

Exam AZ-301: Microsoft Azure Architect Design Crash Course



Tim Warner



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 - Central time zone
- MCT, MVP
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- Badge: [TechTrainerTim.com](#)



Course Materials

timw.info/az301

Session 1 of 2 Learning Goals

- Introduction
- Identity and security design
- Infrastructure/workload design
- Data platform design (as much as we can)

Session 2 of 2 Learning Goals

- Data platform design (concluded)
- 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
- Changes:
 - AZ-300 replaced with AZ-303
 - AZ-301 replaced with AZ-304
- AZ-304 beta will be available around June 29, 2020
- AZ-301 retires around September 30, 2020

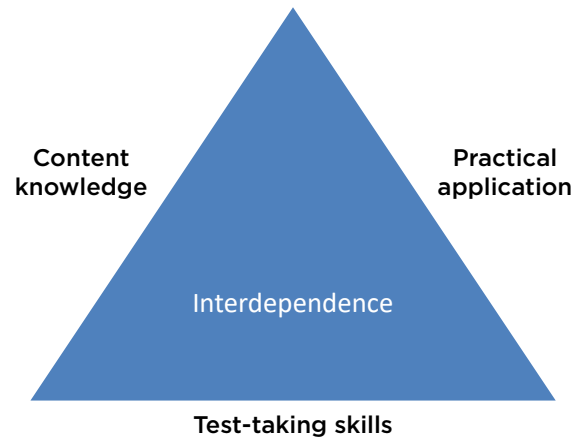


2020 Exam Update Strategy

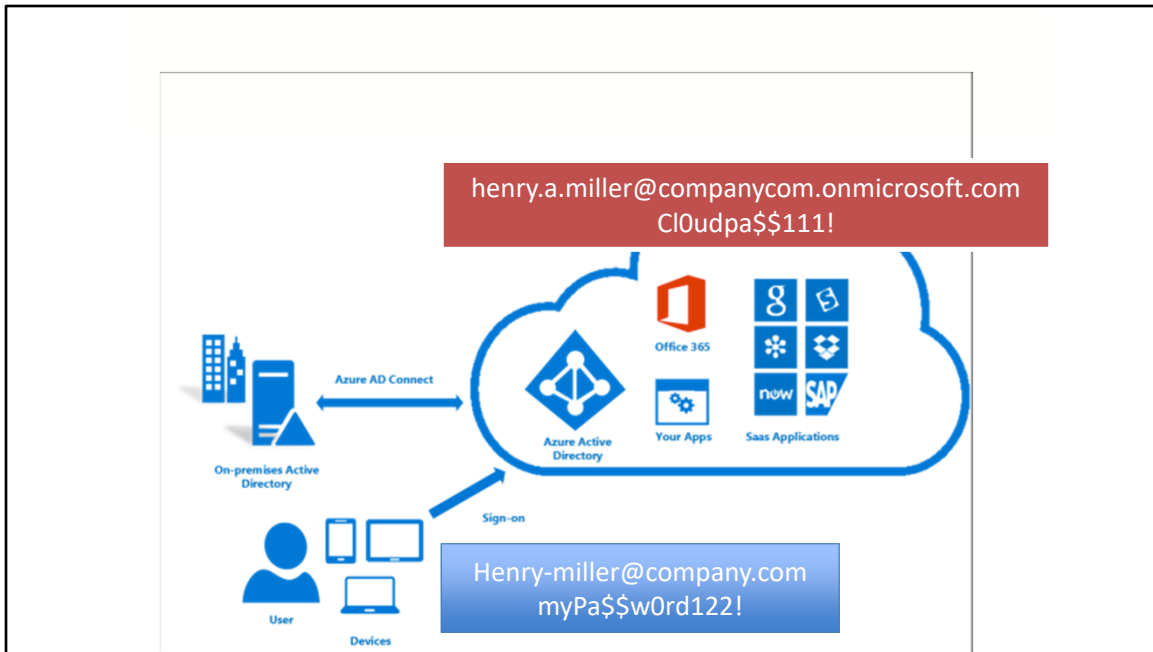
- You can earn your badge by combining the old and new exam versions:
 - AZ-300 and AZ-304
 - AZ-301 and AZ-303
- The certification is the same, and has a 2-year expiry
- If you're already prepping for AZ-300, stay the course!
 - Beta exams sometimes takes a long time
 - Cert prep vendors need time to develop new materials

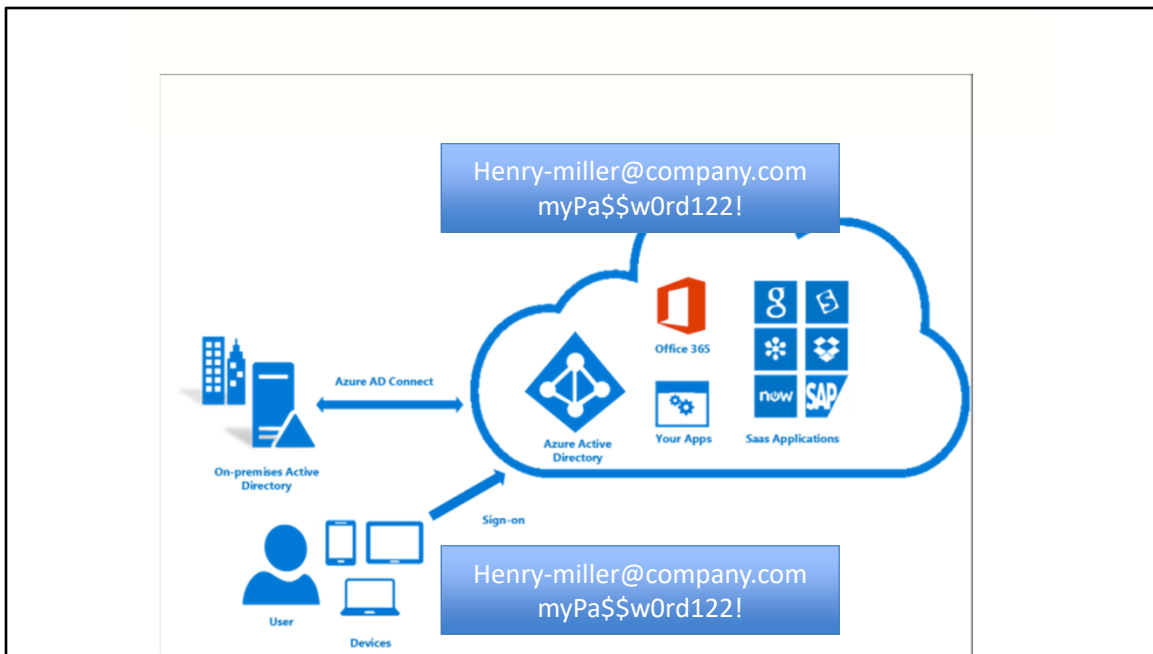


Tim's Certification Study Pyramid

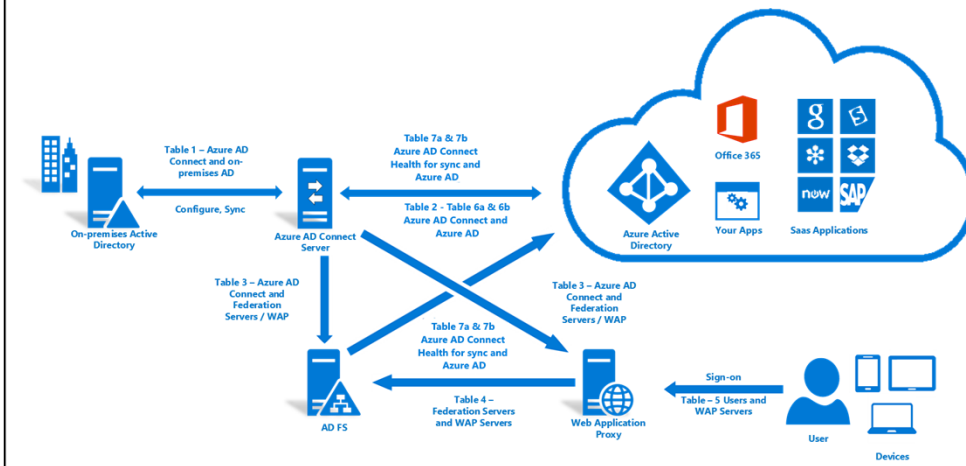


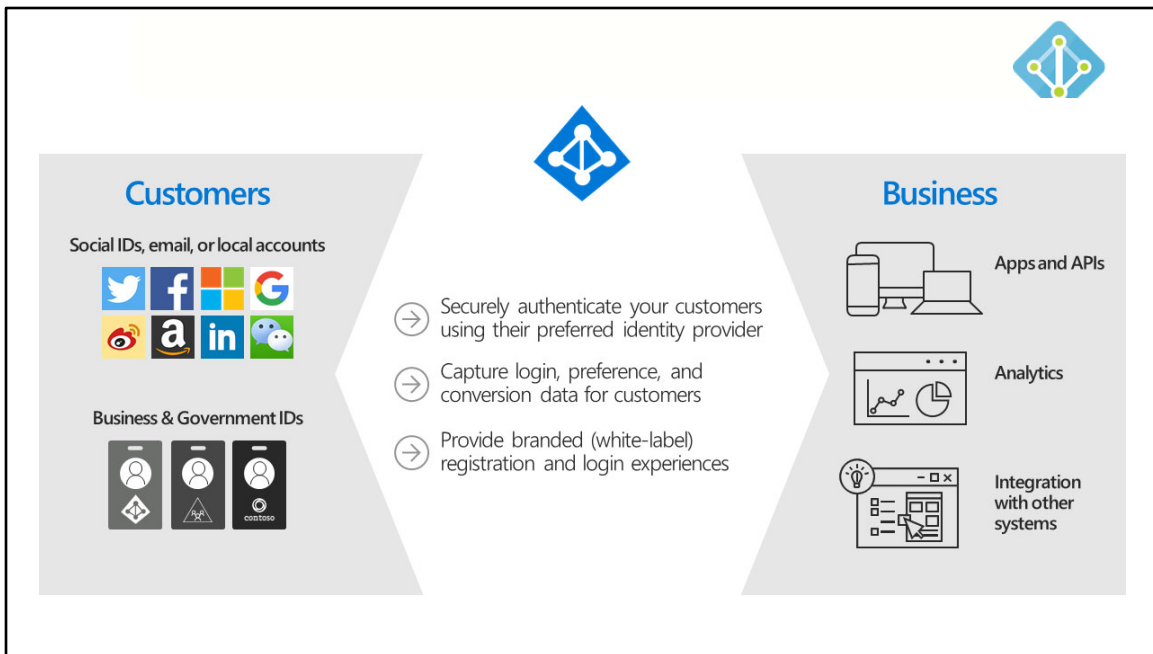


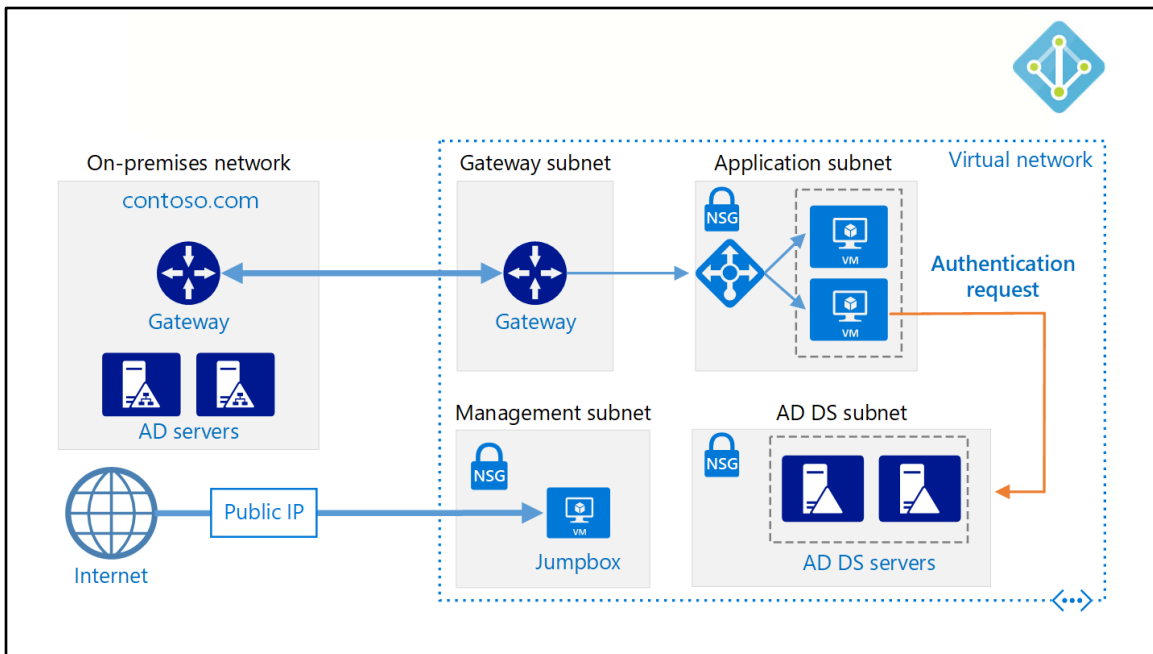




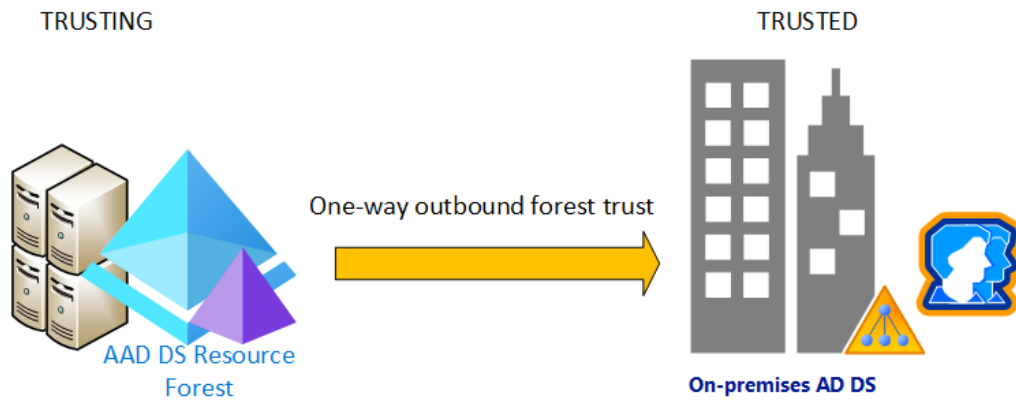
Hybrid Identity Required Ports and Protocols

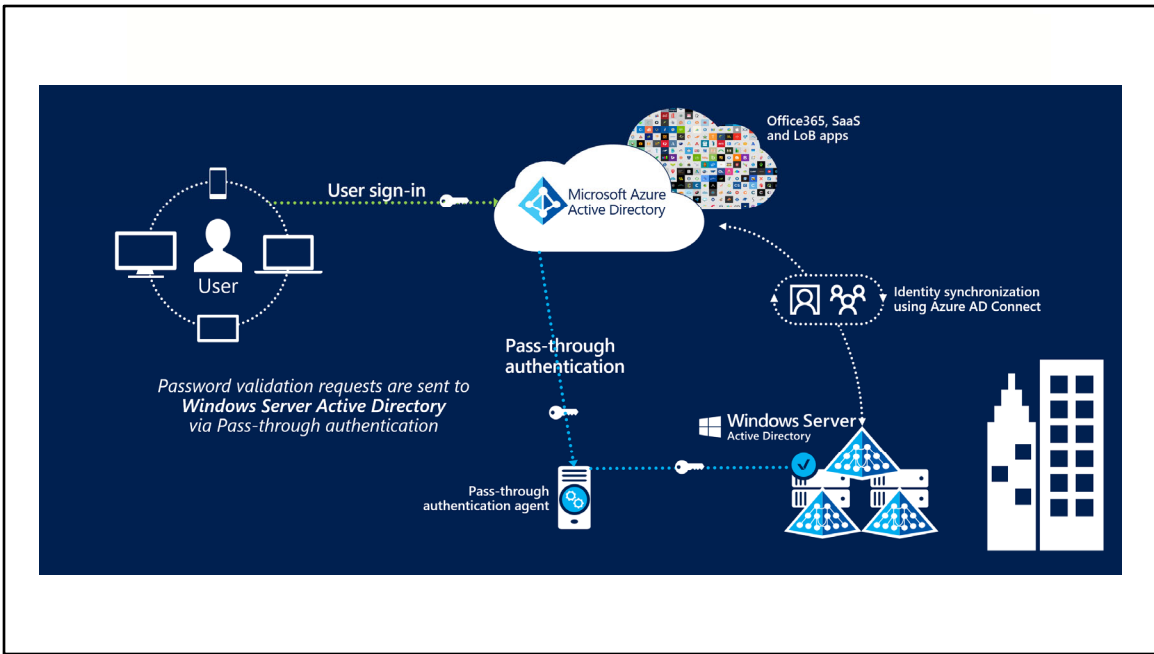


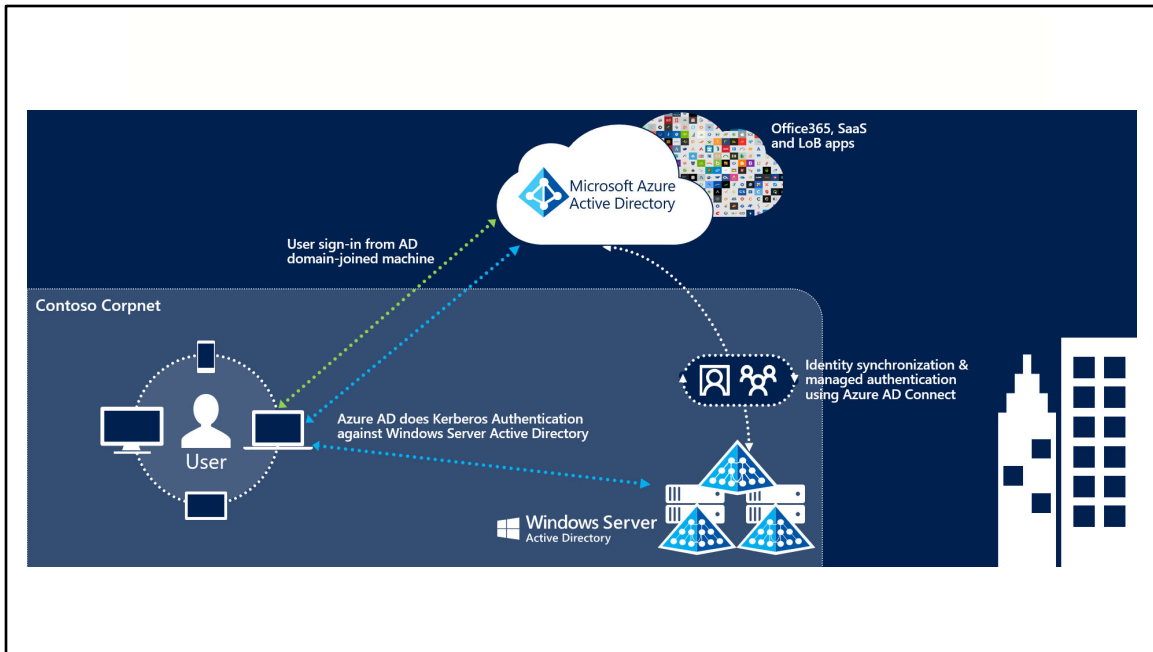


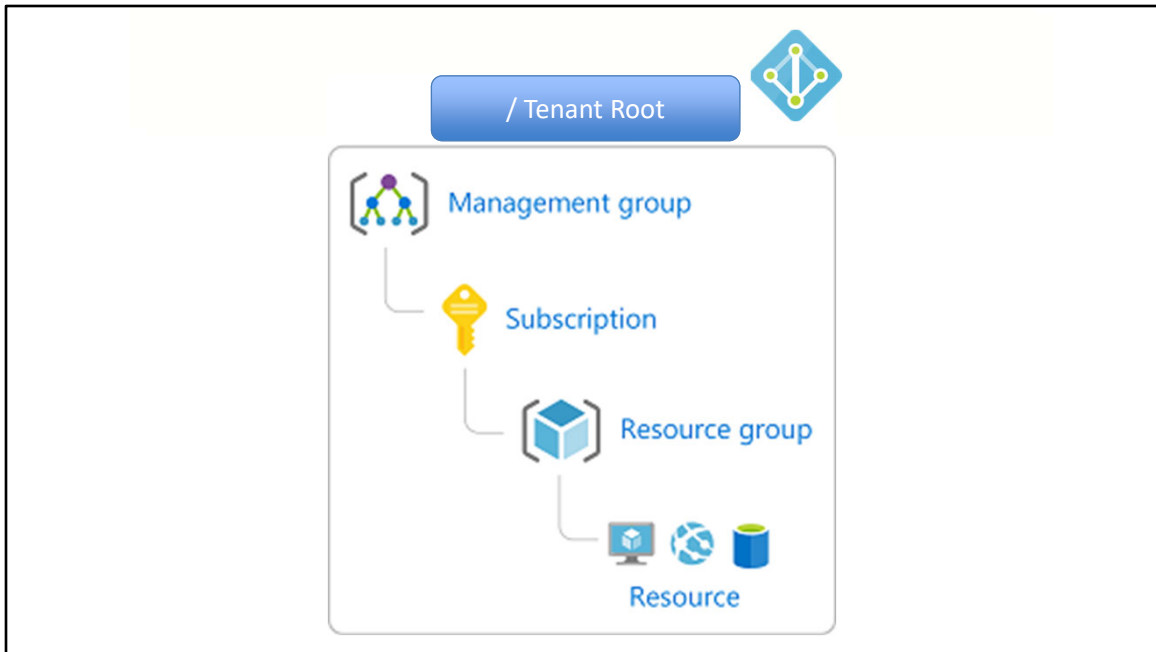


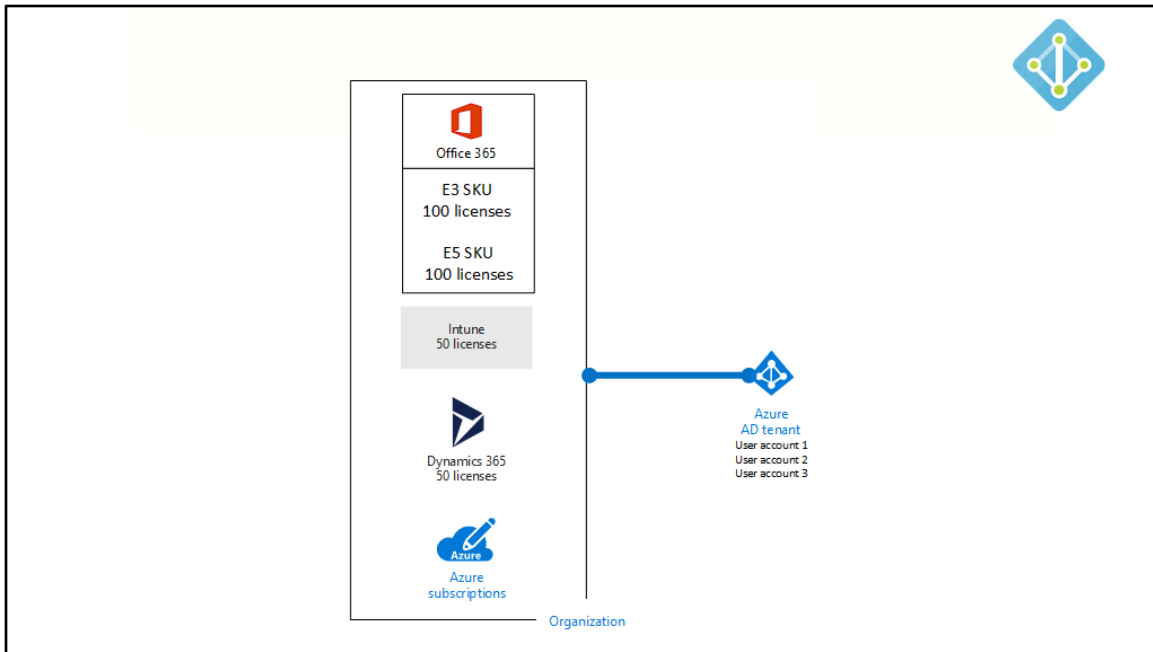
Azure AD Domain Services



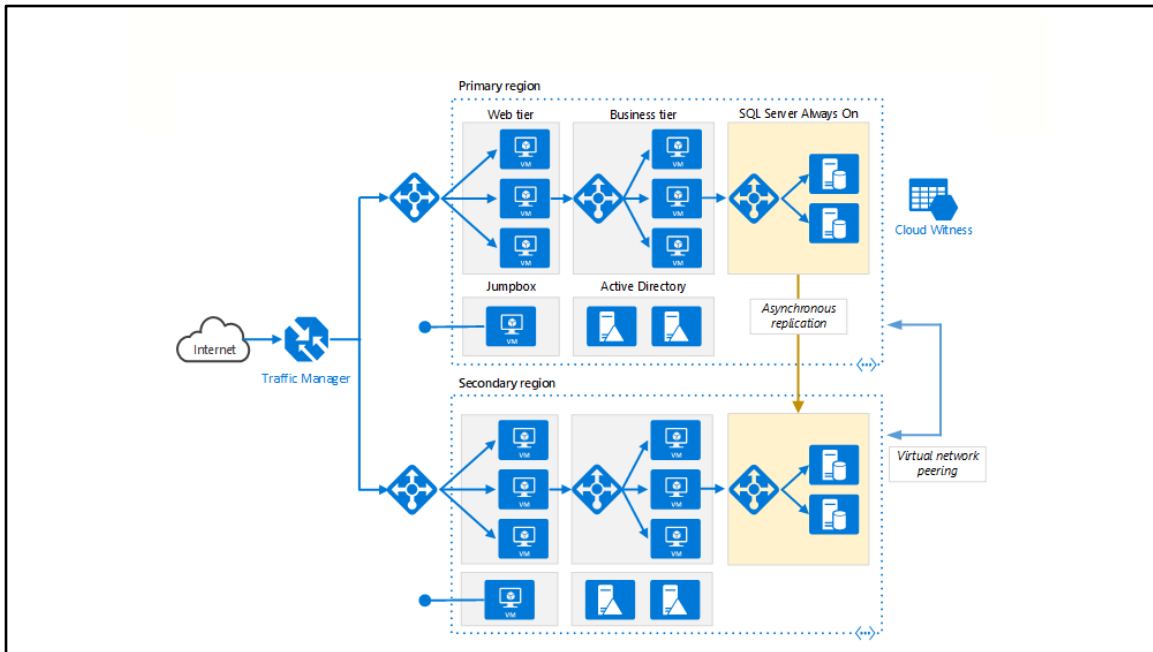


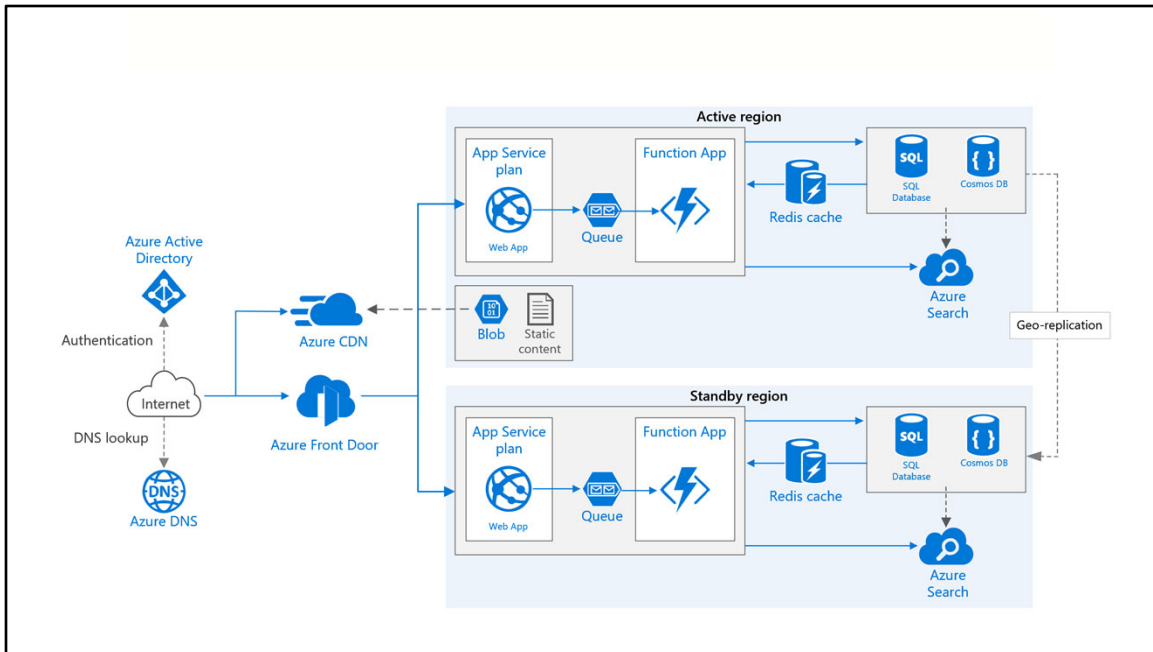


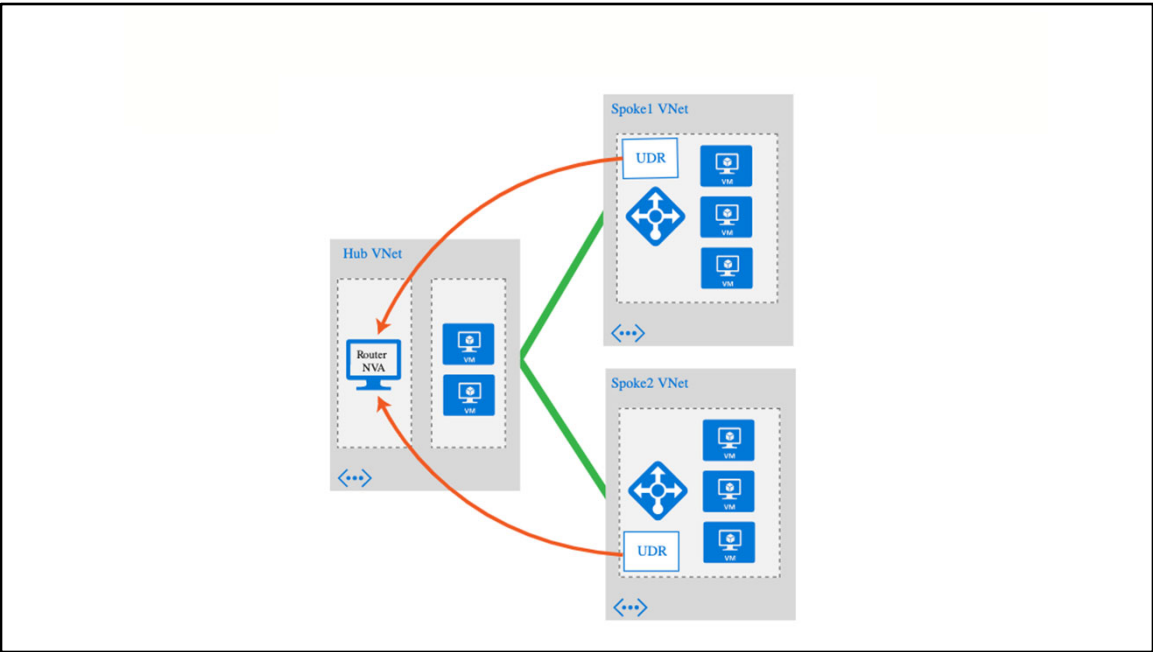


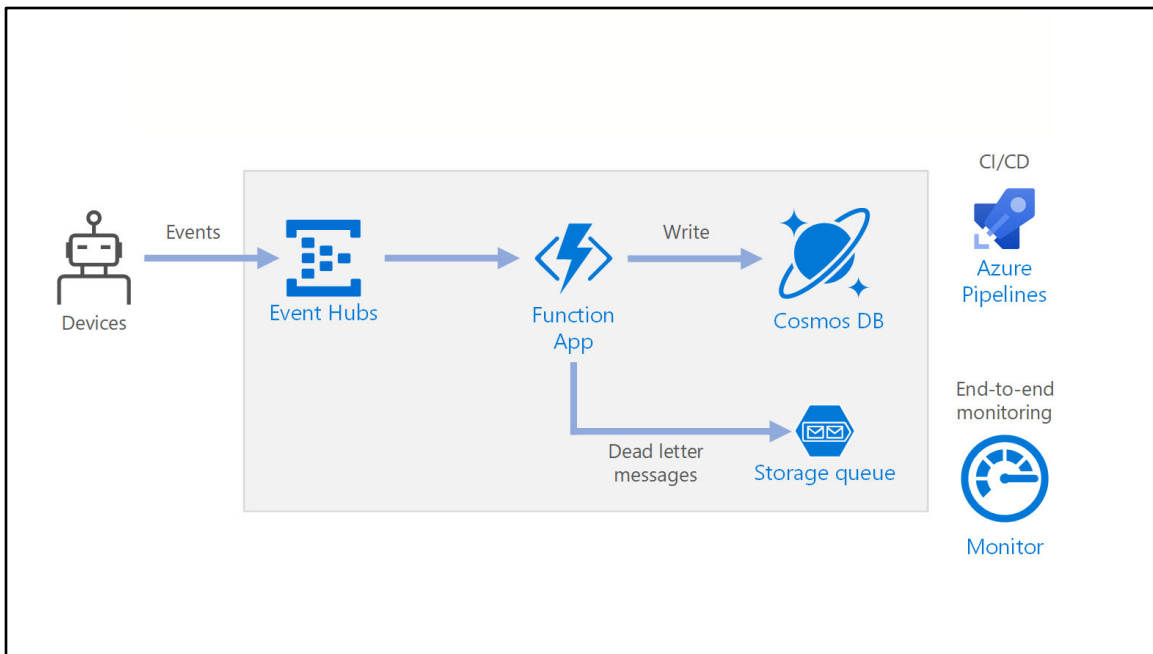
























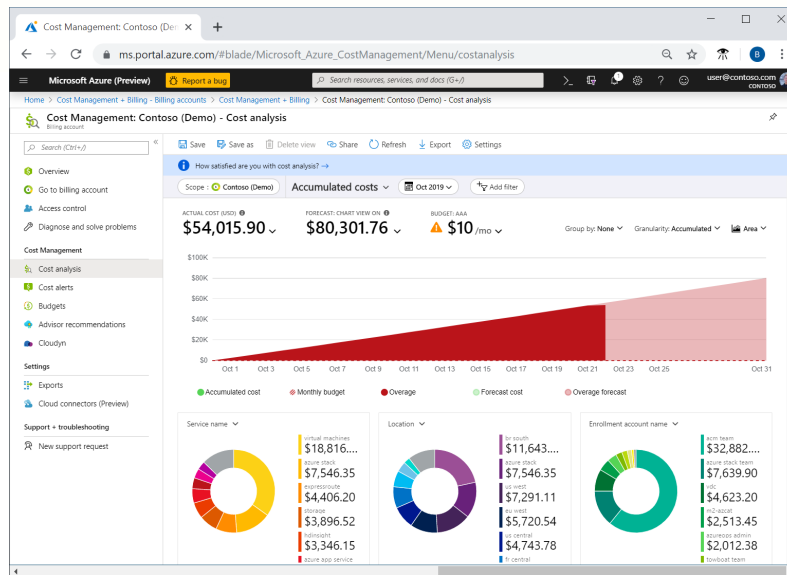
Consumption, Auditing, Monitoring Design

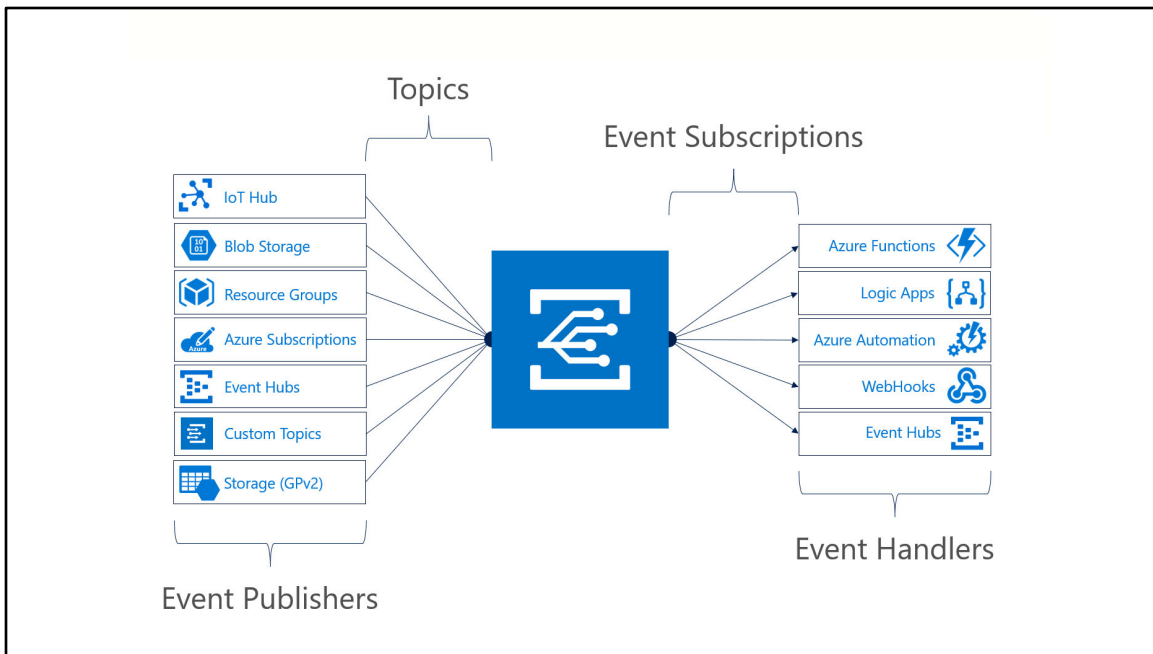
Azure Reservations

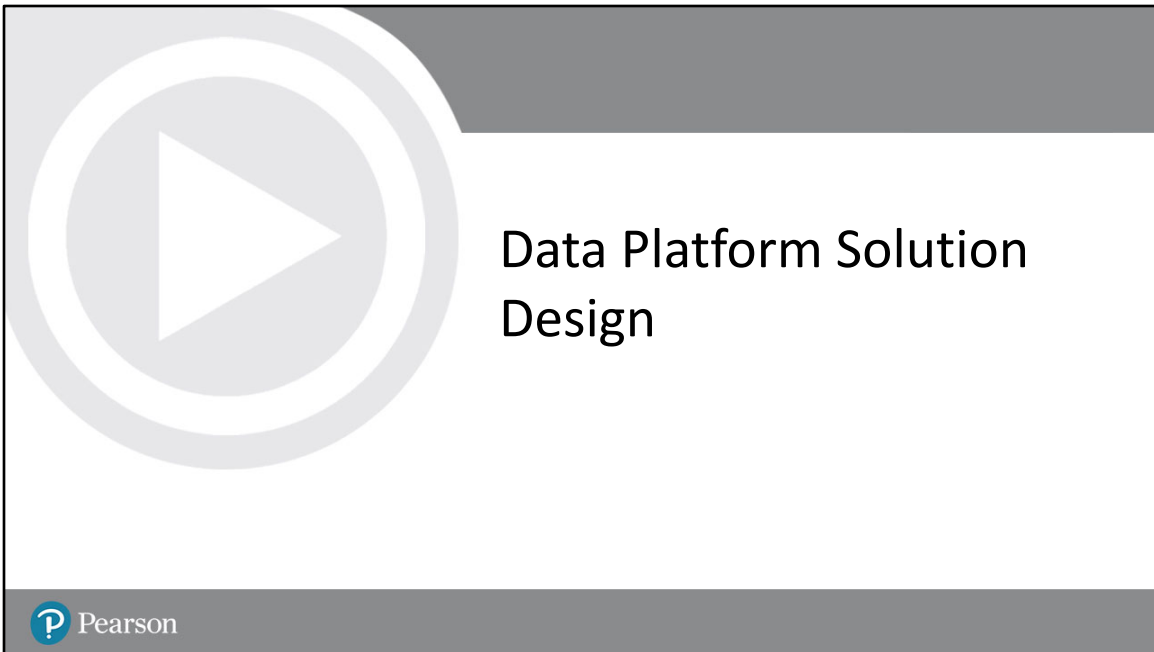
 Virtual machine By Microsoft Corp. Save on virtual machine costs by buying reserved instances for 1 or 3 years Buy	 SQL Database By Microsoft Corp. Save on SQL Database compute costs by buying reserved vCores for 1 or 3 years Buy	 Azure SQL Data Warehouse By Microsoft Corp. Save up to 65% on SQL Data Warehouse costs by buying reserved capacity for 1 or 3 years Buy	 Azure Cosmos DB By Microsoft Corp. Save up to 65% on Cosmos DB by buying reserved throughput capacity for 1 or 3 years Buy	 Azure Blob Storage By Microsoft Corp. 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 Buy
 Azure Database for MySQL By Microsoft Corp. Save on Azure Database for MySQL compute costs by buying reserved vCores for 1 year Buy	 Azure Database for MariaDB By Microsoft Corp. Save on Azure Database for MariaDB compute costs by buying reserved vCores for 1 year Buy	 Azure Database for PostgreSQL By Microsoft Corp. Save on Azure Database for PostgreSQL single server compute costs by buying reserved vCores for 1 year Buy	 Azure Managed Disks By Microsoft Corp. Save on Premium SSD Managed Disks by buying reserved disks for 1 year Buy	 Azure Databricks By Microsoft Corp. Save on your Azure Databricks costs by pre-purchasing DBUs for 1 or 3 years Buy

Azure Dedicated Host

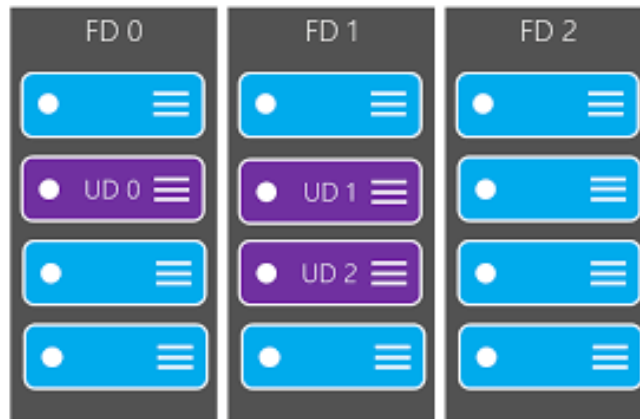




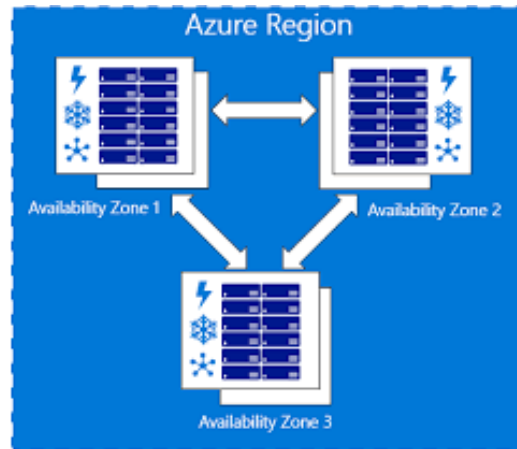




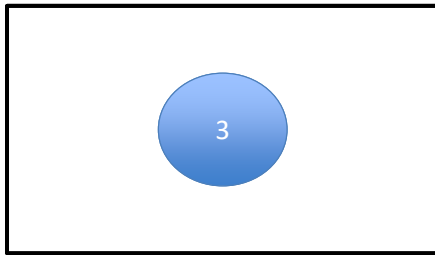
Availability Set



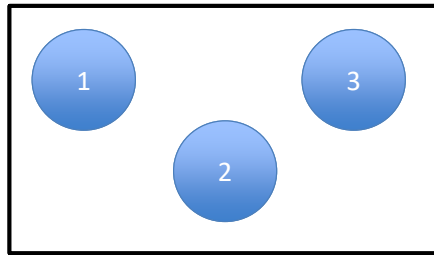
Availability Zone



Storage Account Replication

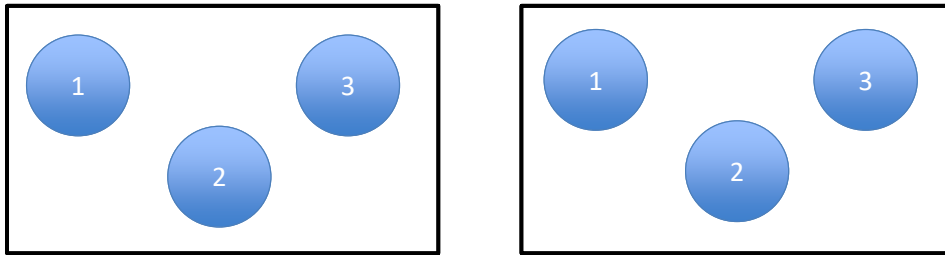


LRS



ZRS

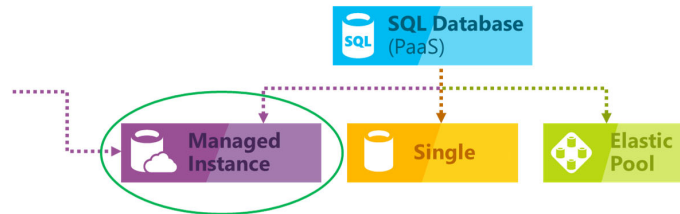
Storage Account Replication



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

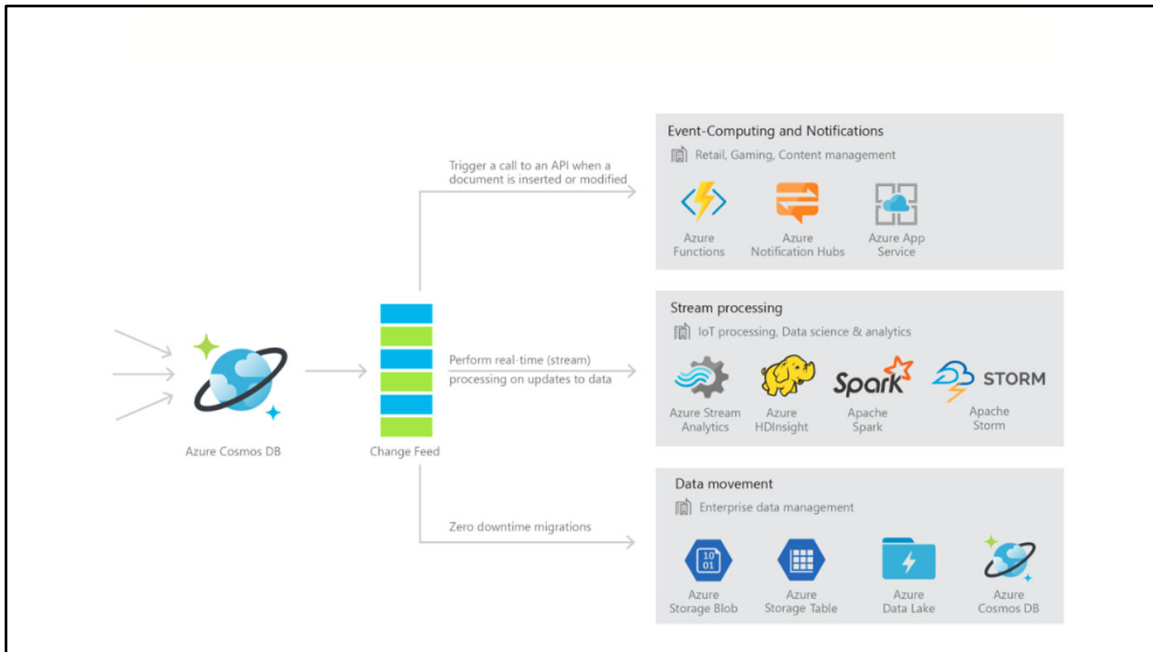
- Built on the same PaaS service infrastructure
- All PaaS features

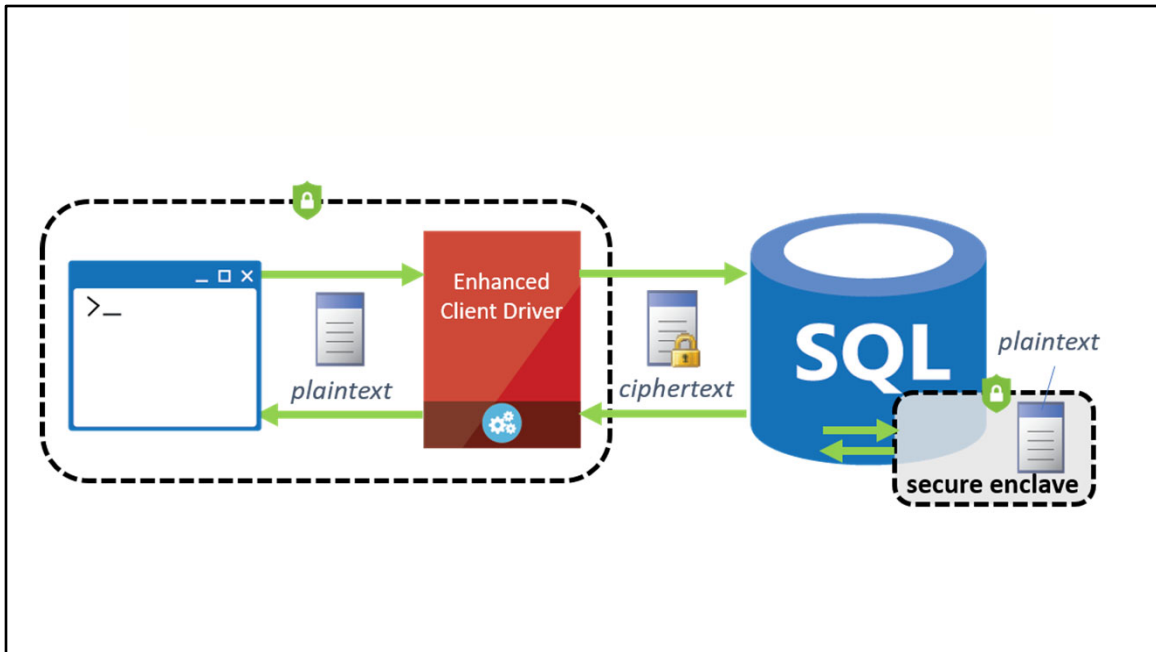
Full isolation and security


- Native VNET implementation
- Private IP addresses

New business model


- Competitive
- Transparent
- Frictionless

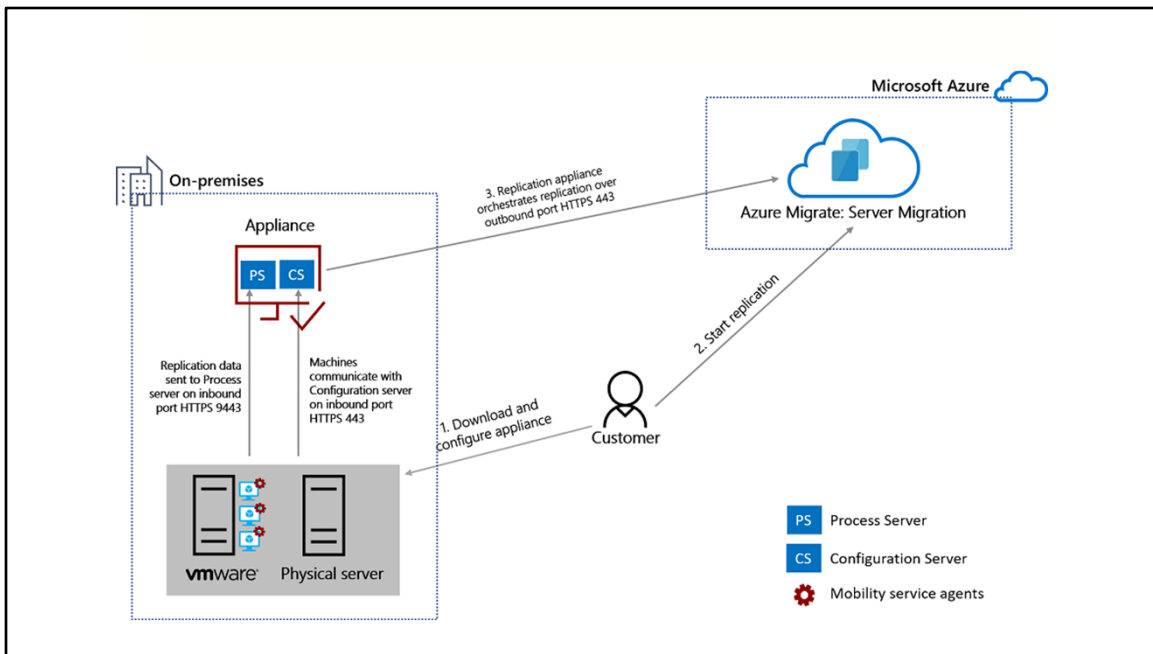








Business Continuity/High
Availability Design








Exam AZ-301 Item Types

 Pearson

Single-Answer Multiple Choice

 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 Reset Previous Next

Multiple-Answer Multiple Choice

Question 3 of 7

You have a computer that runs Windows 7.

You start the computer and receive the following error message:

BOOTMGR is missing
Press Ctrl+Alt+Del to restart

You then start the computer from the Windows 7 installation media.

You need to ensure that the computer successfully starts Windows 7.

What are two possible ways to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

- ☐ A. Run Startup Repair.
- ☐ B. Run System Restore.
- ☐ C. Run **Bootrec /RebuildBcd**.
- ☐ D. Run **Bcdedit /createstore**.

Reset(T)

Instructions(I)

Repeated Scenario

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

Repeated Scenario


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

Solution: You restart the VM.

Does this solution meet the goal?

- a. Yes
- b. No

Select and Place

 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	Recovery Task
Microsoft SQL Server backups	Document libraries
Recycle Bin	SharePoint Site groups
Windows Server Backups	SharePoint Designer workflows
	Resources


 Help

 Calculator


 Color scheme

 Reset

 Previous

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Build List and Reorder



 Question 4 (of 5)

Time remaining 01:56:12

☐ Review later
☐ Comment later

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.

help calculator color scheme reset

Previous Next

Active Screen

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

Libraries

Site Pages

Shared Documents

Lists

Calendar

Tasks

Discussions

Team Discussion

Recycle Bin

Reset(T)

Instructions(I)

Output Cache

Select the **Enable output cache** check box to enable output caching in this site collection.

☒ Enable output cache

Default Page Output Cache Profile

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. [Learn more about the default page output cache profile.](#)

Anonymous Cache Profile

Intranet (Collaboration Site)

Optimized for collaboration sites where authoring, web part customization, and minor version are enabled.

Authenticated Cache Profile

Disabled

Caching is not enabled

Case Study

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

Statement / Code Analysis

```
private void btnEquals_Click(object sender, EventArgs e)
{
    if (plusButtonClicked == true)
    {
        total2 = total1 + double.Parse(txtDisplay.Text);
    }
    else if (minusButtonClicked == true)
    {
        total2 = total1 - double.Parse(txtDisplay.Text);
    }

    txtDisplay.Text = total2.ToString();
    total1 = 0;
}
```

Blah blah blah.

☐ Yes

☐ No

Another statement.

☐ Yes

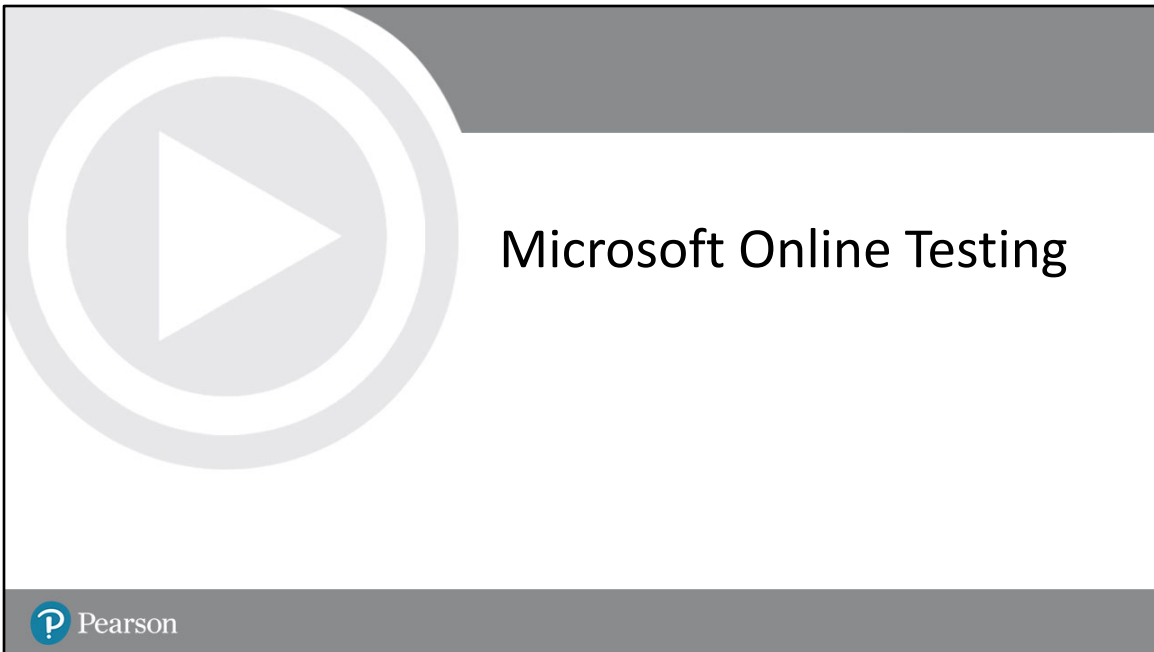
☐ No

Performance-Based Lab

The screenshot displays the Microsoft Azure portal interface. The top navigation bar shows the account 'SQ00115: SQL Server 2016 -', the 'Display' button, and the 'Commands' button. The main content area is titled 'All resources' and lists various virtual machines. The table below shows the details of these VMs:

name	type	sku	size	location	subscription
vm1	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm2	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm3	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm4	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm5	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm6	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm7	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm8	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm9	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm10	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm11	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm12	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm13	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm14	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm15	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm16	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm17	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm18	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm19	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go
vm20	Virtual machine	Microsoft/SQLSRV	Small	East US	Pay-As-You-Go

The right sidebar shows a 'Time remaining' of 01:54:00 and a 'Tasks' section with a list of tasks to be completed. At the bottom, there are icons for 'Help', 'Username/Password', and 'Logout'.



Microsoft Online Testing Process

Select Exam Delivery Option

For: VUE-PCA: VUE Demo

All fields are required.

How do you want to take your exam? [Exam delivery option descriptions](#)

- ☐ At a local test center
- ☒ At my home or office
- ☐ I have a Private Access Code

Microsoft Online Testing Process

Select Date
[Why can't I find an available appointment?](#)

April 2020						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Select a date from the calendar. Only available dates can be selected.

Available start times: Wednesday, April 1, 2020
Times shown in: America/Chicago-CDT [Change](#) | [Show 24-hour](#)

Morning	Afternoon
12:00 AM	12:00 PM

Microsoft Online Testing Process

Start Exam

1

Click on the "Copy Access Code" button below. This will automatically enter your access code into OnVUE once it is running. This access code will authorize you to start the exam check-in process.

123-456-789


Copy Access Code

2

Click "Download". Once complete, run the OnVUE application from the downloads folder.
Alert! Mac users, if prompted, will need to allow OnVUE within their 'System Preferences: Security & Privacy: Privacy' settings for Microphone, Camera, Automation, and Input Monitoring.

Download

以下の日本語の説明は、ここをクリックするか、下にスクロールしてください



Enter your unique exam access code and phone number

1. Your access code may have been entered for you

123-456-789

If you do not see the access code, you will need to manually enter it. You can find your access code on the exam launch page.

2. Enter phone number

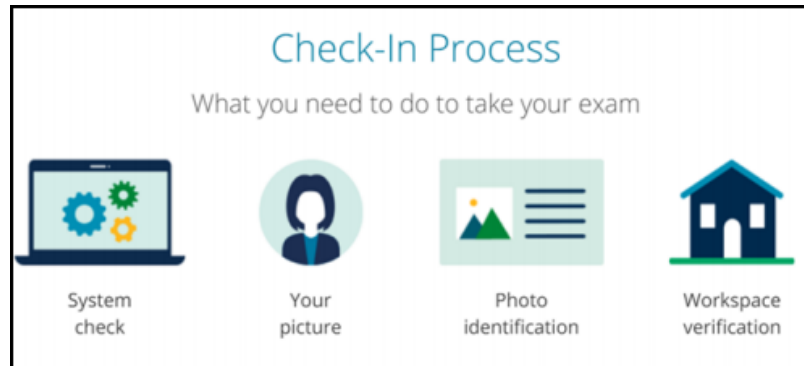
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555-555-5555

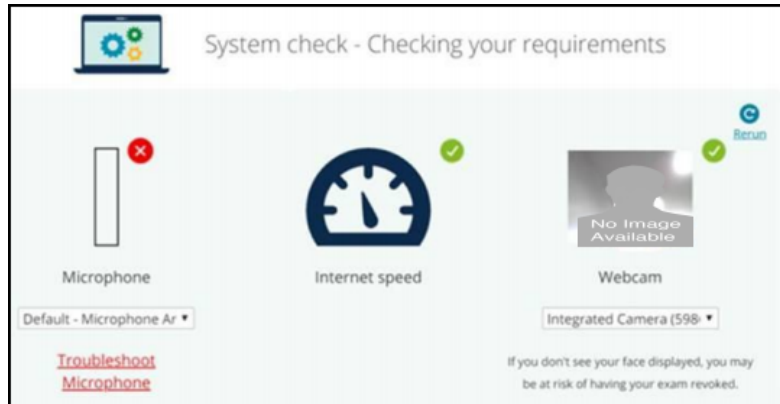
Enter a phone number with a country code, example U.S. +1; we will contact you if there's an issue with check-in or exam delivery.

☐ I do not have a phone available at this time.

Microsoft Online Testing Process




Microsoft Online Testing Process




Microsoft Online Testing Process

Use your mobile phone to take your required verification photos



you don't have a mobile phone, [use our webcam](#) to take the required photos.



Your picture





Photo identification



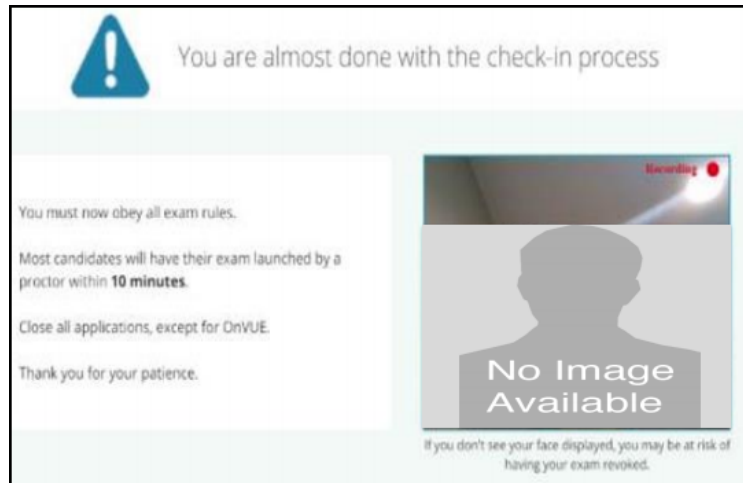
Workspace verification

1. Select access method

- ☐ Text message
- ☐ Type URL into mobile phone

2. Enter contact information

Microsoft Online Testing Process



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, and be surprised if you don't see 'em

Thank You!

- Course materials: timw.info/az301
- Twitter: [@TechTrainerTim](https://twitter.com/TechTrainerTim)
- Website: TechTrainerTim.com

