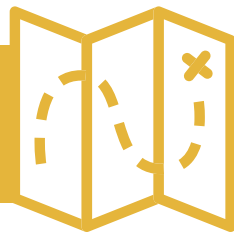


STUDY PLAN



# CompTIA Network+ (N10-007)

Total Videos: **228** Time: **21 hrs**

## STUDY STRATEGIES

Learners use a great variety of strategies to attack their training. Here are some options you can choose from to get the most out of your training experience:

Proceed through all CBT Nuggets video training on double-speed to develop a strong overview of the material; Then proceed through all the training for a second time, taking good notes and focusing on deeper learning.

**OR**

Proceed through all CBT Nuggets video training, taking good notes and focusing on deep learning on the first pass; Then proceed back through all training a second time, using double-speed when appropriate.

Supplement all video training with book study and practical application of knowledge.

Develop a test environment where new skills can be practiced.

Learn more about how to get all you can out of your practice exam experience from a quick video by Keith Barker



## PRACTICE EXAM STRATEGIES

CBT Nuggets offers practice exams as part of your subscription. You can take the practice exams as many times - and as often - as you like! Here are some tips to help you take full advantage of this excellent resource:

### ! PLAN TO TAKE THE PRACTICE EXAM 3 TIMES

#### FIRST EXAM

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Create a baseline against which you can measure your progress with future exams.

Identify areas of weakness in order to direct your training as you move forward.

#### SECOND EXAM

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Measure your progress since your first practice exam! Ask yourself: Are you retaining the information and material you learned at the beginning of your training? Are there areas to which you should return now to ensure your understanding before moving forward?

The results from your second practice exam experience should help you identify areas where you may need to spend extra effort and energy in the training ahead.

#### THIRD EXAM

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Measure your progress against your first two practice exams! Ask yourself: Are you scoring 90% by now? If so, you might be ready for the real thing!

Allow the results from your practice exam to direct your review ahead of your certification exam. Ask yourself: Are you retaining all the material? And are you understanding it well?

Course module title

KEY

### Ethernet Switching:

14 min.

25. STP Reacting to a Network Change

6 min.

The duration of the video.

26. Design Considerations and PoE

5 min.

27. Switch Port Mirroring

3 min.

The number and title for each video corresponds to the number and title you will find on the CompTIA Network+ N10-007 course page online (and on your mobile device).

### EXTRA MILE

The Extra Mile section of your study plan challenges you to dig a little deeper with your training. The Extra Mile might be a textbook recommendation, supplemental materials downloads, or other resources to help you take your training to the next level. Nothing in the Extra Mile is required, but it is here to help you learn.

# CompTIA Network+ N10-007

WEEK 1

## OSI Layers, Ports & Protocols: 58 min.

- 1. A Tale of Two Kings 6 min.
- 2. The 7 Layers of the OSI Model 6 min.
- 3. TCP/IP Suite Layers 6 min.
- 4. Core TCP/IP Protocols 6 min.
- 5. Wireshark Views of Core TCP/IP Protocols 5 min.
- 6. How Ports Are Used in TCP/IP 7 min.
- 7. Verifying L4 Ports with Wireshark 4 min.
- 8. Common Protocols and Their Well-known Ports 6 min.
- 9. TCP's Three-way Handshake 6 min.
- 10. Wireshark Verification of a TCP 3-Way Handshake 6 min.

## Ethernet Switching: 55 min.

- 11. Properties of Network Traffic 6 min.
- 12. Layer 2 Ethernet Addresses 5 min.
- 13. How a Layer 2 Switch Works 6 min.
- 14. Demonstration: Switch Dynamic Learning 4 min.
- 15. Understanding VLANs 4 min.
- 16. Configuring a VLAN 6 min.
- 17. Overview of 802.1Q and Trunks 6 min.
- 18. Configuring an 802.1Q Ethernet Trunk 6 min.
- 19. How Address Resolution Protocol (ARP) Operates 6 min.
- 20. Predicting the MAC Address Table 6 min.

## Ethernet Switching, cont.: 19 min.

- 21. Validating MAC Address Table Predictions 4 min.
- 22. Game: Predict MAC Table After PC1 Pings PC4 5 min.
- 23. Game: Predict MAC Table After PC3 Pings PC5 5 min.
- 24. Switching Loops and Spanning Tree Protocol (STP) 5 min.

### EXTRA MILE

Take the Practice Exams! Use the results to drive your ongoing study.\*

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\*Keep in mind that you've just started the training so you probably won't ace the exam. This is just to establish a benchmark for future practice exam performance.

**Ethernet Switching, cont.:****14 min.**

25. STP Reacting to a Network Change	6 min.
26. Design Considerations and PoE	5 min.
27. Switch Port Mirroring	3 min.

**IP Routing and Forwarding:****61 min.**

28. Introduction to IP Routing	6 min.
29. How to Train a Router	5 min.
30. Options for Static Routes	6 min.
31. Configuring Static Routes	5 min.
32. Dynamic Routing Protocol Overview	5 min.
33. Dynamic Routing Protocol Demonstration	3 min.
34. Address Translation with PAT	5 min.
35. One-to-one Translations with NAT	4 min.
36. Using Wireshark to Verify IP Translations	5 min.
37. Access Control Lists	6 min.
38. ACL Demonstration	5 min.
39. Enterprise Network Forwarding	6 min.

**IP Addressing and Subnetting:****12 min.**

40. IPv4 Overview	6 min.
41. Binary Basics	6 min.

**IP Addressing and Subnetting, cont.:****50 min.**

42. Converting Decimal to Binary	6 min.
43. Converting Binary to Decimal	6 min.
44. The IP Mask	6 min.
45. Practice Using a Different IP Mask	5 min.
46. Borrowing Host Bits	16 min.
47. Practicing the Finger Game	5 min.
48. Identifying New Subnets	6 min.

**EXTRA  
MILE**

Download CBT Nuggets apps to your various devices so you can have your training with you when you're on the go!

**IP Addressing and Subnetting, cont.:** **44 min.**

49. Exercise 1: Identify the New Subnets	6 min.
50. Exercise 2: Identify the New Subnets	3 min.
51. ID Valid Host Addresses on a Subnet	6 min.
52. Exercise 1: ID Valid Host Addresses	6 min.
53. Exercise 2: ID Valid Host Addresses	6 min.
54. Calculate the Number of Hosts per Subnet	6 min.
55. Determine the Subnet Based on a Host's IP Address	6 min.
56. Planning and Assigning IP Addresses	6 min.
57. Test Your IPv4 Knowledge Lab	11 min.
58. IPv6 Concepts	6 min.

**Network Topologies:** **29 min.**

59. Wired Topologies	7 min.
60. Wireless Topologies	5 min.
61. Types of Networks	6 min.
62. Introducing the Internet of Things (IoT)	6 min.
63. Internet of Things (IoT) Technologies	5 min.

**Wireless Technologies and Configurations, cont.:** **45 min.**

65. Understanding Radio Frequency	7 min.
66. Understanding Radio Channels	9 min.
67. Wireless Communication Technologies	7 min.
68. Designing for Wireless Speed and Coverage	9 min.
69. Understanding Wireless Antennas	6 min.

**EXTRA  
MILE**

Create flashcards to aid in your learning. Or, use flashcard services out there like [quizlet.com](https://quizlet.com) to ensure you are getting all that you can out of your training!

**Wireless Technologies and Configurations, cont.:** 8 min.

70. Wireless Performance Improvements 8 min.

**Cloud Concepts:** 27 min.

71. Types of Services 6 min.

72. Cloud Delivery Models 4 min.

73. Connectivity Methods 6 min.

74. Security Implications/Considerations 6 min.

75. Local and Cloud Resource Relationships 5 min.

**Network Services:** 34 min.

76. DHCP Overview 6 min.

77. Verify DHCP with Wireshark 4 min.

78. DNS Overview 4 min.

79. DNS Methods, Records, and Design Options 6 min.

80. DNS Testing and Validation 4 min.

81. Network Time Protocol (NTP) 6 min.

82. IP Address Management (IPAM) 4 min.

**Deploying Appropriate Cabling Solutions:** 34 min.

83. Copper Network Media Types 8 min.

84. Fiber Network Media Types 7 min.

85. Network Termination Points 10 min.

86. Network Transceivers 9 min.

**Device Placement and Configuration:** 32 min.

87. Network Device Placement 6 min.

88. Device Configuration Overview 6 min.

89. Configure Switch Ports Lab 7 min.

90. Configure IP Addresses Lab 6 min.

91. Configure IP Routing Lab 7 min.

**EXTRA  
MILE**

Join the [CBT Nuggets Learners Community](#) on Slack! Join other CBT Nuggets learners in a community where you can post questions, share study resources, and connect with IT experts from all over the world.

\*Please allow 48 hours for your request to join the to be processed.

**Device Placement and Configuration, cont.:** 20 min.

92. Configuring DHCP Services Lab	6 min.
93. Configuring a VLAN Interface Lab	7 min.
94. Configuring NAT Lab	7 min.

**Advanced Networking Devices:** 43 min.

95. Multi-Layer Switch Overview	6 min.
96. Configure Multi-Layer Switch: Lab	6 min.
97. Load Balancer Overview	4 min.
98. IDS and IPS	6 min.
99. Proxy Servers and Content Filtering	4 min.
100. Security Network Devices	5 min.
101. AAA/RADIUS Server	4 min.
102. VoIP PBX and Gateway	4 min.
103. Wireless Controller	4 min.

**Virtualization & Network Storage:** 21 min.

104. Hypervisor Introduction	6 min.
105. Virtual Networking Components	5 min.
106. Creating a Virtual Switch and VM Lab	4 min.
107. Network Storage	6 min.

**WAN Technologies:** 50 min.

108. Understanding the LAN, MAN, and WAN Difference	6 min.
109. WAN Transmission over Copper, Fiber, Wireless, and Satellite	4 min.
110. WAN Types - ISDN/PRI, T1-T3, E1-E3, and OC	11 min.
111. WAN Types - Cable, DSL, Dial-up	7 min.
112. WAN Characteristics - Frame Relay, ATM, MPLS, and DMVPN	9 min.
113. What is PPP and PPPoE?	6 min.
114. What is SIP Trunking?	7 min.

**EXTRA  
MILE**

Retake the Practice Exams! Use the results to drive your ongoing study.\*

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\*Generally speaking, you should be able to score about 90% on the practice exams if you expect to succeed on your certification exam.



**WAN Technologies:, cont.:****5 min.**

115. The Physical Reality of a WAN Connection

5 min.

**Network Diagram & Documentation:****58 min.**

116. Network Documentation is Fun!

6 min.

117. Creating Logical Network Diagrams

6 min.

118. Creating Physical Diagrams

6 min.

119. Naming Conventions and Labeling

8 min.

120. Documenting Wiring and Port Locations

6 min.

121. SOPs and Work Instructions

7 min.

122. Network Change Management

6 min.

123. Configuration and Monitoring Baselines

8 min.

124. Inventory Management

5 min.

**Business Continuity:****51 min.**

125. Availability Concepts

6 min.

126. Load Sharing and Balancing

6 min.

127. Power Management

3 min.

128. Site Recovery Options

6 min.

129. Backups

8 min.

130. Backup and Restore Hands On Lab

15 min.

131. MTTR and MTBF

4 min.

132. SLA Requirements

3 min.

**Scanning, Monitoring & Patching:****23 min.**

133. Scanning Overview

3 min.

134. Network Scanning Methodology

4 min.

135. Port Scanning and Discovery

5 min.

136. OS Discovery and Fingerprinting

6 min.

137. Motivators for Vulnerability Management

5 min.

**EXTRA  
MILE**

Download and review the [CompTIA Network+ exam objectives](#). Use the exam objectives to guide your training in the weeks ahead!

**Scanning, Monitoring & Patching: , cont.:** **56 min.**

138. Vulnerability Scanning	5 min.
139. Logging and Review	6 min.
140. Packet and Traffic Analysis	5 min.
141. Packet Capture and Analysis Lab	11 min.
142. Remediation and Patch Management	6 min.
143. Network Scanning with NMAP and Zenmap Lab	18 min.
144. Baselines	5 min.

**Remote Access Methods:** **26 min.**

145. Telnet and SSH for CLI Remote Access	5 min.
146. HTTPS Management URLs	4 min.
147. VPNs	6 min.
148. Remote Desktop Access	5 min.
149. Out-of-Band Management	6 min.

**Identify Policies & Best Practices:** **21 min.**

150. Privileged User Agreement	5 min.
151. Password Policy	4 min.
152. On-boarding and Off-boarding	7 min.
153. Licensing Restrictions	5 min.

**Identify Policies & Best Practices, cont.:** **34 min.**

154. International Export Controls	4 min.
155. Data Loss Prevention	5 min.
156. Remote Access Policies	4 min.
157. Incident Response Policies	6 min.
158. Bring Your Own Device (BYOD)	6 min.
159. Acceptable Use Policy (AUP)	4 min.
160. Non-disclosure Agreements (NDA)	5 min.

**EXTRA  
MILE**

Learn [what to expect](#) on your exam:  
 You need to earn **720** to pass the exam  
 You will have a maximum of **90 minutes** to complete your exam.

**Identify Policies & Best Practices, cont.:** **8 min.**

- |                                     |        |
|-------------------------------------|--------|
| 161. System Life Cycle              | 5 min. |
| 162. Safety Procedures and Policies | 3 min. |

**Physical Security & Network Attacks:** **89 min.**

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|---|--------|
| 163. Let's Break into a Data Center             | 3 min. |
| 164. Video Surveillance and Motion Detection    | 6 min. |
| 165. Badges and Smart Cards                     | 6 min. |
| 166. Biometrics                                 | 6 min. |
| 167. Locks, Asset Tags, and Tamper Detection    | 6 min. |
| 168. DoS and PDoS (Permanent Denial of Service) | 5 min. |
| 169. DDoS (Distributed Denial of Service)       | 5 min. |
| 170. DDoS with ICMP and Smurfing                | 4 min. |
| 171. DDoS with DNS and NTP                      | 4 min. |
| 172. Let's Go Phishing                          | 5 min. |
| 173. Social Engineering and Insider Threats     | 5 min. |
| 174. Ransomware and Scareware                   | 5 min. |
| 175. Cryptolocker and Logic Bombs               | 6 min. |
| 176. DNS Spoofing (Poisoning)                   | 6 min. |
| 177. Man-In-The-Middle with ARP Spoofing        | 6 min. |
| 178. Wardriving and Deauthentication            | 6 min. |
| 179. Evil Twins and Rogue Access Points         | 5 min. |

**Authentication & Access Control:** **29 min.**

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|--|--------|
| 180. AAA                                   | 6 min. |
| 181. Multi-factor Authentication Overview  | 5 min. |
| 182. Using Two-Factor Authentication (2FA) | 5 min. |
| 183. Implementing 2FA                      | 6 min. |
| 184. Switch Port Security                  | 3 min. |
| 185. Access Control Methods                | 4 min. |

**Basic Wireless Network Security:** **14 min.**

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|--|--------|
| 186. The Wireless Security Evolution                 | 7 min. |
| 187. Wireless Authentication and Authorization Types | 7 min. |

**"Success is the sum of small efforts, repeated day in and day out."**

*- R. Collier*

**Mitigation Techniques: 60 min.**

188. Network Device Hardening	6 min.
189. Hardening a Windows Server System	5 min.
190. Signature Management	4 min.
191. File Integrity Monitoring	5 min.
192. Privileged User Accounts and Role Separation	6 min.
193. Network Segmentation	5 min.
194. Switch Port Protections	7 min.
195. The Native VLAN	5 min.
196. Filtering with Access Control Lists (ACLs)	7 min.
197. Honeypots and Honeynets	4 min.
198. Penetration Testing	6 min.

**Troubleshooting Methodology: 30 min.**

199. A Network Troubleshooting Methodology	5 min.
200. Identify the Problem	5 min.
201. Establish a Theory of Probable Cause	6 min.
202. Test the Theory to Determine the Root Cause	4 min.
203. Establish a Plan of Action to Solve the Problem	5 min.
204. Problem Solving, Verification, and Documentation	5 min.

**Network Troubleshooting: 45 min.**

205. Hardware Tools	9 min.
206. Software Tools	9 min.
207. Using CLI Network Tools: ipconfig, ping, arp	9 min.
208. Using CLI Network Tools: nslookup, dig	8 min.
209. Using CLI Network Tools: tracert, pathping, nmap, route	10 min.

**"When you link desire with effort you can accomplish extraordinary things and lead an extraordinary life."**

*- Michael Josephson*

**Network Troubleshooting: 7 min.**

210. Using CLI Network Tools: ifconfig, iptables, tcpdump, and netstat 7 min.

**Wired Connectivity & Performance Issues: 51 min.**

211. Attenuation, Latency, and Jitter 6 min.  
 212. Crosstalk, EMI, Open/Short 6 min.  
 213. Incorrect Pin-Outs or Cable Types 5 min.  
 214. Mismatched and Damaged Cables 4 min.  
 215. Bad Ports and LED Status Indicators 5 min.  
 216. Duplex and Speed Mismatches 5 min.  
 217. VLAN Mismatches 8 min.  
 218. Native VLAN Mismatches 6 min.  
 219. Bottlenecks 6 min.

**Troubleshooting Wireless: 30 min.**

220. The Nature of Airwaves 7 min.  
 221. Fighting Frequencies 9 min.  
 222. Understanding Antenna Types 6 min.  
 223. Misconfigurations 8 min.

**Common Network Service Issues: 31 min.**

224. Troubleshooting Name Resolution 7 min.  
 225. Troubleshooting MAC Addressing 6 min.  
 226. Troubleshooting IP Addressing 6 min.  
 227. Troubleshooting Security Settings 6 min.  
 228. Troubleshooting Miscellaneous Service Issues 6 min.

**EXTRA MILE**

Retake the Practice Exams! Use the results to drive your ongoing study.

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\*One last time! Use your final practice exam results to identify areas where you need to brush up ahead of your exam.

## THE BIG DAY!

Take the exam.



Brag about it! Tweet us or let us know how your exam went and what you're doing to celebrate your success!