Microsoft Azure

Agenda:

- What is cloud computing?
- Benefits of Cloud Computing?
- Types of cloud Computing?
- Types of Cloud Services?
- What is Azure?
- How to create Azure free tair Account?

What is Cloud Computing?

On-demand availability of computer system resources, storage and computing power, without direct active management by the user.

Benefits of Cloud Computing

- Cost
  - Pay-as-you-go
- On-demand
- Broad network access
- Performance
- Scalability
- Security

Types of Cloud Computing

- Public Cloud
  - Operated by 3rd party service providers like Azure.
- Private Cloud
  - Cloud resources are exclusively used by an org
- Hybrid Cloud
  - Combination of Public and Private Clouds

Types of Cloud Services

- IaaS
  - Azure VM's
  - Azure Storage
  - Azure Networks
- PaaS
  - Azure App Services
  - Azure SQL Database
- SaaS
  - Office 365

What is Azure?

Microsoft Azure is an ever-expanding set of cloud services to help your organization meet your business challenges.

-definition from azure.microsoft.com

Microsoft Azure

A little bit about Azure...

- Announced in 2008 with code name "Project Red Dog"
- Officially launched on Feb 1, 2010 as "Windows Azure"
- Renamed as "Microsoft Azure" on Mar 25, 2015.

A little bit about Azure

- Various service offerings
  - Virtual Machines
  - Networking
  - Storage
  - Serverless Computing
  - Containers
  - App Services
  - SQL Database are few of them

Azure Global Infrastructure

Azure Security

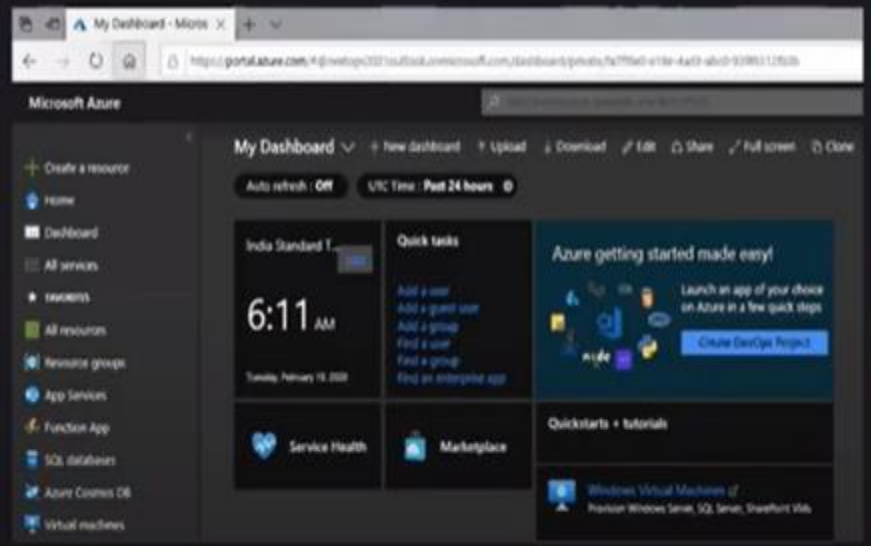
- 90+ compliance offerings
- Azure DDoS Protection
- Azure Security Center
- Azure Firewall
- Azure Key Vault

Microsoft Azure

What is Azure Portal?

Unified management interface to manage all your applications on azure including

- WebApps
- Databases
- Virtual Machines
- Virtual Networks
- Storage
- and 3500+ other services.



azure.microsoft.com/en-in/free/

Microsoft Azure

Contact Sales | Search | My account | Portal | Rama Rao

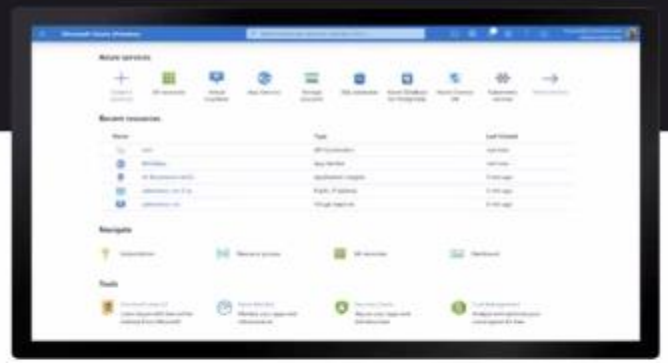
Overview | Solutions | Products | Documentation | Pricing | Training | Marketplace | Partners | Support | Blog | More

Create your Azure free account today

Get started with 12 months of free services

Start free

Or buy now



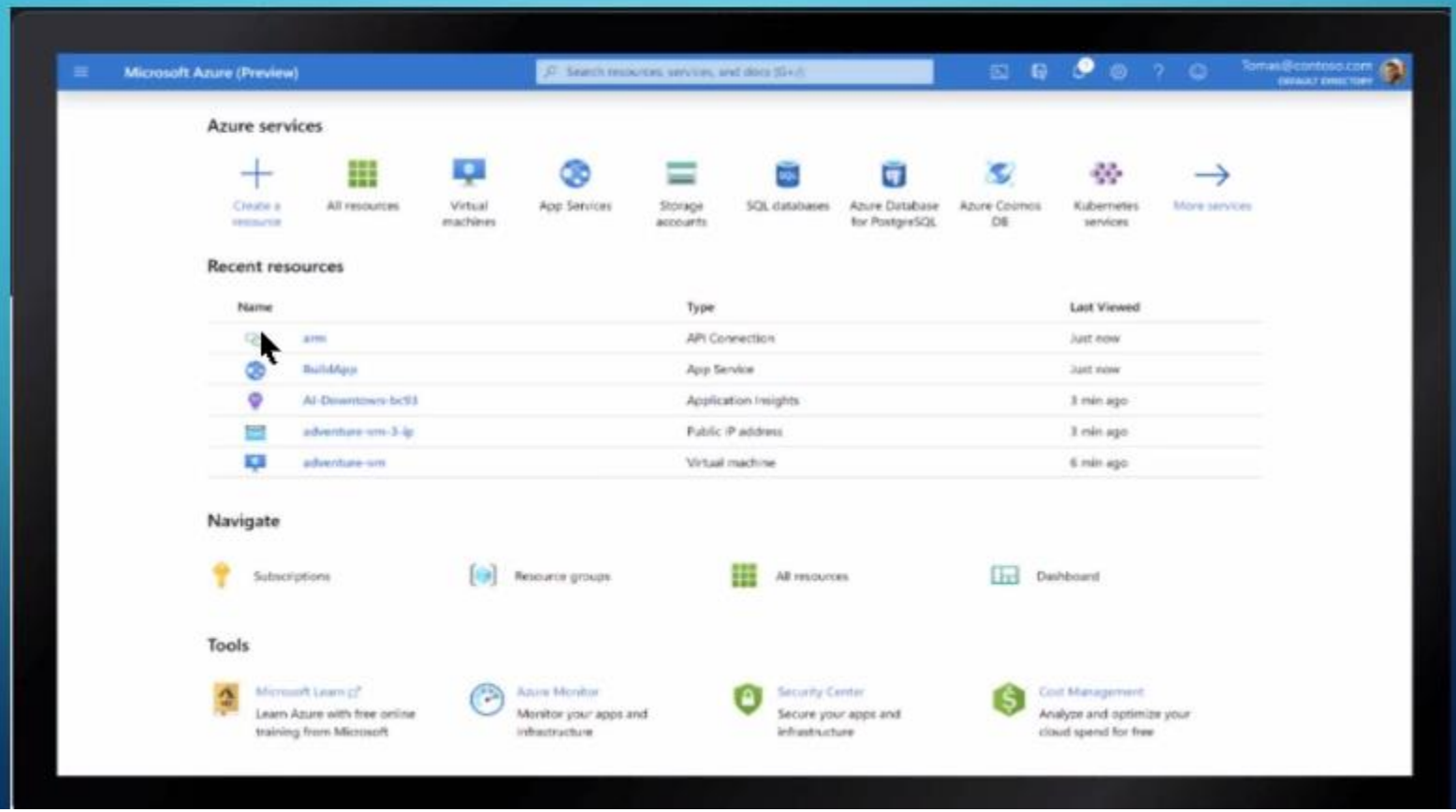
What do I get?

With your Azure free account, you get all of this—and you will not be charged until you choose to upgrade.

12 months of popular free services + **₹13,300 credit** to explore Azure for 30 days + **Always free** 25+ services

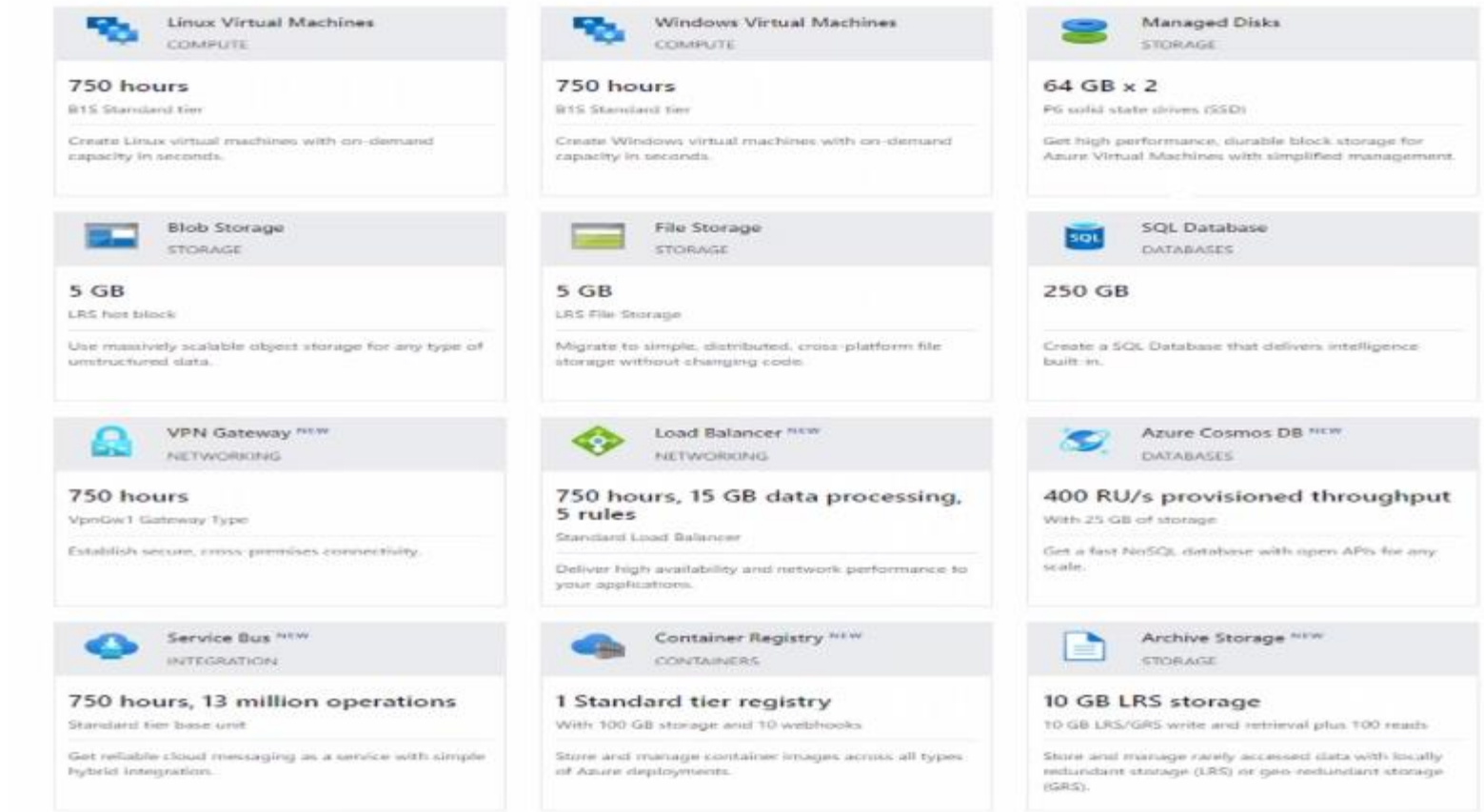
Create your Azure free account today

Get started with 12 months of free services



Which products are free for 12 months?

These products are free for 12 months, up to the monthly limits. Availability is based on resource and region.



View full list of products free for 12 months

Which products are always free?

These products are always free, up to the specified amounts. Availability is based on resource and region.

Azure Cosmos DB

DATABASES

400 request units per second

provisioned throughput

Build modern apps with a fast NoSQL database service with open APIs at any scale.

App Service

COMPUTE

10

web, mobile or API apps

Quickly create powerful apps for any platform or device using your choice of tools including Node.js and PHP.

Functions

COMPUTE

10,00,000

requests per month

Process events with a serverless code architecture.

Event Grid

INTEGRATION

1,00,000

operations per month

Get reliable event delivery at massive scale.

Azure Kubernetes Service (AKS)

COMPUTE

Free

Deploy and manage containers using the tools you choose.

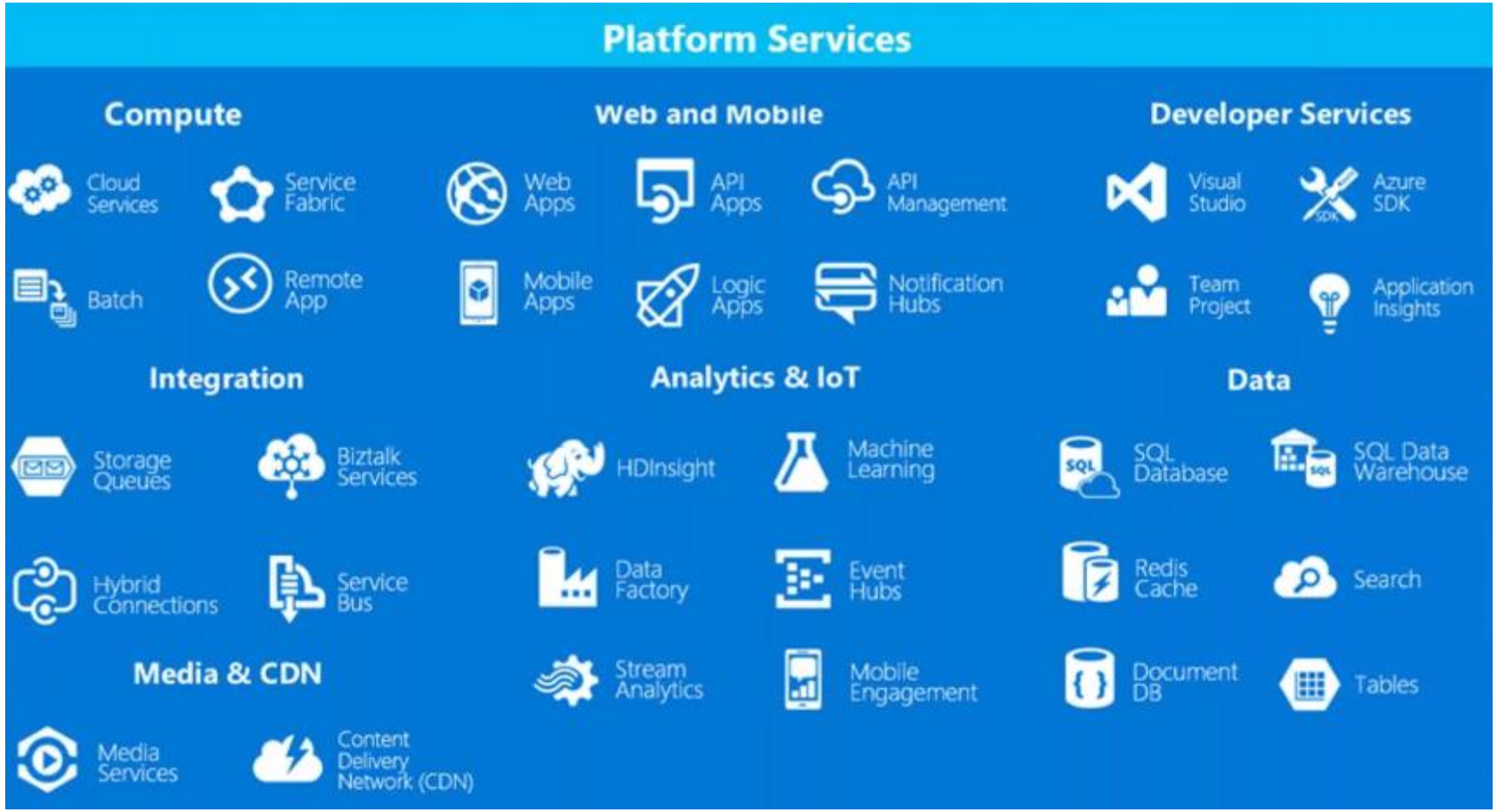
DevTest Labs

DEVELOPER TOOLS

Free

Enable fast, easy and lean dev-test environments.

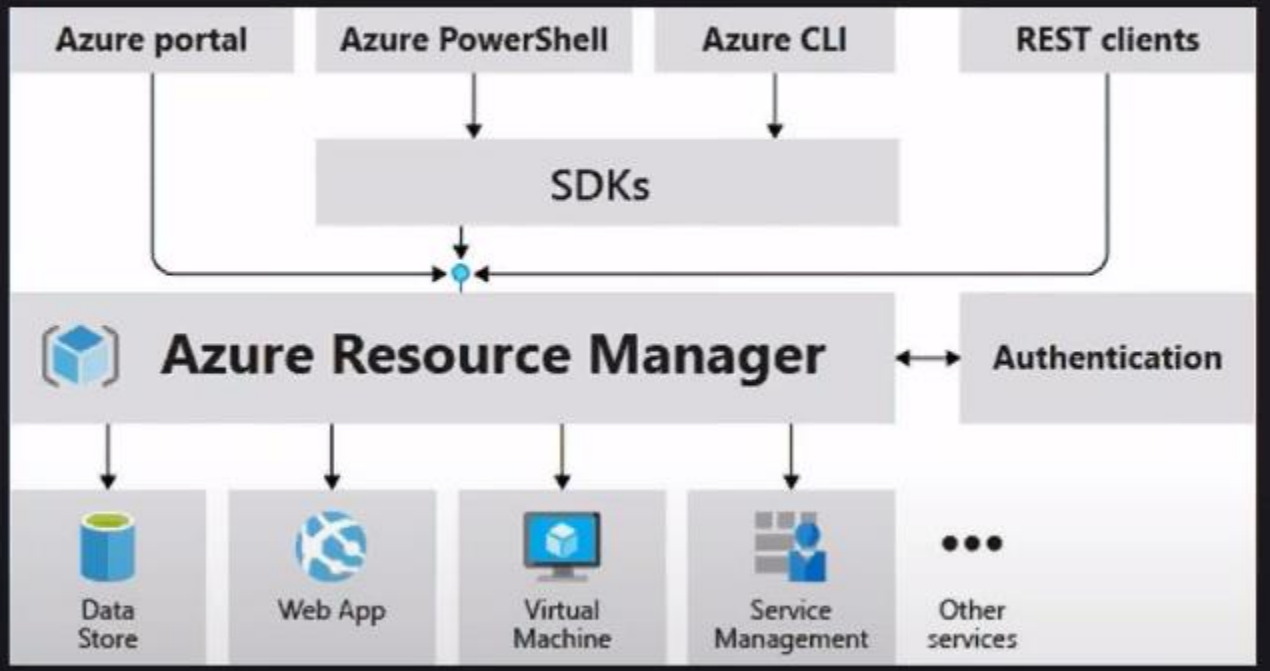
View full list of always-free products


Platform Services
Compute
Cloud Services
Service Fabric
Batch
Remote App
Web and Mobile
Web Apps
API Apps
API Management
Mobile Apps
Logic Apps
Notification Hubs
Developer Services
Visual Studio
Azure SDK
Team Project
Application Insights
Integration
Storage Queues
Biztalk Services
Hybrid Connections
Service Bus
Media & CDN
Media Services
Content Delivery Network (CDN)
Analytics & IoT
HDInsight
Machine Learning
Data Factory
Event Hubs
Stream Analytics
Mobile Engagement
Data
SQL Database
SQL Data Warehouse
Redis Cache
Search
Document DB
Tables

What is Azure Resource Manager?

Azure Resource Manager is the deployment and management service for Azure. It provides a management layer that enables you to create, update, and delete resources in your Azure subscription.

Overview of Azure Resource Manager



ARM Terminology

- Resource
  - A Virtual Machine or A VNET
- Resource Group
  - A Container that holds resources
- Resource Provider
  - A Service that provides resources like 'Azure Compute'
- Resource Manager Template
  - A JavaScript Object Notation (JSON) file that defines one or more resources

Important Points about ARM

- Distributed across regions. Some services are regional.
- Distributed across Availability Zones (as well regions) in locations that have multiple Availability Zones.
- Not dependent on a single logical data center.
- Never taken down for maintenance activities.

Resource Groups

- Logical container for grouping of resources.

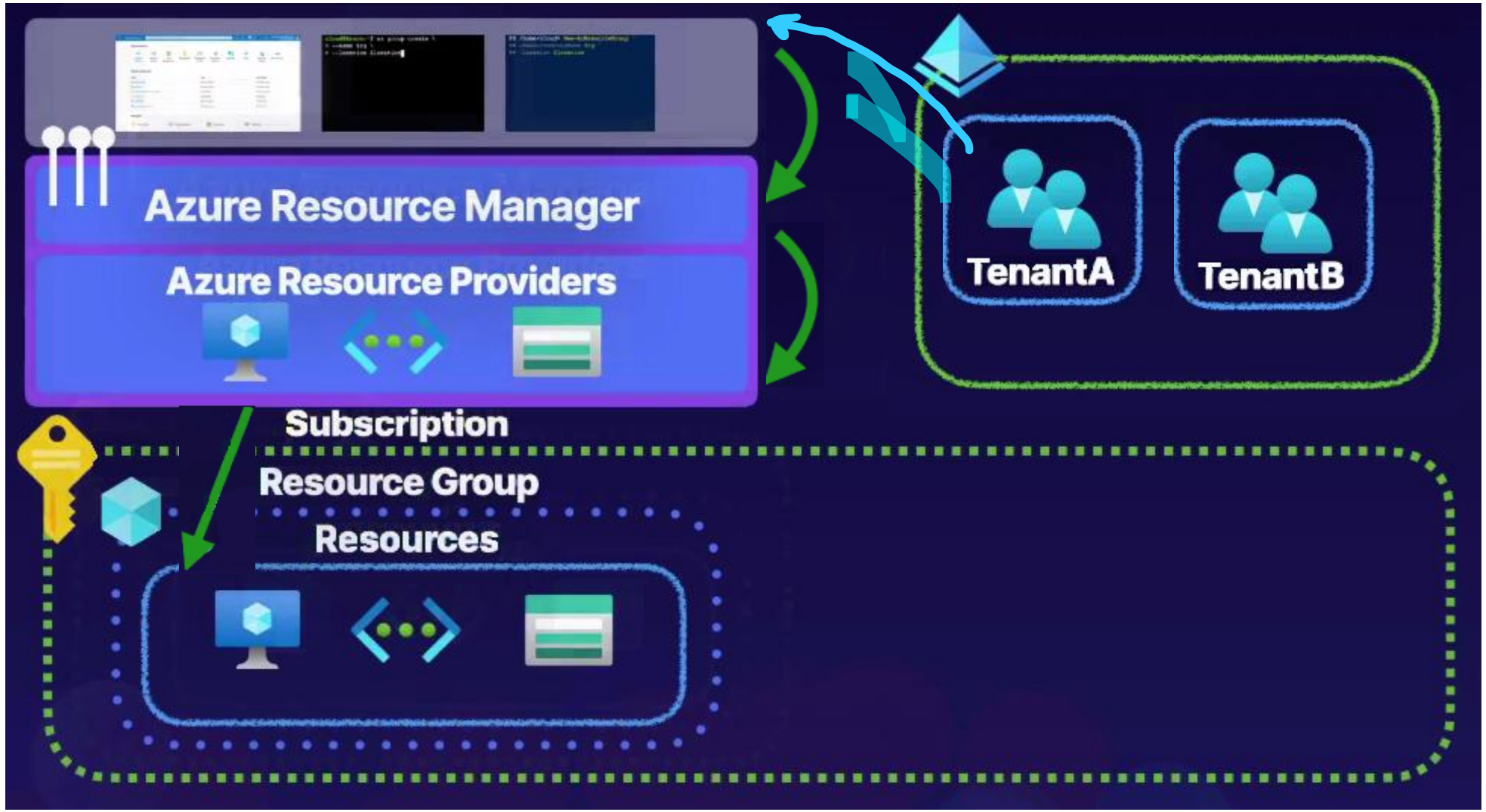
- Group resources based on lifecycles and security

Azure Subscription

- Logical construct that groups together resource groups and associated resources.
- Billing unit for the Azure cloud.
- Controlled by Azure Resource Manager (ARM)

Azure Resource Manager

- Azure Resource Manager (ARM) is the orchestration layer for managing the Azure Cloud
- Azure Resource Manager connects to resource provider
- Resource provider completes the request


Azure Resource Manager
Azure Resource Providers
TenantA
TenantB
Subscription
Resource Group
Resources

Azure Storage

Storage Accounts

Storage Type

- Blobs : A massively scalable object store for text and binary data.
- Files : Managed file shares for cloud or on-premises deployments.
- Queues : A messaging store for reliable messaging between application components.
- Tables : A NoSQL store for schema less storage of structured data.

Blob access tiers

- Hot – frequently accessed data
- Cool – infrequently accessed data
- Archive – flexible latency (several hours)

B

Storage per GB/month

- Hot – $0.0196
- Cool –$0.0100
- Archive – $0.0018