

Core Cloud Services - Cloud Networking/Connectivity options

What's a virtual network?

A *virtual network* is a logically isolated network on any cloud service provider. Azure virtual networks will be familiar to you if you've set up networks on Hyper-V, VMware, or even on other public clouds. A virtual network allows Azure resources to securely communicate with each other, the internet, and on-premises networks. A virtual network is scoped to a single region; however, multiple virtual networks from different regions can be connected together using virtual network peering.

Virtual networks can be segmented into one or more *subnets*. Subnets help you organize and secure your resources in discrete sections. The web, application, and data tiers each have a single VM. All three VMs are in the same virtual network but are in separate subnets.

Users interact with the web tier directly, so that VM has a public IP address along with a private IP address. Users don't interact with the application or data tiers, so these VMs each have a private IP address only.

You can also keep your service or data tiers in your on-premises network, placing your web tier into the cloud, but keeping tight control over other aspects of your application. A *VPN gateway* (or virtual network gateway), enables this scenario. It can provide a secure connection between an Azure Virtual Network and an on-premises location over the internet.

Azure manages the physical hardware for you. You configure virtual networks and gateways through software, which enables you to treat a virtual network just like your own network. You choose which networks your virtual network can reach, whether that's the public internet or other networks in the private IP address space.

Important Networking Services in Cloud

1. Vnet | VPC
2. Firewall
3. DNS
4. VPN
5. Monitoring
6. CDN
7. Bastion
8. NAT
9. IP