData1. WebServer1 hosts basic web apps and websites for its customers. WebData1 has a database for each website and each basic web app that Proseware hosts. WebData1 has four cores and 8 GB of RAM.

Each website database contains customer information for billing purposes. Proseware generates a consolidated report that contains data from all of these databases.

The relevant databases on WebData1 are:

\*CWDB: Currently 60 GB and is not expected to exceed 100 GB. CWDB contains a table named Personallinfo.

\*MovieReviewDB: Currently 5 GB and is not expected to exceed 10 GB.

## Marketing Department

Proseware has a web app for the marketing department. The web app uses an Azure SQL database. Managers in the marketing department occasionally bulk load data by using a custom application. The database is updated daily.

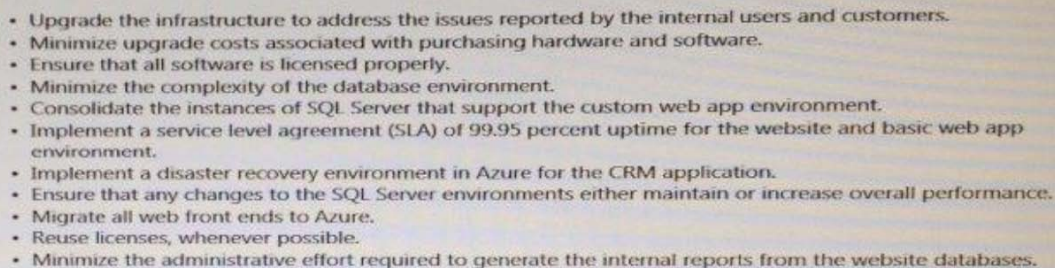
## Problem Statements

Proseware identifies the following issues:

- \* Lack of planning and knowledge has complicated the database environment
- \* Customers who have web apps hosted on Webserver1 report frequent outages caused by failures on WebData1. The current uptime is less than 90 percent .
- \* internally users complain of slow performance by the CRM application when the databases fail over to CRM-B
- \* WebData1 has no high availability option for the databases or the server.
- \* An internal licensing audit of SQL Server identifies that Proseware is non compliant. Host1, CRMA, and CRM-B are licensed properly. VM1 VM2, VM3, VM4, and WebData1 are unlicensed.

## Business Requirements

Proseware identifies the following business requirements:

- 
- Upgrade the infrastructure to address the issues reported by the internal users and customers.
  - Minimize upgrade costs associated with purchasing hardware and software.
  - Ensure that all software is licensed properly.
  - Minimize the complexity of the database environment.
  - Consolidate the instances of SQL Server that support the custom web app environment.
  - Implement a service level agreement (SLA) of 99.95 percent uptime for the website and basic web app environment.
  - Implement a disaster recovery environment in Azure for the CRM application.
  - Ensure that any changes to the SQL Server environments either maintain or increase overall performance.
  - Migrate all web front ends to Azure.
  - Reuse licenses, whenever possible.
  - Minimize the administrative effort required to generate the internal reports from the website databases.

## Security Requirements

Proseware hosts a database for a company named Contoso, Ltd. Currently, all of the employees at Contoso can access all of the data in the database.

Contoso plans to limit user access to the CWDB database so that customer service representatives can see only the data from the Personallinfo table that relates to their own customers.

## HOTSPOT

You need to identify which methods to use to migrate MovieReviewDB and CWDB.

Which method should you identify for each database? To answer, select the appropriate options in the answer area.

### Answer Area

CWDB:

- Azure Import and Export Service
- Azure ExpressRoute
- the bcp utility

MovieReviewDB:

- Azure ExpressRoute
- the BACKUP and RESTORE statements
- the Deploy Database to Microsoft Azure Database task

**Answer:**

### Answer Area

CWDB:

- Azure Import and Export Service
- Azure ExpressRoute
- the bcp utility

MovieReviewDB:

- Azure ExpressRoute
- the BACKUP and RESTORE statements
- the Deploy Database to Microsoft Azure Database task

### Explanation:

References:

<https://azure.microsoft.com/en-gb/documentation/articles/sql-database-cloud-migrate-compatible-using-ssms-migration-wizard/>

2.You are planning the consolidation of the databases from Host1.

You need to identify which methods to use to back up the data after the consolidation completes. What are two possible methods that achieve this goal? Each correct answer presents a complete solution.

- A. BACKUP TO URL
- B. AlwaysOn failover clustering
- C. a maintenance plan
- D. AlwaysOn Availability Groups

**Answer:** A,C

3.You need to recommend a disaster recovery solution for the CRM application that meets the business

requirements.

What should you recommend?

- A. backup and restore by using Windows Azure Storage
- B. log shipping
- C. AlwaysOn Availability Groups
- D. database mirroring

**Answer: A**

#### 4.HOTSPOT

You are evaluating the migration of the databases from Host1 and WebData1 to Azure.

You need to recommend the most cost-effective solution for storing the database in Azure. The solution must meet the business requirements.

In the table below, recommend the most cost-effective storage solution for Host1 and WebData1. NOTE: Make only one selection in each column.

##### Answer Area

Solutions	Host1	WebData1
SQL Server 2014 Standard edition installed on an Azure virtual machine	<input type="radio"/>	<input type="radio"/>
SQL Server 2014 Enterprise edition installed on an Azure virtual machine	<input type="radio"/>	<input type="radio"/>
a single Azure SQL database on the Basic service tier	<input type="radio"/>	<input type="radio"/>
an Azure SQL Database elastic database pool on the Basic service tier	<input type="radio"/>	<input type="radio"/>
a single Azure SQL database on the Standard service tier	<input type="radio"/>	<input type="radio"/>
an Azure SQL Database elastic database pool on the Standard service tier	<input type="radio"/>	<input type="radio"/>

**Answer:**

**Explanation:**

**Answer Area**

<b>Solutions</b>	<b>Host1</b>	<b>WebData1</b>
SQL Server 2014 Standard edition installed on an Azure virtual machine	<input type="radio"/>	<input type="radio"/>
SQL Server 2014 Enterprise edition installed on an Azure virtual machine	<input checked="" type="radio"/>	<input type="radio"/>
a single Azure SQL database on the Basic service tier	<input type="radio"/>	<input type="radio"/>
an Azure SQL Database elastic database pool on the Basic service tier	<input type="radio"/>	<input type="radio"/>
a single Azure SQL database on the Standard service tier	<input type="radio"/>	<input type="radio"/>
an Azure SQL Database elastic database pool on the Standard service tier	<input type="radio"/>	<input checked="" type="radio"/>

5.You are evaluating moving the data from WebData1 to an Azure SQL database.

You need to recommend a solution to generate the consolidated report for billing. The solution must meet the business requirements.

What should you include in the recommendation?

- A. SQL Server Integration Services (SSIS)
- B. SQL Server Analysis Services (SSAS)
- C. an elastic database job
- D. an elastic query

**Answer: D**