Exam Session - Knowledge Check: Getting Started with Azure Virtual Machines

cloudacademy.com/quiz/exam/3766791/results

#1

When deploying an Azure Virtual Machine (VM), what aspect of the VM has the greatest impact on its overall price?

✗
VM region location

✓
VM size

✗
VM operating system

✗
VM authentication method

Explanation

VM size directly correlates to the price of the VM. By VM size we mean, how many disks can be attached, memory, Input/Output Operations or "IOPS," as well as special features which are available in certain skus.

https://docs.microsoft.com/en-us/azure/virtual-machines/windows/tutorial-manage-data-disk

#2

Which of the following use cases best fits spot virtual machines?

✗
Business-critical workloads that require consistent high availability.

✗
Customer-facing web servers that need to reliably scale in and out.

✗

Steady-state applications that require strict cost budgeting

✓

Supporting applications that can tolerate intermittent outages

Explanation

Spot pricing allows an organization to purchase unused Azure compute capacity at a discount of up to 90% when compared to pay-as-you-go prices. However, workloads that are run on spot instances must be able to tolerate interruptions. Spot pricing is good for customers who are running interruptible applications and are looking to drastically lower their compute costs. Workloads that must meet an SLA are not good candidates for Azure VM spot pricing.

/course/getting-started-with-azure-virtual-machines-988/azure-vm-pricing/

Covered in this lecture

Azure VM Pricing

Course:Getting Started with Azure Virtual Machines

2m

#3

Which choice is an example of resizing an Azure virtual machine?

✗

Scaling out additional copies of the same virtual machine into an availability zone

✗

Changing a small general-purpose VM into a storage-optimized VM

✗

Changing the operating system for a VM from Linux to Windows

✓

Changing the virtual machine's size from medium to large

Explanation

The size that you choose for your virtual VM doesn't have to be permanent. You can actually scale the VM up or down by changing the size of that VM, if necessary.

/course/getting-started-with-azure-virtual-machines-988/demo-resizing-a-vm/

Covered in this lecture
DEMO: Resizing a VM
Course:Getting Started with Azure Virtual Machines

6m

#4

All but one of the following is a use case for Azure Virtual Machines. Which choice is not a use case?

✕ Lift and shift an on-premises application to the Azure cloud

✕ Experimenting with new applications in Dev/Test environments

✕ Deploying applications that handle an elastic workload over time

✓ Deploying applications that require customized hardware

Explanation

A virtual machine can support almost any workload of an on-premises server, but if a workload requires specialized hardware, a virtual machine will not suffice because these virtual machines are hosted on shared, standardized hardware managed at Microsoft Azure data centers.

/course/getting-started-with-azure-virtual-machines-988/creating-and-connecting-to-azure-vms/
Covered in this lecture
Creating and Connecting to Azure VMs
Course:Getting Started with Azure Virtual Machines

3m

#5

When using Managed Disks you no longer have to create which piece of the Azure stack?

✓ A storage account

✗ A virtual network

✗ A network security group

✗ An access control list

Explanation

Using Managed Disks takes away the need to create storage accounts and be limited by 20,000 IOPS.

https://docs.microsoft.com/en-us/azure/storage/storage-managed-disks-overview

#6

Regarding virtual machines in Azure, how can you increase the availability of an application that uses multiple virtual machines?

✗ by increasing the memory and computational capacities

✗ by making a copy of the application in all virtual machines

✓ by adding the virtual machines to an availability set

✗ by creating a private virtual network among the VMs

Explanation

In Azure virtual machines, you manage the availability of an application that uses multiple virtual machines by adding the virtual machines to an availability set. Availability sets are directly related to fault domains and update domains.

https://docs.microsoft.com/en-us/azure/virtual-machines/availability

Covered in this lecture
Virtual Machine Options
Course:Getting Started with Azure Virtual Machines

2m

#7

What happens when an Azure Virtual Machine is in a 'stopped' state?

✗
All data is deleted when the VM is stopped.

✗
The VM's public IP address is lost when the VM is stopped.

✗
A stopped VM is expelled from its availability set.

✓
The VM still accrue a small compute cost.

Explanation

Although not running, a VM in the 'stopped' state would continue to incur compute charges. So that's an important difference to recognize when you have a virtual machine in the stopped state. If you want to be sure that your VM isn't incurring charges, you need to make sure that it's in the deallocated state.

Oftentimes, if you shut down the virtual machine from the OS from within the OS using the shutdown command, you'll find that your VM sits in that stopped state, but continues to be allocated and running up charges. So anytime you stop a machine, you want to do it through the Azure portal or maybe through PowerShell.

https://docs.microsoft.com/en-us/azure/virtual-machines/windows/tutorial-manage-vm#vm-power-states
Covered in this lecture
Azure VM Pricing
Course:Getting Started with Azure Virtual Machines

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#8

Which type of Azure Virtual Machines is ideal for workloads that require the most powerful CPUs available, such as genomic research and financial risk modeling?

✓
High-performance compute virtual machines

✗
Compute-optimized virtual machines

✗
Memory-optimized virtual machines

✗
Storage-optimized virtual machines

Explanation

High-performance compute virtual machines are the fastest and most powerful CPU virtual machines available. These virtual machines are designed to handle high-performance compute workloads, including things like molecular modeling, genomic research, and financial risk modeling. Some high-performance compute virtual machines come with optional high throughput network interfaces.

/course/getting-started-with-azure-virtual-machines-988/virtual-machine-options/
Covered in this lecture
Virtual Machine Options
Course:Getting Started with Azure Virtual Machines

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#9

Multiple requirements must be met to correctly resize an Azure Virtual Machine, and potential issues may occur due to resizing the instance. Which of the following is not a requirement and/or would not occur?

✗
You will lose your dynamic public IP address if you deallocate your instance.

✗

If your existing instance has premium storage, the resized instance must support it as well.

✗

Resizing an instance in an availability set may require deallocating or resizing all instances in the availability set.

✓

Resizing an instance means all data stored on your OS and data disks will be lost.

Explanation

Keep these caveats in mind when scaling a VM up or down:

- To resize a VM to a size that's not available on the underlying cluster, you need to deallocate the VM first before resizing it.
- If the current VM supports or is using premium storage, the new size needs to support premium storage that only makes sense.
- Resizing a VM in an availability set that contains other VMs, if the new size is not available on the underlying cluster, requires stopping and resizing the other VMs in the availability set in the same fashion.

However, according to Microsoft Azure documentation, "Deallocating the VM releases any dynamic IP addresses assigned to the VM. The OS and data disks are not affected."

https://docs.microsoft.com/en-us/azure/virtual-machines/windows/resize-vm

#10

Which type of domain defines the group of VMs sharing a common power source and network switch?

✓

Fault domains

✗

Update domains

✗

Availability domains

✗

Resource domains

Explanation

Fault domains define the group of virtual machines that share a common power source and network switch.

https://azure.microsoft.com/en-us/documentation/articles/vpn-gateway-howto-point-to-site-rm-ps/