Microsoft Azure is the one of biggest cloud service provider worldwide created and operated by Microsoft for building, testing, deploying and managing applications services.

A screenshot of a cell phone

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Figure 1: Azure Core Architecture

Shown as Azure Architecture can be divided into 3 main components, Front Ends, Middle Ware, Services. In specific, front ends includes Azure portal, Azure PowerShell, Azure CLI, Rest clients, which are four different ways of accessing the Azure resources.

In specific, Azure portal is the GUI dashboard provided to users by Azure, through which we can deploy or provision resources. A screenshot of a social media post

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Azure PowerShell, make use of the Windows powershell to give command line access to Azure Resources.

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The Azure CLI is a command -line tool providing a great experience for managing Azure resources. The CLI is designed to make scripting easy, query data, support long-running operations and, more.

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REST clients are APIS which can be used in application’s code to initiate an action on Azure clod.

The Azure Resource Manager is the mediator between the resources and external agents which can interact with the azure resources, which is the Middle Ware. Azure Resource Manager plays a key deploying and managing the azure resources. It helps to organize the resources in one group, this group is called resource group, it also help to deploy, manage and monitor all the resources for the solution as a group, rather than handling these resources individually.

The Azure services includes but not limited in Compute, Networking, File Storage, Database, AI + Machine Learning, Identity and management. The Compute part of core Azure Services includes Azure Virtual Machines, Function App, App, Service, Azure Kubernetes Services.

The Azure Virtual Machines are image service instance that provide on-demand and scalable computing resources with usage-based pricing. Azure Functions is a solution for easily running small pieces of code, or “functions,” in the cloud. You can write just code you need for the problem at hand, without worrying about the whole application or the infrastructure to run it. Azure App service is a fully managed “Platform as a Service” (PaaS) that integrates Microsoft Azure Websites, Mobile Services, and BizTalk Services into a single service. Azure Kubernetes (AKS) is a managed container orchestration service, based on the open source Kubernetes system, which is available on the Microsoft Azure public cloud.

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Another Azure Service is Networking, in which contains 5 core azure services, Virtual Networks, Load Balancers, Application Gateway, DNS Zones, and CDN Profiles. In specific, the Azure Virtual Network (VNet) is a representation of your own network in the cloud. It’s a logical isolation of the Azure cloud dedicated to your subscription. Each VNet you create has its own CIDR block, and can be linked to other VNets and on-premises networks as long as the CIDR blocks do not overlap. The Load Balancers is a layer-4 (TCP, UDP) load balancer that provides high availability by distributing incoming traffic among healthy VMs. The Application Gateway is a wen traffic load balancer that enables you to manage traffic to your web applications. This type of routing is known as application layer (OSI layer 7) load balancing. MOREEXPLANKSD DNS Zone is a data resource that contains the DNS records for a domain name. You can use Azure DNS to hisr a DNS zone and manage the DNS records for a domain in Azure. Lastly, Azure Content Delivery Network (CDN) is a global CDN solution for delivering high-bandwidth content. With Azure CDN, you can cache static objects loaded from Azure blob storage, a web application, or any publicly accessible web server, by using the closest point of presence (POP) server.