

Terms to Know

Complementary Glossary for my [AZ-900 Bootcamp](#)



This glossary comprises a comprehensive collection of terms and definitions related to cloud computing, with a strong emphasis on Microsoft Azure services. It covers a wide array of concepts, including but not limited to cloud service models, Azure-specific services, data management and analytics, and DevOps and monitoring.

This glossary serves as an essential resource for anyone looking to familiarize themselves with cloud computing terminology, particularly within the Microsoft Azure platform. It aims to provide readers with a clear understanding of the key components and services that make up Azure's cloud computing offerings, making it a valuable tool for students, professionals, and anyone interested in the field of cloud technology.

App Service

A fully managed platform for building, deploying, and scaling web apps and APIs quickly and easily, supporting multiple languages and frameworks.

Application Hosting Options

Azure provides various options for hosting applications, including Web Apps, Containers, and Virtual Machines, each offering different levels of control, scalability, and management overhead.

Application Insights

An extensible Application Performance Management (APM) service for web developers on multiple platforms, helping to monitor live applications' performance and detect issues.

ARM (Azure Resource Manager)

The deployment and management service for resources in Azure. It provides a management layer that enables you to create, update, and delete resources in your Azure account.

AzCopy

A command-line utility used for copying blobs or files to or from a storage account, facilitating the movement or migration of files within Azure.

Azure Active Directory (Azure AD)

Microsoft's cloud-based identity and access management service, enabling users to access and manage permissions for various applications and resources.

Azure Active Directory B2C (Business to Consumer)

A customer identity access management (CIAM) solution that provides business-to-consumer identity services, allowing businesses to customize and control how customers sign up, sign in, and manage their profiles when using the business's applications.

Azure Active Directory Domain Services (Azure AD DS)

Provides managed domain services such as domain join, group policy, LDAP, and Kerberos/NTLM authentication that are fully compatible with Windows Server Active Directory.

Azure AD Conditional Access

Provides automated access control decisions based on conditions for accessing applications and services, enhancing security policies.

Azure Advisor

A personalized cloud consultant that helps you follow best practices to optimize your Azure deployments. It analyzes your resource configuration and usage to offer recommendations to improve the efficiency, security, and performance of your Azure resources.

Azure Analysis Services

A fully managed platform as a service (PaaS) that provides enterprise-grade data models in the cloud. It allows the consolidation of data from different sources into a single, coherent view for business users to analyze.

Azure App Service

A platform as a service (PaaS) offering that enables quick building, deployment, and scaling of web, mobile, and API apps on any platform, providing a fully managed platform for infrastructure maintenance.

Azure Application Gateway

A web traffic load balancer that enables you to manage traffic to your web applications. Traditional load balancers operate at the transport layer (OSI layer 4 - TCP and UDP) and route traffic based on source IP address and port, to a destination IP address and port. Application Gateway operates at the application layer (OSI layer 7).

Azure Arc

A service that enables users to manage their Windows and Linux servers, Kubernetes clusters, and Azure services across on-premises, multi-cloud, and edge devices from a single pane of glass.

Azure Automation

Allows you to automate tasks across Azure & non-Azure environments, reducing the likelihood of errors and boosting efficiency with reduced operational costs.

Azure Backup

A service that provides simple, secure, and cost-effective solutions to back up your data and recover it from the Microsoft Azure cloud.

Azure Bastion

A fully managed PaaS service that provides secure and seamless RDP and SSH access to your virtual machines directly through the Azure Portal over SSL.

Azure Blob Storage

A scalable cloud storage service provided by Microsoft Azure that is designed for storing large amounts of unstructured data, such as text or binary data.

Azure Blockchain Service

A managed service that allows the building, governance, and expansion of consortium blockchain networks. It simplifies the formation, management, and governance of consortium blockchain networks.

Azure Blueprints

A service that helps automate the deployment of resources in Azure, ensuring they're consistently set up in compliance with organizational standards and regulations.

Azure Cognitive Search

An AI-powered service for building rich search experiences over private, heterogeneous content in web, mobile, and enterprise applications. It's the only cloud search service with built-in AI capabilities that enrich all types of information to easily identify and explore relevant content at scale.

Azure Cognitive Services

A collection of APIs, SDKs, and services available to developers to make their applications more intelligent, engaging, and discoverable. It includes services for vision, speech, language, and decision-making.

Azure Compliance Manager

A dashboard tool that helps manage your organization's compliance with legal and regulatory standards applicable to Azure services.

Azure Container Instances (ACI)

Offers the fastest and simplest way to run a container in Azure without managing VMs, ideal for scenarios that can operate in isolated containers.

Azure Container Registry (ACR)

A managed Docker registry service based on the open-source Docker Registry 2.0. It allows you to store and manage container images across all types of Azure deployments.

Azure Cost Management and Billing

A suite of tools that provide insights into where organizational spending is occurring and how to optimize costs. It helps analyze and manage cloud costs across Azure and AWS in a single place.

Azure CycleCloud

An enterprise-friendly service that enables users to manage and optimize HPC (High-Performance Computing) environments in Azure, providing scheduling and management for computing workloads.

Azure Data Catalog

A fully managed service that serves as a system of registration and system of discovery for enterprise data sources. It allows users to discover, understand, and consume data sources.

Azure Data Explorer

A fast and highly scalable data exploration service for log and telemetry data. It simplifies the management of big data analytics, allowing you to explore and analyze large volumes of data from various sources.

Azure Data Factory

A cloud-based data integration service that allows you to create, schedule, and orchestrate your data workflows.

Azure Data Lake

A scalable data storage and analytics service for big data analytics workloads that require developers to store massive amounts of data in its native format.

Azure Data Share

A service that provides a simple and safe means of sharing big data with external organizations, enabling easy data collaboration and analytics.

Azure Databricks

An Apache Spark-based analytics platform optimized for the Microsoft Azure cloud services platform, designed for big data and machine learning.

Azure DDoS Protection

Provides enhanced DDoS mitigation features to help protect Azure resources from DDoS attacks, ensuring high availability and performance, even under attack.

Azure DevOps

A suite of development tools provided by Microsoft Azure to support software development projects, including CI/CD, repositories, project management tools, and more.

Azure DevTest Labs

A service that helps developers and testers quickly create environments in Azure while minimizing waste and controlling cost.

Azure DNS

A hosting service for DNS domains, providing name resolution using Microsoft Azure infrastructure. It allows for the management of DNS records using the same credentials, APIs, tools, and billing as other Azure services.

Azure DNS Private Resolver

A service enabling queries to Azure DNS private zones from an on-premises environment and vice versa, without the need for VM-based DNS servers. This service is in public preview.

Azure Event Grid

A fully-managed event routing service that allows for uniform event consumption using a publish-subscribe model. It enables scalable event-driven programming, making it easy to connect data sources and event handlers.

Azure Event Hubs Capture

An automatic data capture feature of Azure Event Hubs that enables you to automatically capture the streaming data in Event Hubs and save it to an Azure Blob storage or Azure Data Lake Storage account.

Azure ExpressRoute

A service that provides a private connection between Microsoft Azure data centers and on-premises infrastructure or co-location facilities, bypassing the public internet.

Azure File Share

A fully managed file storage service in the cloud that allows access via the SMB protocol. It can be mounted concurrently by cloud or on-premises deployments of Windows, Linux, and macOS.

Azure Firewall

A managed, cloud-based network security service that protects your Azure Virtual Network resources. It's a fully stateful firewall as a service with built-in high availability and unrestricted cloud scalability.

Azure Front Door

A scalable and secure entry point for fast delivery of your global web applications. It offers various traffic-routing methods and tools to monitor and visualize your traffic.

Azure Functions

A serverless compute service that lets you run event-triggered code without having to explicitly provision or manage infrastructure, allowing you to focus on the code and event triggers.

Azure Functions

A serverless computing service ideal for running code in response to events without worrying about the underlying infrastructure, suitable for tasks that can be completed quickly, within seconds or less.

Azure Governance

The set of policies and services designed to manage and monitor Azure resources, ensuring they comply with both internal policies and external regulations.

Azure HDInsight

A fully managed cloud service that makes it easy, fast, and cost-effective to process massive amounts of data. It supports popular open-source frameworks such as Hadoop, Spark, Hive, LLAP, Kafka, Storm, R, and more.

Azure Information Protection (AIP)

A cloud-based solution that helps organizations protect their data by applying labels to documents and emails for classification and optionally, encryption.

Azure IoT Hub

A managed service, hosted in the cloud, that acts as a central message hub for bi-directional communication between your IoT application and the devices it manages. It offers a secure and reliable communication channel between IoT applications and the devices it manages.

Azure Key Vault

A cloud service that provides a secure store for secrets, keys, and certificates, allowing you to securely control access to tokens, passwords, certificates, API keys, and other secrets.

Azure Kubernetes Service (AKS)

A managed Kubernetes service that simplifies deploying a Kubernetes cluster in Azure, handling critical tasks like health monitoring and maintenance while you only manage the agent nodes.

Azure Kubernetes Service (AKS) Cluster Autoscaler

Automatically adjusts the number of nodes in your AKS cluster depending on the volume of workloads, ensuring efficient resource use and cost savings.

Azure Lighthouse

Offers service providers the ability to manage their customers' Azure resources and subscriptions with greater automation, efficiency, and scalability.

Azure Logic Apps

A cloud service that helps you schedule, automate, and orchestrate tasks, business processes, and workflows when you need to integrate apps, data, systems, and services across enterprises or organizations.

Azure Logic Apps Standard

A version of Azure Logic Apps that offers enhanced performance, flexibility, and portability for building and running automated workflows, integrating apps, data, systems, and services across enterprises or organizations.

Azure Machine Learning

A cloud service for training, deploying, automated machine learning, and tracking ML models. It supports numerous ML frameworks, including TensorFlow, PyTorch, and Scikit-learn.

Azure Managed Applications

Provides an ecosystem for publishing, managing, and consuming cloud solutions that are easy to deploy and operate, packaged with best practices.

Azure Marketplace

An online store that offers applications and services designed for or compatible with Azure, including solutions from Microsoft and its partners.

Azure Migrate

A service that provides a centralized hub to assess and migrate to Azure on-premises servers, infrastructure, applications, and data.

Azure Mobile Apps

A set of tools and services for building mobile applications with features such as authentication, data storage, push notifications, and analytics.

Azure Monitor

Collects, analyzes, and acts on telemetry data from your Azure and on-premises environments, helping to understand how applications are performing and proactively identifying issues affecting them and the resources they depend on.

Azure Monitor Alerts

Provides a way to get notified when issues are detected with your Azure services. Alerts can trigger emails, SMS, or other actions through Azure Logic Apps.

Azure Monitor Workbooks

Provides a flexible canvas for data analysis and the creation of rich visual reports within the Azure portal. It allows you to combine text, Log Analytics queries, Azure Metrics, and parameters into interactive reports.

Azure Notification Hubs

A scalable mobile push notification engine for quickly sending millions of messages to iOS, Android, Windows, or Kindle devices, enabling you to reach your customers wherever they are.

Azure Peering Service

A networking service that enhances customer connectivity to Microsoft cloud services like Microsoft 365 and Dynamics 365.

Azure PlayFab

A complete backend platform for live games and a powerful way for indie developers and large publishers to eliminate the barriers to launching and growing games.

Azure Policy

A service within Azure that allows you to create, assign, and manage policies that enforce different rules and effects over your resources, ensuring compliance with corporate standards and SLAs.

Azure Private DNS

Offers a secure DNS service for virtual networks, managing and resolving domain names within the virtual network without the need for a custom DNS solution. It supports using custom domain names within virtual networks.

Azure Private Link

A service that provides private connectivity from a virtual network to Azure services, customer-owned services, and Microsoft partner services. It simplifies the network architecture and secures the connection between endpoints in Azure by keeping data on the Microsoft network.

Azure Quantum

A service that offers cloud access to quantum computers, quantum simulators, and optimization solutions, enabling developers and researchers to explore quantum computing and develop quantum applications.

Azure Redis Cache

A fully managed, open-source compatible, in-memory data structure store, used as a database, cache, and message broker, offering high performance and scalability.

Azure Reserved VM Instances (RIs)

A way to purchase virtual machine capacity in Azure at a significantly reduced price, compared to pay-as-you-go rates, in exchange for committing to a one- or three-year term.

Azure Resource Health

A service that provides detailed information about the health of resources within Azure. It helps identify and troubleshoot the cause of Azure service issues and understand their impact on your resources.

Azure Resource Manager (ARM) Templates

A declarative syntax for defining and deploying resources to Azure. It allows you to template, deploy, and manage Azure resources in a repeatable and consistent manner.

Azure Role-Based Access Control (RBAC)

A method of restricting system access to authorized users, allowing for fine-grained access management of Azure resources.

Azure Search

A cloud search-as-a-service solution that gives developers APIs and tools for building rich search experiences on web and mobile applications.

Azure Security Center

Provides unified security management and advanced threat protection across hybrid cloud workloads. It can help identify and remediate vulnerabilities, thereby supporting compliance efforts.

Azure Sentinel

A scalable, cloud-native, security information event management (SIEM) and security orchestration automated response (SOAR) solution. Azure Sentinel delivers intelligent security analytics and threat intelligence across the enterprise, providing a single solution for attack detection, threat visibility, proactive hunting, and threat response.

Azure Service Bus

A fully managed enterprise integration message broker. This messaging system is used for connecting applications, services, and devices running on Azure and on-premises environments.

Azure Service Health

A suite of experiences that provide personalized guidance and support when issues in Azure services affect you. It includes a dashboard for tracking active events like incidents and maintenance.

Azure Site Recovery (ASR)

A disaster recovery service that ensures business continuity by keeping business apps and workloads running during outages. ASR replicates workloads running on physical and virtual machines (VMs) from a primary site to a secondary location.

Azure Sphere

A comprehensive IoT security solution – including hardware, OS, and cloud components – to secure and power devices at the intelligent edge.

Azure Spring Cloud

A fully managed service for Spring Boot apps that lets you quickly build, deploy, and scale Java apps on Azure without the hassle of managing infrastructure.

Azure SQL Database

A fully managed relational database service that offers SQL Server engine compatibility on Azure.

Azure Storage

Microsoft's cloud storage solution, offering highly available, scalable, durable, and secure storage for a wide range of data objects.

Azure Stream Analytics

A real-time analytics and complex event-processing engine that is designed to analyze and process high volumes of fast streaming data from multiple sources simultaneously.

Azure Synapse Analytics

An analytics service that brings together enterprise data warehousing and Big Data analytics. It gives you the freedom to query data on your terms, using either serverless on-demand or provisioned resources.

Azure Table Storage

A service that stores large amounts of structured, non-relational data. It's a NoSQL datastore that accepts authenticated calls from inside and outside the Azure cloud.

Azure Time Series Insights

A fully managed analytics, storage, and visualization service for managing IoT time-series data in the cloud.

Azure Traffic Manager

A DNS-based traffic load balancer that enables you to distribute traffic optimally to services across global Azure regions, while providing high availability and responsiveness.

Azure Trust Center

A resource providing information about Microsoft's security, privacy, and compliance practices for Azure and other Microsoft cloud services, helping customers meet their own compliance obligations.

Azure Virtual Desktop

A desktop and app virtualization service that runs on the cloud, allowing for the setup of multi-session Windows 10 or Windows 11 deployments, providing scalability and the ability to manage desktops and apps from different Windows and Windows Server operating systems.

Azure Virtual Desktop (AVD)

A desktop and app virtualization service that runs on the cloud, letting you set up a scalable and flexible environment to deliver Windows desktops and applications to any device.

Azure Virtual Machines (VMs)

On-demand scalable computing resources offered by Azure, providing the flexibility of virtualization without the need to buy and maintain physical hardware.

Azure Virtual Networks (VNet)

Enables Azure resources like VMs, web apps, and databases to communicate with each other, with users on the internet, and with on-premises client computers, acting as an extension of your on-premises network.

Azure Virtual WAN

A networking service providing optimized and automated branch-to-branch connectivity through Azure. Virtual WAN allows you to connect and configure branch devices to communicate with Azure easily and to use Azure's global network as a WAN backbone.

Azure VM (Virtual Machine)

An on-demand, scalable computing resource offered by Microsoft Azure, essentially replicating a physical server in a virtual environment.

Azure VPN Gateway

Facilitates the creation of encrypted tunnels within another network, typically deployed to connect private networks over an untrusted network like the public internet.

Azure WebJobs

A feature of Azure App Service that enables you to run a program or script in the same context as a web app, API app, or mobile app. It can run tasks in the background, on a schedule, or continuously.

Capital Expenditure (CapEx)

Upfront spending on physical infrastructure, which then gets deducted over time, contrasting with operational expenses in cloud environments.

CDN (Content Delivery Network)

A distributed network of servers that efficiently delivers web content and services to users based on their geographic location, the origin of the content, and a content delivery server.

Cloud Analytics

The use of remote public or private computing resources—known as the cloud—to analyze data on demand. This approach leverages cloud computing for big data analytics, offering scalability and flexibility in processing large datasets.

Cloud Auditing

The process of reviewing and evaluating the compliance, security, and governance of cloud services and infrastructure. It involves assessing the effectiveness of security controls, privacy policies, and regulatory compliance.

Cloud Automation

The use of tools and technologies to automate the management and provisioning of cloud computing workloads and services. It aims to reduce manual efforts and streamline operational tasks such as deployment, scaling, and management of cloud environments.

Cloud Brokerage

An intermediary service that connects cloud consumers with the best cloud services to fit their needs. Cloud brokers may offer additional services such as integration, customization, and support.

Cloud Brokering Service

An intermediary service between cloud services consumers and providers that helps to aggregate, integrate, and customize services. Cloud brokers may also facilitate the best execution venue, manage performance, and ensure compliance for cloud services.

Cloud Bursting

A configuration that's set up between a private cloud and a public cloud to deal with peaks in computing demand. It allows an application to run in the private cloud and "burst" to the public cloud when the demand for computing capacity spikes.

Cloud Disaster Recovery (Cloud DR)

A strategy for backing up and restoring data and applications in the cloud in the event of a hardware failure, natural disaster, or other disruptive events. Cloud DR can be a more cost-effective and flexible solution than traditional disaster recovery approaches.

Cloud Encryption

The process of encoding or transforming data before it's transferred to cloud storage. Encryption is critical for protecting data privacy and meeting compliance requirements in cloud environments.

Cloud Governance

The process of applying specific policies or principles to the use of cloud computing services. It involves managing and monitoring applications, data, and services residing in the cloud to ensure compliance with regulations and protect data privacy.

Cloud Integration

The process of configuring multiple cloud services to connect to each other and to on-premises systems. This allows for the seamless movement of data and applications across different cloud environments.

Cloud Interoperability

The ability of different cloud services and platforms to understand, exchange, and use information across various cloud environments, enabling workloads to be more portable and scalable.

Cloud Management Platform (CMP)

A suite of integrated software tools that an enterprise can use to monitor and control cloud computing resources. CMPs facilitate the management of cloud environments across multiple platforms from a single point of reference.

Cloud Migration

The process of moving data, applications, or other business elements from an organization's onsite computers to the cloud, or moving them from one cloud service to another.

Cloud Migration Strategy

The plan and methodology for moving digital business operations into the cloud. This strategy can involve moving data, applications, or entire business processes from on-premises servers to the cloud.

Cloud Operations (CloudOps)

The alignment of processes and practices for managing cloud infrastructure and services. It focuses on automation, continuous monitoring, and support to ensure optimal performance and reliability.

Cloud Optimization

The process of adjusting an existing cloud environment to improve efficiency, performance, and reduce costs. This includes rightsizing resources, choosing the right pricing models, and implementing best practices for cloud usage.

Cloud Orchestration

The use of programming technology to manage the interconnections and interactions among workloads on public and private cloud infrastructure. It involves automating the deployment, coordination, and management of complex computer systems, middleware, and services.

Cloud Provisioning

The allocation of a cloud provider's resources to a customer. It can be done manually or automatically and is often related to deploying new apps, services, or infrastructure.

Cloud Repatriation

The process of moving applications, data, or other components from a cloud computing environment back to an on-premises data center or to a private cloud. This is sometimes done for cost, compliance, or security reasons.

Cloud Scalability

The ability to increase or decrease IT resources as needed to meet changing demand. Scalability is one of the most valued features of cloud computing.

Cloud Security Posture Management (CSPM)

A continuous process of cloud security improvement and adaptation to reduce the risk of security breaches. CSPM tools help organizations automate the identification and remediation of risks across cloud infrastructures.

Cloud Service Catalog

A curated list of all the cloud services available to users within an organization. It helps in managing the availability, performance, and pricing of cloud services and ensures compliance with company policies.

Cloud Service Level Agreement (SLA)

A contract between a cloud service provider and a customer that specifies, usually in measurable terms, what services the provider will furnish. SLAs cover service quality, availability, and responsibilities of the provider and the customer.

Cloud Service Provider (CSP)

A company that offers some component of cloud computing – typically Infrastructure as a Service (IaaS), Software as a Service (SaaS) or Platform as a Service (PaaS) – to other businesses or individuals via the internet.

Cloud Sprawl

The uncontrolled proliferation of an organization's cloud instances, services, or providers. Cloud sprawl typically occurs when an organization lacks visibility into or control over its cloud computing resources.

Cloud Workload Protection

A security strategy that involves safeguarding workloads running in the cloud from threats such as malware, data breaches, and unauthorized access. It typically involves the use of automated security policies and monitoring.

Cloud-native Applications

Applications that are specifically designed and built to run in the elastic and distributed nature provided by cloud computing platforms. They're built with services packaged in containers, orchestrated as microservices, and managed on elastic infrastructure through agile DevOps processes and continuous delivery workflows.

Compliance as a Service (CaaS)

A cloud service model that delivers a range of compliance management solutions to businesses, helping them to ensure that they meet regulatory and compliance requirements for their data.

Containerization

The use of containers to encapsulate an application and its dependencies into a single package that can be run anywhere, ensuring consistency across environments and simplifying deployment and scalability.

Content Delivery Network (CDN)

A system of distributed servers that deliver pages and other web content to a user, based on the geographic locations of the user, the origin of the webpage, and the content delivery server. CDNs are used to provide high availability and performance by distributing the service spatially relative to end-users.

Cosmos DB

A globally distributed, multi-model database service provided by Azure for managing data at scale. It offers turnkey global distribution, seamless horizontal scaling, and support for multiple models and query languages.

Data Fabric

A framework and set of data services providing consistent capabilities across a choice of endpoints spanning on-premises and multiple cloud environments. It helps in data management and integration across various platforms and environments.

Data Lake

A storage repository that holds a vast amount of raw data in its native format until it is needed. While a hierarchical data warehouse stores data in files or folders, a data lake uses a flat architecture to store data.

Data Lakes and Analytics

Cloud-based platforms that allow organizations to store structured and unstructured data at scale, and perform big data analytics on stored data using various analytics and machine learning tools.

Data Sovereignty

The concept that digital data is subject to the laws of the country in which it is located. This becomes particularly important in cloud computing, where data might reside in different countries with varying legal implications.

Demand Forecasting in Cloud Computing

The process of predicting the demand for cloud resources to ensure that adequate capacity is available to handle workloads efficiently. This helps in cost management and resource optimization in cloud environments.

Development and Test Environments

Utilizing Azure VMs provides a quick and easy way to create computers with specific configurations required for coding and testing applications.

Digital Transformation

The process of using digital technologies to create new — or modify existing — business processes, culture, and customer experiences to meet changing business and market requirements. This reimagining of business in the digital age is digital transformation.

Direct Connect

A network service that links an on-premises network to a cloud provider's infrastructure over a private connection. This service is offered by cloud providers like AWS, Azure, and Google Cloud to facilitate a more secure and reliable connection than internet-based connections.

Disaster Recovery

The strategy of backing up and restoring data in the cloud to ensure business continuity in the event of failure.

Disk Storage

Azure Disk Storage provides high-performance, durable block storage for Azure Virtual Machines with support for data disks, OS disks, and snapshot capabilities.

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Edge Computing

A distributed computing paradigm that brings computation and data storage closer to the location where it is needed, to improve response times and save bandwidth.

Elasticity

The ability of a cloud service to dynamically allocate and de-allocate resources as needed. Elastic services automatically scale resources up or down, depending on the demand, ensuring that the infrastructure matches the current needs without manual intervention.

Event Hub

A big data streaming platform and event ingestion service, capable of receiving and processing millions of events per second.

Extended Datacenter

Azure VMs can be easily connected to an organization's network, acting as an extension of the datacenter to the cloud.

External Identities and Guest Access

Features in Azure AD that allow organizations to securely share their applications and services with users outside their organization, including partners, vendors, and customers.

FaaS (Function as a Service)

A category of cloud services that provides a platform allowing customers to develop, run, and manage application functionalities without the complexity of building and maintaining the infrastructure typically associated with developing and launching an app. FaaS enables users to execute code in response to events without the need for permanent infrastructure.

Function Isolation

In cloud environments, particularly in serverless computing, it refers to the separation and management of functions to ensure that processes do not interfere with each other, enhancing security and stability.

GDPR Compliance

Azure provides capabilities to help organizations comply with the General Data Protection Regulation, offering tools for managing and protecting personal data.

Geo-Distribution

The deployment of applications and data to regional data centers around the globe to ensure optimal performance for users in different locations.

Geo-Redundancy

The practice of distributing copies of data or services across multiple geographic locations to ensure availability and continuity in the event of a site failure or disaster.

High-Performance Computing (HPC)

Using supercomputers and parallel processing techniques for complex computational tasks, supported by cloud computing for scalable resources.

HIPAA/HITECH Compliance

Azure offers features and services that enable health organizations to meet the Health Insurance Portability and Accountability Act and Health Information Technology for Economic and Clinical Health Act requirements.

Horizontal Scaling (Scaling Out/In)

Adding or removing instances of resources, such as virtual machines, to meet demand without changing the capacity of individual resources.

Hybrid Cloud

A computing environment that combines a public cloud and a private cloud by allowing data and applications to be shared between them. This provides businesses greater flexibility and more deployment options.

Hybrid Integration Platform (HIP)

A framework that allows integration of on-premises and cloud-based applications, data, and processes across an enterprise. It enables companies to achieve greater efficiency and agility, and to create more cohesive, integrated user experiences.

Hybrid IT

A combination of internal (on-premises) and external (cloud-based) services and technologies, allowing for a mixed computing, storage, and services environment.

IaaS (Infrastructure as a Service)

A form of cloud computing that provides virtualized computing resources over the internet. In IaaS, hardware is provided by an external provider and managed for you.

Identity and Access Management (IAM)

A framework of policies and technologies for ensuring that the proper people in an enterprise have the appropriate access to technology resources. IAM is particularly important in the cloud to ensure secure and efficient access to resources across diverse platforms and environments.

Immutable Infrastructure

A model in cloud computing where once a resource is deployed, it is never modified; if changes are needed, a new resource is created and replaced in a controlled manner, reducing inconsistencies and simplifying rollback.

Infrastructure as Code (IaC)

The process of managing and provisioning computer data centers through machine-readable definition files, rather than physical hardware configuration or interactive configuration tools. This helps in automating the setup and teardown of infrastructure.

Infrastructure as Code (IaC) Security

The practice of applying security best practices and policies to the code and processes used to automate the provisioning and management of infrastructure, ensuring that cloud environments are secure from development through deployment.

ISO/IEC Certifications

Azure holds numerous international compliance certifications, including ISO/IEC 27001 for information security management, providing assurance to customers about the handling of their data.

Latency Optimization

Techniques used in cloud computing to reduce delays in processing data or serving requests, often involving the strategic placement of data centers closer to end-users or optimizing network routes.

Lift-and-Shift Migration

Moving applications or workloads to the cloud without modifying their architecture, offering a quick and cost-effective migration strategy.

Load Balancer

A fully managed load balancing service for both on-premises and Azure cloud environments, ensuring high availability and reliability by distributing incoming traffic among healthy service instances.

Log Analytics

A tool in Azure Monitor that helps you collect and analyze data generated by resources in your cloud and on-premises environments, making it easier to understand the performance and operation of your applications and services.

Managed Disks

Azure Managed Disks simplify disk management for Azure IaaS VMs by managing the storage accounts associated with the VM disks for you.

Microservices

A style of software architecture that structures an application as a collection of loosely coupled services, which implement business capabilities. This approach enables the continuous delivery/deployment of large, complex applications.

Microservices Architecture

An approach to developing a single application as a suite of small, independently deployable services, each running in its own process and communicating with lightweight mechanisms. This architecture enables rapid, reliable, and frequent development and deployment.

Microsoft Defender for Cloud

A tool that provides unified security management and advanced threat protection across hybrid cloud environments, helping secure data and resources in Azure, on-premises, and across other cloud platforms.

Multi-Cloud

The use of multiple cloud computing and storage services in a single heterogeneous architecture. This approach helps to mitigate against the failure of a single cloud provider and allows for optimizing enterprise IT solutions.

Multi-Factor Authentication (MFA)

An additional layer of security requiring users to provide two or more verification factors to gain access to resources.

Multi-Tenancy

The architecture in cloud computing where a single instance of software application serves multiple customers. Each customer's data and configuration is kept separate, allowing for cost savings and efficiency.

Network Interface (NIC)

A digital circuit that enables communications between a computer and a network. In Azure, a NIC enables an Azure Virtual Machine to communicate with internet, Azure, and on-premises resources.

Network Peering

The process of connecting separate cloud networks to share traffic among them, typically to reduce costs and improve performance by eliminating the need for data to travel through the public internet.

Network Security Group (NSG)

A networking filter (firewall) containing a list of security rules that determine the inbound and outbound network traffic that can flow through network interfaces (NIC), VMs, and subnets.

Network Virtual Appliances (NVAs)

Specialized VMs that perform a network function, such as firewalls or WAN optimization. They're used to enhance network security and performance.

Object Storage

A strategy for storing data as objects, as opposed to files or blocks. Object storage is ideal for cloud storage because it is highly scalable, and data can be accessed through APIs, making it suitable for storing unstructured data like photos, videos, and backups.

Operational Excellence in Cloud

A cloud computing principle focusing on running and monitoring systems to deliver business value and continuously improving processes and procedures.

Operational Expenditure (OpEx)

Expenses for services or products billed as they are used, fitting the consumption model of cloud services where there's no upfront cost.

PaaS (Platform as a Service)

A cloud computing service that provides a platform allowing customers to develop, run, and manage applications without dealing with the complexity of building and maintaining the infrastructure typically associated with developing and launching an app.

Passwordless Authentication

A user authentication method that does not require a password, using alternatives like biometrics, security keys, or unique verification codes.

PCI DSS Compliance

Azure maintains compliance with the Payment Card Industry Data Security Standard, enabling businesses to handle credit card transactions with a secure environment.

Platform as a Service (PaaS)

A cloud computing model that provides customers a complete platform—hardware, software, and infrastructure—for developing, running, and managing applications without the cost, complexity, and inflexibility of building and maintaining that platform on-premises.

Point-to-Site VPNs

VPN connections from a single computer to a virtual network, allowing remote users secure access to Azure resources.

Policy as Code

An approach where policies that govern the use of IT resources are defined in a high-level language and managed as code. This allows for automated enforcement and compliance checking of security policies and operational best practices.

Predictive Analytics in Cloud

The use of data, statistical algorithms, and machine learning techniques in the cloud to identify the likelihood of future outcomes based on historical data. It's used for forecasting trends and behaviors.

Proactive Scaling

A strategy in cloud computing where resources are automatically scaled in anticipation of demand spikes, based on predictive analytics and historical data, to ensure that the infrastructure can handle increased loads.

Quantum Computing

A type of computing that takes advantage of quantum phenomena like superposition and quantum entanglement. While not a cloud computing term per se, quantum computing as a service is emerging in cloud platforms, offering access to quantum processors and simulators over the cloud.

Resource Group

A container that holds related resources for an Azure solution. It allows for managing the lifecycle of all the resources within it as a group.

Resource Locks

Mechanisms to prevent accidental deletion or modification of critical Azure resources, enhancing management and security.

Resource Tagging

The practice of assigning metadata tags to cloud resources, such as virtual machines, storage accounts, and databases. This facilitates resource management, cost tracking, and governance by allowing resources to be categorized and searched.

Route Tables and Border Gateway Protocol (BGP)

Used in Azure to control network traffic flow. Route tables define how traffic is directed within and between subnets, while BGP is used with Azure VPN gateways and ExpressRoute to propagate on-premises routes to Azure virtual networks.

SaaS (Software as a Service)

A distribution model in which applications are hosted by a service provider or vendor and made available to customers over a network, typically the internet.

Self-Service Password Reset (SSPR)

Allows users to reset their passwords without administrator intervention, improving security and reducing helpdesk calls.

Serverless Computing

A cloud computing execution model where the cloud provider dynamically manages the allocation and provisioning of servers. A serverless provider allows users to write and deploy code without the hassle of worrying about the underlying infrastructure. Applications are broken down into individual functions that can be invoked and scaled individually.

Service Fabric

A middleware platform for building scalable, reliable, and easily managed applications for the cloud. Service Fabric is designed to facilitate the development of microservices and contains features that simplify cluster management and code deployment.

Service Mesh

An infrastructure layer implemented in cloud-native applications. It facilitates communications between microservice instances, providing capabilities like load balancing, service-to-service security, and observability without requiring changes to the microservice code.

Site-to-Site VPNs

Connections that link an on-premises VPN device to Azure's VPN gateway, effectively extending the on-premises network to Azure.

Software-Defined Networking (SDN) in Cloud

An approach to networking that uses software-based controllers or application programming interfaces (APIs) to direct traffic on the network and communicate with the underlying hardware infrastructure. It's key for creating flexible and scalable cloud computing environments.

Storage Account

An Azure service that gives you access to a range of cloud storage services including Azure Blobs, File Storage, Queues, and Tables.

Subnets in Azure VNet

Allows segmentation of the virtual network into one or more sub-networks, enabling efficient allocation and organization of resources within a secure environment.

Subscription

A logical container used to manage access, billing, and the provision of resources within Azure. Each subscription can have multiple resource groups.

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Test and Development Environments

Utilizing cloud resources to quickly set up and dismantle environments for application development and testing.

User-Defined Routes (UDR)

Allow for customizing network traffic flow within and between VNets, providing greater control over how traffic is routed in Azure's virtual networks.

Vertical Scaling (Scaling Up/Down)

Increasing or decreasing the capacity of existing resources, such as adding RAM or CPUs to a virtual machine, to handle workload changes.

Virtual Machine Scale Sets (VMSS)

Azure compute resource that allows you to deploy and manage a set of identical, auto-scaling virtual machines.

Virtual Network Peering

Connects multiple virtual networks in Azure, allowing resources in each VNet to communicate with each other as though they were within the same network.

Virtualization

The creation of a virtual (rather than actual) version of something, such as virtual computer hardware platforms, storage devices, and computer network resources. Virtualization is a fundamental technology that enables cloud computing by allowing multiple simulated environments or dedicated resources from a single, physical hardware system.

VNet (Virtual Network)

A logically isolated network on Microsoft Azure that allows Azure resources to securely communicate with each other, the internet, and on-premises networks.

Zero Trust Architecture

A security concept centered on the belief that organizations should not automatically trust anything inside or outside its perimeters and instead must verify anything and

everything trying to connect to its systems before granting access. This approach is becoming increasingly important in cloud computing to secure applications and data.

Zero Trust Model

A security concept centered on the belief that organizations should not automatically trust anything inside or outside its perimeters and must verify everything trying to connect before granting access.

Zonal Services

Services in cloud computing that are tied to a specific zone or geographic location within a cloud provider's region, designed to offer low latency and high availability by replicating across multiple zones.