

# CompTIA NET+ Cert, Part 05 of 17: TCP/IP Services

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**Meet the expert:** Patrick Loner has certifications for MCSA, MCSE, MCITP, A+, Network+, Security+, and more. He has been working as a Microsoft Certified Trainer, network administrator, and network consultant for over ten years. He has over a decade of experience working with and teaching about Windows networks with client and server operating systems. He has guided many students toward Microsoft and CompTIA certifications. Most recently, he has worked as a freelance trainer and network consultant specializing in Windows Server 2008 and Microsoft Exchange 2007 and Exchange 2010 implementations, design, and upgrades. Patrick continues to branch out now working with and training on Windows Server 2012, Windows 8, Exchange 2013, and System Center Configuration Manager 2012.

**Prerequisites:** This course assumes the user has some experience with computer hardware, software, and understands the concept of a computer network. The user should have viewed CompTIA NET+ Cert: TCP/IP Addressing and Data before taking this course.

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**Course description:** This course is full of practical information and knowledge that you can use every day. Assigning IP addresses is of prime importance and you will know what can be done both statically and dynamically using a protocol like DHCP. You also know that name resolution services like DNS provide the ability for users to utilize user friendly names in place of numerical IP addresses. The user doesn't have to know what is going on behind the scenes but you do, and you need to understand how to troubleshoot it if things don't go right. You will learn about various TCP/IP protocols and utilities that are used for both configuration as well as diagnosis. You will be able to put this knowledge to use right away in any network that you encounter.

## Course outline:

### Assign IP Addresses

- Introduction
- Static & Dynamic IP Addressing
- Static IP Address Assignment
- DHCP
- The DHCP Lease Process
- The DHCP Lease Process (Cont.)
- APIPA
- IP Configuration Utilities
- The ping Command
- Ports
- Sockets
- Summary

- Demo: DNS Server
- The DNS Hierarchy
- The DNS Name Resolution Proc.
- Summary

- LDAP
- Zeroconf
- Summary

### TCP/IP Utilities

- Introduction
- The tracert Command
- The pathping Command
- The pathping Command (Cont.)
- The MTR Utility
- Demo: Tracert Utility
- Summary

### Assign IP Addresses Demo

- Introduction
- Demo: Assigning IP Addresses
- IP config
- IP parameters
- IP config all
- Ping address
- IP properties
- Summary

### TCP/IP Protocols and Services

- Introduction
- FTP
- NTP
- SMTP
- POP3
- IMAP4
- NNTP
- HTTP
- HTTPS
- NFS
- SSH
- SCP
- Telnet
- SMB

### Name Resolution Services

- Introduction
- Host Names
- DNS
- Types of DNS Records