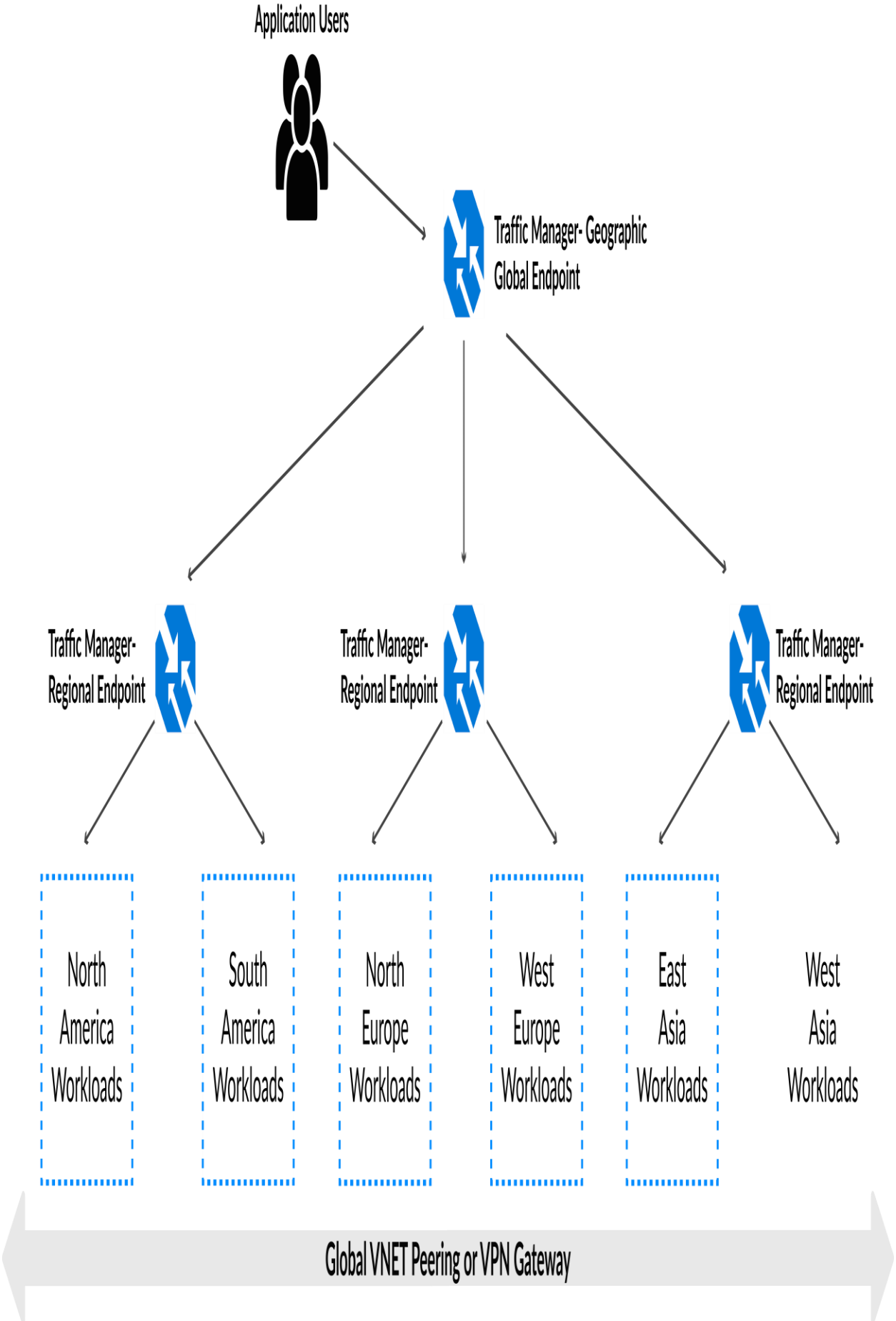
Azure Traffic Manager

Azure Traffic Manager is a global DNS Server hosted in Azure. It is an external DNS solution. It extends the functionality of DNS beyond simple name, IP resolution by adding load balancing and advance features such as geo-fencing, weighted, performance name resolutions.

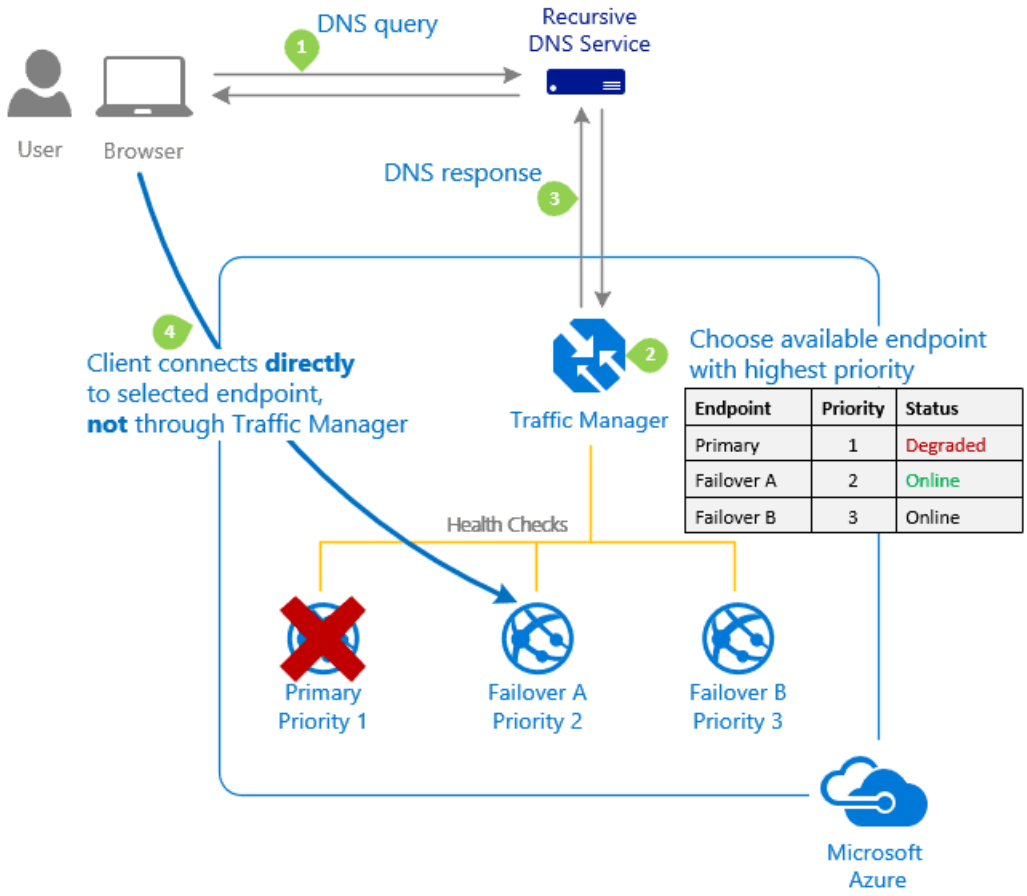
1. What Is Azure Traffic Manager?

Azure Traffic Manager allows you to regulate the distribution of user traffic by using **DNS** to direct requests to the most appropriate service endpoint supported on a **traffic-routing method** and therefore the health of the endpoints.
Azure traffic manager selects an endpoint based on the configured **routing method.** It supports a variety of traffic-routing methods to suit different application needs. After the selection of endpoints, the client is connected directly to the appropriate service point. It also provides endpoint health checks and automatic failover. It also enables you to build a highly available application that is resilient to failure, including the failure of an entire Azure region


Application Users
Traffic Manager- Geographic Global Endpoint
Traffic Manager- Regional Endpoint
Traffic Manager- Regional Endpoint
Traffic Manager- Regional Endpoint
North America Workloads
South America Workloads
North Europe Workloads
West Europe Workloads
East Asia Workloads
West Asia Workloads
Global VNET Peering or VPN Gateway

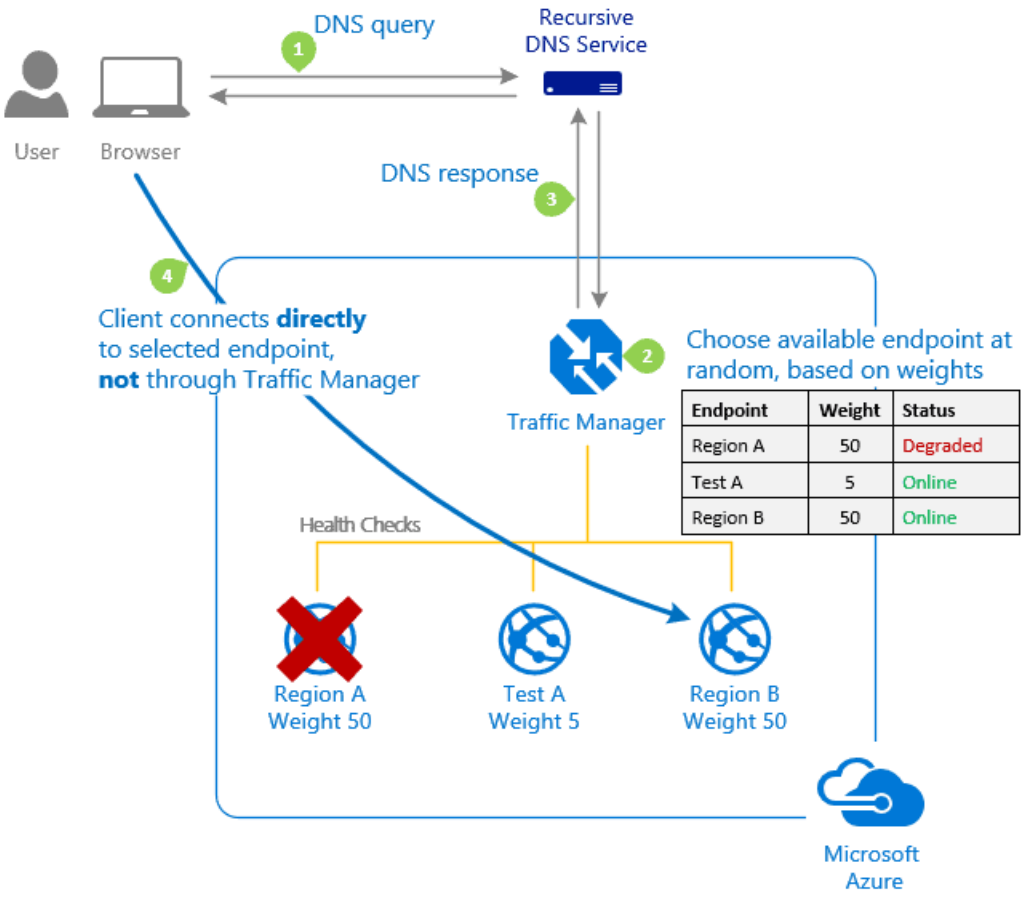
2. Why Do We Use Traffic Manager?

Traffic Manager uses DNS to direct client requests to the most appropriate service endpoint based on a traffic-routing method and the health of the endpoints. An endpoint is any Internet-facing service hosted inside or outside of Azure. It provides a range of traffic-routing methods and endpoint monitoring options to suit different application needs and automatic failover models. It is resilient to failure, including the failure of an entire Azure region.



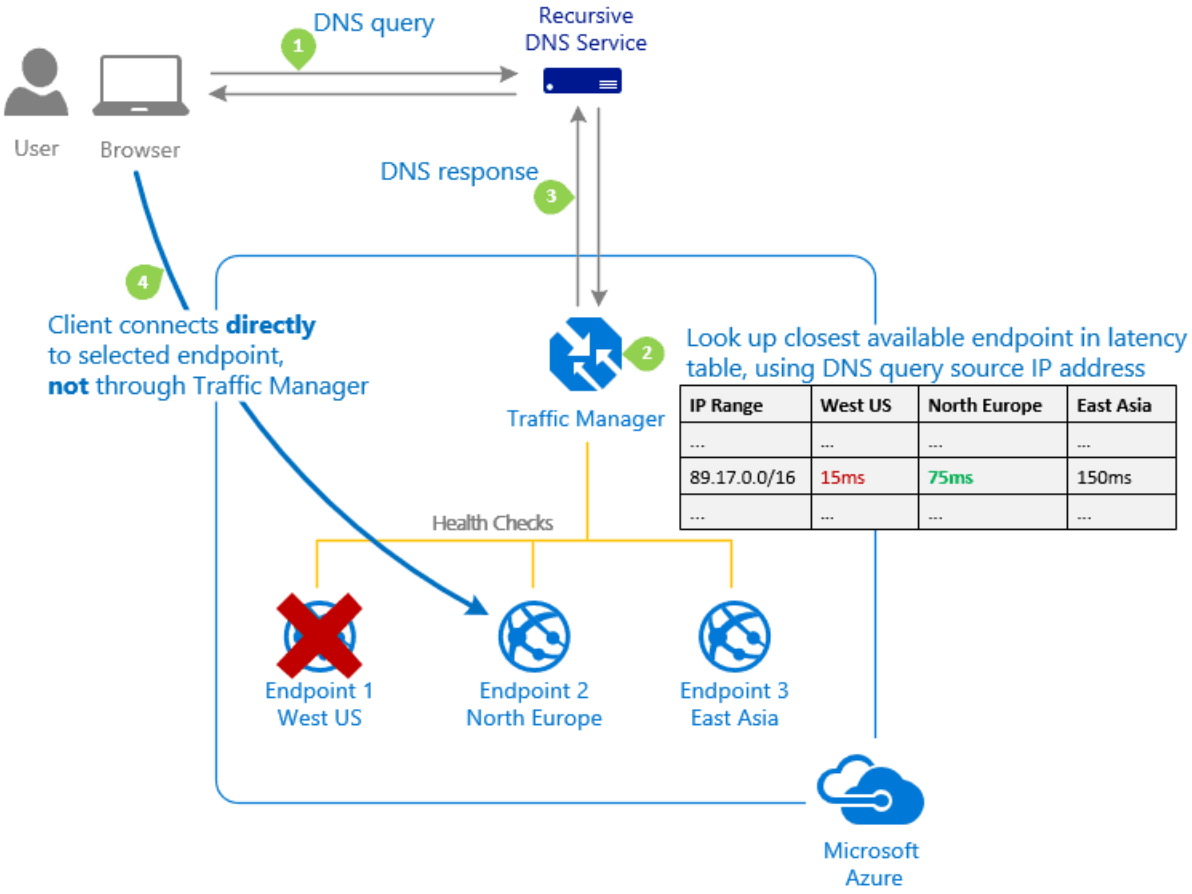
2.) Weighted

The weighted routing method is used when you want to **distribute traffic** evenly or to use **pre-defined** weights across a set of endpoints. In this traffic-routing method, you allocate a weight which is an integer from 1 to 1000, to each endpoint in the Microsoft Azure Traffic Manager profile configuration.



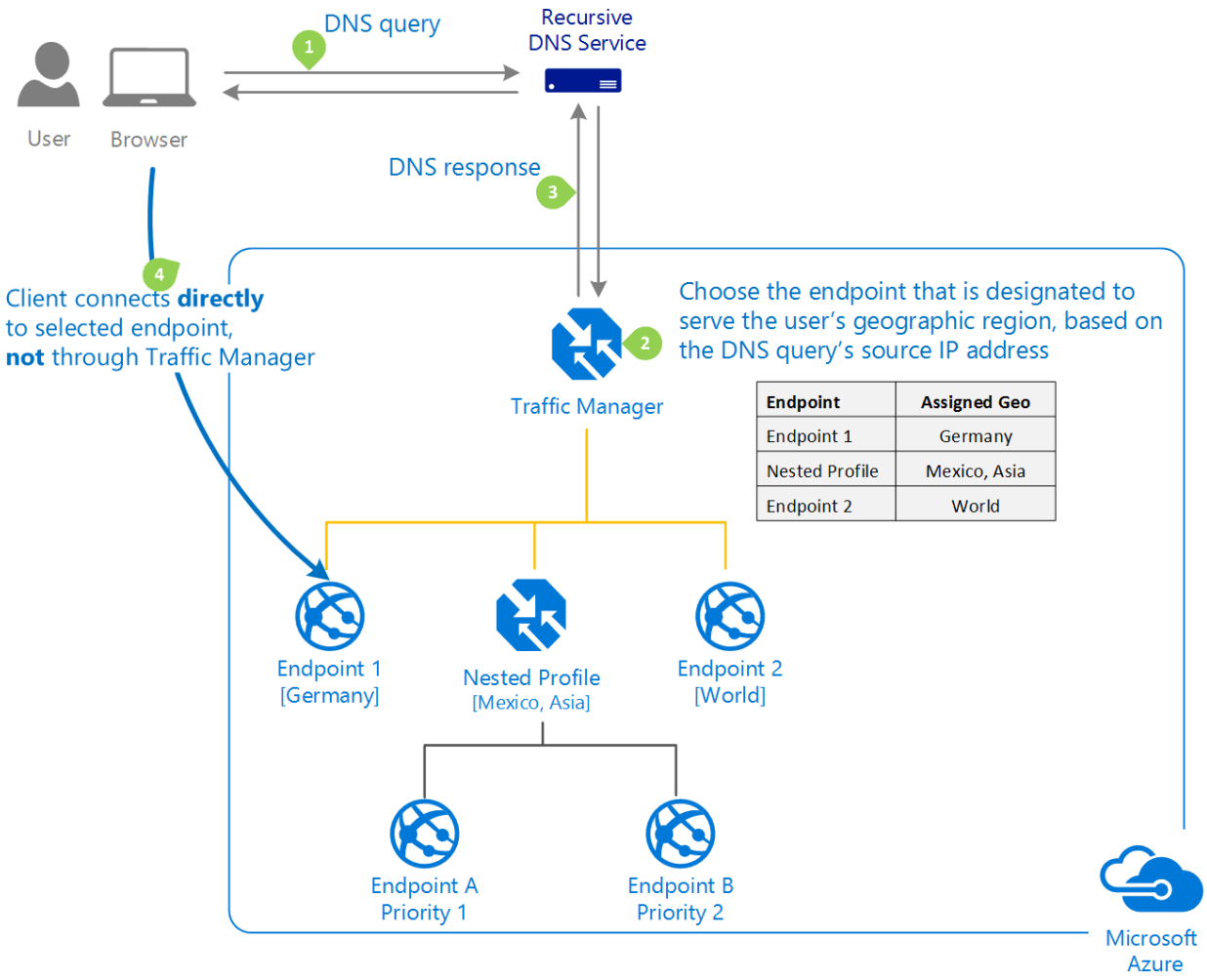
3.) Performance

This traffic routing method is used when you want to **improve the responsiveness** of many applications by routing traffic to the location that is **closest** to the user. The 'closest' endpoint isn't necessarily closest as measured by geographic distance. Instead, the 'Performance' traffic-routing method determines the closest endpoint by measuring **network latency**



4.) Geographic

In Geographic routing, each endpoint associated with that profile must have a set of **geographic regions** assigned thereto. When a region or a set of regions is assigned to an endpoint, **any requests** from those regions get routed only thereto endpoint.



5.) Multivalue

You can select **MultiValue** for Azure Traffic Manager profiles which may only have **IPv4/IPv6** addresses as endpoints. When a question is received for this profile, all healthy endpoints are returned.

6.) Subnet

Select the **Subnet** traffic-routing method to map sets of end-user IP address ranges to a specific endpoint within an Azure Traffic Manager profile. When a request is received, the endpoint returned are getting to be the one mapped for that request's source IP address.

4. Features Of Azure Traffic Manager

Some of the features are discussed below:

1) Increase application availability

It provides high availability for your critical applications by **monitoring your endpoints** and delivering automatic failover when an endpoint goes down.

2) Improve application performance

Azure allows you to run cloud services or websites in data centres located all over the world. It enhances application **responsiveness** by directing traffic to the endpoint with the lowest network latency for the client.

3) Perform service maintenance without downtime

You can perform planned **maintenance operations** on your applications without downtime. It can direct traffic to alternative endpoints while the unkeep is ongoing.

4) Combine hybrid applications

Microsoft Azure Traffic Manager supports external, non-Azure endpoints enabling it to be used with hybrid cloud and on-premises deployments, including the **“burst-to-cloud”, “migrate-to-cloud,” and “failover-to-cloud”** scenarios.

5) Distribute traffic for complex deployments

Using nested Azure Traffic Manager profiles, multiple traffic-routing methods are often combined to make sophisticated and versatile rules to scale to the requirements of larger, more complex deployments.