

# 1. Knowledge check

Total points 6

## 1.Question 1

Azure supports a wide range of computing solutions for development and testing, running applications, and extending your data center.

When you require lightweight, virtualized application environments that can be quickly created, scaled out, and stopped dynamically, which of the following solutions is most suitable?

1 / 1 point

- ☐ Virtual machine scale sets
- ☐ App Services
- ☒ Containers and Kubernetes
- ☐ Virtual machines

Correct

Azure Container Instances and Azure Kubernetes Service (AKS) are Azure compute resources that you can use to deploy and manage containers. These are lightweight, virtualized application environments that are designed to be quickly created, scaled out, and stopped dynamically. You can run multiple instances of a containerized application on a single host machine.

## 2.Question 2

Azure supports a wide range of computing solutions for development and testing, running applications, and extending your data center.

When the demand for services targeting big compute, big data, and containerized workloads increases, one feature of Azure Compute Services is the ability to quickly deploy identical VMs. What is this feature known as?

1 / 1 point

- ☒ Virtual machines
- ☐ Virtual machine scale sets
- ☐ Functions
- ☐ Containers and Kubernetes

Correct

Virtual machine scale sets are an Azure compute resource that you can use to deploy and manage a set of identical VMs. With all VMs configured the same, virtual machine scale sets are designed to support true autoscale.

**3.Question 3**

**Azure Virtual Machines (VMs) let you create and use virtual machines in the cloud. They provide Infrastructure as a Service (IaaS) in the form of a virtualized servers and can be used in many ways. Just like a physical computer, you can customize all the software running on the VM. Who is responsible for maintaining, configuring, and updating Azure Virtual Machines (VMs)?**

**1 / 1 point**

☐ The Cloud provider

☒ The Cloud Tenant

**Correct**

An Azure VM gives you the flexibility of virtualization without having to buy and maintain the physical hardware that runs the VM. However, the cloud tenant still needs to configure, update, and maintain the software that runs on the VM.

**4.Question 4**

**What can you use to enable large-scale parallel and high-performance computing (HPC) jobs with the ability to scale to tens, hundreds, or thousands of VMs?**

**1 / 1 point**

☐ Virtual Machine Scale Sets

☒ Azure Batch

☐ Containers

☐ Azure Virtual Machines

**Correct**

Azure Batch enables large-scale parallel and high-performance computing (HPC) batch jobs with the ability to scale to tens, hundreds, or thousands of VMs.

**5.Question 5**

**The task of automating, managing, and interacting with a large number of containers is known as orchestration. Which of the following services allows you to manage and interact with a large number of containers?**

**1 / 1 point**

☐ Azure Container Instances (ACI)

☒ Azure Kubernetes Service (AKS)

**Correct**

The task of automating, managing, and interacting with a large number of containers is known as orchestration. Azure Kubernetes Service (AKS) is a complete orchestration service.

**6.**Question 6

**Which cloud service model allows you to run Azure Container Instances (ACI)?**

**1 / 1 point**

☐ IaaS

☐ PaaS

☒ SaaS

**Correct**

Azure Container Instances offers the fastest and simplest way to run a container in Azure without having to manage any virtual machines or adopt any additional services. It is a PaaS offering that allows you to upload your containers, which it will run for you.

**Question**

Your team needs a more robust set of options for controlling permissions across the entire portfolio of work. Which solution would be the best option for the team?

☐ Azure DevOps

☒ GitHub

**Correct**

Azure DevOps has a much more granular set of permissions that allow organizations to refine who is able to perform most operations across the entire toolset.

## 2. Knowledge check

**Total points** 6

### 1.Question 1

**True or False?**

**Azure storage is used by both Infrastructure as a Service (IaaS) virtual machines, and Platform as a Service (PaaS) cloud services.**

**1 / 1 point**

- ☐ True
- ☐ False

**Correct**

You can use Azure Storage on its own. For example, you can use it as a file share. Developers also often use it as a repository for working data. These repositories can be used by websites, mobile apps, desktop applications, and many other types of custom solutions. Azure Storage is also used by Infrastructure as a Service (IaaS) virtual machines, and Platform as a Service (PaaS) cloud services.

### 2.Question 2

**Azure Blob Storage is Microsoft's object storage solution for the cloud. Is the following statement on Azure Blob storage true or false?**

**Azure Blob Storage is ideal for streaming video and audio.**

**1 / 1 point**

- ☐ True
- ☐ False

**Correct**

Blob Storage is ideal for serving images or documents directly to a browser, storing files for distributed access, and streaming media.

### 3.Question 3

**True or False?**

**Azure Files are accessible via the industry standard Server Message Block (SMB) protocol.**

**1 / 1 point**

- ☐ True
- ☐ False

**Correct**

Azure Files offers fully managed file shares in the cloud that are accessible via the industry standard Server Message Block (SMB) protocol. Azure file shares can be mounted concurrently by cloud or on-premises deployments of Windows, Linux, and macOS.

**4.Question 4**

**True or False?**

**Azure files can be accessed from anywhere in the world using a URL that points to the file.**

**1 / 1 point**

☐ True

☐ False

**Correct**

One thing that distinguishes Azure Files from files on a corporate file share is that you can access the files from anywhere in the world using a URL that points to the file.

**5.Question 5**

**True or False?**

**Shared Access Signature (SAS) tokens allow access to a private asset for a specific amount of time.**

**1 / 1 point**

☐ True

☐ False

**Correct**

You can also use Shared Access Signature (SAS) tokens to allow access to a private asset for a specific amount of time.

**6.Question 6**

**Azure storage offers different access tiers for blob and file storage. This allows you to store object data in the most cost-effective manner. What do you think is the most cost-effective tier to optimize storage for data that is infrequently accessed and stored for at least 30 days?**

**1 / 1 point**

☒ Cool storage tier

☐ Hot storage tier

☐ Archive storage tier

**Correct**

Cool storage tier is optimized for data that is infrequently accessed and stored for at least 30 days, like invoices for your customers.

### 3. Knowledge check

Total points 6

#### 1.Question 1

Azure virtual networks enable you to link resources together in your on-premises environment and within your Azure subscription. In effect, you can create a network that spans both your local and cloud environments. There are three mechanisms for you to achieve this connectivity.

Which of the following is not a valid mechanism?

1 / 1 point



Service endpoints



Site-to-site Virtual Private Networks



Azure ExpressRoute



Point-to-site Virtual Private Networks

Correct

You use service endpoints to connect to other Azure resource types, such as Azure SQL databases and storage accounts. This approach enables you to link multiple Azure resources to virtual networks, thereby improving security and providing optimal routing between resources.

#### 2.Question 2

True or false?

A VM in Azure can connect out to the Internet by default.

1 / 1 point



False



True

Correct

A VM in Azure can connect out to the Internet by default.

#### 3.Question 3

Azure virtual networks enable you to filter traffic between subnets. Which of the following are valid filtering approaches?

Select all options that apply.

1 / 1 point



Border Gateway Protocol



Network virtual appliances

**Correct**

A network virtual appliance is a specialized VM that can be compared to a hardened network appliance. A network virtual appliance carries out a particular network function, such as running a firewall or performing Wide Area Network (WAN) optimization.

- ☐ Network security groups

**Correct**

That's correct. A network security group is an Azure resource that can contain multiple inbound and outbound security rules. You can define these rules to allow or block traffic, based on factors such as source and destination IP address, port, and protocol.

**4.Question 4**

**When you create an Azure virtual network, you configure a number of settings such as multiple subnets, distributed denial of service (DDoS) protection, and service endpoints. Which of the following fields must be completed as part of the setup?**

Select all options that apply.

1 / 1 point

- ☒ Name

**Correct**

You must provide a name for the virtual network.

- ☐ DDoS Protection

- ☒ Resource Group

**Correct**

All resources must be associated with a resource group.

- ☒ Subscription

**Correct**

All resources must be associated with a valid subscription.

**5.Question 5**

**Policy-based VPN gateways specify statically the IP address of packets that should be encrypted through each tunnel. This type of device evaluates every data packet against those sets of IP addresses to choose the tunnel where that packet is going to be sent through.**

**Which of the following are key features of policy-based VPN gateways in Azure?**

Select all options that apply.

1 / 1 point

- ☒ Compatibility with legacy on-premises VPN devices.

**Correct**

Policy-based VPNs must be used in specific scenarios that require them, such as for compatibility with legacy on-premises VPN devices.

- ☐ Support for IKEv2.
- ☐ Dynamic routing protocols.

☒ Use of static routing.

### Correct

Combinations of address prefixes from both networks control how traffic is encrypted and decrypted through the VPN tunnel. The source and destination of the tunneled networks are declared in the policy and don't need to be declared in routing tables.

### 6.Question 6

**Which of the following are supported ExpressRoute models that you can use to connect your on-premises network to the Microsoft cloud?**

Select all options that apply.

1 / 1 point

☒ Point-to-point Ethernet connection

### Correct

Point-to-point connections provide Layer 2 and Layer 3 connectivity between your on-premises site and Microsoft Azure. You can connect your offices or datacenters to Azure by using the point-to-point links.

☒ Any-to-any connection

### Correct

With any-to-any connectivity you can integrate your wide area network (WAN) with Microsoft Azure by providing connections to your offices and datacenters.

☒ Cloud Exchange colocation

### Correct

Co-located providers can normally offer both Layer 2 and Layer 3 connections between your infrastructure, which might be located in the colocation facility, and the Microsoft cloud.

☐ Site-to-site connection



## 4. Knowledge check

Total points 6

### 1.Question 1

Artificial Intelligence (AI) is a broad classification of computing that allows a software system to perceive its environment and take action that maximizes its chance of successfully achieving its goals. A goal of AI is to create a software system that is able to adapt or learn something on its own without being explicitly programmed to do it.

One approach to AI is a technique that uses existing data to train and test a model, then apply that model to new data to forecast future behaviors, outcomes, and trends. What is this referred to as?

1 / 1 point



Deep Learning



Machine Learning

Correct

Machine learning, which is a data science technique uses existing data to train and test a model, then apply that model to new data to forecast future behaviors, outcomes, and trends.

### 2.Question 2

There are three primary AI offerings from Microsoft Azure, each of which is designed for a specific audience and use case. Which of the following features are offered by Azure Cognitive Services?

Select all options that apply.

1 / 1 point



The ability to add recognition and identification capabilities when analyzing pictures, videos, and other visual content.

Correct

Azure Cognitive Services includes vision services that allow recognition and identification capabilities when analyzing pictures, videos, and other visual content.



The ability to train and evaluate predictive models using tools and programming languages familiar to data scientists.



The ability to convert speech into text and text into natural-sounding speech. Translate from one language to another and enable speaker verification and recognition.

Correct

Azure Cognitive Services includes speech services that can convert speech into text and text into natural-sounding speech. It can translate one language into another and enable speaker verification and recognition.

- ☐ The ability to create virtual agents that understand and reply to questions just like a human.

### 3.Question 3

**What service can you use to build a virtual agent that can understand and reply to questions just like a human?**

**1 / 1 point**

☒ Azure Bot Service

☐ Azure Cognitive Services

☐ Azure Machine Learning

**Correct**

The Azure Bot Service and Bot Framework is a platform for creating virtual agents that understand and reply to questions just like a human.

### 4.Question 4

**Your organization requires the development of an app that will predict future outcomes based on private historical data. Which Azure service do you think is the most appropriate to use in this scenario?**

**1 / 1 point**

☐ Azure Bot Service

☐ Azure Cognitive Services

☒ Azure Machine Learning

**Correct**

Azure Machine Learning is a platform for making predictions. It consists of tools and services that allow you to connect to data to train and test models to accurately predict a future result.

### 5.Question 5

**Your organization requires the development of an app that can understand the content and meaning of images, video, audio, or translate text into a different language. Which Azure services do you think is the most appropriate to use in this scenario?**

**1 / 1 point**

☐ Azure Bot Service

☒ Azure Cognitive Services

☐ Azure Machine Learning

**Correct**

Azure Cognitive Services provides pre-built machine learning models that enable applications to see, hear, speak, understand, and even begin to reason.

### 6.Question 6

**Your organization requires the development of an app that will include both a virtual agent that interfaces with humans through natural language and understand the content and meaning of images, video, audio. What two Azure Services do you think are most suitable for developing this app?**

Select all options that apply.

1 / 1 point



Azure Bot Service

Correct

The Azure Bot Service and Bot Framework is a platform for creating virtual agents that understand and reply to questions just like a human.



Azure Machine Learning



Azure Cognitive Services

Correct

Azure Cognitive Services provides pre-built machine learning models that enable applications to see, hear, speak, understand, and even begin to reason.

## 5. Knowledge check

Total points 6

### 1.Question 1

Software developers and operations professionals traditionally work to create software systems that satisfy the needs of the organization. DevOps is a new approach that helps to align technical teams to work towards their common goal. Which of the following provides a suite of services that addresses each stage of the Software Development Lifecycle (SDL)?

1 / 1 point



Azure DevOps Services



Azure DevTest Labs



GitHub and GitHub Actions

Correct

Azure DevOps is a suite of services that address every stage of the Software Development Lifecycle (SDL).

### 2.Question 2

Which of the following is a shared source code repository that includes tools that enable developers to perform code reviews by adding comments and questions in a web-view of the source code before it is merged into the main code base?

1 / 1 point



Azure DevOps Services



Azure DevTest Labs



GitHub and GitHub Actions

Correct

GitHub is one of the most popular code repositories for open-source software. GitHub provides related services for coordinating work, reporting, and discussing issues, providing documentation, and more.

### 3.Question 3

True or False

GitHub is “lighter weight” than Azure DevOps, with a focus on individual developers contributing to open source while Azure DevOps, is more focused on enterprise development with heavier project management, planning tools, and finer-grained access control.

1 / 1 point



False

 True

**Correct**

GitHub has a long and trusted history with public repositories and is trusted by tens of thousands of open-source projects. GitHub is “lighter weight” than Azure DevOps, with a focus on individual developers contributing to open source. Azure DevOps, on the other hand, is more focused on enterprise development with heavier project management and planning tools, and finer-grained access control.

**4.Question 4**

**True or False**

**Azure DevTestLabs provide automated provisioning of pre-created lab environments with required configurations and tools already installed.**

**1 / 1 point**

 True

☐ False

**Correct**

Azure DevTest Labs allows for the provisioning of pre-created lab environments with required configurations and tools already installed. It is a huge timesaver for quality assurance professionals and developers.

**5.Question 5**

**In your organization software development teams work on many different projects and they are required to provide project sponsors and managers with reports, progress tracking, bug reports etc. Management wants to ensure that individuals have access to only the information they need to do their work.**

**Which of the following in your opinion would be the most suitable solution to implement?**

**1 / 1 point**

☐ Azure DevTest Labs

☐ GitHub and GitHub Actions

 Azure DevOps Services

**Correct**

Azure DevOps has a much more granular set of permissions that allow organizations to refine who is able to perform most operations across the entire toolset. Also, Azure DevOps is highly customizable, allowing an administrator to add custom fields to capture metadata and other information alongside each work item. By contrast, GitHub Issues uses tags as its primary means of helping a team categorize issues.

**6.Question 6**

**Your company wants to publish an open-source API that allows third-parties to integrate their own inventories of new and used items. They also want to use the API to offer a wider variety of products directly from your ecommerce site. You need a platform to share example code, collect**

feedback on the API, allow contributors to report issues, and build a community around feature requests.

Which of the following do you think is the most suitable solution to implement?

1 / 1 point



Azure DevTest Labs



GitHub and GitHub Actions



Azure DevOps Services

**Correct**

With GitHub, your company can publish its code, accept community contributions to improve the code examples, accept feedback, and bug reports. Because this scenario involves open-source code, GitHub is a leading candidate.

## 6. Knowledge check

Total points 5

### 1.Question 1

Which of Azure's three primary monitoring offerings are most useful for collecting, analyzing, visualizing, and possibly taking actions based on the collected data from your entire Azure and on-premises environment?

1 / 1 point

☐ Azure Advisor

☒ Azure Monitor

☐ Azure Service Health

Correct

Azure Monitor is a platform for collecting, analyzing, visualizing, and potentially taking action based on the metric and logging data from your entire Azure and on-premises environment.

### 2.Question 2

Which of Azure's three primary monitoring offerings are most useful for providing a personalized view of the health of the Azure services, regions, and resources?

1 / 1 point

☒ Azure Service Health

☐ Azure Monitor

☐ Azure Advisor

Correct

Azure Service Health provides a personalized view of the health of the Azure services, regions, and resources.

### 3.Question 3

You need to optimize your cloud services for reliability, security, performance, costs, and operations based on expert best practices. Which Azure monitoring tool would you recommend to best satisfy this requirement?

1 / 1 point

☐ Azure Service Health

☒ Azure Advisor

☐ Azure Monitor

**Correct**

Azure Advisor evaluates your Azure resources and makes recommendations to help you improve reliability, security, and performance, achieve operational excellence, and reduce costs.

**4.Question 4**

**You have been tasked with creating alerts that will send notifications to your department when Azure outages occur. Which Azure monitoring tool would you recommend to do this?**

**1 / 1 point**



Azure Service Health



Azure Advisor



Azure Monitor

**Correct**

Azure Monitor is a platform for collecting, analyzing, visualizing, and potentially taking action based on the metric and logging data from your entire Azure and on-premises environment.

**5.Question 5**

**Your company has recently moved to Azure cloud services. Management are concerned that they may be spending too much and have also highlighted how well their new environment meet security best practices. They would like to analyze their use of the cloud analyzed against industry best practices. Which monitoring tool would you recommend using for this?**

**1 / 1 point**



Azure Service Health



Azure Monitor



Azure Advisor

**Correct**

Azure Advisor evaluates your Azure resources and makes recommendations to help you improve reliability, security, and performance, achieve operational excellence, and reduce costs.



## 7. Knowledge check

Total points 4

### 1.Question 1

Your company has recently moved to Azure cloud services from an on-premises Windows environment and the Chief Financial Officer (CFO) wants to gain insights into how Azure resources are being used and costed. He wants to see the data displayed visually and be able to run reports on an ongoing basis in real-time. Which tool would you recommend using in this scenario?

1 / 1 point

- ☐ Azure PowerShell
- ☒ Azure Portal
- ☐ Azure CLI
- ☐ ARM Templates

#### Correct

Given the requirement to view data visually and create custom reports the Azure portal is the best choice. You can quickly find answers to questions using a range of reporting options.

### 2.Question 2

Your company runs a successful ecommerce business. Typically, at certain times of the year resource usage spikes and it becomes necessary for some staff members to be onsite to monitor the services and deal with any issues these surges may cause. Having moved to Azure, the IT (Information Technology) manager is now hoping to provide a solution that will allow employees to monitor the services remotely.

Which service Azure Cloud services do you think is best to use in this scenario?

1 / 1 point

- ☒ Azure mobile app
- ☐ Azure CLI
- ☐ Azure PowerShell

#### Correct

The Azure mobile app running on a phone or tablet could help key employees keep an eye on the health of the cloud environment. The Azure mobile app is a good compromise in this scenario, it allows employees the freedom to be away from the office while still being able to perform one-off management and administrative tasks.

### 3.Question 3

True or False

**Azure PowerShell is available for Windows, Linux, and Mac,**

**1 / 1 point**

☐ False

☒ True

**Correct**

Azure PowerShell is available for Windows, Linux, and Mac, and can be accessed in a web browser via the Cloud Shell.

**4.Question 4**

**True or False**

**The Azure CLI (Command Line Interface) is an executable program that allows developers, DevOps, and IT professionals to execute commands using bash.**

**1 / 1 point**

☒ True

☐ False

**Correct**

The Azure CLI (Command Line Interface) is an executable program that allows developers, DevOps, and IT professionals execute commands using bash.

## 8. Knowledge Check

Total points 5

### 1.Question 1

True or False

The term “serverless computing” means that there is no underlying Server component.

1 / 1 point

☐ True

☒ False

Correct

There is a server (or a group of servers) that execute your code or desired functionality. The key idea is that you are not responsible for setting up or maintaining that server. You don't have to worry about scaling the server or dealing with outages. The cloud vendor takes care of all the maintenance and scaling concerns for you.

### 2.Question 2

True or False?

Serverless computing is primarily used to process messages sent from end-users to the back-end system.

1 / 1 point

☐ True

☒ False

Correct

Serverless computing is used to handle backend scenarios. It is responsible for sending messages from one system to another, or processing messages that were sent from other systems. It's not used for end-user facing systems.

### 3.Question 3

Azure Cloud services provides two serverless computing services Azure Functions and Azure Logic Apps. Which service allows a program to run in response to an event, like an HTTP request, a new message on a queue?

1 / 1 point

☐ Azure Logic Apps

☒ Azure Functions

Correct

Azure Functions allows you to host a single method or function using a popular programming language in the cloud that runs in response to an event such as an HTTP request, a new message on a queue, or on a timer.

#### 4.Question 4

**Which serverless computing service can make use of a web-based designer and can execute logic triggered by Azure services without writing any code?**

Select all options that apply.

1 / 1 point



Azure Functions

Correct

Azure Functions allows you to host a single method or function using a popular programming language in the cloud that runs in response to an event, like an HTTP request, a new message on a queue, or on a timer.



Azure Logic Apps

Correct

Logic Apps is low-code / no-code development platform hosted as a cloud service that helps you automate and orchestrate tasks, business processes, and workflows. An Azure Logic Apps is designed in a web-based designer and can execute logic triggered by Azure services without writing any code

#### 5.Question 5

**Currently, your company randomly sends out requests to purchasers asking them to participate in a customer satisfaction survey. The customer service department would like to be more proactive in responding to poor satisfaction ratings. The company has recently moved to Azure cloud services and believes it should be possible to dynamically respond to specific customer satisfaction responses.**

**Which of the following services could assist in such an automated process?**

1 / 1 point



Azure Logic Apps



Azure Functions

Correct

Azure Logic Apps is a development platform hosted as a cloud service that helps you automate and orchestrate tasks, business processes, and workflows when you need to integrate apps, data, systems, and services across enterprises or organizations.

## 9. Knowledge Check

Total points 6

### 1.Question 1

True or False

**Azure IoT Hub is a cloud hosted service that acts as a central message hub for bi-directional communication between IoT application and the devices it manages.**

1 / 1 point



☐ False

Correct

Azure IoT Hub is a managed service hosted in the cloud that acts as a central message hub for bi-directional communication between your IoT application and the devices it manages. You can use Azure IoT Hub to build IoT solutions with reliable and secure communications between millions of IoT devices and a cloud-hosted solution backend. You can connect virtually any device to your IoT Hub.

### 2.Question 2

True or False

**Azure IoT Central creates an end-to-end highly secure IoT solution for customers that encompasses everything from the hardware and operating system on the device, to the secure method of sending messages from the device to the message hub.**

1 / 1 point

☐ True



Correct

Azure Sphere creates an end-to-end highly secure IoT solution for customers that encompasses everything from the hardware and operating system on the device to the secure method of sending messages from the device to the message hub.

### 3.Question 3

**Which of the following provides a dashboard that allows you to connect, monitor, and manage your IoT devices and send alerts when a specific device needs maintenance?**

1 / 1 point

☐ Azure Sphere



☐ Azure IoT Hub

**Correct**

Azure IoT Central builds on top of IoT Hub by adding a dashboard that allows you to connect, monitor, and manage your IoT devices. The visual user interface (UI) makes it easy to quickly connect new devices and watch as they begin sending telemetry or error messages.

#### **4.Question 4**

**Your company is looking at utilizing IoT devices, however management want assurances that the best level of security will be implemented on these devices and on all communications. Which Azure service do you think provides the most secure implementation?**

**1 / 1 point**



Azure Sphere



Azure IoT Central



Azure IoT Hub

**Correct**

Azure Sphere creates an end-to-end highly secure IoT solution for customers that encompasses everything from the hardware and operating system on the device, to the secure method of sending messages from the device to the message hub.

#### **5.Question 5**

**Your company has partnered with a leading appliance manufacturer. These IoT enabled appliances will send telemetry information to a centralized location in your company where it can be analyzed, and maintenance can be scheduled. Your company will integrate this information into its own existing maintenance request system. In your opinion which of the following services would be most suitable for this scenario?**

**1 / 1 point**



Azure IoT Hub



Azure Sphere



Azure IoT Central

**Correct**

Azure IoT Hub is the best choice in this scenario. It is a managed service hosted in the cloud that acts as a central message hub for bi-directional communication between your IoT application and the devices it manages. You can connect virtually any device to your IoT Hub.

#### **6.Question 6**

**You have recently joined a large haulage company as a junior cloud engineer. The company have recently moved to Azure Cloud services and management is planning to use IoT devices to collect information from their trucks as they transport goods around the world. This will include computer engine information as well as third party sensor collection information such as temperatures etc.**

**Based on this scenario which of the following solutions would you recommend?**

1 / 1 point



Azure IoT Central



Azure Sphere



Azure IoT Hub

**Correct**

Azure IoT Central is the best choice in this scenario. IoT Central has access to prebuilt templates such as the Connected Logistics starter template which provides an out-of-the-box dashboard that will accomplish many of these requirements. Certain features might need to be reconfigured once the template has been deployed but the truck gateway functionality would be ideal for this scenario.

# 10. Knowledge check

Total points 5

## 1.Question 1

Many Azure services include built-in security features however Azure also has specific tools to assist with securing your environment. Which of the following would be the simplest way to monitor your resources and perform automatic security assessments to identify potential vulnerabilities?

1 / 1 point

- ☐ Azure Sentinel
- ☐ Azure Security Center

☒ Azure Key Vault

Correct

Azure Security Center is a monitoring service that provides visibility of your security posture across all your services on Azure and on-premises.

## 2.Question 2

Your company has migrated to Azure Cloud services. Management wants to implement security that will limit the applications that can run on certain virtual machines. Which of the following approaches provide such a solution?

1 / 1 point

- ☐ Connect the virtual machines to Azure Sentinel.
- ☐ Administrators periodically review what applications are running on each VMs by creating and running PowerShell scripts.

☒ Implement an application control rule in Azure Security Center.

Correct

With Azure Security Center, you can define a list of allowed applications to ensure that only applications you allow can run. Azure Security Center can also detect and block malware from being installed on your VMs.

## 3.Question 3

Your company has recently migrated to Azure cloud services. Azure has various reporting and monitoring tools built in. What is the simplest tool to use to create a single report that will show all security information to be collected from all the monitoring tools?

1 / 1 point

- ☐ Secure Score



☐ Azure Key Vault

☒ Azure Sentinel

**Correct**

Azure Sentinel is Microsoft's cloud based SIEM solution and can combine and report on security data from different sources.

#### 4.Question 4

**Your company had recently migrated to Azure cloud services and management are concerned that sensitive information such as passwords, encryption keys, and certificates will not be as secure as they were when operating an on-premises environment. What solution can you implement to allay these concerns?**

**1 / 1 point**

☐ Implement Azure Sentinel.

☒ Implement Azure Key Vault.

☐ Configure a secure VM and store the Passwords and certificates in a shared folder.

**Correct**

Azure Key Vault is a centralized cloud service for storing your applications' secrets in a single, central location. It provides secure access to sensitive information by providing access control and logging capabilities.

#### 5.Question 5

**Your company is planning to migrate to Azure cloud services however because of their type of business they are obliged to follow regulatory compliance that requires them to be the only customer using the physical machine that will host their virtual machines in the cloud. How can your company migrate to the cloud while still remaining compliant?**

**1 / 1 point**

☐ Configure the network so that the company's VMs are isolated from other VM's running on the same host in the datacenters.

☒ Configure the VM's to run on Azure Dedicated Host

☐ They cannot, these specific systems will need to remain and operate on-premises only.

**Correct**

By default, virtual machines (VMs) on Azure run on shared hardware that's managed by Microsoft. Although the underlying hardware is shared, VM workloads are isolated from workloads being run by other Azure customers. However, some organizations must follow regulatory compliance that requires them to be the only customer using the physical machine that hosts their virtual machines. Azure Dedicated Host provides dedicated physical servers to host your Azure VMs for Windows and Linux.

# 11. Knowledge check

Total points 5

## 1.Question 1

Malicious attackers can try to overwhelm the resources of a network by sending large volumes of packets to a targeted host on the network. Which of the following Azure offerings would be most suitable in detecting this form of attack?

1 / 1 point



Azure DDoS Protection



Azure Firewall



Network security groups

Correct

DDoS Protection can help protect your Azure resources from DDoS attacks. A DDoS attack attempts to overwhelm and exhaust an application's resources, making the application slow or unresponsive to legitimate users.

## 2.Question 2

True or False

Azure Firewall provides Network Address Translation (NAT) rules that can define destination IP addresses and ports to translate inbound requests.

1 / 1 point



True



False

Correct

Azure Firewall provides Network Address Translation (NAT) rules that can define destination IP addresses and ports to translate inbound requests.

## 3.Question 3

What service tiers are available to DDoS Protection?

Select all options that apply.

1 / 1 point



Basic

Correct

The Basic service tier is automatically enabled for free as part of your Azure subscription. Always-on traffic monitoring and real-time mitigation of common network-level attacks provide the same defenses that Microsoft's online services use. The Basic service tier ensures that Azure infrastructure itself is not

impacted during a large-scale DDoS attack. Azure's global network is used to distribute and mitigate attack traffic across Azure regions.

☐ Enhanced

☒ Standard

#### Correct

The Standard service tier provides additional mitigation capabilities that are tuned specifically to Azure Virtual Network resources. The Standard tier also provides always-on traffic monitoring and real-time mitigation of common network-level attacks.

#### 4.Question 4

**Having recently migrated to Azure cloud services you need to implement a solution that will allow the filtering of network traffic to and from Azure resources within an Azure Virtual Network. Which of the following services would be most suitable to solve this problem?**

1 / 1 point

☐ Azure Firewall

☒ Network Security Groups

☐ DDoS protection

#### Correct

A Network Security Group (NSG) enables you to filter network traffic to and from Azure resources within an Azure Virtual Network. You can think of network security groups like an internal firewall.

#### 5.Question 5

**What is the simplest way for a company to implement a policy that will restrict VMs from being able to communicate with each other?**

1 / 1 point

☐ Place each VM on a separate virtual network.

☐ Limit access by implementing DDoS protection.

☒ Use Network Security Groups to create a rule that prevents access from another VM on the same network.

#### Correct

A network security group rule enables you to filter traffic to and from resources by source and destination IP address, port, and protocol.

## 12. Knowledge check

Total points 5

### 1.Question 1

What is the process of establishing the identity of a person or service that wants to access a resource known as?

1 / 1 point



Authentication



Authorization

Correct

Authentication is the process of establishing the identity of a person or service that wants to access a resource. It involves the act of challenging a party for legitimate credentials and provides the basis for creating a security principle for identity and access control. It establishes whether the user is who they say they are.

### 2.Question 2

What kinds of resources can Azure AD help secure?

1 / 1 point



Only internal resources



Only external resources



Both External and Internal Resources

Correct

Azure AD helps users access both external and internal resources. External resources might include Microsoft Office 365, the Azure portal, and thousands of other software as a service (SaaS) applications. Internal resources might include apps on your corporate network and intranet, along with any cloud applications developed within your organization.

### 3.Question 3

True or False

Single sign-on enables a user to sign in one time and use that credential to access multiple resources and applications from different providers.

1 / 1 point



True



False

Correct

Single sign-on enables a user to sign in one time and use that credential to access multiple resources and applications from different providers.

#### 4.Question 4

**Multi-factor authentication is a process where a user is prompted during the sign-in process for an additional form of identification. A code that's sent to your mobile phone is an example of which type of multi-factor authentication?**

1 / 1 point

- ☐ Something you know
- ☒ Something you have
- ☐ something you are

#### Correct

Something you have might be a code that's sent to your mobile phone.

#### 5.Question 5

**Your company wants to ensure that certain content is only accessible from specific locations. Which of the following solutions is the most suitable to meet this requirement?**

1 / 1 point

- ☒ Conditional Access
- ☐ Single Sign On (SSO)
- ☐ Multifactor Authentication

#### Correct

Conditional Access is a tool that's used by Azure Active Directory to allow (or deny) access to resources based on identity signals. These signals include who the user is, the user's location, and what device the user is requesting access from.

# 13. Knowledge check

Total points 5

## 1.Question 1

Your company has migrated to Azure cloud services and management wish to chargeback some of the resource cost to various departments on a monthly basis. Which in your opinion is the best solution to meet these requirements with the least amount of administrative effort?

1 / 1 point

- ☐ Manually track using a Microsoft Excel spreadsheet
- ☐ Create Subscriptions for each department



Correct

Tags provide extra information, or metadata, about your resources. You might create a tag that's named Sales whose value is the name of the billing department. You can use Azure Policy to ensure that the proper tags are assigned when resources are provisioned.

## 2.Question 2

Your Azure deployment consists of multiple subscriptions and resource groups. You need to restrict the actions that some of your users can carry out. You are required to allow some users to manage VM's without having permission to make configuration changes to networking etc. Which of the following solutions allow you to do this?

1 / 1 point

- ☐ Create policies in Azure Policy that will audit resource usage.



- ☐ Create multiple Resource Groups.

Correct

Azure RBAC enables you to create roles that define access permissions. You might create one role that limits access only to virtual machines and a second role that provides administrators with access to everything.

## 3.Question 3

Resource Locks in Azure cloud services prevent accidental changes or deletions. Which of the following are valid options when configuring Resource Locks?

Select 2 options.

1 / 1 point



**Correct**

ReadOnly means authorized people can read a resource, but they can't delete or change the resource. Applying this lock is like restricting all authorized users to the permissions granted by the Reader role in Azure RBAC.

☒ CanNotDelete

**Correct**

CanNotDelete means authorized people can still read and modify a resource, but they can't delete the resource without first removing the lock.

☐ CanNotModify

#### **4.Question 4**

**Azure Policy is a service in Azure that enables you to create, assign, and manage policies that control or audit your resources. These policies enforce different rules and effects over your resource configurations so that those configurations stay compliant with corporate standards.**

**Select Yes if you agree with the following statement otherwise select No:**

**Azure Policy initiatives are a way of grouping related policies into one set.**

**1 / 1 point**

☒ Yes

☐ No

**Correct**

An Azure Policy initiative is a way of grouping related policies into one set. The initiative definition contains all the policy definitions to help track your compliance state for a larger goal.

#### **5.Question 5**

**An Azure Blueprint is composed of artifacts. Which of the following resources as artifacts are currently supported by Azure Blueprints?**

**Select 3 options.**

**1 / 1 point**

☒ ARM Templates

**Correct**

Azure Blueprints currently supports Resource Groups, ARM template, Policy Assignment and Role Assignment as artifacts.

☒ Policy Assignment

**Correct**

That's correct. Azure Blueprints currently supports Resource Groups, ARM template, Policy Assignment and Role Assignment as artifacts.

☒ Role Assignment

**Correct**

Azure Blueprints currently supports Resource Groups, ARM template, Policy Assignment and Role Assignment as artifacts.

☐ Management Groups



# 14. Knowledge check

Total points 5

## 1.Question 1

Which of the following is a legal agreement between Microsoft and the customer that details the obligations by both parties with respect to the processing and security of customer data and personal data?

1 / 1 point



Online Services Terms



Microsoft Privacy Statement

Correct

The Online Services Terms (OST) is a legal agreement between Microsoft and the customer that details the obligations by both parties with respect to the processing and security of customer data and personal data. The OST applies specifically to Microsoft's online services that you license through a subscription including Azure, Dynamics 365, Office 365, and Bing Maps.

## 2.Question 2

Which of the following provides in-depth information about security, privacy, compliance offerings, policies, features, and practices across Microsoft cloud products?

1 / 1 point



Azure Monitor



Azure Advisor



Azure Portal



Microsoft Trust Center

Correct

The Trust Center provides In-depth information about security, privacy, compliance offerings, policies, features, and practices across Microsoft cloud products including links to the security, privacy, and compliance blogs.

## 3.Question 3

True or False?

To provide the highest level of security and compliance, Azure Government uses physically isolated datacenters and networks located only in the US.

1 / 1 point



True

☐ False

**Correct**

To provide the highest level of security and compliance, Azure Government uses physically isolated datacenters and networks located only in the US. Azure Government customers, such as the US federal, state, and local government or their partners, are subject to validation of eligibility.

**4.Question 4**

**True or False?**

**Azure China is operated by 21Vianet and is a physically separated instance of cloud services located in China.**

**1 / 1 point**

☒ True

☐ False

**Correct**

Azure China is operated by 21Vianet is a physically separated instance of cloud services located in China. It is independently operated and transacted by Shanghai Blue Cloud Technology Co., Ltd. ("21Vianet"), a wholly owned subsidiary of Beijing 21Vianet Broadband Data Center Co., Ltd.

**5.Question 5**

Where can the team access detail about the personal data Microsoft processes and how the company processes it, including for Cortana?

**1 / 1 point**

☐ The Azure compliance documentation

☐ Microsoft Privacy Statement

☒ Microsoft compliance offerings

**Correct**

The Microsoft Privacy Statement provides information that's relevant to specific services, including Cortana.

# 15. Knowledge check

Total points 5

## 1.Question 1

**Your company is planning on migrating to Azure cloud services. However, before this happens management requires some comparisons of the costs involved in using cloud services as opposed to an on-premises solution. What would be the first step you could take to provide this comparison information?**

1 / 1 point

- ☐ Assume that the cost of running workloads on Azure are similar as running workloads on-premises.
- ☐ Setup some resources in Azure as this is a free service.

☒ Run the Total Cost of ownership Calculator.

Correct

Running the Total Cost of Ownership Calculator is a great first step because it can provide an accurate comparison of running workloads in the datacenter versus on Azure and is certified by an independent research company.

## 2.Question 2

**You work for a large manufacturing company and are planning on moving to Azure cloud services. You want to avail of the best pricing Microsoft has to offer on their Azure services. Which Azure service should you purchase?**

1 / 1 point

☒ An Enterprise agreement

- ☐ Buy Directly from the web
- ☐ Through a Cloud Solution Provider (CSP)

Correct

Larger customers (known as Enterprise customers) can sign an Enterprise Agreement with Microsoft that commits them to spend a predetermined amount on Azure services over a period of 3 years, which is typically paid annually. As an Enterprise Agreement customer, you will receive the best, customized pricing based on the kinds and amounts of services you plan on using.

## 3.Question 3

**Your company's development team create virtual machines for testing on a regular basis. These test machines are only used during certain times. In your opinion what is the most efficient way to save costs on virtual machines when they are not in use?**

1 / 1 point

- ☐ Use virtual machines that are only chargeable when accessed remotely.

- ☐ Delete the virtual machines when they are not in use because once they are deleted, they will not incur any charges.

☒ Deallocate the virtual machines when they are not in use.

**Correct**

When you deallocate virtual machines, the associated hard disks and data are kept in Azure. But you don't pay for CPU or network consumption, which can help save costs.

**4.Question 4**

**True or False?**

**Azure Advisor helps you identify unused or under-utilized resources and can recommend unused resources that you can remove.**

**1 / 1 point**

- ☐ False

☒ True

**Correct**

Azure Advisor identifies unused or under-utilized resources and recommends unused resources that you can remove. This helps you configure your resources to match your actual workload.

**5.Question 5**

**If you have a free trial subscription to Azure and you reach your credit limit during the trial period, what will happen to your resources?**

**1 / 1 point**

☒ Your existing Azure resources are removed from production and your Azure virtual machines are stopped and deallocated.

- ☐ The oldest resources will be deleted once the credit limit has been reached allowing you to create new resources.

- ☐ You can carry on and access existing resources, but you will not be able to create new resources.

**Correct**

When you spend all the credit included with your Azure free account, Azure resources that you deployed are removed from production and your Azure virtual machines are stopped and deallocated. The data in your storage accounts are available as read-only. At this point, you can upgrade your subscription to a pay-as-you-go subscription.

# 16. Knowledge check

Total points 4

## 1.Question 1

True or False?

A service-level agreement (SLA) is a formal agreement between a service company and the customer. On Azure, this agreement defines the performance standards that Microsoft commits to for you, the customer. However, in order to view an SLA, you must have an Azure Subscription.

1 / 1 point

☐ True

☒ False

Correct

You don't need an Azure subscription to review service SLAs. You can access SLAs from the Service Level Agreements page on [azure.microsoft.com](https://azure.microsoft.com).

## 2.Question 2

Downtime refers to the time duration that the service is unavailable, how much cumulative downtime per year will an SLA percentage of 99.95 give?

1 / 1 point

☐ 3.65 days

☐ 52.56 minutes

☐ 8.76 hours

☒ 4.38 hours

Correct

An SLA percentage of 99.95 will give an annual cumulative downtime of 4.38 hours.

## 3.Question 3

Azure cloud services continue to release new features. Prior to release these new services go through various stages of testing such as pre-release and Beta. Which of the following will allow all Azure customers an opportunity to test the beta and other pre-release features?

1 / 1 point

☒ Public Preview

☐ General availability

☐ Private Preview

**Correct**

During this phase, all customers with the proper Azure AD license are invited to evaluate the new feature.

**4.Question 4**

**Which of the following define performance targets such as uptime?**

**1 / 1 point**



Service Level Agreements



Support plans



Usage Meters

**Correct**

Service Level Agreements or SLAs define performance targets for an Azure product or service.