

Azure Architectural Components



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Agenda

- Azure Free Account
- Azure Billing and Subscription
- Organization Resources Hierarchy
- Management Group, Subscription, Resource Group, Resources
- Azure Global Infrastructure
- Azure Regions, Zones and Paired Regions

Azure Free Account

- To sign up, you need a phone number, a credit card, and a Microsoft or GitHub account.
- The Azure free account includes:
 - Free access to popular Azure products for 12 months.
 - A credit to spend for the first 30 days.
 - Access to more than 25 products that are always free.

Azure Purchasing Options

- **Azure.com:** The fastest and easiest way for organizations of all sizes to get started with Azure. You can manage your Azure deployments and usage yourself and get a monthly bill for the services used.
- **Microsoft representative:** Buying Azure through a Microsoft representative is intended for large organizations or customers who already work with one.
- **Microsoft partner:** Buy Azure as a managed service through your partner and your partner will provide you with access to Azure, manage your billing, and provide support.

Steps to Sign Up for a free account

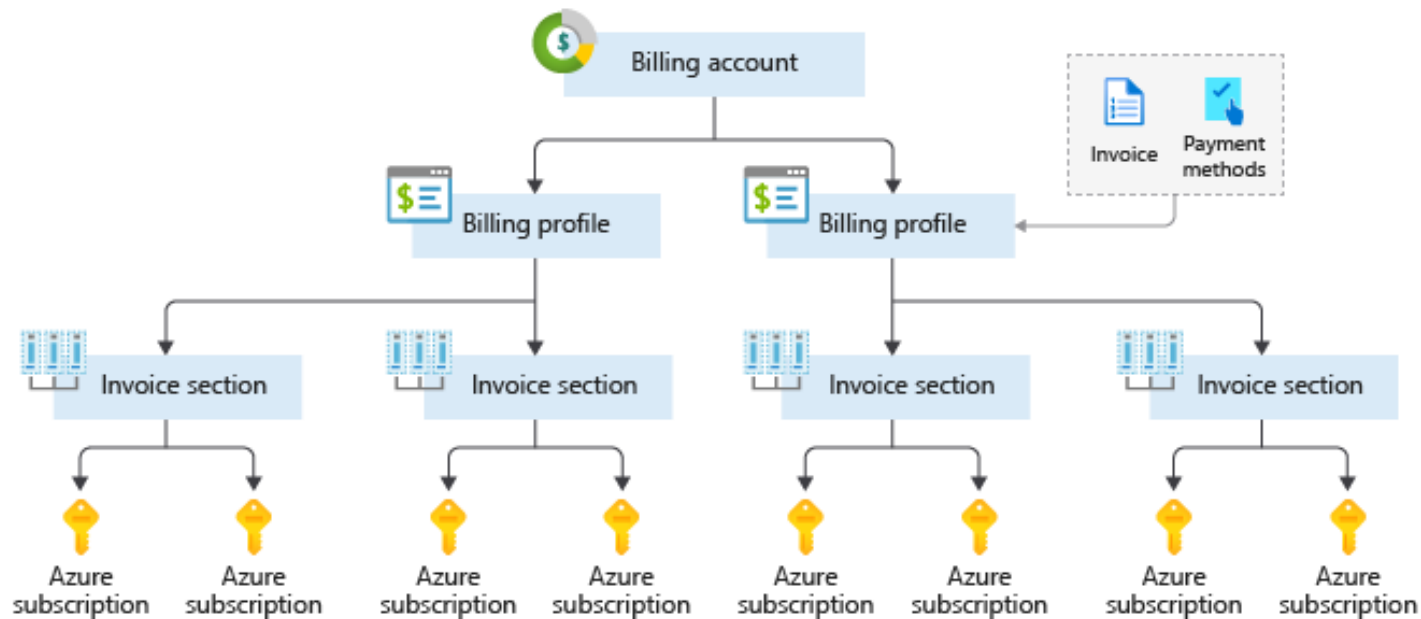
- In a web browser, go to <https://azure.microsoft.com/free> and Select **Start free** option.
- Sign in with your **Microsoft or GitHub** account or create a free Microsoft account.
- On the **About you** page, select your country or region. Enter your **first and last name, email address, and phone number**. Depending on your country, you might see additional fields. Select **Next** to continue.
- On the **Identity verification by phone** screen, select your country code, and type the number of a telephone to which you have immediate access.
- You have the option of text or callback to obtain a verification code. Select the relevant button, type the code in the **Verification code** box, and select **Verify code**.
- Now enter details of a **valid credit card** and select **Next**.
- The last step is to review the agreement and privacy statement then select **Sign up**.

Azure Billing and Subscription

- With Azure, you only pay for what you use. You can also set up for multiple invoices.
- An **Azure subscription** is a logical container used to provision resources in Azure. It holds the details of all your resources like virtual machines (VMs), databases, and more.
- You can create multiple subscriptions for resource or billing management purposes.

Customize billing

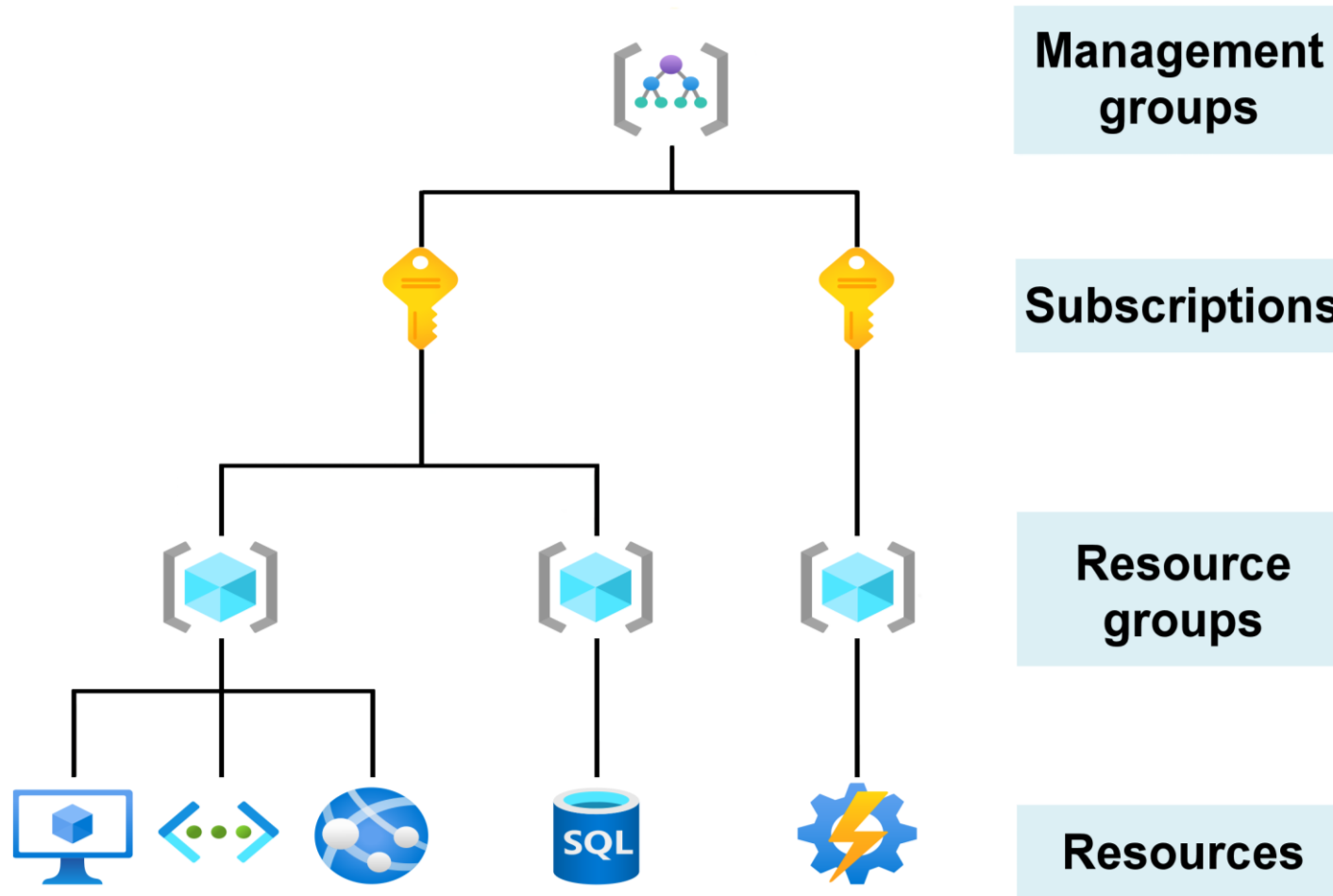
- Multiple invoices can be created with the help of billing profiles.
- Each billing profile will have own monthly invoice and payment method.
- Multiple subscriptions can be organized into invoice sections and each invoice section is a line item on the invoice that shows the charges incurred.



Azure Support Plans

Support Type	Developer	Standard	Professional Direct
Best for	Non-critical workloads	Production workloads	Business-critical workloads
Reactive technical support	1 business day response	1-hour response for critical cases	1-hour response + priority tracking of critical cases
Proactive technical support	Not applicable	Not applicable	Access to a pool of technical experts

Organization Resources Hierarchy

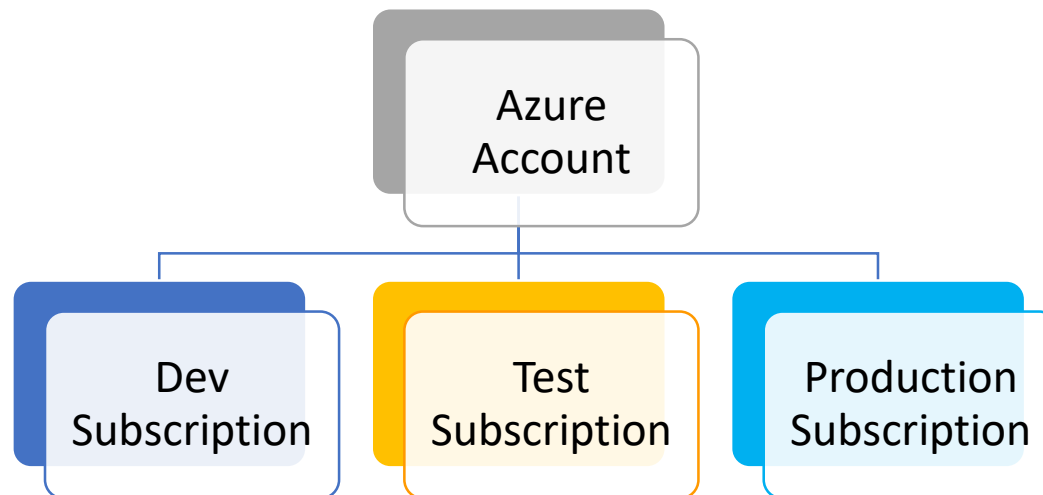


Management Group

- Help you to manage access, policy, and compliance for multiple subscriptions.
- All subscriptions in a management group automatically inherit the conditions applied to the management group.
- 10,000 management groups can be supported in a single directory.
- A management group tree can support up to six levels of depth. This limit doesn't include the root level or the subscription level.
- All subscriptions and management groups are within a single hierarchy in each directory.

Subscription

- A subscription provides you with authenticated and authorized access to Azure products and services.
- An Azure subscription is a logical unit of Azure services that links to an Azure account.
- Allows you to provision resources.



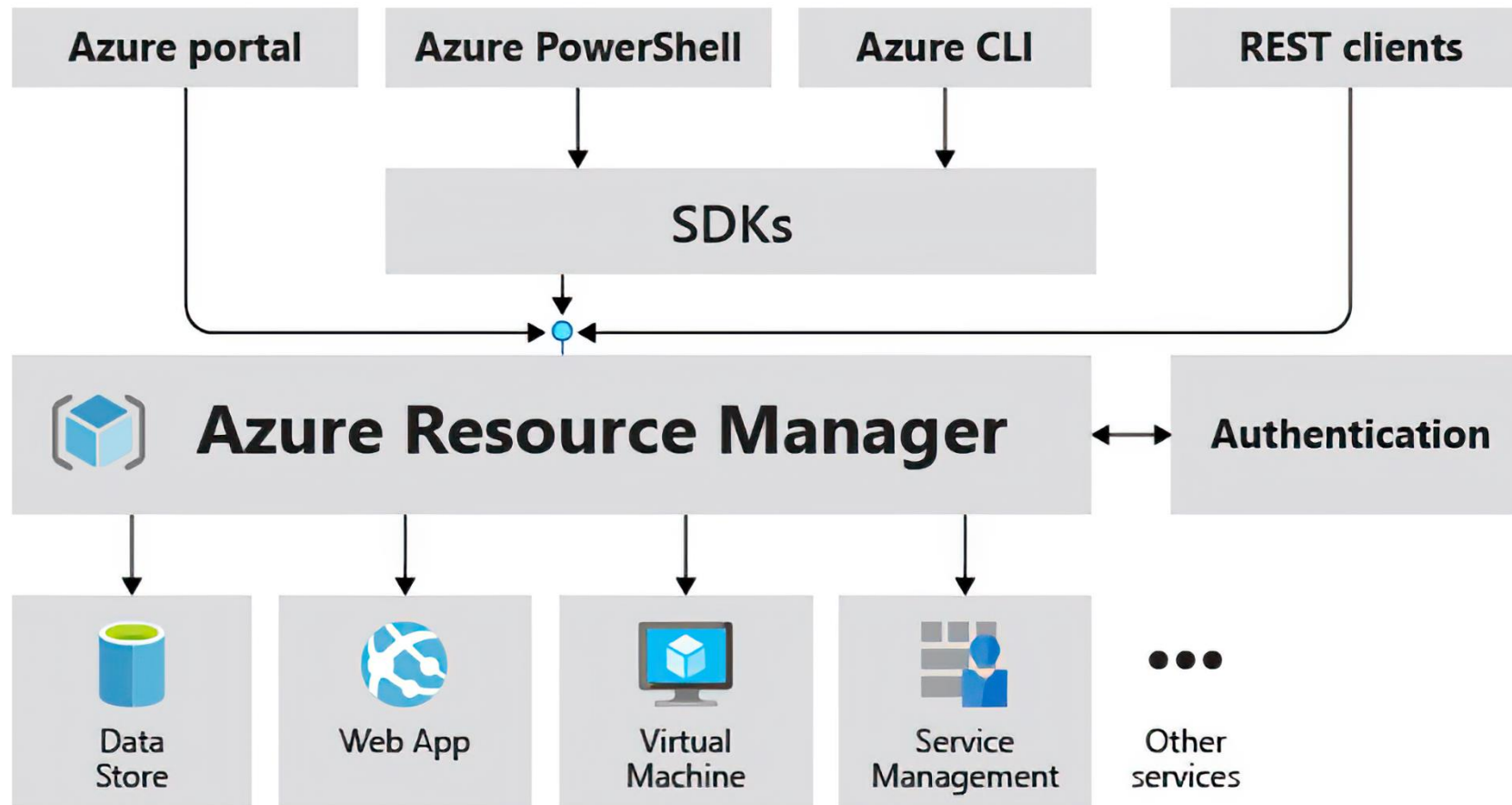
Resource Group

- An ARM resource can exist only in one resource group.
- A resource group is created in a region and it can have the resources from the other regions.
- Resources can be moved between resource groups.
- All resources within a resource group share the common lifecycle.
- A subscription can have up to 800 resource groups.
- A resource group can have up to 800 resources of the same type and up to 15 tags.

Resources

- Resources are instances of services that you create, like virtual machines, storage, or SQL databases.
- When you delete a resource group, all resources contained within it are also deleted.
- Organizing resources by life cycle can be useful in nonproduction environments, where you might try an experiment and then dispose of it.

Managing Resources



Resource Manager

- A deployment and management service for Azure.
- Provides a management layer that enables you to create, update, and delete resources in your Azure account.
- Provide management features like access control, locks, and tags to secure and organize your resources after deployment.

Tags

- Categorize the resources for management and billing
- For example - All resources for a project are tagged with *project* tag and a value as project *name*
- You can search resources based on tag value

Name	Value
AppName	The name of the application that the resource is part of.
CostCenter	The internal cost center code.
Owner	The name of the business owner who's responsible for the resource.
Environment	An environment name, such as "Prod," "Dev," or "Test."
Impact	How important the resource is for business operations, such as "Mission-critical," "High-impact," "Low-impact."

Azure Global Infrastructure

60+ regions worldwide

140 available in 140 countries/regions



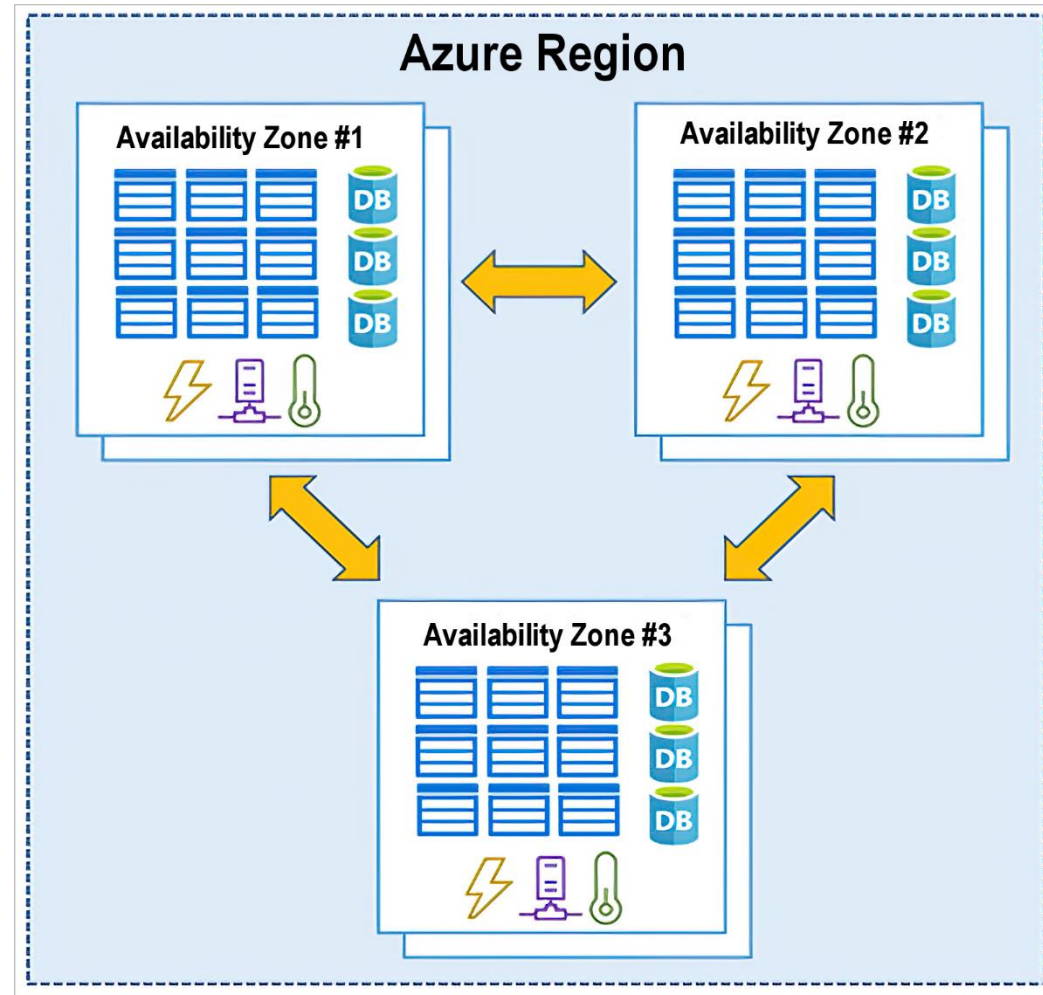
Azure Region

- A region is a geographical area that can have one or multiple datacenters that are nearby and networked together with a low-latency network.
- Azure intelligently assigns and controls the resources within each region to ensure workloads are appropriately balanced.
- Azure has specialized regions that are useful when you build your applications for compliance or legal purposes For example US Gov and China region.

Availability Zone

- A collection of datacenters within an Azure region.
- Each availability zone is made up of one or more datacenters equipped with independent power, cooling, and networking.
- An availability zone is set up to be an isolation boundary. If one zone goes down, the other continues working. Availability zones are connected through high-speed, private fiber-optic networks.
- Not every region has support for availability zones.

Availability Zone Contd..



Paired Region

- To prevent large natural disaster or civil unrest or power outages, or physical network outages, azure pair regions together within the same geography (US, Europe, or Asia) at least 300 miles away.

