AZ-700T00 - Design and Implement Microsoft Azure Network Solutions

Microsoft - Microsoft Azure - Virtualizzazione e Cloud

Durata:	Lingue:	Certificazione:
3 Giorni	**Italiano**	**Microsoft Certified: Azure Network Engineer Associate**

Descrizione del corso

This course teaches Network Engineers how to design, implement, and maintain Azure networking solutions. This course covers the process of designing, implementing, and managing core Azure networking infrastructure, Hybrid Networking connections, load balancing traffic, network routing, private access to Azure services, network security and monitoring. Learn how to design and implement a secure, reliable, network infrastructure in Azure and how to establish hybrid connectivity, routing, private access to Azure services, and monitoring in Azure.

This course is part of the following Certifications: Microsoft Certified: Azure Network Engineer Associate
Prerequisites

• You should have experience with networking concepts, such as IP addressing, Domain Name System (DNS), and routing
• You should have experience with network connectivity methods, such as VPN or WAN
• You should be able to navigate the Azure portal
• You should have experience with the Azure portal and Azure PowerShell

Programma

Module 1: Azure Networking Fundamentals & VNet Design

- Azure Virtual Network (VNet) design, address space planning e subnetting strategy

ITCore Group
Via Balestra, 12
6900 Lugano (CH)
+41.091.9760019
www.itcoregroup.com

Via Lanino, 36
21047 Saronno (VA)
+39.02.84108669
www.itcoregroup.com

- IP addressing, CIDR, subnet requirements per gateway, firewall, bastion, private endpoints
- VNet peering (regional/global), hub-and-spoke patterns e transit considerations
- Routing basics: system routes, custom routes, route tables e effective routes
- NAT Gateway fundamentals e outbound connectivity patterns

Module 2: DNS & Name Resolution in Azure

- Azure DNS public zones: records, delegation e resolution flow
- Azure DNS private zones: VNet links e split-horizon DNS
- DNS integration per Private Endpoint e service dependencies
- Azure DNS Private Resolver: inbound/outbound endpoints e rulesets
- Troubleshooting DNS: resolution path, conflicts e misconfiguration patterns

Module 3: Hybrid Connectivity: VPN Gateway

- Site-to-Site VPN: gateway types, IPsec/IKE concepts e configuration workflow
- Point-to-Site VPN: tunnel types, client configuration e authentication options
- High availability e resiliency patterns per VPN connectivity
- Routing with VPN: BGP concepts, route propagation e coexistence scenarios
- VPN troubleshooting: connection status, logs, packet flow e common issues

Module 4: ExpressRoute & Advanced WAN Architectures

- ExpressRoute connectivity models, circuit components e peering basics
- Private peering vs Microsoft peering: routing e advertised prefixes
- ExpressRoute gateway integration, route exchange e BGP troubleshooting
- Azure Virtual WAN: virtual hubs, hub routing e branch connectivity design

- Interoperability con NVA e secure hub patterns (design-level)

Module 5: Application Delivery: L4/L7 Load Balancing

- Azure Load Balancer (public/internal): rules, probes, inbound NAT e outbound SNAT
- Traffic Manager: routing methods e global traffic distribution concepts
- Application Gateway: listeners, backend pools, HTTP settings e routing rules
- TLS/SSL concepts: termination, end-to-end encryption e certificate handling
- Troubleshooting application delivery: probes, backend health e routing behavior

Module 6: Global Edge & Modern Application Front Door

- Azure Front Door tiers e core architecture (endpoints, origins, routes)
- Routing rules, URL rewrite/redirect e rules engine concepts
- Caching e performance optimization: acceleration e content delivery behavior
- Origin protection patterns con Private Link (design e integration DNS)
- Observability: metrics, logs e diagnosing edge-to-origin issues

Module 7: Private Access to Azure Services

- Private Link e Private Endpoint: lifecycle, approvals e access patterns
- Private Link Service: publishing services e consumer/provider model
- Service Endpoints: use cases, policies e security boundaries
- DNS design per private access: private zones e resolver integration
- Connectivity validation: name resolution, reachability e path verification

Module 8: Network Security, Governance, Monitoring & Troubleshooting

- NSG e ASG: rule design, effective security rules e segmentation
- Azure Firewall: policy concepts, rule collections e routing integration
- WAF on Application Gateway / Front Door: policy, modes e managed rules

- DDoS Protection: protection plans e operational considerations
- Monitoring & troubleshooting: Network Watcher, flow logs, connection monitor, Azure Monitor insights

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