

# Exam AZ-301: Microsoft Azure Architect Design Crash Course



Tim Warner



## Tim Warner



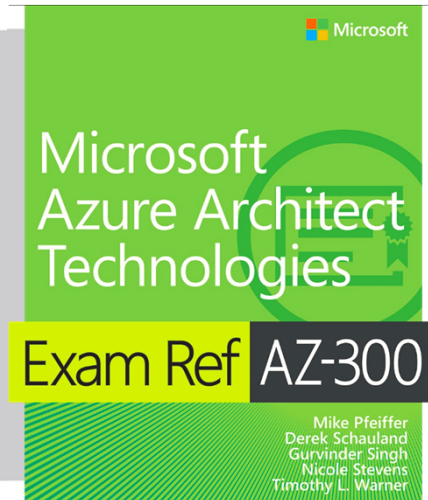
- Based in Nashville, TN, US
- MCT, MVP
- Twitter: [@TechTrainerTim](https://twitter.com/TechTrainerTim)
- Badge: [timw.info/azarchcert](http://timw.info/azarchcert)



Tim Warner

[timw.info/ms300](http://timw.info/ms300)

O'Reilly Online Learning



 Pearson

## Course Materials

[timw.info/az301](http://timw.info/az301)

## Session 1 of 2 Learning Goals

- Introduction
- Identity Design
  - Authentication
  - Authorization
  - Accounting (monitoring)
- Data Platform Solution Design
  - Relational vs non-relational databases + optimization
  - Data protection of all stripes

## Session 2 of 2 Learning Goals

- Business Continuity / High Availability Design
- Deployment, Migration, Integration Design
- Exam AZ-301 certification strategy

## Setting Expectations

- Azure Architect is an expert-level certification
  - You should already know how to deploy and configure Azure resources
- This is a "crash course"
  - Please plan to review these materials more than once
  - Five-minute break at midpoint
- Please ask/answer questions and provide feedback in the Q/A panel, not the group chat

## 2020 Exam Update Information

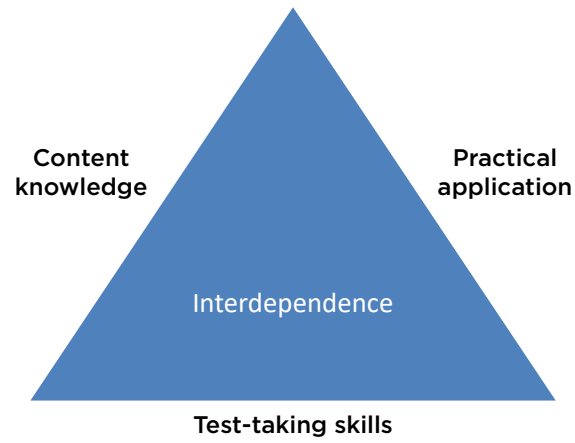
- Microsoft WorldWide Learning (WWL) revisits the Azure role-based certs yearly
- Relevant blog post: [timw.info/az2020](https://timw.info/az2020)
- Changes:
  - AZ-300 replaced with AZ-303
  - AZ-301 replaced with AZ-304
- AZ-304 beta will be available ~ April 28, 2020
- AZ-301 will remain in market until or around July 28, 2020



## 2020 Exam Update Strategy

- You can earn your badge by combining the old and new exam versions:
  - AZ-300 and AZ-304
  - AZ-301 and AZ-301
- The certification is the same, and has a 2-year expiry
- If you're already prepping for AZ-300, stay the course!
  - Beta sometimes takes a long time
  - Cert prep vendors need time to develop new materials











## Tim's Certification Study Pyramid





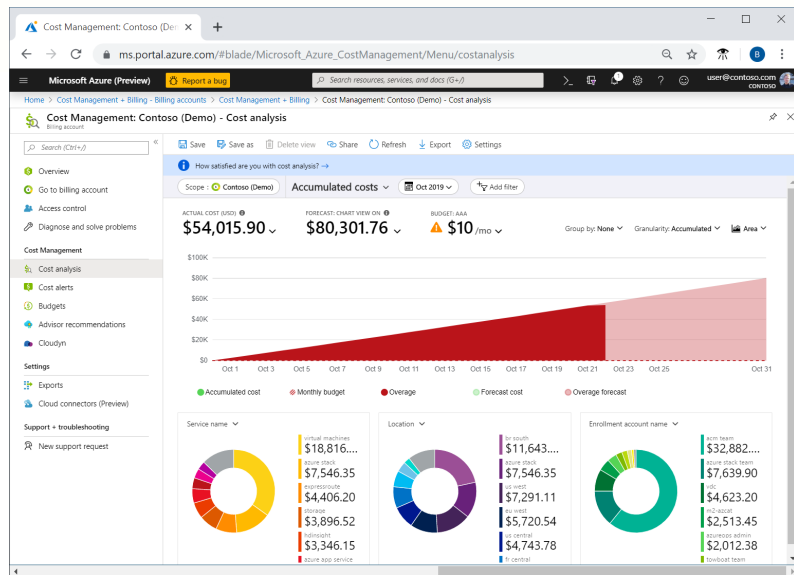
## Consumption, Auditing, Monitoring Design

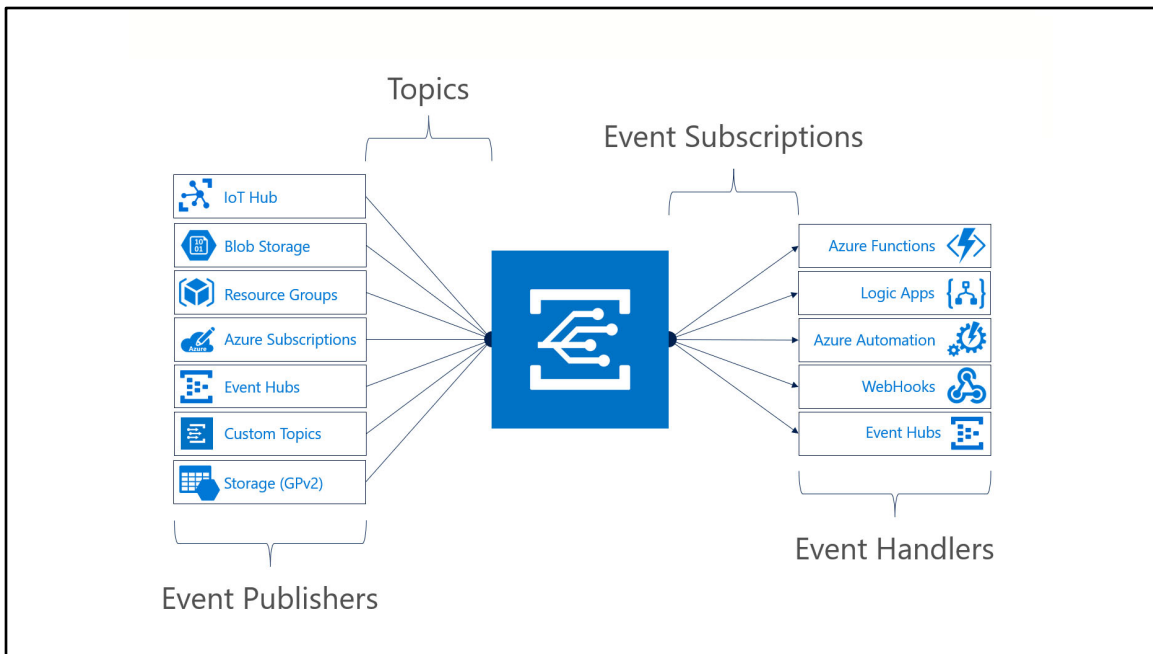
# Azure Reservations

 <p><b>Virtual machine</b> By Microsoft Corp.</p> <p>Save on virtual machine costs by buying reserved instances for 1 or 3 years</p> <p><a href="#">Buy</a></p>	 <p><b>SQL Database</b> By Microsoft Corp.</p> <p>Save on SQL Database compute costs by buying reserved vCores for 1 or 3 years</p> <p><a href="#">Buy</a></p>	 <p><b>Azure SQL Data Warehouse</b> By Microsoft Corp.</p> <p>Save up to 65% on SQL Data Warehouse costs by buying reserved capacity for 1 or 3 years</p> <p><a href="#">Buy</a></p>	 <p><b>Azure Cosmos DB</b> By Microsoft Corp.</p> <p>Save up to 65% on Cosmos DB by buying reserved throughput capacity for 1 or 3 years</p> <p><a href="#">Buy</a></p>	 <p><b>Azure Blob Storage</b> By Microsoft Corp.</p> <p>Save on Azure Storage costs for Block Blobs and Azure Data Lake Storage by buying Azure Blob Storage Reserved Capacity for 1 or 3 years</p> <p><a href="#">Buy</a></p>
 <p><b>Azure Database for MySQL</b> By Microsoft Corp.</p> <p>Save on Azure Database for MySQL compute costs by buying reserved vCores for 1 year</p> <p><a href="#">Buy</a></p>	 <p><b>Azure Database for MariaDB</b> By Microsoft Corp.</p> <p>Save on Azure Database for MariaDB compute costs by buying reserved vCores for 1 year</p> <p><a href="#">Buy</a></p>	 <p><b>Azure Database for PostgreSQL</b> By Microsoft Corp.</p> <p>Save on Azure Database for PostgreSQL single server compute costs by buying reserved vCores for 1 year</p> <p><a href="#">Buy</a></p>	 <p><b>Azure Managed Disks</b> By Microsoft Corp.</p> <p>Save on Premium SSD Managed Disks by buying reserved disks for 1 year</p> <p><a href="#">Buy</a></p>	 <p><b>Azure Databricks</b> By Microsoft Corp.</p> <p>Save on your Azure Databricks costs by pre-purchasing DBUs for 1 or 3 years</p> <p><a href="#">Buy</a></p>

# Azure Dedicated Host

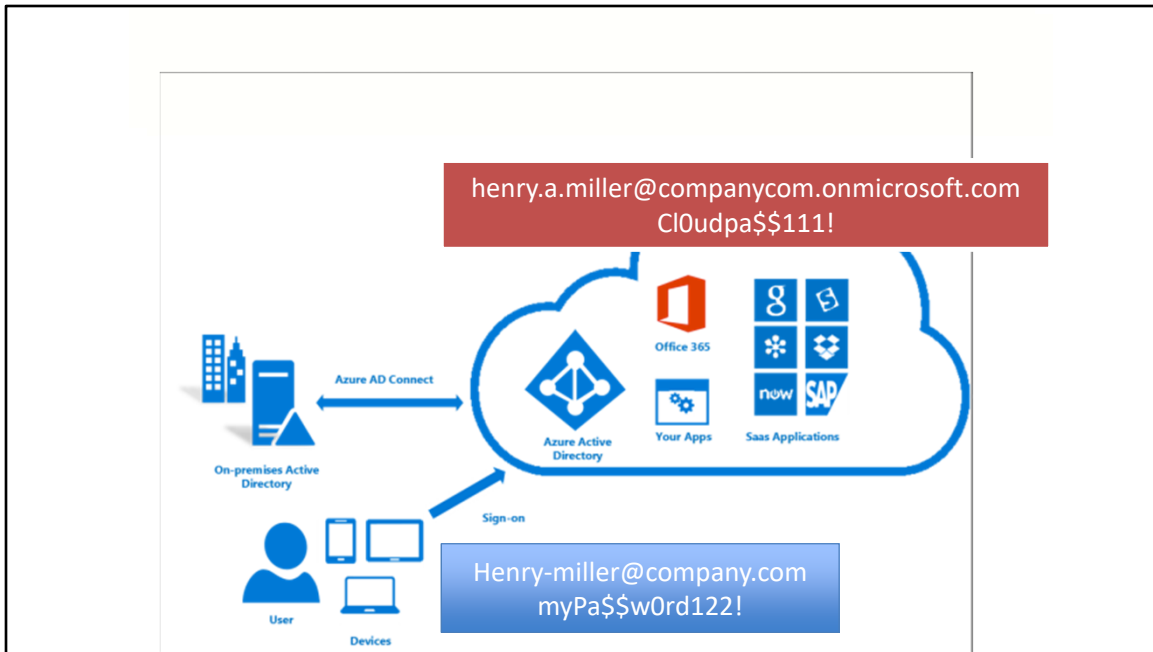


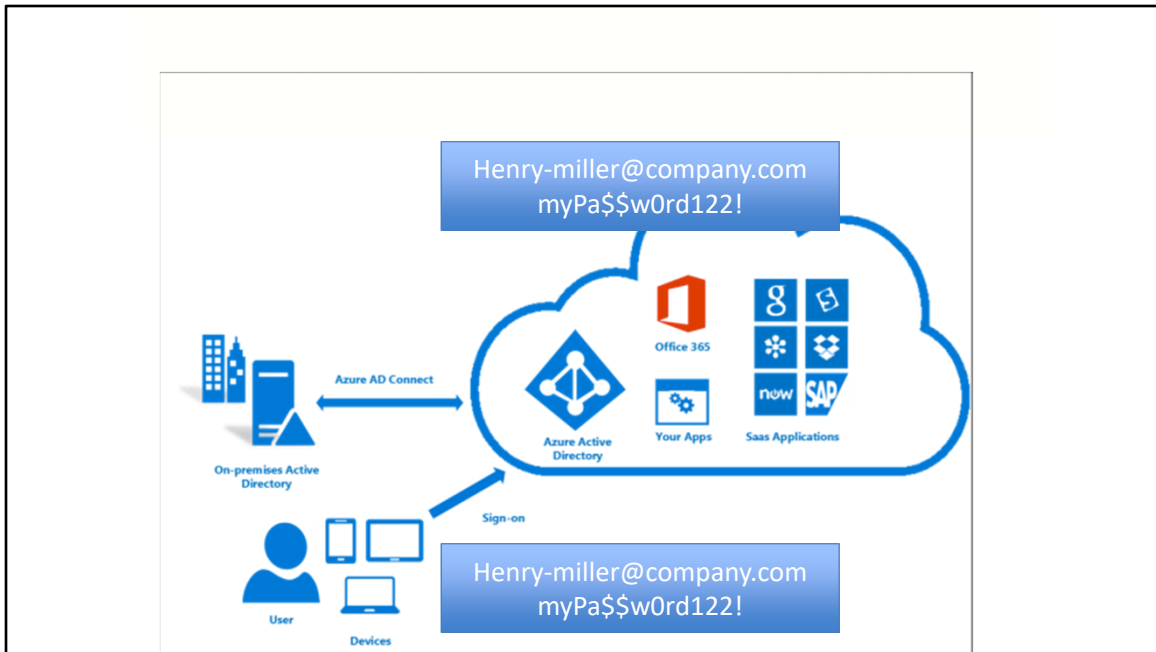




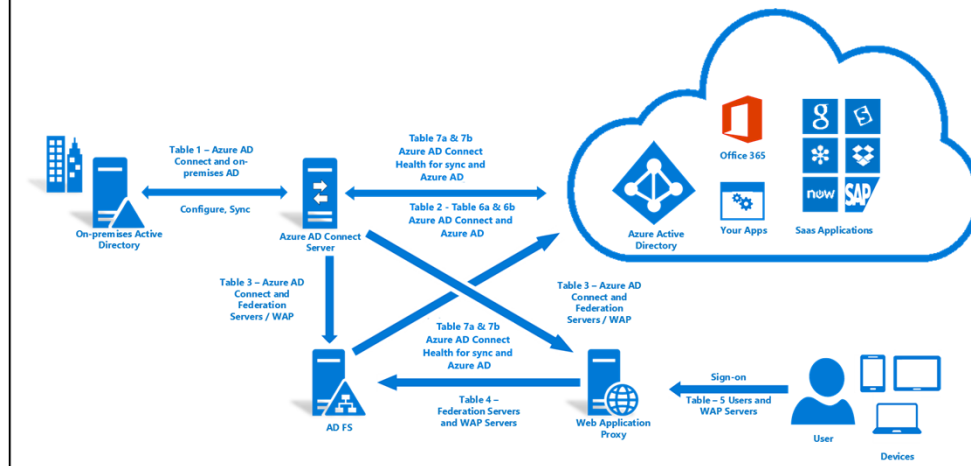


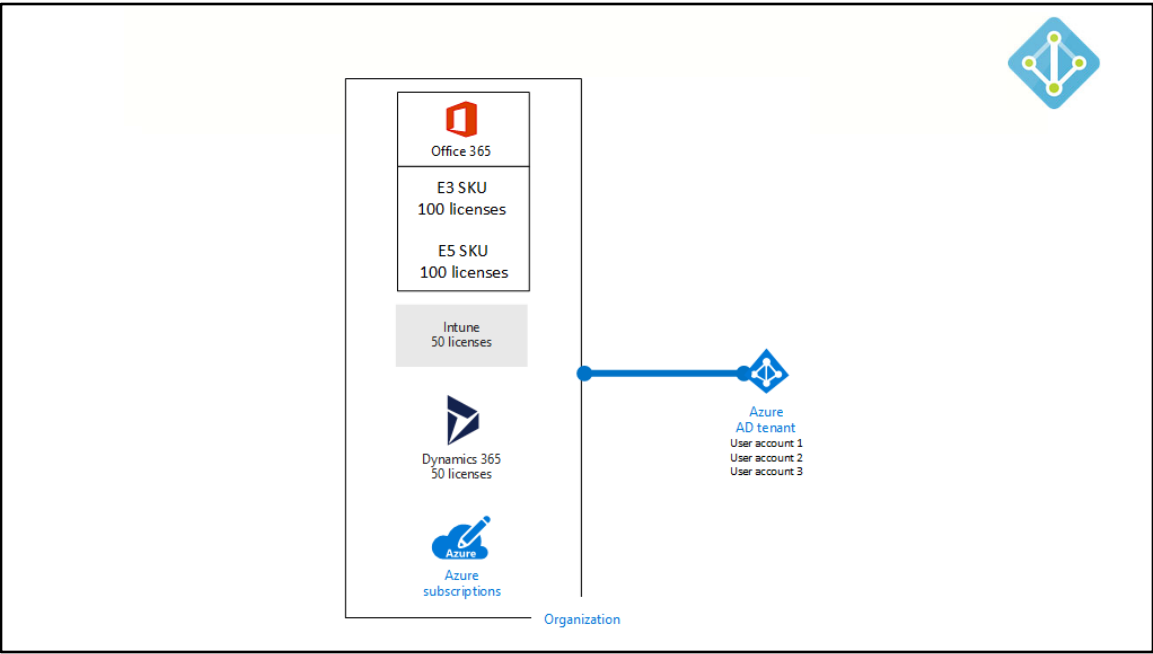


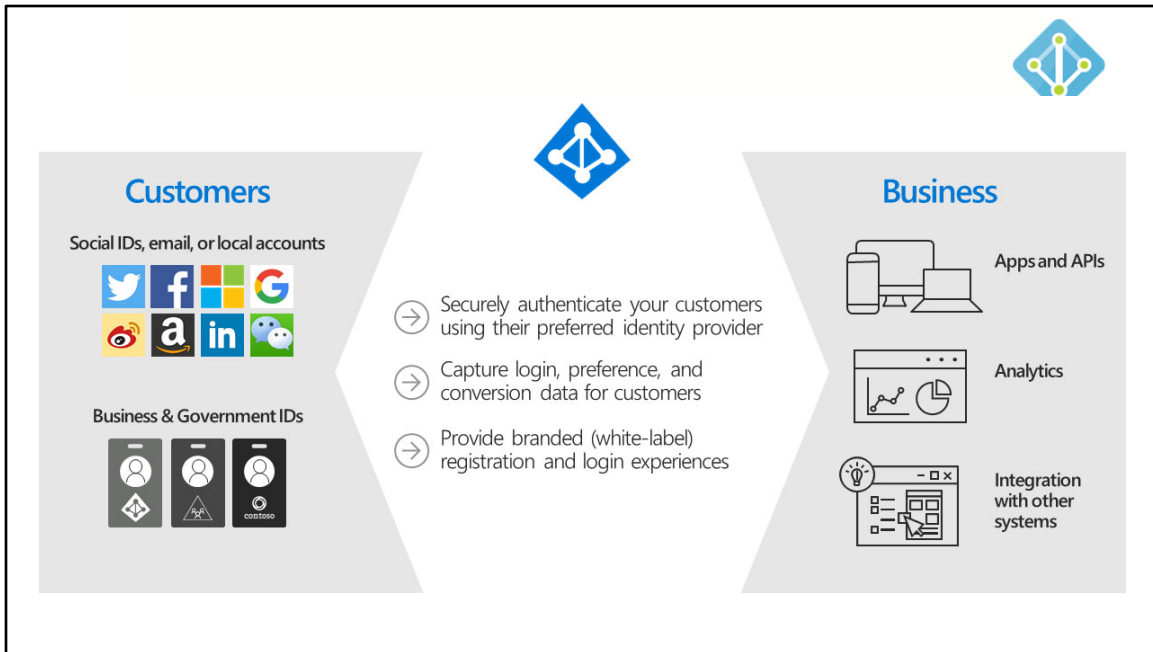


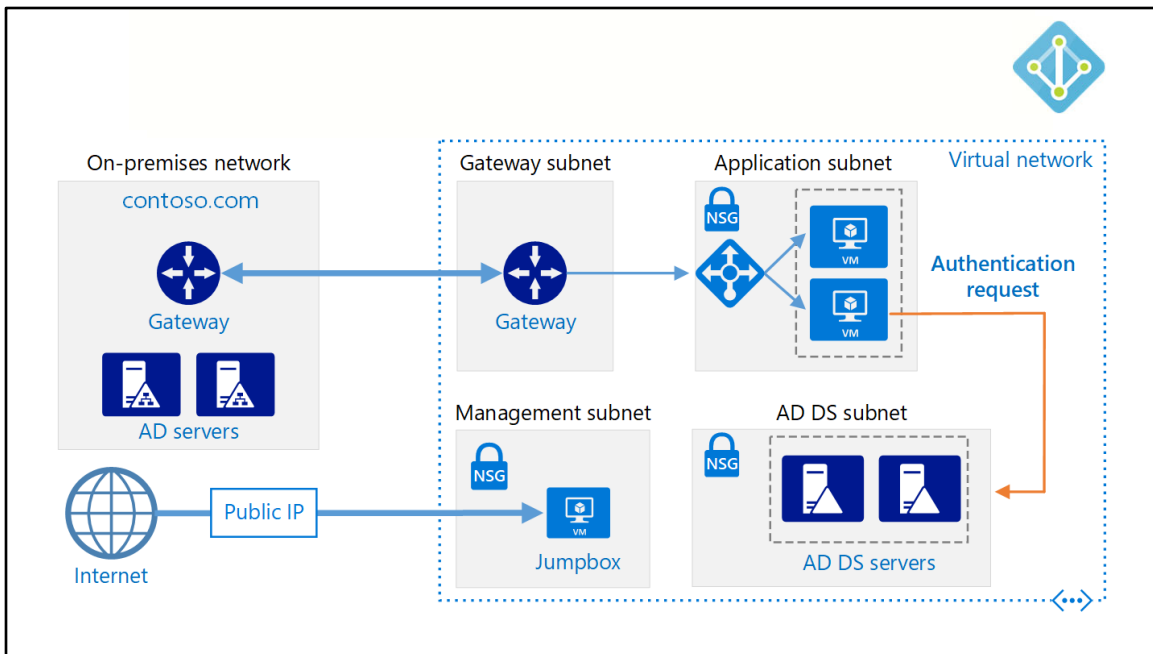


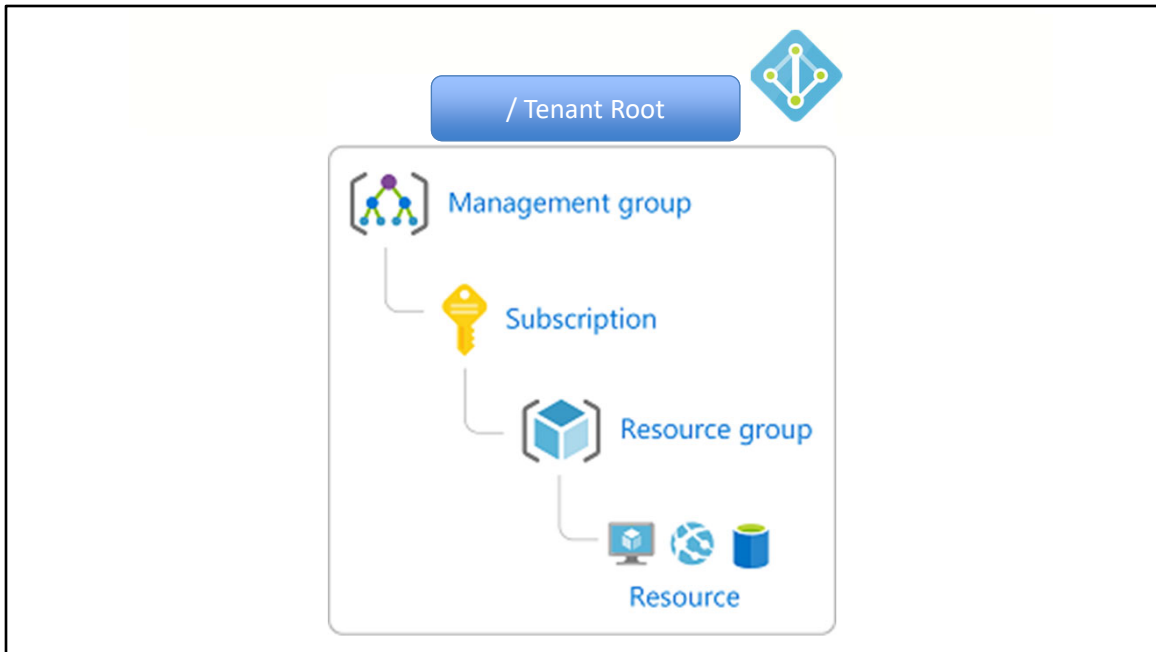
## Hybrid Identity Required Ports and Protocols

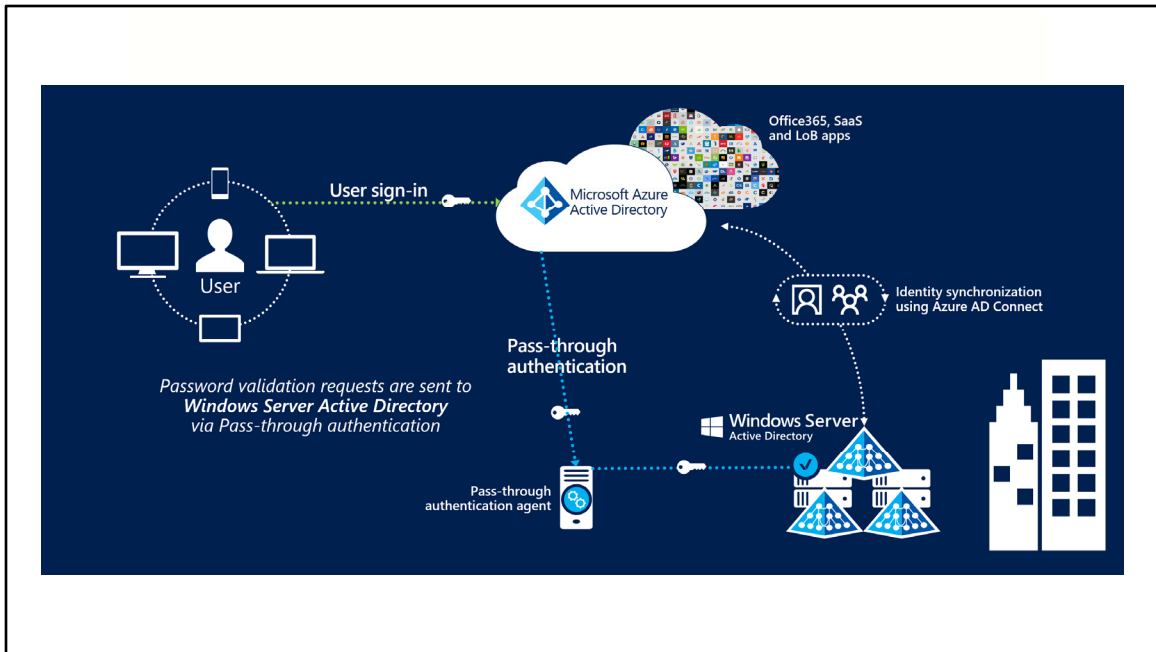




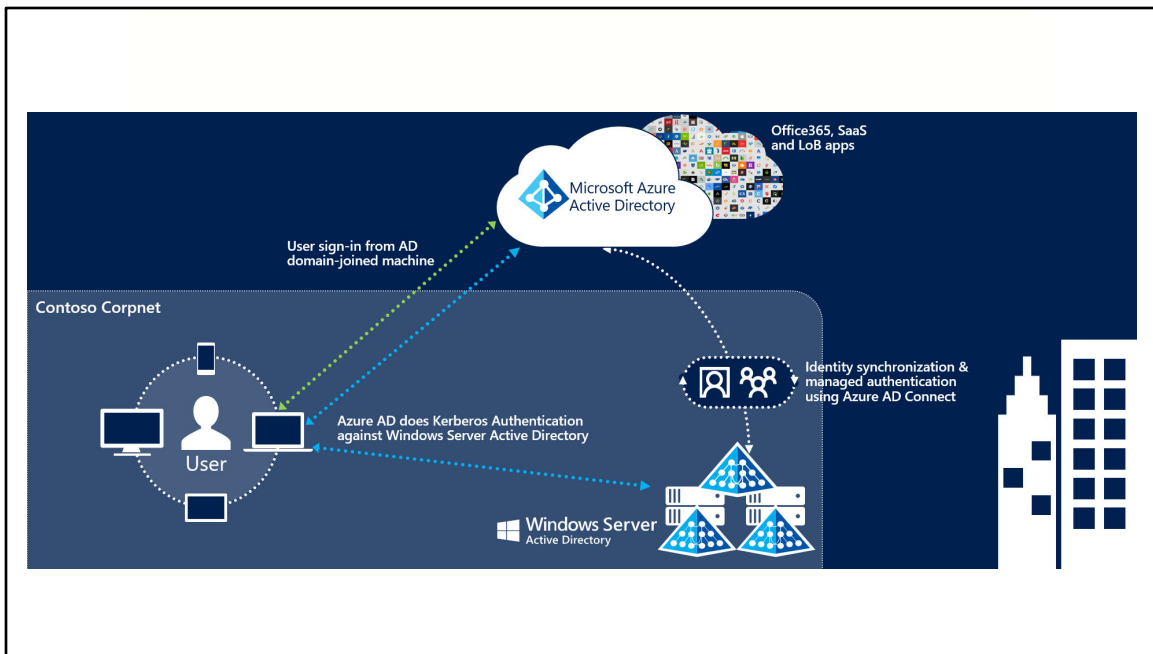












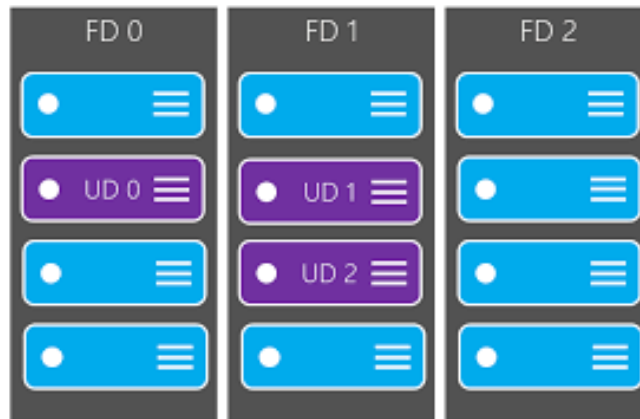




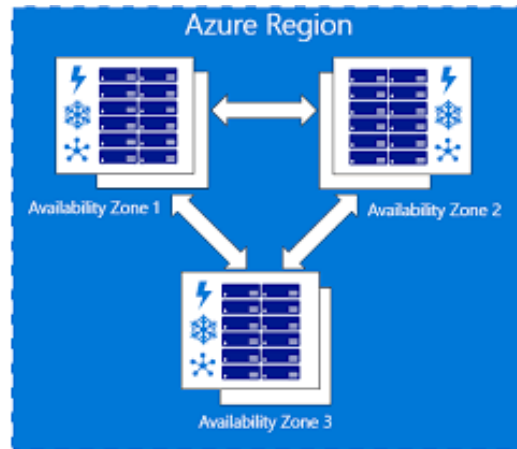
# Data Platform Solution Design

 Pearson

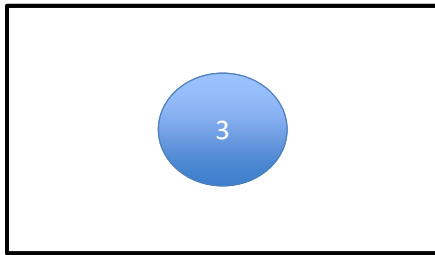
## Availability Set



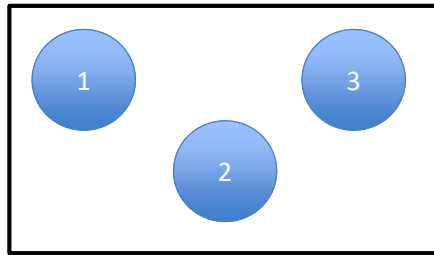
# Availability Zone



## Storage Account Replication

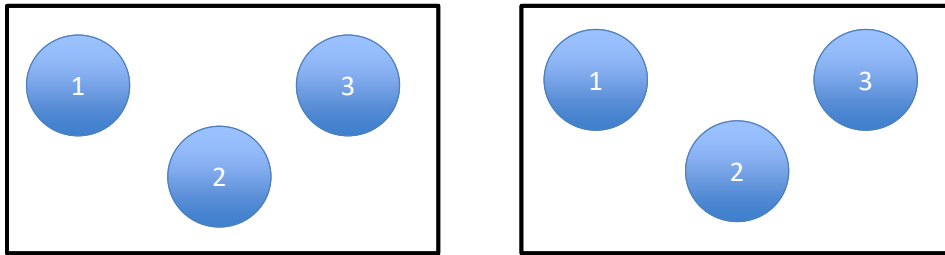


LRS



ZRS

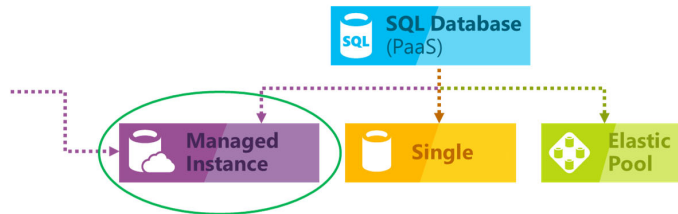
## Storage Account Replication



GRS – RA/GRS

# What is SQL Database Managed Instance?

New deployment option that enables frictionless migration for SQL apps and modernization in a fully managed service



## Easy lift and shift

- Fully-fledged SQL instance with nearly 100% compat with on-prem

## Fully managed PaaS

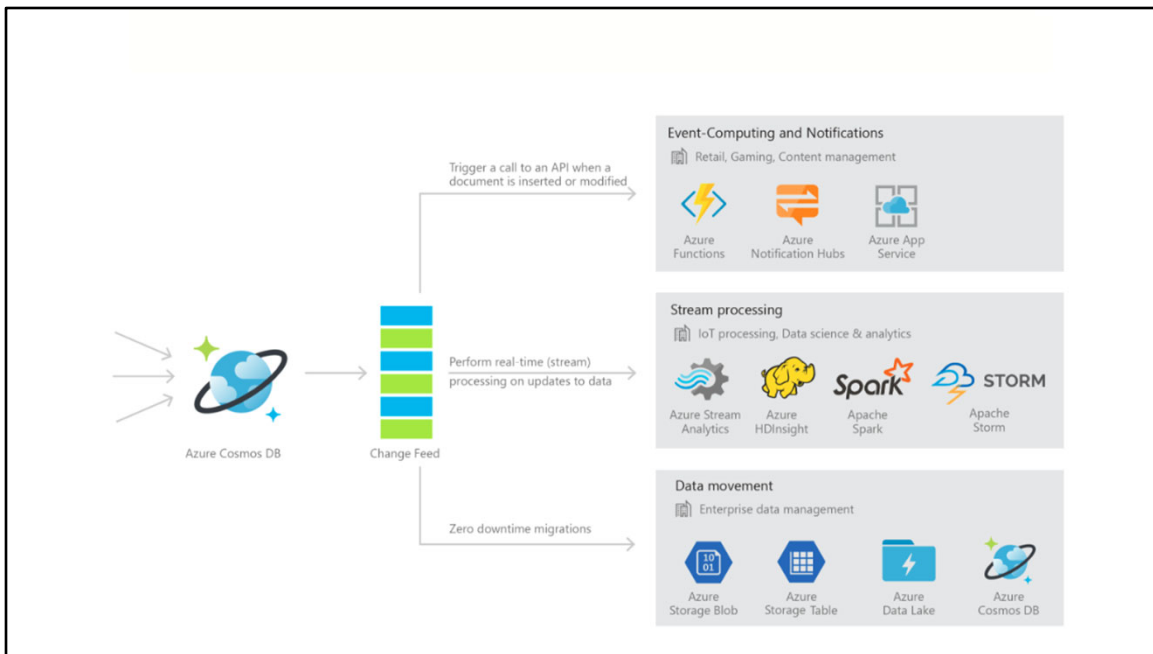
- Built on the same PaaS service infrastructure
- All PaaS features

## Full isolation and security

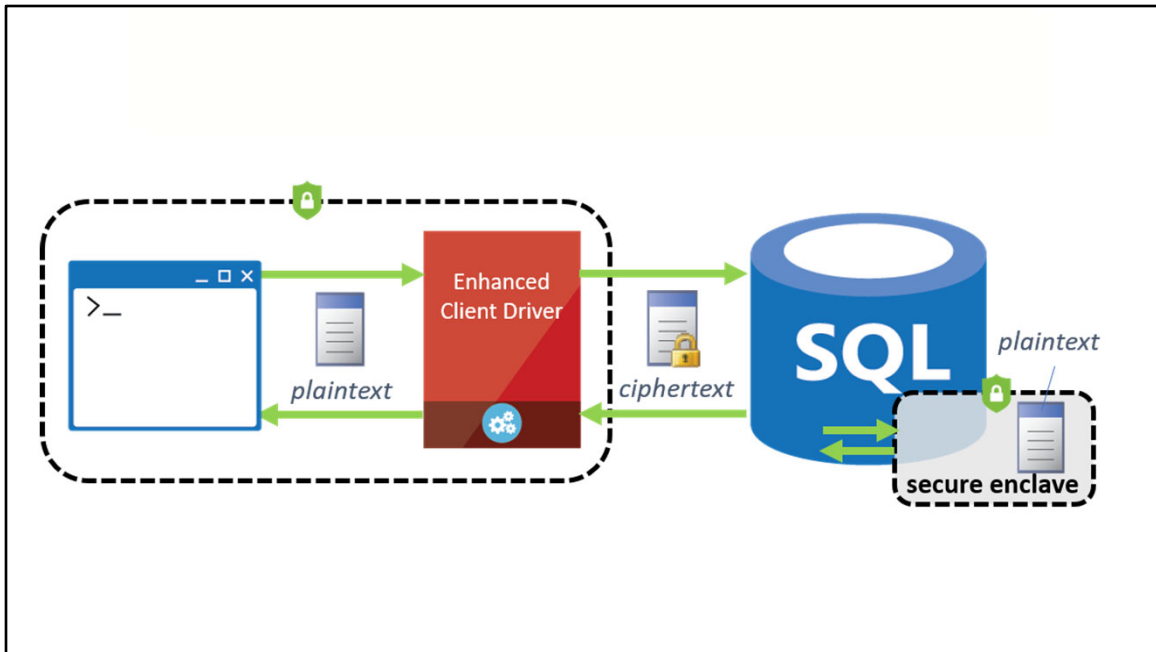
- Native VNET implementation
- Private IP addresses


## New business model

- Competitive
- Transparent
- Frictionless



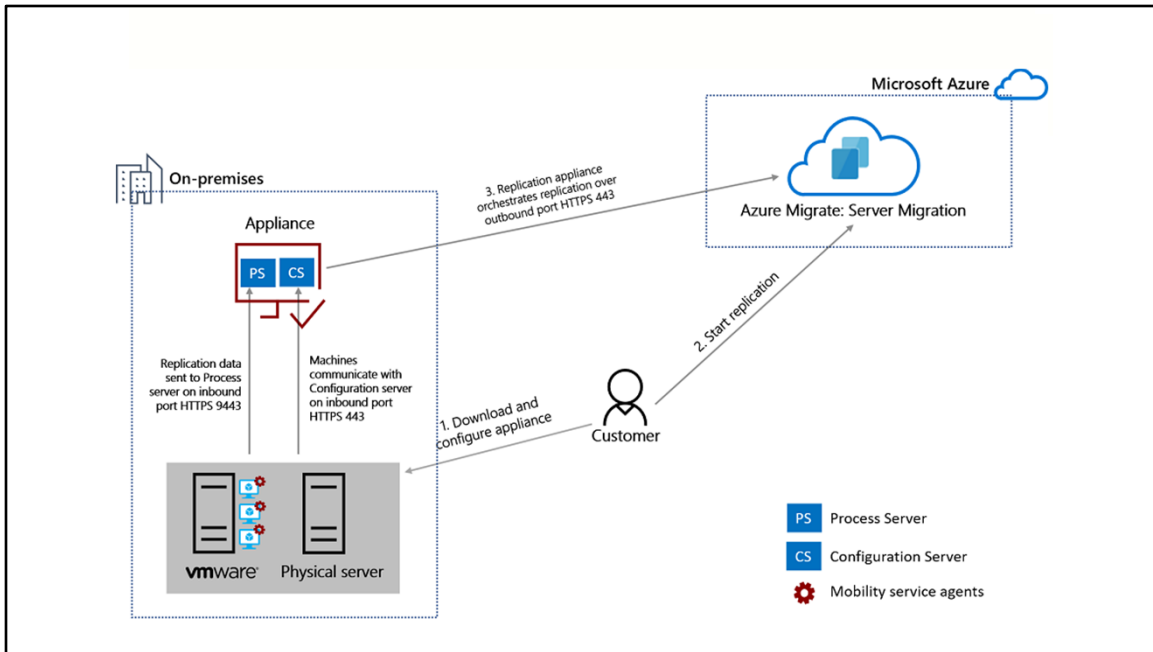






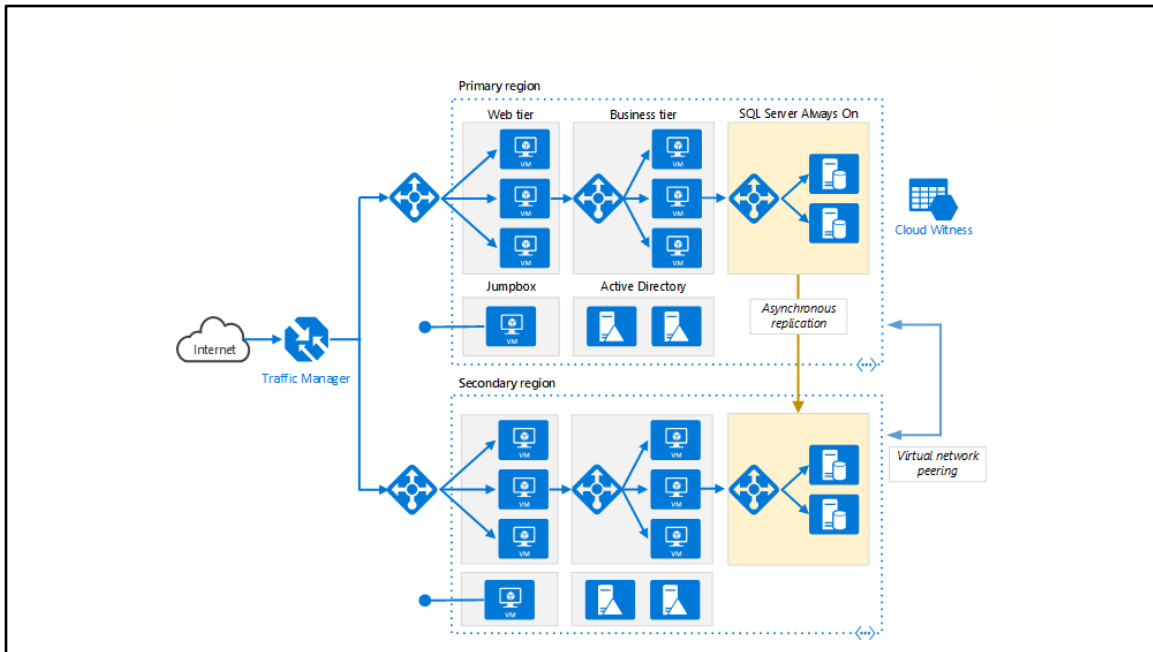
## Business Continuity/High Availability Design

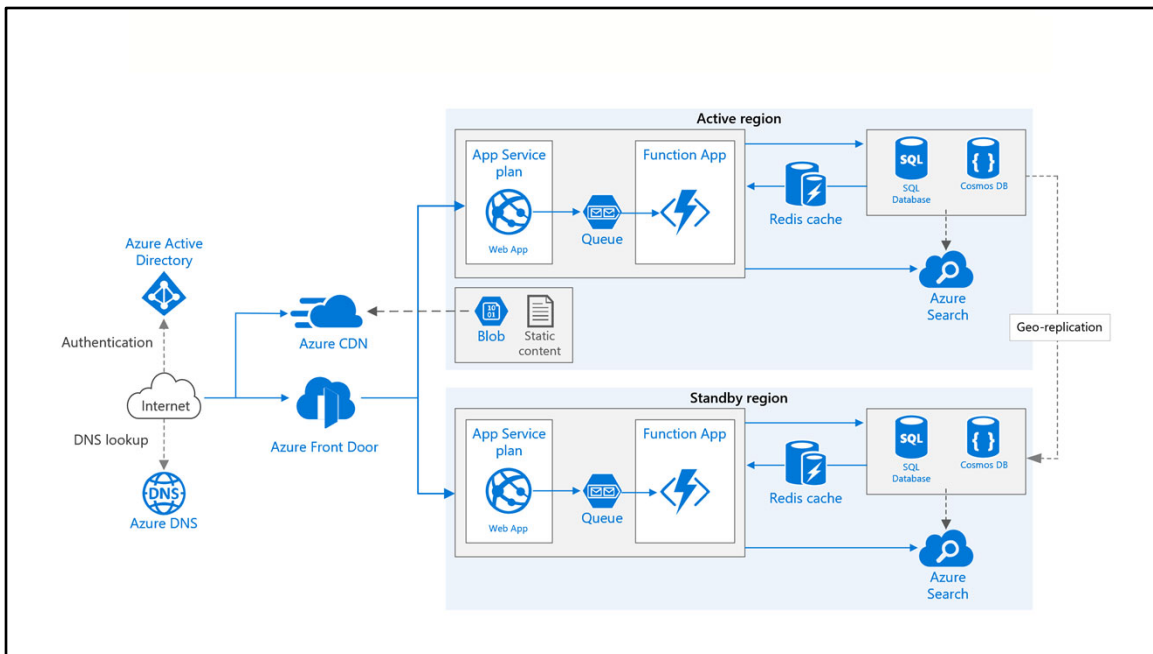
 Pearson

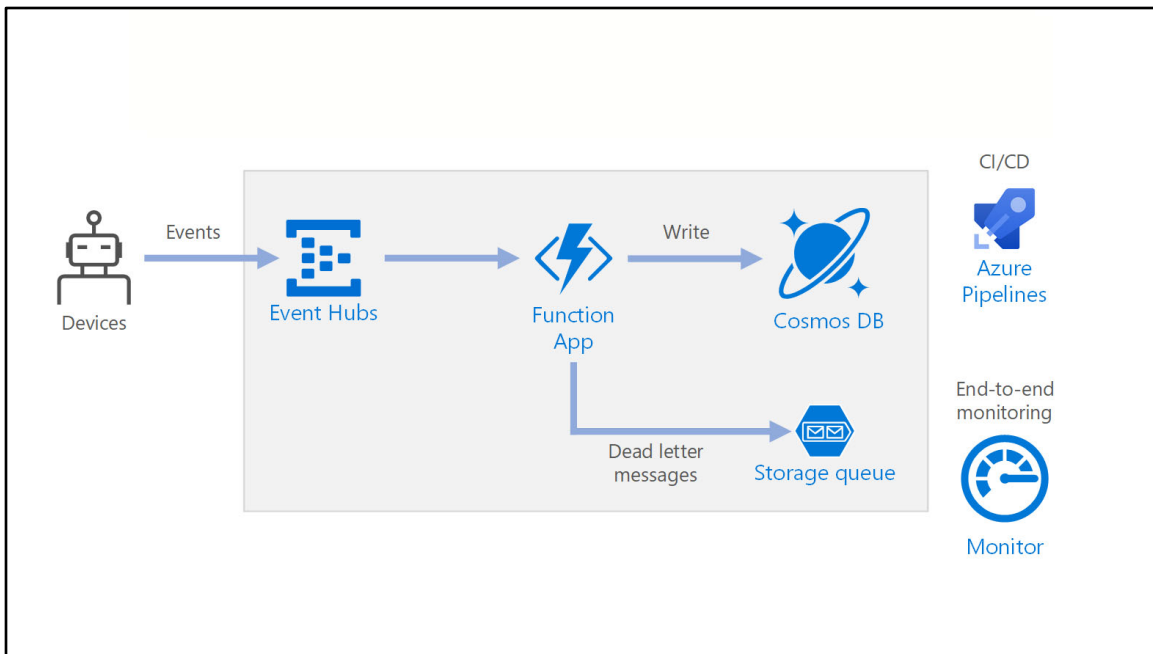


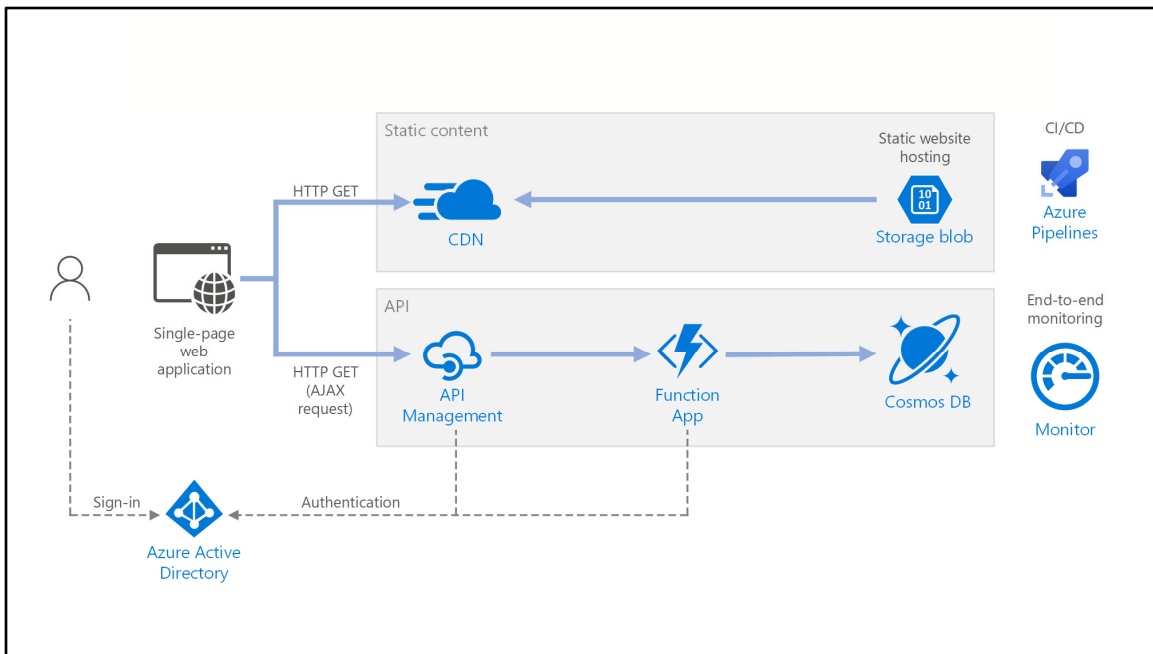


## Deployment, Migration, Integration Design















## Exam AZ-301 Item Types

 Pearson



#### Question 4 (of 5)

Time remaining 01:58:22

- ☐ Review later
- ☐ Comment later

Your network contains an Active Directory domain named contoso.com. The domain contains two servers named Server1 and Server2 that run Windows Server 2012 R2. Server1 has the Group Policy Management feature installed. Server2 has the Print and Document Services server role installed.

On Server2, you open **Print Management** and you deploy a printer named Printer1 by using a Group Policy object (GPO) named GPO1.

When you open GPO1 on Server1, you discover that the Deployed Printers node does not appear.

You need to view the Deployed Printers node in GPO1.

What should you do?

- ☐ A. On Server1, add and share a printer.
- ☐ B. On Server1, install the Print and Document Services Tools.
- ☐ C. On a domain controller, create a Group Policy central store.
- ☐ D. On Server1, modify the Group Policy filtering options of GPO1.



Help



Calculator



Color scheme



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Expires on 30 October 2020

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[Additional Details](#)

### Microsoft Certified: Azure Administrator Associate

Issued By [Microsoft](#)

Earning Azure Administrator Associate certification demonstrates understanding of services across the IT lifecycle, and ability to take requests for infrastructure services, applications, and environments. Candidates for this certification are typically Azure Administrators who manage cloud services spanning storage, security, networking, and compute cloud capabilities. They recommend services to use for optimal performance and scale, as well as provision, size, monitor, and adjust resources.

#### Demonstrated Skills

AzureCloud ArchitectureCloud ComputingCloud DataCloud Developer

Cloud InfrastructureCloud NetworkingCloud PlatformCloud SecurityCloud Services

Cloud StorageCloud TechnologiesPowerShellVirtualization

#### Earning Criteria

 PASS AZ-100 AND AZ-101:

 [AZ-100 Microsoft Azure Infrastructure and Deployment](#)

 [AZ-101 Microsoft Azure Integration and Security](#)

You need to move an Azure VM to another hardware host.

Solution: You redeploy the VM.

Does this solution meet the goal?

- a. Yes
- b. No

Question 5 (of 9)

Review later

Comment later

Time remaining

01:38:28

You have a Microsoft SharePoint 2013 Service Pack 1 (SP1) server farm.

You need to recommend which tools should be used to recover deleted SharePoint site groups, deleted document libraries, and deleted SharePoint Designer 2010 workflows. The solution must use the minimum amount of administrative effort.

Which tool should you recommend for each type of content? To answer, drag the appropriate tool to the correct recovery task. Each tool may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Tool

Microsoft SQL Server backups

Recycle Bin

Windows Server Backups

Recovery Task

Document libraries

SharePoint Site groups

SharePoint Designer workflows

Microsoft SQL Server backups

Recycle Bin

Resources

?

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⌚

Question 4 (of 5)

Review later

Comment later

Time remaining 01:56:12

You have a Hyper-V host named Server1.

A technician creates a virtual machine named VM1 on Server1 by using the New Virtual Machine Wizard.

You start VM1 and you discover that there is no option to start by using PXE.

You need to ensure that you can start VM1 by using PXE.

Which three actions should you perform in sequence? (To answer, move the appropriate three actions from the list of actions to the answer area and arrange them in the correct order.)

Actions

Shut down VM1.

Modify the BIOS settings of VM1.

Enable DHCP guard on the legacy network adapter.

>

<

Answer Area

1 Modify the virtual switch settings of the legacy network adapter.

2 Add a legacy network adapter to VM1.

3 Install Integration Services on VM1.

<

>

?

Calculator

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Question 18 of 32

You configure a SharePoint Server 2010 Service Pack 1 (SP1) server farm.

You need to enable the cache profile for anonymous users on internal collaboration sites for the site collection. You also need to allow administrators to choose a different page output cache profile for page layouts.

What should you do? (To answer, configure the appropriate option or options in the dialog box in the answer area.)

Answer Area

<b>Libraries</b> Site Pages Shared Documents	<b>Output Cache</b> Select the <b>Enable output cache</b> check box to enable output caching in this site collection.	<input checked="" type="checkbox"/> Enable output cache
<b>Lists</b> Calendar Tasks	<b>Default Page Output Cache Profile</b> A cache profile specifies how long items should be held in the cache. It also describes to the caching system how to determine whether a cached page element is in fact valid for other requests for the same element from different users. You can specify different cache profiles to use for anonymous and authenticated users. This optimizes the use of the cache based on the authentication methods allowed on the site. Page output cache profiles specifically affect portal publishing pages. <a href="#">Learn more about the default page output cache profile.</a>	<b>Anonymous Cache Profile</b> <div>intranet (Collaboration Site)</div> Optimized for collaboration sites where authoring, web part customization, and minor version are enabled.
<b>Discussions</b> Team Discussion		<b>Authenticated Cache Profile</b> <div>Disabled</div> Caching is not enabled
Recycle Bin		
<input type="button" value="Reset(T)"/>	<input type="button" value="Instructions(I)"/>	

## Case Study

Time remaining 01:56:02

### Question

#### Background

#### Existing Environment

#### Business Requirements

#### Technical Requirements

#### Problem Statements

#### Exhibits

This exam includes at least one case study. **Case studies are not timed separately. You can use as much exam time as you would like to complete each case.** However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other questions in this case study.

At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next section of the exam. After you begin a new section, you cannot return to this section.

#### To start the case study

To display the first question in this case study, click the **Next** button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an **All Information** tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the **Question** button to return to the question.



Help



Calculator



Color scheme



Reset



Next





## AZ-301 Exam Strategy/Tips

- Does exam order matter?
- What's the difference between AZ-300 and AZ-301?
- Does AZ-301 have performance-based labs?

## AZ-301 Exam Strategy/Tips

- Focus your skills accordingly:
  - 60 percent Azure portal
  - 20 percent Azure PowerShell
  - 10 percent Azure CLI
  - 10 percent KQL
- Expect performance-based labs

## AZ-301 Exam Strategy/Tips

- Expect to see lots and lots and lots of JSON
- Performance-based labs
  - Open a second tab for [shell.azure.com](https://shell.azure.com)
  - Don't be afraid to file an item challenge/grievance

# Thank you!

- Course materials: [timw.info/az300](http://timw.info/az300)
- Twitter: [@TechTrainerTim](https://twitter.com/TechTrainerTim)
- Work: [timw.info/ps](http://timw.info/ps)
- Web: [TechTrainerTim.com](http://TechTrainerTim.com)

