MERCURY

Windows Server DNS, DHCP, IPAM and Remote Access Course

20 – 24 December 2026
Cairo (Egypt)



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Windows Server Networking: DNS, DHCP, IPAM and Remote Access is a 1-week course for infrastructure administrators who run name resolution, address allocation and remote connectivity on Microsoft platforms. You plan addressing, build DHCP and DNS services, track addresses with IPAM and set up DirectAccess and VPN, and leave with an Addressing and Remote Access Design for your site. Mercury Training Center delivers this Windows Server networking course.

About This Course

Outages often trace back to an exhausted DHCP scope, a stale DNS record or a remote access gateway nobody documented. You should already administer Microsoft servers and understand basic IP addressing. You practice in labs that move from address plans to name resolution, remote access and branch connectivity, using hospital, bank and campus layouts.

Who It Is For

- Running DHCP scopes, reservations and failover for user and device addressing.
- Operating DNS zones, forwarders and Active Directory-integrated name resolution.
- Tracking address space and auditing changes across many sites.
- Providing remote and mobile staff with access to internal applications.
- Connecting small offices to headquarters with limited links.

This course is not for readers who need to build and administer servers end to end, who are better served by a broader server administration boot camp, or for those new to TCP/IP, who need an introductory course on IP fundamentals.

Competencies You Will Build

- Address Planning: subnetting IPv4 and allocating IPv6 prefixes for sites and VLANs.
- DHCP Operations: deploying scopes, options, reservations and failover and fixing lease problems.
- Name Resolution: configuring zones, conditional forwarding and AD DS integration.
- Address Tracking: using IPAM to audit and allocate address space.
- Remote Access Design: choosing between DirectAccess, VPN and Web Application Proxy.
- Small Office Connectivity: using DFS and BranchCache to cut traffic over slow links.

What You Will Be Able to Do

By the end of the course you will be able to:

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- Given a site list and device counts, produce an IPv4 subnet plan and an IPv6 prefix plan.
- From a lease exhaustion incident, find the cause and redesign the DHCP scope and failover.
- Using a name resolution fault report, trace the failing query and correct the zone or forwarder.
- From an inventory of address ranges, load them into IPAM and report utilization by site.
- Given a remote workforce requirement, choose and configure DirectAccess or VPN access.

Course Content

Day 1: IPv4 Planning and Troubleshooting

- IPv4 Subnet Planning for Multi-Site Organizations
- IPv4 Host Configuration and Connectivity Troubleshooting with Command-Line Tools
- DHCP Role Overview and Scope Design
- DHCP Deployment, Options, Reservations and Failover
- DHCP Lease and Scope Troubleshooting

Day 2: IPv6 and Name Resolution

- IPv6 Addressing, Prefixes and Host Configuration
- IPv4 and IPv6 Coexistence and Transition Technologies
- DNS Zone Types and Zone Configuration
- Name Resolution Between Zones with Forwarders and Conditional Forwarding
- AD DS Integration and Advanced DNS Settings

Day 3: IPAM and Remote Access

- IPAM Overview and Deployment Options
- Managing Address Spaces and Auditing Changes with IPAM
- Remote Access Role Overview and Planning
- Web Application Proxy Publishing for Internal Applications
- VPN Planning, Protocols and Authentication

Day 4: DirectAccess, Small Offices and Virtualized Fabrics

- DirectAccess with the Getting Started Wizard
- Advanced DirectAccess Infrastructure and Its Upkeep
- DFS and BranchCache for Small Office Sites
- High-Performance Features and Hyper-V Virtual Switch Settings
- Software-Defined Networking, Hyper-V Network Virtualization and Network Controller

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Day 5: Practice on a Site Design

- Address Plan Exercise for a Hospital Campus
- Name Resolution Fault-Finding Exercise on a Bank Domain
- Remote Access Choice Exercise for Field Staff
- Network Discovery and Documentation of the Current Layout
- Completing Your Addressing and Remote Access Design

Case Studies and Exercises

The items below are suggested activities.

- Case study: a hospital campus runs out of DHCP leases when medical devices are added; you redesign scopes and set up failover.
- Case study: a bank's staff cannot reach an internal application after a domain merger; you trace the name resolution path and fix forwarding.
- Exercise: a university needs remote access for staff laptops; you choose between DirectAccess and VPN and list the setup steps.
- Exercise: a retail chain's small stores share a slow link; you plan DFS and BranchCache settings.

What You Take Back

The Addressing and Remote Access Design documents how your site allocates addresses, resolves names and admits remote users. In your first month back you use it to clean up scopes and zones, load ranges into IPAM and propose the remote access option to your manager.

- An IPv4 subnet plan and IPv6 prefix plan.
- DHCP scope, option and failover settings.
- A DNS zone and forwarder map.
- A remote access option comparison with the chosen setup.

Quick Answers FAQ

What should I know before a Windows Server networking course?

You should already administer Microsoft servers, know how to join machines to a domain and understand IP addresses, subnet masks and default gateways. Prior DNS or DHCP setup experience helps but is not required.

How does Windows Server networking training differ from a server administration boot camp?

It covers addressing, name resolution, IPAM and remote access in depth. A server administration boot camp spreads its time across installation, storage, virtualization and identity, with only a short look at these services.

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Should I choose DirectAccess or VPN for Windows Server remote access?

DirectAccess suits domain-joined laptops that should connect automatically without user action, while VPN suits a mix of devices and users who connect on demand. Many sites run both, using VPN for unmanaged devices.

What do I take back from Windows Server DNS, DHCP and IPAM training?

You take back an Addressing and Remote Access Design for your site: subnet and prefix plans, DHCP settings, a DNS zone and forwarder map and a remote access option comparison.

For Your Manager

After the course, the team member will be able to plan IPv4 and IPv6 addressing, run DHCP and DNS reliably, track address space with IPAM and set up remote access. They return with an Addressing and Remote Access Design, first used to clean up scopes and zones and to propose a remote access option for staff.