process

Azure DNS works by providing a managed DNS service within the Microsoft Azure cloud. It follows the same fundamental principles as traditional DNS but with the added benefits of integration with Azure services. Here's how Azure DNS works within the Azure ecosystem:

1. **Zone Creation:** You start by creating a DNS zone in Azure. A DNS zone is a container for your DNS records. This is typically done through the Azure portal or Azure CLI.

2. **Record Configuration:** Inside the DNS zone, you configure DNS records. These records specify the mappings between domain names (like www.example.com) and IP addresses or other resources (like mail servers or Azure resources). Common types of DNS records include A records, CNAME records, MX records, and more.

3. **DNS Query Resolution:** When a user or a device tries to access a resource associated with your domain name, a DNS query is generated. The query is sent to Azure DNS servers for resolution.

4. **Azure DNS Resolution:** Azure DNS servers receive the query and look up the corresponding DNS records in your Azure DNS zone. If there's a match, Azure DNS returns the IP address or resource information associated with the queried domain name.

5. **Caching and TTL:** To improve performance and reduce query load, Azure DNS may cache resolved records for a certain period based on the Time to Live (TTL) value specified in the DNS record. This reduces the need to look up the same records repeatedly for frequently visited sites.

6. **Global Network:** Azure DNS operates on a global network, ensuring low-latency and high availability for DNS resolution. Azure has DNS servers distributed in various regions worldwide to provide fast responses.

7. **Integration with Azure Services:** Azure DNS seamlessly integrates with other Azure services. For example, you can link your DNS records to Azure-hosted applications and services, like Azure App Service, Azure Virtual Machines, or Azure Front Door, making it easy to point domain names to specific Azure resources.

8. **Private DNS Zones:** Azure DNS also supports private DNS zones, which can be used for internal-only DNS resolution within Azure Virtual Networks. This allows you to resolve resources privately without exposing them to the public internet.

Overall, Azure DNS simplifies DNS management, enhances performance, and integrates well with Azure services. It ensures that your domain names are correctly translated to the appropriate IP addresses when accessing resources hosted in Azure or external to Azure.

---

we are creating a vm by giving a name to that vm. so if i call that vm from another vm. does dns lookup the ip address of that called vm using the name i gave ?

Yes, when you create a virtual machine (VM) in Azure and give it a name, you can use that name to refer to the VM when communicating with it from other VMs within the same Virtual Network.

DNS (Domain Name System) will play a role in resolving the name you've given to the corresponding IP address.

Here's how it works:

1. You create a VM and give it a name, let's say "MyVM."

2. When you create the VM, Azure automatically registers the name "MyVM" in the Azure DNS system. This means that the name "MyVM" is associated with the VM's IP address.

3. If you have another VM in the same Virtual Network and you want to communicate with "MyVM" by name, you can use the hostname "MyVM."

4. When you make a connection from one VM to "MyVM" using the hostname, Azure's DNS system resolves the name "MyVM" to the actual IP address of the target VM, allowing the communication to occur.

This makes it easier to manage and reference your VMs using meaningful names instead of remembering complex IP addresses. DNS plays a crucial role in translating these names into IP addresses to establish network connections within your Azure Virtual Network.