Network Components

After completing this episode, you should be able to:

- Discuss the various network components that are made available in the cloud

Description: In this episode, you will learn about just some of the network components that are made available virtually in the cloud. These components include application load balancers, network load balancers, application gateways, content delivery networks (CDNs), and firewalls.

Network Components

Application load balancer - A cloud-based application load balancer is a scalable, resilient service deployed in the cloud environment that distributes incoming traffic across multiple backend servers or instances to optimize performance and ensure high availability. By intelligently routing requests based on factors such as server health, proximity, and application-specific rules, it enhances the overall reliability and responsiveness of cloud-based applications.

Network load balancer - A cloud-based network load balancer is a virtual appliance or service deployed in the cloud environment that evenly distributes incoming network traffic across multiple backend resources, such as virtual machines or containers, to ensure efficient utilization and high availability. Leveraging advanced routing algorithms and monitoring capabilities, it dynamically adjusts traffic flow to maintain optimal performance and minimize downtime, enhancing the scalability and reliability of cloud-based networks.

Application gateway - A cloud-based application gateway serves as a centralized entry point for accessing web applications hosted in the cloud, providing secure and controlled access to these applications from external networks. By offering features such as SSL termination, web application firewall (WAF), and content caching, it enhances security, accelerates performance, and simplifies application delivery for users accessing cloud-hosted services.

Content delivery network (CDN) - A content delivery network (CDN) is a distributed network of servers strategically placed across various geographic locations to deliver web content, such as images, videos, and static files, to users with optimal speed and reliability. By caching content closer to end-users and dynamically routing requests based on proximity and server availability, CDNs reduce latency, alleviate network congestion, and improve the overall performance and scalability of websites and web applications.

Firewalls - A cloud-based firewall is a security service deployed in the cloud environment to monitor, filter, and control incoming and outgoing network traffic based on predefined security policies. By inspecting traffic at the application layer and enforcing security rules, it protects cloud-hosted resources from unauthorized access, malicious attacks, and data breaches, providing enhanced security posture and compliance assurance for organizations leveraging cloud infrastructure.

Additional resources

- Azure Front Door: https://azure.microsoft.com/en-us/products/frontdoor (https://azure.microsoft.com/en-us/products/frontdoor)