Tuesday, October 8, 2024

00:48

**Basic Azure Interview Questions**

**1. Why Did You Choose a Career in Cloud Computing?**

These types of Azure interview questions require a thoughtful, honest response. By thinking through your answer ahead of time, you’ll be ready to say something your interviewer will approve of. Show that you care about the field and that you have a passion for [cloud computing](https://www.simplilearn.com/tutorials/cloud-computing-tutorial/what-is-cloud-computing) and the problems it can solve.

**2. Why Did You Choose Microsoft Azure and Not Aws?**

Your response to this question is based on your own background and experience. Maybe you come from a developer background, so Azure appealed to you. Maybe your first cloud computing role just happened to be with Azure. As with the question above, the key here is to be ready to give an intelligent answer to the question.

**3. How Does Microsoft Azure Compare to Aws?**

This might be a matter of opinion for you, so answer as you see fit. In general, people say Azure is a better choice because it’s a Microsoft product, making it easier for organizations already using Windows Server, SQL Server, and Exchange to move to the cloud. In addition, because of Microsoft’s deep knowledge of developer tools, Azure offers multiple app deployment options for developers, which makes it stand out against [AWS](https://www.simplilearn.com/introduction-to-amazon-web-services-aws-article).

**4. How Did You Learn Azure?**

Did you learn Azure through a certification? Through on-the-job experience? A little of each? However you learned it, make sure to demonstrate to the interviewer that you have practical experience (if you’re new to the field) and that you are continuing to learn.

**5. Tell Me About a Problem You Solved at Your Prior Job.**

This is something to spend some time on when you’re preparing responses to possible Azure interview questions. As a cloud architect, you need to show that you are a good listener and problem solver, as well as a good communicator. Yes, you need to know the technology, but cloud computing does not usually involve sitting isolated in a cubicle. You’ll have stakeholders to listen to, problems to solve, and options to present. When you answer questions like these, try to convey that you are a team player and a good communicator, in addition to being a really good Azure architect.

**6. What is the difference between SaaS, PaaS, and IaaS?**

This is one of the most common Azure interview questions. Cloud Computing has three types of service models, that are [IaaS, PaaS, and SaaS](https://www.simplilearn.com/saas-paas-iaas-quick-comparison-article)

|  |  |  |
| --- | --- | --- |
| **Infrastructure as a Service(IaaS)** | **Platform as a Service(PaaS)** | **Software as a Service(SaaS)** |
| It provides users with components such as OS, networking capabilities, etc. This is a paid service, based on usage and can be used to host applications. | It enables developers to build and work with applications without having to worry about the infrastructure or management of the hosting environment. | It involves applications being consumed and used by organizations. Usually, organizations pay for their use of the application |
| Example -  Azure Virtual Machine, Azure VNET | Example -  Azure SQL, Azure Storage | Example -  Office 365, Salesforce |

**Azure Interview Questions and Answers for Experienced**

**7. What are the instance types offered by Azure?**

Azure offers a number of different instance types based on what needs they fulfill.

* General Purpose: The CPU-to-memory ratio is balanced. It provides low—to medium-traffic web servers and small—to medium-traffic databases and is ideal for testing and development.
  + Largest instance size: Standard\_D64\_v3
  + 256 GB Memory and 1600 GB SSD Temp Storage
* Compute Optimized: This processor has a high CPU-to-memory ratio and is best suited for medium-traffic web servers, application servers, batch processes, and network appliances.
  + Largest instance size: Standard\_F72s\_V2
  + 144 GB Memory and 576 GB SSD Temp Storage
* Memory-Optimized: High memory-to-CPU ratio. Best suited for relational database servers, in-memory analytics, and medium to large caches.
  + Largest instance size: Standard\_M128m
  + 3892 GB Memory and 14,336 GB SSD Temp Storage
* Storage Optimized: Provides high disk IO and throughput. Best suited for Big Data, NoSQL and SQL Databases.
  + Largest instance size: Standard\_L32s
  + 256 GB Memory and 5630 GB SSD Temp Storage
* GPU: Virtual Machines that specialize in heavy graphic rendering and video editing. It also helps with model training and inferencing with deep learning.
  + Largest instance size: Standard\_ND24rs
  + 448 GB Memory and 2948 GB SSD Temp Storage
  + 4 GPUs and 96 GB Memory
* High-Performance Compute: Provides Azure’s fastest and powerful CPU virtual machines with optional high throughput interfaces.
  + Largest instance size: Standard\_L32s
  + 224 GB Memory and 2000 GB SSD Temp Storage

**8. What are the deployment environments offered by Azure?**

Azure offers two deployment environments:

**Staging Environment**

* It provides a platform to validate changes to your application before it can be made live in the production environment.
* In this stage, the app can be identified using the Azure’s Globally Unique Identifier (GUID) in URL form (GUID.cloudapp.net).

**Production Environment**

* This environment is used to store the live application.
* It can be differentiated from the staging environment with a more [DNS](https://www.youtube.com/watch?v=9dX7S-xgS60)-friendly URL (servicename.cloudapp.net).

**9. Differentiate between repetitive and minimal monitoring.**

|  |  |
| --- | --- |
| **Repetitive / Verbose Monitoring** | **Minimal Monitoring** |
| It collects metrics based on performance. | It is a default configuration method. |
| It allows a close analysis of data fed during the process of application. | It allows for a close analysis of data fed during the application process. |

**11. What are the advantages of Scaling in Azure?**

Azure performs scaling with the help of a feature known as Autoscaling. Autoscaling helps to deal with changing demands in Cloud Services, Mobile Services, Virtual Machines, and Websites. Below are a few of its advantages:

* Maximizes application performance
* Scale up or down based on demand
* Schedule scaling to particular time periods
* Highly cost-effective

**12. How is Windows Active Directory and Azure Active Directory different?**

This one’s another regular question from the list of Azure interview questions.

|  |  |
| --- | --- |
| **Windows Active Directory** | **Azure Active Directory** |
| It is a directory service that facilitates unified work with interconnected, complex and different network resources. | [Azure Active Directory](https://www.simplilearn.com/tutorials/azure-tutorial/azure-active-directory) (Azure AD) is Microsoft’s multi-tenant, cloud-based directory and identity management service. |
| Uses 5 layers to store data, store user details, issue and manage certifications, etc. | Uses 5 layers to store data, store user details, issue and manage certifications, etc. |
| Works with an emphasis on on-premises units like applications, file services, printers, etc. | Emphasizes on web-based services that use RESTful interfaces. |

**13. What are the types of Queues offered by Azure?**

Azure offers two types of queues:

**Storage Queues**

* It is a part of Azure’s Storage infrastructure.
* It provides messaging within and between services.
* It is best suited when users need to store more than 80 GB of messages in queues.
* It can provide side logs of all transactions executed against the user’s queues.

**Service Bus Queues**

* It is a part of Azure’s messaging infrastructure.
* It integrates application or application components that span multiple communication protocols, network environments, etc.
* It provides a FIFO style of delivery.
* The user’s queue size has to remain under 80 GB.

**14. What are the advantages of the Azure Resource Manager?**

Azure Resource Manager enables users to manage their usage of application resources. Few of the advantages of Azure Resource Manager are:

* ARM helps deploy, manage and monitor all the resources for an application, a solution or a group.
* Users can be granted access to the resources they require.
* It obtains comprehensive billing information for all the resources in the group.
* Provisioning resources is made much easier with the help of templates.

**16. How has integrating hybrid cloud been useful for Azure?**

The [Hybrid Cloud](https://www.simplilearn.com/what-is-hybrid-cloud-article) boosts productivity by using Azure and the Azure stack for building and deploying applications for the cloud and on-premises applications. Integrating hybrid cloud been useful for Azure in the following ways:

* It obtains greater efficiency with a combination of Azure services and DevOps processes and tools.
* Users can use constantly updated Azure services and other Azure Marketplace applications.
* It enables it to be deployed regardless of its location, the cloud, or on-premises.
* This enables applications to be created at a higher speed.

**18. What are the different types of storage offered by Azure?**

Storage questions are very commonly asked during an Azure Interview. Azure has four different types of storage. They are:

**Azure Blob Storage**

Blob Storage enables users to store unstructured data that can include pictures, music, video files, etc. along with their metadata.

* When an object is changed, it is verified to ensure it is of the latest version.
* It provides maximum flexibility to optimize the user’s storage needs.
* Unstructured data is available to customers through REST-based object storage.

**Azure Table Storage**

Table Storage enables users to perform deployment with semi-structured datasets and a [NoSQL](https://www.simplilearn.com/rise-of-nosql-and-why-it-should-matter-to-you-article) key-value store.

* It is used to create applications requiring flexible data schema.
* It follows a strong consistency model, focusing on enterprises.

**Azure File Storage**

File Storage provides file-sharing capabilities accessible by the SMB (Server Message Block) protocol

* The data is protected by SMB 3.0 and HTTPS.
* Azure takes care of managing hardware and operating system deployments.
* It improves on-premises performance and capabilities.

**Azure Queue Storage**

Queue Storage provides message queueing for large workloads

* It enables users to build flexible applications and separate functions.
* It ensures the application is scalable and less prone to individual components failing.
* It enables queue monitoring which helps ensure customer demands are met.

**20. What are the advantages of Azure Queue Storage?**

Queue storage enables message queueing for large workloads in a simple, cost-effective, and durable manner. Few of its advantages are:

* It provides rich client libraries for [Java](https://www.simplilearn.com/tutorials/java-tutorial/what-is-java), Android, C++, PHP, Ruby, etc.
* It enables users to build flexible apps and separate functions for greater durability.
* It ensures users’ applications are scalable and less prone to individual component failure.
* It enables queue monitoring to ensure servers aren’t overwhelmed by sudden traffic bursts.

**21. What are the two kinds of Azure Web Service roles?**

A cloud service role is a set of managed and load-balanced virtual machines that work together to perform tasks. The two kinds of Azure Web Service roles are:

**Web Roles**

* It is a cloud service role that is used to run web applications developed in programming languages supported by IIS (Internet Information Services) like ASP.NET, PHP, etc.
* It automatically deploys and hosts applications through the user's IIS.

**Worker Roles**

* It runs applications and other tasks that don't require IIS. It also performs supporting background tasks and web roles.
* It doesn’t use IIS and runs user applications standalone.

**22. What is Azure Service Fabric?**

Service Fabric provides a platform that makes the process of developing microservices and managing the application lifecycle easier.

* It produces applications with a faster time to market.
* It supports Windows/ Linux, on-premises, and other clouds.
* It provides the ability to scale up to a thousand machines.

**23. How can Azure handle this situation?**

A client wants the front end of his/ her application to be hosted on Azure, but wants the database to be hosted on-premises.



Solution: The ideal solution in this scenario is to use Azure VNET-based “Point to Site.” It’s best suited for scenarios where there are only a limited number of resources that need to be connected.

**24. What is the Azure Traffic Manager?**

Azure Traffic Manager is a traffic load balancer that enables users to provide high availability and responsiveness by distributing traffic in an optimal manner across global Azure regions.

* It provides multiple automatic failover options.
* It helps reduce application downtime.
* It enables the distribution of user traffic across multiple locations.
* It enables users to know where customers are connecting from.

**25. How can Azure handle this situation?**

You must isolate network traffic among VMs in a subnet, which is part of a [virtual network](https://www.simplilearn.com/tutorials/azure-tutorial/azure-virtual-network-vnet) with little downtime and impact on users.



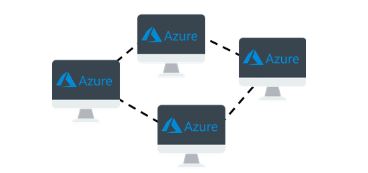
Solution: This would ensure that the virtual machines are kept isolated without the need for additional security, like a Network Security Group.

**26. With respect to Azure, what is public, private, and hybrid cloud?**

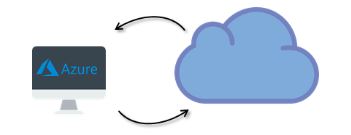
Public Cloud: Every component in the user's application runs only on Azure.



Private Cloud: Azure services are run within an on-premises data center, or the user uses on-premises data centers to host systems or applications.



Hybrid Cloud: Combines features of both Public and Private cloud. Some of the user’s components run on Azure, while others are within an on-premises data center.



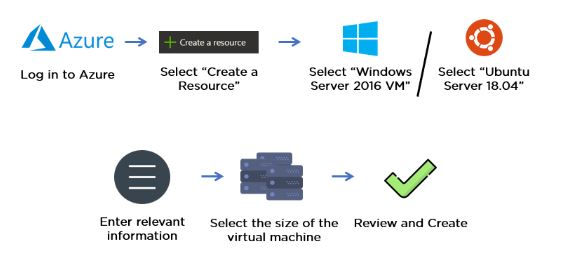
**27. What kind of storage is best suited to handle unstructured data?**

Blob Storage provides storage capacity for data. It divides data into different tiers based on how often it is accessed.

* Any unstructured data can be stored.
* Data integrity is maintained every time an object is changed.
* It helps to increase app performance and reduces bandwidth consumption.

**28. How do you set up an Azure Virtual Machine?**

The below image would explain clearly how to set up an Azure Virtual Machine:



**29. How do you handle this scenario?**

You need to make sure your Virtual Machines are able to communicate securely with each other to ensure security.

Solution: Azure Virtual Network enables Azure resources to communicate securely with each other, the Internet, or on-premises networks.

* Users can create their own private networks.
* It provides users with an isolated and highly secure environment for applications.
* All traffic stays within the Azure network.
* It allows users to design their own networks.

**30. How do you handle this scenario?**

You need to ensure that every time a user logs in, they are not asked to re-enter their passwords as part of the authentication.

a. To enable Microsoft Account authentication

b. Deploy ExpressRoute

c. Set up a VPN between premises and datacenter. Set up an AD domain controller in VM and implement integrated Windows Authentication

d. Configure Azure AD Sync to use single sign-on

Solution: d. Configure Azure AD Sync to use single sign-on

* Single Sign-On (SSO) is a property of access control of multiple related, but independent software systems. With this property, a user logs in once and gains access to all systems without being prompted to log in again at each of them.

**31. Azure Storage plays the same role in Azure that \_\_\_\_\_\_ plays in Amazon Web Services.**

a. [S3](https://www.simplilearn.com/tutorials/aws-tutorial/aws-s3)

b. EC2

c. EC3

d. All of the mentioned

Answer: a. S3

**32. Which service in Azure is used to manage resources in Azure?**

a. Azure Resource Manager

b. Application Insights

c. Log Analytics

d. Azure Portal

Answer: a. Azure Resource Manager

**33. How do you handle this scenario?**

You need to ensure that virtual machines remain available while migrating to Azure. What would be the appropriate service to use?

a. Traffic Manager

b. Update Domains

c. Express Route

d. Cloud Services

Answer: c. Express Route

**34. How do you handle this scenario?**

a. You administer a website called web game. You must validate and deploy changes made to your website by your development team with minimum downtime.

b. Create a new linked resource

c. Create a staging environment for the site

d. Enable remote debugging on the website

Solution: b. Create a staging environment for the site

**35. How do you handle this scenario?**

Your standard tier application is used worldwide and uses the Azure website standard tier. It uses a large number of image files, which causes the application to load slowly.

a. Configure [Azure blob storage](https://www.simplilearn.com/tutorials/azure-tutorial/azure-blob-storage) with a custom domain

b. Configure Azure website Autoscaling to increase instances at high loads

c. Configure Azure CDN to cache all responses from the application’s web endpoint

d. Configure Azure CDN to cache site images and content stored in Azure blob storage

Answer: d. Configure Azure CDN to cache site images and content stored in Azure blob storage

Blobs that benefit the most from Azure CDN caching are those that are accessed frequently during their time-to-live (TTL) period. A blob stays in the cache for the TTL period and then is refreshed by the blob service after that time is elapsed. Then the process repeats.