



Azure Fundamentals Cheat Sheets

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Good luck on your exam!

Cloud Concepts Cheat Sheet

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- Microsoft Azure is a Cloud Service Provider (CSP)
- The **4 common types of cloud services** for Infrastructure as a Service (IaaS): Compute, Storage, Networking, Databases
- The Benefits of Cloud Computing are:
 - **Cost-effective** — **No up-front cost**. Pay-as-you-go (PAYG) thousands of customers share the cost.
 - **Global** — Launch workloads **anywhere in the world**, Just choose a region.
 - **Secure** — CSP takes care of physical security. **Can be secure by default**. ability to configure to granular level.
 - **Reliable** — data backup, disaster recovery, and data replication, and fault tolerance.
 - **Scalable** — Increase or decrease resources and services based on demand.
 - **Elastic** — **Automate** scaling during spikes and drop in demand.
 - **Current** — The underlying hardware and managed software is patched, upgraded and replaced by the CSP
- The Types of Cloud Computing
 - **Software as a Service (SaaS)** For customers — A product that is run and managed by the service provider
 - *Don't worry about how the service is maintained. It just works and remains available.*
 - eg. Salesforce, Office 365, Gmail
 - **Platform as a Service (PaaS)** For developers — Focus on the deployment and management of your apps.
 - *Don't worry about provisioning, configuring or understanding the hardware or OS.*
 - eg. Azure App Service, Heroku, AWS Elastic Beanstalk, Google App Engine
 - **Infrastructure as a Service (IaaS)** For admins — The basic building blocks for cloud IT. Provides access to networking features, computers and data storage space.
 - *Don't worry about IT staff, data centers and hardware.*
 - Microsoft Azure, Amazon Web Services, Oracle Cloud, Google Cloud Platform

Cloud Concepts Cheat Sheet

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- Microsoft Azure Cloud Deployment Models
 - **Public Cloud** — When everything is built on a Cloud Service Provider (CSP), also known as Cloud-Native
 - Low Cost, Fast Adoption, Less Control over Hardware, More Cloud Service Offerings
 - **Private Cloud** — When everything is built on a company's own datacenter. (On-Premise) The on-premise infrastructure is running their own cloud stack such as open-source cloud framework Open Stack.
 - High Cost, Can meet any Security compliance requirement if they can implement it. Full control of Hardware
 - **Hybrid Cloud** — When a company uses both Private Cloud and Public Cloud and they are connected via an internet connection to act as hybrid infrastructure
 - Cloud offload cost and effort to cloud, but allow greater security and control for sensitive high performing workloads.
- **Total Cost of Ownership (TCO)** is a financial estimate intended to help buyers and owners determine the direct and indirect costs of a product or system. In the context of Azure Microsoft it is the difference between On-Premise vs Cloud-Native
- **Capital Expenditure (CAPEX)** Spend money upfront on physical infrastructure. Deduct expenses from tax bills over time.
 - Server Costs (computers), Storage Costs (hard drives), Network Costs (Routers, Cables, Switches), Backup and Archive Costs, Disaster Recovery Costs, Datacenter Costs (Rent, Cooling, Physical Security), Technical Personal
 - With Capital Expenses **you have to guess upfront** what you plan to spend
- **Operational Expenditure (OPEX)** Non-physical costs. Ongoing costs for running a product, business or system
 - Leasing Software and Customizing features, Training Employees in Cloud Services, Paying for Cloud Support, Billing based on cloud metrics eg. Compute and storage usage.
 - With Operation Expenses you can try a product or service **without investing in equipment**

Cloud Architecture Terminology Cheat Sheet

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- **Availability** — Ability to **remain available** by ensuring there is ***no single point of failure** and/or ensure a level of performance
 - Running your workload across multiple **Availability Zones** ensures that if **AZs** become unavailable your service applications remains available.
 - A service that correctly implements availability is known as being Highly Available (HA)
 - You can use **Azure Load Balancer** to be Highly Available
- **Scalability** — Your ability to **increase your capacity** based on the demand of traffic, memory and computing usage
 - **Vertical Scaling (Scaling Up)** When you increase the size of your instance
 - **Horizontal Scaling (Scaling Out)** When you add more servers of the same size
- **Elasticity** — Ability to **automatically** increase or decrease your capacity based on the current demand of traffic, memory and computing power
 - You use Horizontal Scaling to be Elastic:
 - **Scaling In** — When you remove servers when demand decreases
 - **Scaling Out** — When you add servers when demand increases
 - You would **Azure VM Scale Sets** to automate and trigger scaling actions for Azure Virtual Machines
- **Fault Tolerance** — Ability to ensure there is **no single point of failure. Preventing** the chance of failure
 - **Fail-over** is when you have a plan to shift traffic to a redundant system in case the primary system fails
 - Imagine you have a Database and the primary fails, so you fail-over to your secondary stand-by database
 - You can use **Azure Traffic Manager** a DNS-based traffic balancer to fail-over
- **Disaster Recovery (DR)** — Ability to **recover** from a disaster and to prevent **the loss** of data
 - To be Highly Durable, have backups, determine a time to restore data, make sure your backups work, check the integrity of your data and watch out for data corruption

Global Infrastructure Cheat Sheet

Exam 

- **Regions** — a grouping of multiple data centers (Availability Zones)
- **Geographies** — a discreet market of two or more regions that preserves data residency and compliance boundaries
- **Availability Zones** — is a physical location made up of one or more datacenter.
- **Paired Regions** — A region paired with another 300 miles away. Only one region is updated at a time to ensure no outages
- **Specialized Regions** — Regions for governments for compliance and Legal reasons eg. US and China
- Azure has two Region types:
 - **Recommended Regions** — broadest range of Service availability, Designed to support multiple AZs
 - **Alternate Regions** — extends Azures global footprint, No AZ support, labeled as “Other” in Azure Portal
- **General availability** (GA) is when a service is considered ready to be used publicly by everyone.
- Azure Cloud services are grouped into **three** categories that determine **when** resources become available:
 - **Foundational** — When GA, immediately or in 12 months in Recommended and Alternate Regions
 - **Mainstream** — When GA immediately or in 12 months in Recommended Regions, May become available in Alternate Regions based on customer demand
 - **Specialized** — Available in Recommended or Alternate Region based on customer demand.
- **Availability Set** — A logical grouping in Azure to ensure VMs are in different fault/update domains to avoid downtime.
 - **Fault Domain** — A logical grouping of hardware to avoid a single point of failure within an AZ. A group of virtual machines that share a common power source and network switch.
 - **Update Domain** — A logical grouping of hardware to ensure your resources do not go offline when Azure is rolling out updates to underlying hardware and software

Technology Overview Cheat Sheet

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Storage Services

- **Azure Blob Storage** — **Object Storage**, Pay for what you store, unlimited storage, no-resizing volumes, no filesystem protocols
- **Azure Disk Storage** — **A virtual volume**. Choose SSD or HDD, encryption by default, attach volume to VMs
- **Azure File Storage** — **A shared volume** you can access and manage like a file server. eg SMB, NFS
- ***Azure Queue Storage** — **Messaging Queue** A data store for queuing and reliably delivering messages between applications
- ***Azure Table Storage** — **Wide-Column NoSQL Database**. Hosts unstructured data independent of any schema
- **Azure Data Box / Azure Databox Heavy** — A **rugged briefcase computer and storage** designed to move terabytes or petabytes of data
- **Azure Archive Storage** — **Long-term cold storage** for when you need to hold onto files for years on the cheapest storage options
- **Azure Data Lake Storage** — **centralized repository** that allows you to store structured and unstructured data at any scale

Computing Services

- **Azure Virtual Machines** — Windows or Linux virtual machines (VMs). The most common type of compute.
- **Azure Container Instances** — **Docker as a Service** Run containerized apps on Azure without provisioning servers or VMs
- **Azure Kubernetes Service (AKS)** **Kubernetes as a Service**. Easy to deploy, manage and scale open-source Kubernetes (K8) clusters.
- **Azure Service Fabric** — **Tier-1 Enterprise Containers as a Service** Runs in Azure or on-premises.
- **Azure Functions** — Event-driven, serverless compute (functions) run code without provisioning or managing servers.
- **Azure Batch** — Plans, schedules and executes your batch compute workloads across running 100+ jobs in parallel.

Database Services

- **Azure Cosmos DB** — A fully managed **NoSQL database**. Designed for scale with a guarantee of 99.999% availability
- **Azure SQL Database** — **Fully managed MS SQL database** with auto-scale, integral intelligence, and robust security
- **Azure Database for MySQL / PSQL / MariaDB** — Fully managed and scalable **relational database** with high availability and security
- **SQL Server on VMs** — Host enterprise SQL Server apps in the cloud. Lift-and-shift MS SQL servers from on-premise to Azure Cloud.
- **Azure Synapse Analytics (Azure SQL Data Warehouse)** — Fully managed **data warehouse**. Security at every level of scale at no extra cost
- **Azure Database Migration Service** — Migrates your databases to the cloud with no application code changes
- **Azure Cache for Redis** — **Caches** frequently used and static data to reduce data and application latency

Technology Overview Cheat Sheet

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Application Integration Services

- **Azure Notifications Hub** — **Pub/Sub** Send push notifications to any platform from any back end
- **Azure API Apps** — **API Gateway** Quickly build and consume APIs in the cloud. Route APIs to Azure Services
- **Azure Service Bus** — **Service Bus** Reliable cloud messaging as a service (MaaS) and simple hybrid integration
- **Azure Stream Analytics** — Serverless **real-time analytics**, from the cloud to the edge
- **Azure Logic Apps** — Schedule, automate and orchestrate tasks, business processes and workflows. Integration with Enterprise SaaS and Enterprise applications.
- **Azure API Management** — Hybrid, multi-cloud management platform for APIs across all environments. Put in front of existing APIs to add additional functionality.
- ***Azure Queue Storage** — **Messaging Queue** A data store for queuing and reliably delivering messages between applications

Developer and Mobile Tools

- **Azure SignalR Service** — **Real-Time Messaging** Easily add real-time web functionality to applications. *Think of it like the Pusher for Azure*
- **Azure App Service** — Easy to use service for deploying and scaling web applications *Think of it like Heroku for Azure*
- **Visual Studio (Microsoft-owned)** — **Code Editor** Integrated development environment (IDE) for creating powerful, scalable apps for Azure
- **Xamarin (Microsoft-owned)** — **Mobile-App Framework** Create powerful and scalable native mobile apps with .NET and Azure

Azure DevOps — Plan smarter, collaborate, and ship faster with a set of modern dev services.

- **Azure Boards** — **Kanban** Deliver value to your users faster using proven agile tools to plan, track, and discuss work across your teams
- **Azure Pipelines** — Build, test, deploy with **CI/CD** with any language, platform, and cloud. Use GitHub or Git provider and deploy continuously
- **Azure Repos** — Get unlimited, cloud-hosted private **Git repos** and collaborate to build code with pull requests and advanced file management
- **Azure Test Plans** — Test and ship with confidence using **manual and exploratory testing tools**.
- **Azure Artifacts** — Create, host, and share packages with your team, and add artifacts to CI/CD pipelines with a single click.
- **Azure DevTest Labs** — Fast, easy, and lean dev-test environments

Technology Overview Cheat Sheet

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Cloud-Native Networking Services

- **Azure DNS** — Provides ultra-fast DNS responses and ultra-high domain availability
- **Azure Virtual Network (vNET)** — A logical isolated section of the Azure network for customers to launch Azure resources within.
- **Azure Load Balancer** — OSI Level 4 (Transport) Load Balancer
- **Azure Application Gateway** — OSI Level 7 (HTTP) Load Balancer, can apply a Web Application Firewall
- **Network Security Groups** — A virtual firewall at the subnet level
- **Azure Traffic Manager** — operates at the DNS layer to quickly and efficiently direct incoming DNS requests based the routing method
- **ScaleSets** — group together identical Virtual Machines (VMs) and **automatically increase or decrease the number of servers** based on:
 - change in CPU, memory, disk, and network performance
 - On a predefined schedule

Enterprise/Hybrid Networking Services

- **Azure Front Door** — Scalable and secure entry point for fast delivery of your global applications
- **Azure Express Route** — A connection between your on-premise to Azure cloud from 50 Mbps to 10 Gbps
- **Virtual WAN** — a networking service that brings networking, security, and routing functionalities together in a single operational interface
- **Azure Connection** — A VPN connection securely connects two Azure local network via (IPsec).
- **Virtual Network Gateway** — A site-to-site VPN connection between an Azure virtual network and your local network

IoT Services

- **IoT Central** — Connects your IoT devices to the cloud
- **IoT Hub** — Enable highly secure and reliable communication between your IoT application and the devices it manages
- **IoT Edge** — A fully managed service built on Azure IoT Hub. It allows data processing and analysis nearest the **IoT** devices. Edge computing is when you offload compute from the cloud to local computing hardware such as IoT devices, phones or home computers
- **Windows 10 IoT Core Services** — A cloud services subscription that provides the essential **services** needed to commercialize a device on Windows 10 IoT Core. Long-term OS support and services to manage device updates and assess device health

Technology Overview Cheat Sheet

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What is BigData?

A term used to describe **massive volumes of structured/unstructured data** that is so large it is difficult to **move and process** using traditional database and software techniques.

BigData Services

- **Azure Synapse Analytics** — (*SQL Data Warehouse*) Enterprise **data warehousing and Big Data analytics**. Intended to **run SQL queries** against large databases for things such as **reporting**.
- **HDInsight** — Run **open-source analytics software** such as Hadoop, Kafka and Spark
- **Azure Databricks** — An Apache Spark-based analytics platform optimized for the Microsoft Azure cloud services platform. Third-Party Databricks cloud services supported within Azure.
- **Data Lake Analytics** — An on-demand analytics job service that simplifies big data. A **data lake** is a storage repository that holds a vast amount of raw **data** in its native format until it is needed.

What is Artificial Intelligence (AI)? — Machines that perform jobs that mimic human behavior

What is Machine Learning (ML)? — Machines that get better at a task without explicit programming

What is Deep Learning (DL)? — Machines that have an artificial neural network inspired by the human brain to solve complex problems

Machine Learning (ML) and Artificial Intelligence (AI) services

- **Azure Machine Learning Service** — A service that simplifies running AI/ML-related workloads allowing you to build flexible Pipelines to automate workflow. Use Python and R, Run DL workloads such as Tensorflow
- **Azure Machine Learning Studio (classic)** — An older service that manages AI/ML workloads. Does not have a pipeline and other limitations. Workloads are not easily transferable to from classic to the new service.
- **Personalizer** — Deliver rich, personalized experiences for every user.
- **Translator** — Add real-time, multi-language text translation to your apps, website and tools.
- **Anomaly detector** — Detect anomalies in data to quickly identify and troubleshoot issues.
- **Azure Bot Service** — Intelligent, serverless bot service that scales on demand
- **Form Recogniser** — Automate the extraction of text, key/value pairs and tables from your documents.
- **Computer Vision** — Easily customize computer vision models for your unique use case.
- **Language Understanding** — Build natural language understanding into apps, bots and IoT devices.
- **QnA Maker** — Create a conversational question-and-answer bot from your existing content.
- **Text Analytics** — Extract information such as sentiment, key phrases, named entities and language from your text.
- **Content moderator** — Moderate text and images to provide a safer, more positive user experience.
- **Face** — Detect and identify people and emotions in images.
- **Ink Recogniser** — Recognise digital ink content, such as handwriting, shapes and document layout.

What is Serverless?

When the underlying servers, infrastructure and OS are taken care of by the Cloud Service Provider (CSP). It will generally be highly available, scalable and cost-effective. The three advantages of Serverless:

1. **Event-Driven Scale** A serverless function can be triggered or can trigger other events allowing you to compose complex applications and its just scales.
2. **Abstraction of Servers** Servers are abstracted away. Your code is described as functions. These functions can be running on different compute instances.
3. **Micro-Billing** Serverless compute could run for a fraction of a second. Billing into micro-seconds will save you money.

Serverless Services

- **Azure Functions** Run small amounts of code (serverless functions) in C#, Java, JavaScript, Python or PowerShell
- **Blob Storage** Serverless Object Storage. Just upload files, don't think about the underlying file systems or resizing
- **Logic Apps** build serverless workflows composed of Azure Functions. Building a state machine for serverless compute.
- **Event Grid** Pub/Sub messaging system to allow you to react to events and trigger other Azure services such as Azure Functions

Management Tools Cheat Sheet

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- **The Azure portal** is **a web-based, unified console** that provides an alternative to command-line tools. You can manage your Azure subscription with the Azure portal. Build, manage, and monitor everything from simple web apps to complex cloud deployments.
- If you want to **test preview features** should use **preview.portal.azure.com**
- if you **stable-release and production-ready** features you should you use **portal.azure.com**
- **PowerShell** is a task automation and configuration management framework, **command-line shell** and a **scripting language**
- **Azure PowerShell** A set of cmdlets for managing Azure resources directly from the PowerShell command line
- **Visual Studio Code** **is a free source-code editor** made by Microsoft for Windows, Linux and macOS.
- **Azure Cloud Shell** is an interactive, authenticated, **browser-accessible shell** for managing Azure resources.
 - It provides the flexibility of choosing the shell experience that best suits the way you work, either **Bash or PowerShell**.
- **Azure Command Line Interface (CLI)** **processes commands to a computer program through lines of text**. Operating systems implement a command-line interface in a shell or terminal
 - The Azure CLI can be installed on Windows, Mac and Linux.
 - Once installed, you can type **az** followed by other commands to create, update, delete, view and manage Azure resources.

Azure Security Cheat Sheet

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- **Azure Trust Portal** is a public-facing website portal providing easy access to privacy, security, and regulatory compliance information.
- **Compliance Program** is a set of internal policies and procedures of a company to comply with laws, rules, and regulations or to uphold business reputation.
 - **Criminal Justice Information Services (CJIS)** Any US state or local agency that wants to access the FBI's CJIS database is required to adhere to the CJIS Security Policy.
 - **General Data Protection Regulation (GDPR)** A European privacy law. Imposes new rules on companies, government agencies, non-profits, and other organizations that offer goods and services to people in the European Union (EU), or that collect and analyze data tied to EU residents.
 - **Health Insurance Portability and Accountability Act (HIPAA)**. US federal law that regulates patient Protected Health Information
 - **Service Organization Controls (SOC) 1, 2, and 3** independent third-party examination reports that demonstrate how the company achieves key compliance controls and objectives
 - **National Institute of Standards and Technology (NIST) Cybersecurity Framework (CSF)** Voluntary Framework that consists of standards, guidelines, and best practices to manage cybersecurity-related risks.
 - **Federal Information Processing Standard (FIPS) 140-2** US and Canadian government standard that specifies the security requirements for cryptographic modules that protect sensitive information.
- **What is Multi-Factor Authentication (MFA)?** A security control where after you fill in your username/email and password **you have to use a second device**, such as a phone, to confirm that it is you logging in.

Azure Security Cheat Sheet

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- **Azure Active Directory (Azure AD)** is Microsoft's cloud-based **identity and access management service**, which helps your employees sign in and access resources.
 - Azure can connect to **External Resources**: Microsoft Office 365, Azure Portal, SaaS applications
 - Azure can connect to **Internal Resources**: Applications within your internal networking, access to on-prem workstations
 - Use Azure AD to implement **Single-Sign-On (SSO)**
 - Azure Active Directory comes in four editions
 - **Free** MFA, SSO, Basic Security and Usage Reports, User Management
 - **Office 365 Apps** Company Branding, SLA, Two-Sync between On-Premise and Cloud
 - **Premium 1** Hybrid Architecture, Advanced Group Access, Conditional Access
 - **Premium 2** Identity Protection, Identity Governance
- **Azure Security Center** is a **unified infrastructure security management system** It strengthens the security posture of your data centers and provides advanced threat protection across your hybrid workloads in the cloud.
- **Azure Application Gateway** is a **web-traffic load balancer** (Layer 7 HTTP) that re-routes traffic based on a set of rules. A Web Application Firewall (WAF) can be attached for additional protection on OSI Layer 7.
- **Azure Key Vault** helps you **safeguard cryptographic keys and other secrets** used by cloud apps and services.
 - **Secrets Management** store and tightly control access to **tokens, passwords, certificates, API keys, and other secrets**
 - **Key Management** create and control the **encryption keys** used to encrypt your data
 - **Certificate Management** easily provision, manage, and deploy public and private **SSL certificates** for use with Azure and internal connected resources.
 - **Hardware Security Module** secrets and keys can be protected either by software or **FIPS 140-2 Level 2** validated HSMs

Azure Security Cheat Sheet

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- An HSM is a **Hardware Security Module**. It's a piece of hardware designed to store encryption keys.
 - **Federal Information Processing Standard (FIPS) 140-2** US and Canadian government standard that specifies the security requirements for cryptographic modules that protect sensitive information.
 - HSM's that are **multi-tenant** are **FIPS 140-2 Compliant** (multiple customers virtually isolated on an HSM)
 - HSM's that are **single-tenant** are **FIPS 140-3 Compliant** (single customer on a dedicated HSM)
- **DDoS (Distributed Denial of Service) Attack** malicious attempt to disrupt normal traffic by flooding a website with fake traffic
- Azure offers **two tiers** of DDoS Protection
 - **DDoS IP Protection**: Charged per protected IP. Key Features: Active Traffic Monitoring and Detection, Application-based Mitigation Policies, Metric, Alerts, and Mitigation Reports, Integration with Azure Services, Public IP Standard Tier Protection
 - **DDoS Network Protection**: Charged per 100 protected IP addresses. Key Features: All Features of IP Protection, DDoS Rapid Response Support, Cost Protection, WAF Discount, Protection Across Subscriptions
- **Azure Firewall** is a managed, **cloud-based network security service** that protects your Azure Virtual Network resources.
- **Azure Information Protection** — **Protects sensitive information** such as emails and documents with encryption, restricted access and rights, and integrated security in Office apps
- **Azure Advisor** is a personalized cloud consultant that helps you follow best practices to optimize your Azure deployments for the following 5 categories: 1] High Availability, 2] Security, 3] Performance, 4] Cost, 5] Operational Excellence

Azure Security Cheat Sheet

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- **Intrusion Detection / Intrusion Protection System (ID/IPS)** A device or software application that monitors a network or systems for malicious activity or policy violations.
- **Azure Advanced Threat Protection (ATP)** is a cloud-based security solution that **leverages your on-premises Active Directory** signals to identify, detect, and investigate threats, compromised identities, and malicious actors
- **Microsoft Security Development Lifecycle (SDL)** is a software security assurance process. SDL is defined in phases:
 - Training > Requirements > Design > Implementation > Verification > Release > Response
- **Azure Policy** evaluates resources in Azure by comparing the properties of those resources to business rules. These business rules, described in **JSON** format, are known as Policy Definitions.
- **Azure role-based access control (Azure RBAC)** — helps you manage who has access to Azure resources, what they can do with those resources, and what areas they have access to.
- **A Role Definition** — is a collection of permissions. A role definition lists the operations that can be performed,
 - such as **read, write, and delete**. Roles can be high-level, like owner, or specific, like virtual machine reader.
- **Lock Resources** — As an admin, you may need to **lock a subscription, resource group, or resource** to **prevent other users from accidentally deleting or modifying critical resources**.
 - **CanNotDelete (Delete)** authorized users can still read and modify a resource, but they can't delete the resource.
 - **ReadOnly (Read-only)** authorized users can read a resource, but they can't delete or update the resource
- **Azure Management Groups** is used for managing multiple subscriptions (accounts) into a hierarchal structure.
- **Azure Monitor** comprehensive solution **for collecting, analyzing, and acting on telemetry** from your cloud and on-premises environments: Create Visual Dashboards, Smart Alerts , Automated Actions, Log Monitoring
- **Azure Service Health** provides Information about **current and upcoming issues** eg. Service outages

Billing and Pricing Cheat Sheet

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- **Service Level Agreement (SLA)** describes Azure's commitments for **uptime** and **connectivity**
 - SLA's are individualized per Azure service
 - Uptime and connectivity is described as **Performance Targets**
 - A Performance Target is represented as a **percentage %**.
 - 99% (two nines)
 - 99.9% (three nines)
 - 99.999% (five nines)
 - 99.9999999% (nine nines)
 - Azure does not provide SLAs for Free Tier or the shared tiers.
- **Service Credits** — customers may **have a discount applied to their Azure bill**, **as compensation for an under-performing Azure product or service** based on the SLA.
- **A Composite SLA** is when you **combine** SLAs across different service offerings to improve overall SLA performance target
- **TCO Calculator** — Estimate the cost savings you can realize by migrating your workloads to Azure
- **Azure Marketplace** are **apps and services** made available by **third-party publishers** to quickly get started. The available apps and services can be Free, Free-Trial, Pay-As-You-Go, Bring-Your-Own-License (BYOL)
- **Azure Hybrid Use Benefit (HUB)** Gives customers the right to use these licenses for virtual machines on Azure.
- **Azure Pricing Calculator** — Configure and estimate the costs for Azure products. No Sign-in require. Download an **Excel spreadsheet** and share it with your boss.
- **Azure Cost Management**
 - Perform **cost-analysis**, visualize the spending of your Azure cloud resources
 - Create **budgets**, set a budget threshold to be alerted when approaching or exceeded

Billing and Pricing Cheat Sheet





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- There are **4 tiers** of Azure Subscriptions:
- **Free Subscription**
 - Credit Card Required
 - \$200 USD credits free for 30 days
 - Certain Azure products are free for 12 months
- **Pay-As-You-Go (PAYG) Subscription**
 - Credit Card Required
 - Charged end at the of the month based on consumed cloud resources
- **Enterprise Agreement**
 - An Enterprise and Azure agree to receive discounted prices for licenses and cloud services
- **Student Subscription**
 - No Credit Card Required
 - \$100 USD credits for 12 months
 - Requires valid student email

Azure Support Plans

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	 24/7 Phone Support		
	Third Party Software Support		
	Minimal business impact (Sev C)		
		< 8 hours	(Sev C) < 4 hours
		Moderate (Sev B) < 4 hours	(Sev B) < 2 hours
		Critical business impact (Sev A) < 1 hour	
Azure Advisor, Azure Health Status, Community Support, Azure Documentation			
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