Read-only geo-redundant storage

Data stored on multiple nodes in separate geographic locations , can be read from secondary as well as from primary location.

RA-GRS allows you to have higher read availability for your storage account by providing ג€read onlyג€ access to the data replicated to the secondary location. Once you enable this feature, the secondary location may be used to achieve higher availability in the event the data is not available in the primary region. This is an  
ג€opt-inג€ feature which requires the storage account be geo-replicated.  
References:  
<https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy> <https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy-grs#read-access-geo-redundant-storage>

Cloud Computing Services:

Infrastructure as a Service (IaaS), you rent IT infrastructure—servers and virtual machines (VMs), storage, networks, and operating systems—from a cloud provider on a pay-as-you-go basis. <https://azure.microsoft.com/en-us/overview/what-is-iaas/>

Software as a Service (SaaS) is a cloud computing model where third-party providers host applications and make them available to customers over the internet.

the most responsibility with the cloud provider and the least responsibility with the users.

Platform as a service(PaaS):

the cloud provider maintains the physical infrastructure, physical security, and connection to the internet. They also maintain the operating systems, middleware, development tools, and business intelligence services that make up a cloud solution.

In a PaaS scenario, you don't have to worry about the licensing or patching for operating systems and databases.

Consumption based/IT infrastructure models:

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CapEx: one-time, up-front expenditure to purchase or secure tangible resources.

A new building, repaving the parking lot, building a datacenter, or buying a company vehicle are examples of CapEx.

OpEx: spending money on services or products over time. Renting a convention center, leasing a company vehicle, or signing up for cloud services are all examples of OpEx

Support plans –

Standard-- SSL , >10gb , deployed to 2 instances.

Standard offers 50 GB of storage space, while Basic only gives 10 GB.  
References:  
<http://azure.microsoft.com/en-us/pricing/details/websites/>

Azure Cosmos DB is a globally distributed, multi-model database service that can be used to store and retrieve data for various use cases. However, it is not specifically designed for building, testing, and deploying predictive analytics solutions.

To build, test, and deploy predictive analytics solutions in Azure, you should make use of Azure Machine Learning,

Azure API Management Service i( APIM ) is a way to create and manage customer APIs for existing backend services.

ARM (Azure Resource Manager) is a tool that automates the deployments on the AZ cloud

For all Virtual Machines that have two or more instances deployed across two or more Availability Zones in the same Azure region, we guarantee you will have Virtual Machine Connectivity to at least one instance at least 99.99% of the time.

For all Virtual Machines that have two or more instances deployed in the same Availability Set or in the same Dedicated Host Group, we guarantee you will have Virtual Machine Connectivity to at least one instance at least 99.95% of the time.

For any Single Instance Virtual Machine using Premium SSD or Ultra Disk for all Operating System Disks and Data Disks, we guarantee you will have Virtual Machine Connectivity of at least 99.9%.

For any Single Instance Virtual Machine using Standard SSD Managed Disks for Operating System Disk and Data Disks, we guarantee you will have Virtual Machine Connectivity of at least 99.5%.

For any Single Instance Virtual Machine using Standard HDD Managed Disks for Operating System Disks and Data Disks, we guarantee you will have Virtual Machine Connectivity of at least 95%.

Azure DevTest Labs enable you to quickly create environments using reusable templates and artifacts

Azure Information Protection (AIP) is a cloud-based solution that enables organizations to discover, classify, and protect documents and emails by applying labels to content.

Multi-factor authentication(MFA) is a process where users are asked during the login process for an additional form of identification, such as a code on their mobile phone or a fingerprint scanner.

VPN gateway designs

point-to-site (P2S) VPN gateway connection lets you create a secure connection to your virtual network from an individual client computer

site-to-site (S2S) VPN gateway connection is a connection over IPsec/IKE (IKEv1 or IKEv2) VPN tunnel. Site-to-site connections can be used for cross-premises and hybrid configurations. A site-to-site connection requires a VPN device located on-premises that has a public IP address assigned to it

VNet-to-VNet is similar to connecting a virtual network to an on-premises site location.

Azure AD Identity Protection meets the goal of encouraging users to change passwords under specific risk conditions.

Azure network security group to filter network traffic to and from Azure resources in an Azure virtual network. A network security group contains security rules that allow or deny inbound network traffic to, or outbound network traffic from, several types of Azure resources. For each rule, you can specify source and destination, port, and protocol.

Traditionally, IT expenses have been considered a Capital Expenditure (CapEx). Today, with the move to the cloud and the pay-as-you-go model, organizations have the ability to stretch their budgets and are shifting their IT CapEx costs to Operating Expenditures (OpEx) instead. This flexibility, in accounting terms, is now an option due to the ג€as a Serviceג€ model of purchasing software, cloud storage and other IT related resources.  
  
Two virtual machines using the same size could have different disk configurations. Therefore, the monthly costs could be different.  
  
When an Azure virtual machine is stopped, you don't pay for the virtual machine. However, you do still pay for the storage costs associated to the virtual machine.  
The most common storage costs are for the disks attached to the virtual machines. There are also other storage costs associated with a virtual machine such as storage for diagnostic data and virtual machine backups.

Region pairs allow the replication of Azure resources across geographies to help ensure that a secondary region is available in case of any disaster at the primary region.

Virtual Machine Scale Sets are an Azure compute resource that you can use to deploy and manage and scale a set of identical virtual machines.

Azure Functions allows you to run code as a service without having to manage the underlying platform or infrastructure. Azure Logic Apps is similar to Azure Functions, but uses predefined workflows instead of developing your own code.

virtual network peering enables resources in each virtual network to communicate with each other.

Service endpoints are used to expose Azure services to a virtual network, providing communication between the two.

ExpressRoute is used to connect an on-premises network to Azure.

NSGs allow you to configure inbound and outbound rules for virtual networks and virtual machines.