TECDT90345

Design and implement cloud networks

Overview

This standard is about designing and implementing cloud networks.

Cloud networks enable organisations to deploy and manage applications and services to users in a more efficient and cost-effective manner compared to traditional on-premises solutions. Designing and implementing cloud networks involves creating a scalable, flexible, and secure network infrastructure that provides cloud computing resources using high-performance networks that enable end users to access centrally hosted applications and data.

This standard is for those who need to design and implement cloud networks as part of their duties.

Performance criteria

You must be able to:

1. Engage with cloud architects to produce cloud network specifications in line with organisational requirements
2. Develop plans for implementing cloud network infrastructure in line with cloud network specifications
3. Configure virtual networks, subnets, and routing schemas to produce prototype cloud environments in line with organisational requirements
4. Integrate security measures into cloud network designs to safeguard against cyber security threats
5. Set up load balancing solutions to provide optimal distribution of network traffic
6. Configure load balancing solutions to distribute network traffic and optimise performance in line with organisational procedures
7. Implement traffic management strategies to maintain network performance and availability
8. Incorporate monitoring systems in cloud network designs to track network performance metrics
9. Configure Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP) services in cloud networks to provide network communications
10. Configure Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP) services in cloud networks to facilitate network communications
11. Troubleshoot cloud network issues to identify root causes and implement effective solutions
12. Produce cloud network design and implementation documentation in line with organisational requirements

Knowledge and understanding

You need to know and understand:

1. Cloud networking concepts and technologies
2. Cloud service models including Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS)
3. Industry standard cloud platform solutions and tools and how to configure and apply them
4. How to design cloud network solutions for optimal performance and scalability
5. Cloud deployment models including public, private, hybrid, and multi-cloud architectures
6. How to implement Virtual Private Networks (VPNs) and cloud direct connect solutions to integrate on-premises and cloud environments
7. Cloud network design considerations for Virtual Private Clouds (VPCs) and virtual networks
8. How to provide subnetting and IP Addressing in cloud environments for efficient allocation of network resources
9. Industry standard cloud network components including load balancers, gateways, and routers and how to configure them
10. How to connect on-premises infrastructure to cloud environments for hybrid cloud deployments
11. Domain Name System (DNS) services configuration in cloud environments
12. Traffic management strategies including load balancing, routing, and failover
13. Cloud monitoring tools, metrics, logs, and alerts used for proactive monitoring and detection of network performance issues
14. How to monitor network performance to identify network performance issues
15. How to resolve network performance issues
16. The importance of effective communication with technical and non-technical stakeholders for cloud network implementation
17. How to clearly articulate cloud network designs and configurations to stakeholders
18. How to provide cloud network documentation and reports tailored to audience needs

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