

LIKE A BOSS

AZURE CONCEPTS NOTES

AZ 900 TEST PREP



Use these notes to help review testable material for the AZ-900 certification exam.

Azure provides over 100 services that enable you to do everything from running existing applications on VMs to exploring new software paradigms like AI and Serverless.

Here are the most commonly used categories of services in Azure:

- Compute
- Networking
- Storage
- Mobile
- Databases
- Web
- Internet of Things
- Big Data
- Artificial Intelligence
- DevOps

AZURE INFRASTRUCTURE HIGHLIGHTS: GEOGRAPHIES, REGIONS, ZONES.

Azure divides the world into geographies that are defined by geopolitical boundaries or country borders. An Azure geography is a discrete market typically containing two or more *regions* that preserve data residency and compliance boundaries.

Right now there are four geographies:

- Americas
- Europe
- Asia Pacific
- Middle East and Africa

A **region** is a geographical area on the planet containing at least one, but potentially multiple *datacenters* that are nearby and networked together with a low-latency network.

Some examples of regions:

- Central US
- East US 2
- West Europe
- France Central

Each of the regions above also have at least three **availability zones**. Availability Zones (AZs) are physically separate datacenters within an Azure region. Each AZ is made up of one or more datacenters equipped with independent power, cooling, and networking. Interruptions in one availability zone (e.g. a storage device failure) do not impact other AZs. Each AZ has very low latency with other AZs in the region.

For even further redundancy, Azure offers **region pairs**, which is when one region is paired with another region within the same geography (such as US, Europe, or Asia) at least 300 miles away. Region pairs reduce the likelihood of interruptions in case of major disaster.

HIERARCHY WITHIN AZURE

Setting up Azure begins with signing up with an account, which establishes the Azure Active Directory **tenant**. All hierarchy items that follow exist within this Azure tenant...

A **subscription** is a *billing entity*. It's an agreement with Microsoft to use one or more Microsoft cloud platforms or services, for which charges accrue based on either a per-user license fee or on cloud-based resource consumption. Organizations (i.e. tenants) can have multiple subscriptions.

NOTE - subscriptions can be moved to other Azure Active Directory tenants.

NOTE - quotas for resources are calculated on a per region basis rather than per subscription.

NOTE - users can be given access to multiple subscriptions

A **resource** is a manageable item that is available through Azure. It's the computing stuff you rent. Examples include virtual machines, storage accounts, web apps, databases, and virtual networks.

A **resource group** (RG) is a logical container that holds related resources for an Azure solution. You decide which resources belong in a resource group based on what makes the most sense for your organization.

NOTE - resources can be moved from subscription to subscription and from RG to RG, but a resource can only belong to one sub and to one RG.

The **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 account.

The Azure free account includes access to a number of Azure products that are free for **12 months, \$200 credit to spend for the first 30 days of sign up**, and access to more than 25 products that are always free.