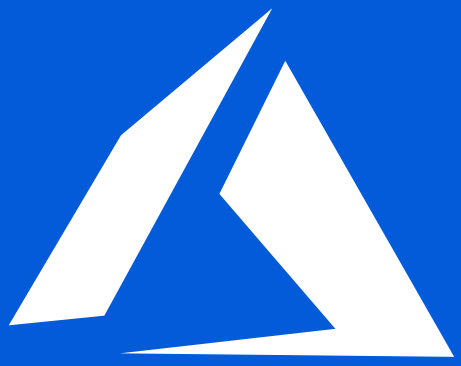


Microsoft Azure

Interview Guide

simplilearn

Ace Your Azure Interview

If you're pursuing a career in cloud computing, you're making a smart move. Cloud computing is becoming the norm in the business world as organizations realize they can be more efficient and lower costs with this model. Spending on public cloud services is expected to reach $302.5 billion by 2021. What does that mean for you? Plenty of potential in the cloud computing space! Today's cloud computing job market is quite competitive and getting a job is not a piece of cake. Microsoft Azure is one of the raging cloud service providers today and you must be thoroughly prepared for the interview process. And to help you ace your interview in one go, here's a collection of 40+ Azure interview questions.

To help you gear up, the Azure interview questions have been divided into the following:

- Beginner Azure interview questions
- Advanced Azure interview questions
- Multiple Choice Azure interview questions
- Scenario-based Azure interview questions

Beginner Azure Interview Questions

Q. Why Did You Choose a Career in Cloud Computing?

A: 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 and the problems it can solve.

Q. Why Did You Choose Microsoft Azure and Not Aws?

A: 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.

Q. How Does Microsoft Azure Compare to Aws?

A: 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.

Q. How Did You Learn Azure?

A: 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.

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

A: 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.

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

A: This is one of the most common Azure interview questions. Cloud Computing has three types of service models, that are IaaS, PaaS, and SaaS

- **Infrastructure as a Service(IaaS)**

  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.

  Example - Azure Virtual Machine, Azure VNET

- **Platform as a Service(PaaS)**

  It enables developers to build and work with applications without having to worry about the infrastructure or management of the hosting environment.

  Example - Azure SQL, Azure Storage

- **Software as a Service(SaaS)**

  It involves applications being consumed and used by organizations. Usually, organizations pay for their use of the application

  Example - Office 365, Salesforce

Advanced Azure Interview Questions

Q. What Are the Different Storage Options with Azure?

A: Should your interview start to get technical, there are countless questions you might be asked. You can't predict them. We can't predict them. So we've brainstormed some possible Azure interview questions and answers for you to study, prepare for, and practice. Do this, and you'll walk into your interview with much more confidence! Now, onto the different storage options with Azure. These options include a blog, table, and queue options. Be prepared to expand on the benefits of each as well.

Q. What Is the Benefit of the Azure CDN?

A: The Content Delivery Network (or CDN) in Azure offers the same benefits as other CDNs: it can be used to reduce load times and bandwidth as well as speed up responsiveness.

Q. What Is Azure Virtual Network?

A: Azure Virtual Network enables Azure resources like Virtual Machines to securely communicate with each other, with the Internet and with on-site networks. It lets you implement multiple virtual networks, as well as a filter or even route network traffic, and to connect virtual networks to each other.

Q. What Are Azure Virtual Machines Used For?

A: Speaking of virtual, Azure Virtual Machines are used in the same way any virtual machines are used: to add computing power without adding hardware. Azure supports Windows Server (of course), Linux, SAP, Oracle, IBM, and SQL Server.

Q. What Is Azure Cloud Service?

A: Azure Cloud Service lets you deploy a multi-tier web application in Azure, with multiple roles to distribute processing and enable flexible scaling of your application. It lets you support more complex multi-tier architectures.

Q. What Is Azure Active Directory?

A: Azure Active Directory is an Identity and Access Management system, similar

to other active directories. It lets you grant employee access to specific products and services within your network.

Q. What Is Powershell, and How Is It Used?

A: Windows PowerShell has been around for a long time. It can be used to automate tedious tasks. Azure PowerShell is used to manage and administer Azure resources from the command line, as well as to build automation scripts for use with the resource manager.

Q. Explain HdInsight.

A: Azure HDInsight is a cloud service that makes it easy, fast and cost-effective to process massive amounts of data using open-source frameworks like Hadoop, Spark, Hive, LLAP, Kafka, Storm and R. HDInsight can enable a broad range of scenarios, including ETL, data warehousing, and Machine Learning, to name a few.

Q. How Do You Stay Current on Microsoft Azure?

A: Technology is rapidly changing, especially in the cloud computing space, and Microsoft regularly makes updates to Azure. How do you stay on top of it all? Your interviewer will want to know that if you're hired for the job, you'll stay current. If you've earned a certification, definitely mention that. But also look into forums, user groups, and other resources for staying current, and be ready to talk about them when answering Azure interview questions.

Q. What are the instance types offered by Azure?

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

- **General Purpose -** CPU to memory ratio is balanced. Provides low to medium traffic web servers, small to medium 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 -** High CPU to memory ratio. 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 le

  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

Q. What are the deployment environments offered by Azure?

A: This is one of the most frequently asked Azure interview questions, and you must know the answer. 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 an URL that's more DNS friendly (servicename.cloudapp.net)

Q. Differentiate between repetitive and minimal monitoring.

A:

Repetitive/Verbose Monitoring

- It collects metrics based on performance
- It allows a close analysis of data fed during the process of application

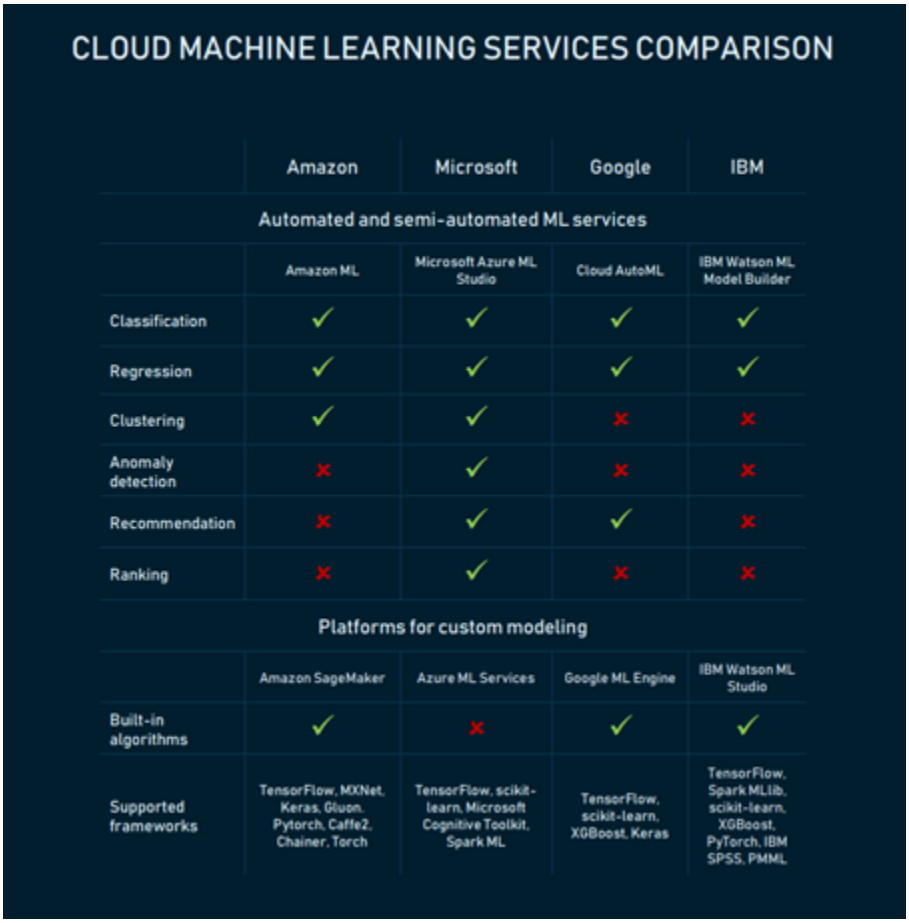
Minimal Monitoring

- It is a default configuration method
- It allows a close analysis of data fed during the process of application

Q. Which one amongst Microsoft Azure ML Studio and GCP Cloud AutoML is better?

A: When we compare both in terms of services, Azure ML Studio wins the verdict since it has Classification, Regression, Anomaly Detection, Clustering, Recommendation, and Ranking features.

On the other hand, GCP Cloud AutoML has Clustering, Regression, and Recommendation features. Moreover, Azure has a drag and drop options that make the process easier to carry out



Q. What are the advantages of Scaling in Azure?

A: 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

Q. How are Windows Active Directory and Azure Active Directory different?

A:

Windows Active Directory	Azure Active Directory
It is a directory service that facilitates working with interconnected, complex and different network resources in a unified manner	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

Q. What are the types of Queues offered by Azure?

A: 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

Q. What are the advantages of the Azure Resource Manager?

A: 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 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

Q. Azure interview questions can also have MCQ's like follows: Which of the following web applications can be deployed with Azure?

A. ASP.NET

B. PHP

C. WCF

D. All of the mentioned

A: A) ASP.NET

Q. How has integrating hybrid cloud been useful for Azure?

A: The Hybrid Cloud 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 take advantage of 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

Q. What is the Federation in Azure SQL?

A: SQL Azure Federation provides tools that can enable developers to access or share databases among themselves in SQL Azure.

- It enables users to take advantage of resources within the cloud
- It allows users to have their own database or share databases amongst each other
- It reduces the possibility of a single point of failure
- It provides cost-effectiveness, by using cloud resources only when needed

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

A: 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 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

Q. What is the Text Analysis API in Azure Machine Learning?

A: Text Analysis API is a set of web services that can be used for text analysis. It is used to analyze unstructured text for sentiment analysis and keyphrase extraction. It provides results that range between 0 and 1, to elicit a positive or negative sentiment

Scores closer to 1, would be considered as a positive sentiment

Scores closer to 0, indicates a negative sentiment

When a new model is created, it doesn't need to be designed and trained, users need to add the data and call the service to obtain the sentiment analysis

Q. What are the advantages of Azure Queue Storage?

A: 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, 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

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

A: 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 users IIS

Worker Roles

- It runs applications and other tasks that don't require IIS. It performs supporting background tasks along with web roles
- It doesn't use IIS and runs user applications standalone

Q. What is Azure Service Fabric?

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

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

Q. 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

A: 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

Q. What is the Azure Traffic Manager?

A: 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

Q. How can Azure handle this situation?

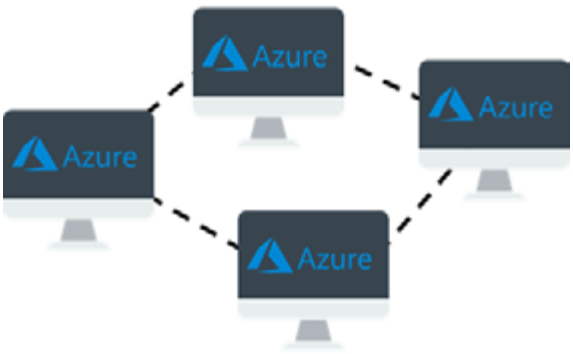
You need to isolate network traffic among VMs in a subnet, which is part of a Virtual Network with little downtime and impact on users?

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

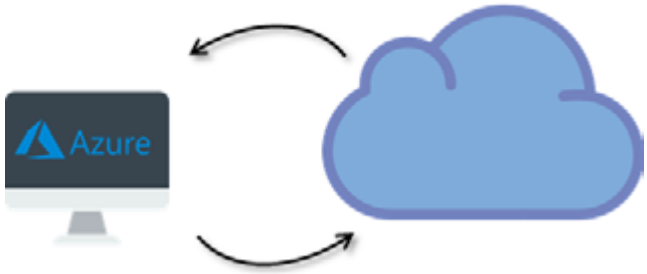
Q. With respect to Azure, what is public, private and hybrid cloud?

A: **Public Cloud -** Every component that the user is using in his/ her application are running only on Azure

Private Cloud - Azure services are being run within an on-premises data center or on-premises data centers are used by the user to host systems or applications



Hybrid Cloud - Combines features of both Public and Private cloud. Some of the user's components are being run on Azure and others within an on-premises datacenter



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

A: Questions on Blob Storage can be seen in the list of Azure Interview Questions

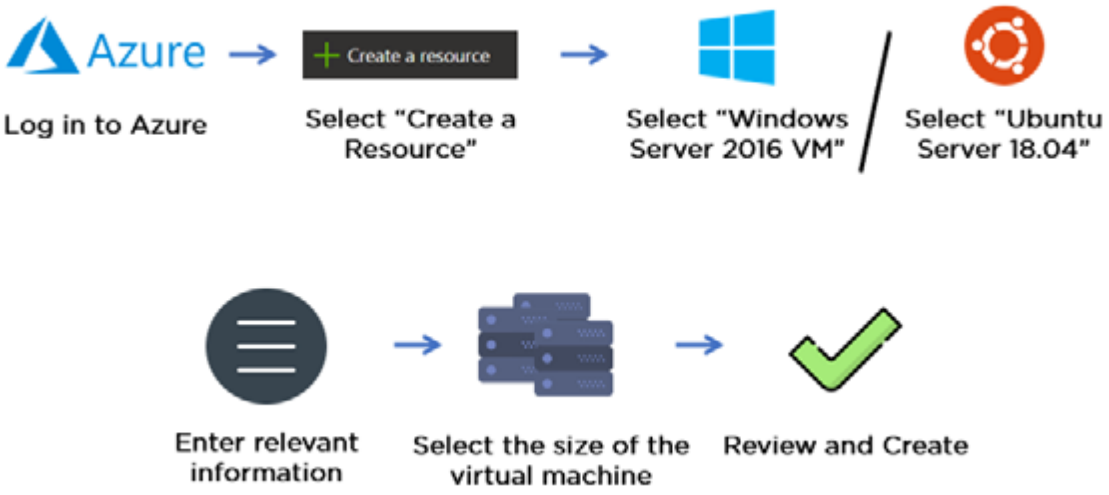
Blob Storage provides storage capacity for data. It places data into different tiers based on how often they're accessed

- Any type of 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

Q. How do you set up an Azure Virtual Machine?

A: Setting up a VM is one of the most important Azure Interview Question

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



Q. 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

A: Azure Virtual Network enables Azure resources to communicate with each other, the internet or on-premises networks securely

- 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

Q. 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

A: 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.

Q. Azure Storage plays the same role in Azure that _____ plays in Amazon Web Services.

A. S3

B. EC2

C. EC3

D. All of the mentioned

A: A) S3

Q. Which service in Azure is used to manage resources in Azure?

A. Azure Resource Manager

B. Application Insights

C. Log Analytics

D. Azure Portal

A: A) Azure Resource Manager

Q. 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

A: C) Express Route

Q. Which service in Azure is used to manage resources in Azure?

A. Azure Resource Manager

B. Application Insights

C. Log Analytics

D. Azure Portal

A: A) Azure Resource Manager

Q. How do you handle this scenario?

You administer a website called webgame. You're required to validate and deploy changes made to your website by your development team with minimum downtime

A. Create a new linked resource

B. Create a staging environment for the site

C. Enable remote debugging on the website

D. Create a new website

A: B) Create a staging environment for the site

Q. How do you handle this scenario?

These scenarios are important on the list of Azure Interview Questions

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

A. Configure 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

A: 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.

NEXT STEP TO SUCCESS

These were some of the most frequently asked questions and knowing them beforehand will definitely give you an edge over others. If reading through these Azure interview questions and answers has you a little unsure about how well you'll do in an interview, here's a solution: earn a certification first.

With an Azure certification, you'll know more about the platform, and you'll be able to answer even very technical questions. More importantly, you'll add credibility to your résumé as well as give your confidence a boost. To be doubly sure, and to prove your credibility to a potential employer you should consider getting certified and enrolling in our comprehensive Azure Cloud Architect Master's Program today!

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