**Azure Class 3 Notes**

VM Creation in Azure

Creating a Virtual Machine (VM) in Azure involves several steps, each with its own set of options and configurations.

1. **Select VM Image**: Choose an image from the Azure Marketplace. This can be Windows, Linux, or a custom image.
2. **Choose VM Size**: Based on your performance and resource needs (CPU, memory, and storage).
3. **Configure Settings**:
	* **Resource Group**: Place the VM in an existing or new resource group.
	* **Virtual Network and Subnet**: Ensure the VM is connected to the right network.
	* **Public IP Address**: Assign if external access is needed.
	* **Disks**: Choose the type of disk (HDD or SSD) and configure storage.
	* **Ports**: Open necessary ports for access (e.g., RDP for Windows, SSH for Linux).
4. **Review and Create**: Finalize configurations and create the VM.

**Disks as Separate Resource**: Disks are managed as separate resources in Azure. This allows for greater flexibility, such as resizing or changing disk types independently from the VM.

**Best Practice**: Use meaningful and descriptive names for VM and related resources for easy identification and management.

Azure VM Replication

Azure Site Recovery (ASR) offers replication for VMs, ensuring business continuity by replicating workloads running on physical and virtual machines (VMs) from a primary site to a secondary location.

* **Setup Process**: Involves specifying source and target locations, and configuring the replication settings.
* **Failover Capabilities**: In case of a disaster, a failover can be initiated to the secondary location.

VM Pricing in Azure

Azure VM pricing varies based on several factors:

1. **VM Size**: Larger VMs with more CPUs, memory, and resources cost more.
2. **Region**: Pricing can vary based on the Azure region.
3. **Operating System**: Windows-based VMs might have a different pricing structure compared to Linux-based VMs.
4. **Reserved Instances**: Pre-paying for VMs can offer significant cost savings.
5. **Disk Storage**: Costs depend on the size and type of disk (standard HDD, standard SSD, or premium SSD).
6. **Outbound Data Transfers**: Data transfer costs apply for outbound data.

**Cost Management Tools**: Utilize Azure's cost management tools to track and optimize spending.

**AZ-900 Exam Relevance**

* **VM Creation and Management**: Understanding the steps and options in creating and managing VMs is essential.
* **Site Recovery**: Know the basics of Azure’s disaster recovery capabilities, like ASR.
* **Pricing Considerations**: Awareness of how pricing works and how to manage costs is important for the AZ-900 exam.

**AZ-900 Exam Relevance: Questions and Answers on Azure Class 3 Topics**

Question 1: What is a key consideration when choosing the size of an Azure Virtual Machine (VM)?

**Answer**: The key consideration includes the VM's performance requirements, such as the CPU, memory, and storage needs. Larger VMs with more resources are suitable for demanding applications but are more expensive.

Question 2: In Azure, why are disks managed as separate resources from Virtual Machines?

**Answer**: Disks are managed as separate resources to provide flexibility. This allows for operations like resizing, upgrading, or changing disk types without affecting the VM's other configurations.

Question 3: What are the essential steps involved in creating a VM in Azure?

**Answer**: Essential steps include selecting a VM image, choosing a VM size, configuring settings like resource group, network, storage, and ports, and then reviewing and creating the VM.

Question 4: What is Azure Site Recovery, and what is its primary purpose?

**Answer**: Azure Site Recovery is a service that provides disaster recovery capabilities by replicating workloads from a primary site to a secondary location. Its primary purpose is to ensure business continuity in the event of outages or disasters.

Question 5: How does the pricing of Azure VMs vary?

**Answer**: Azure VM pricing varies based on VM size, region, the operating system used, the type of reserved instances, the size and type of disk storage, and outbound data transfers.

Question 6: What is a best practice when naming resources in Azure?

**Answer**: As a best practice, resources in Azure should be given meaningful and descriptive names. This facilitates easier management, identification, and understanding of the resource's purpose and its relation to other resources.

Question 7: What factors influence the selection of an Azure region for deploying a VM?

**Answer**: Factors include data residency and compliance requirements, proximity to users for reduced latency, and availability of certain Azure services and features in that region.