

Name: _____

Date: _____

Score: _____

NordVPN Security

Examining NordVPN security features including NordLynx protocol, Double VPN, Onion Over VPN, Threat Protection, zero-logs audits, and military-grade AES-256 encryption.

NORDVPN SECURITY LEARNING OVERVIEW

LEARNER

STUDENT STATUS

Network Defender Track

SECURE

CONNECTION STATUS

Shielding data packets

100%

LEAK DEFENSE

DNS & IPv6 leak protection

Welcome! This activity packet guides you through NordVPN's security features. You will explore proprietary NordLynx, diskless RAM nodes, Double VPN cascades, and independent zero-logs audits.

WORKSHEET CHECKPOINTS

- ☐ **Part 1-4:** Master VPN and network security configurations.
- ☐ **Part 5-7:** Solve crossword & word search puzzles.
- ☐ **Part 8-9:** Solve case studies & cipher challenge.
- ☐ **Part 10:** Review basic & advanced FAQ pages.
- ☐ **Part 11:** Explore 10 interesting real-world facts.

Open the VPN.com Best VPNs Guide

URL: <https://www.vpn.com/vpn/nordvpn-security/>

Your NordVPN Security Learning Roadmap

- Analyze the technical architecture and configuration rules of NordVPN Security.
- Configure client settings to prevent IP, DNS, and WebRTC traffic leaks.
- Compare custom pricing, trial, and performance features against standard models.

NORDVPN SECURITY GUIDE INSTRUCTIONS

Answer the multiple choice and true/false questions, complete the fill-in-the-blank sentences using the word bank, match definitions, and solve the crossword and word search puzzles. Apply your knowledge to proprietary encryption protocols and RAM-only server nodes.

PROPRIETARY NORDLYNX PROTOCOL & VULNERABILITY MITIGATIONS (INTRODUCTION)

NordVPN's custom NordLynx protocol integrates WireGuard with a double NAT system to ensure speed without storing user data. Their infrastructure runs on diskless RAM-only hardware, backed by regular Cure53 and Deloitte zero-log audits.

READ EACH CHECKPOINT CAREFULLY AND SELECT OR WRITE THE CORRECT RESPONSE.

Checkpoint 1: Multiple Choice Challenge

1 What is NordVPN's proprietary connection protocol?

- ☐ A) OpenVPN
- ☐ B) NordLynx
- ☐ C) IKEv2
- ☐ D) Lightway

2 Which architecture runs servers strictly in volatile RAM?

- ☐ A) Dual NAT
- ☐ B) Meshnet
- ☐ C) Diskless RAM Tiers
- ☐ D) Split Tunneling

3 Which feature blocks ads, trackers, and malware domains?

- ☐ A) Double VPN
- ☐ B) NordLynx
- ☐ C) Threat Protection
- ☐ D) Onion Over VPN

4 How does Double VPN enhance transmission security?

- ☐ A) Chains Two Servers
- ☐ B) Doubles Bandwidth
- ☐ C) Compresses Packets
- ☐ D) Bypasses ISP Taxes

5 Which independent firm audited NordVPN's zero-logs policy?

- ☐ A) Cure53
- ☐ B) PricewaterhouseCoopers
- ☐ C) Deloitte
- ☐ D) Deloitte / PwC

Checkpoint 2: True or False Challenge

6 Question 6

NordLynx is built directly on top of the WireGuard protocol.

☐ True ☐ False

7 Question 7

Threat Protection requires an active VPN connection to run.

☐ True ☐ False

8 Question 8

Dedicated IPs bypass the shared pool, reducing security isolation.

☐ True ☐ False

9 Question 9

The App Kill Switch blocks system-wide traffic if a tunnel drops.

☐ True ☐ False

10 Question 10

NordVPN servers are progressively migrated to diskless RAM nodes.

☐ True ☐ False

Checkpoint 3: Key Term Insertion

Read each sentence below and fill in the blank with the correct term from the Word Bank.

1. The custom WireGuard-based connection protocol is named _____ by NordVPN.
2. Data is protected from local hardware seizure using diskless _____ nodes.
3. Malware and invasive trackers are blocked using the built-in _____ feature.
4. Routing traffic through two encryption nodes is achieved via _____ tunnels.
5. PwC and Deloitte validated NordVPN's strict, zero-retention _____ policy.
6. Internet access is cut immediately during tunnel drops via the _____ failsafe.
7. Safe LAN-like connections can be built across devices using _____ routing.
8. Data payload security is enforced using AES-256 and ChaCha20 _____ encryption.

VOCABULARY WORD BANK

NORDLYNX
ZEROLOGS

RAMNODES
KILLSWCH

THREATPT
MESHNETZ

DOUBLEVP
CIPHERSX

Write your answers here:

- | | | | |
|----|----------------------|----|----------------------|
| 1. | <input type="text"/> | 2. | <input type="text"/> |
| 3. | <input type="text"/> | 4. | <input type="text"/> |
| 5. | <input type="text"/> | 6. | <input type="text"/> |

Checkpoint 4: VPN & Network Concept Match

DEFINITION MATCHING

Match each vocabulary term on the left with its correct definition on the right by writing the corresponding letter (A-H) in the fillable input box.

NORDLYNX

C A local security suite that blocks trackers, ads, and malware.

RAMNODES

H Cryptographic algorithms used to secure payload data.

THREATPT

F A safety feature that cuts traffic when a VPN drops.

DOUBLEVP

A NordVPN's custom protocol built on the WireGuard standard.

ZEROLOGS

G A decentralized routing tool to connect devices directly.

KILLSWCH

D Chaining two VPN servers to encrypt data twice.

MESHNETZ

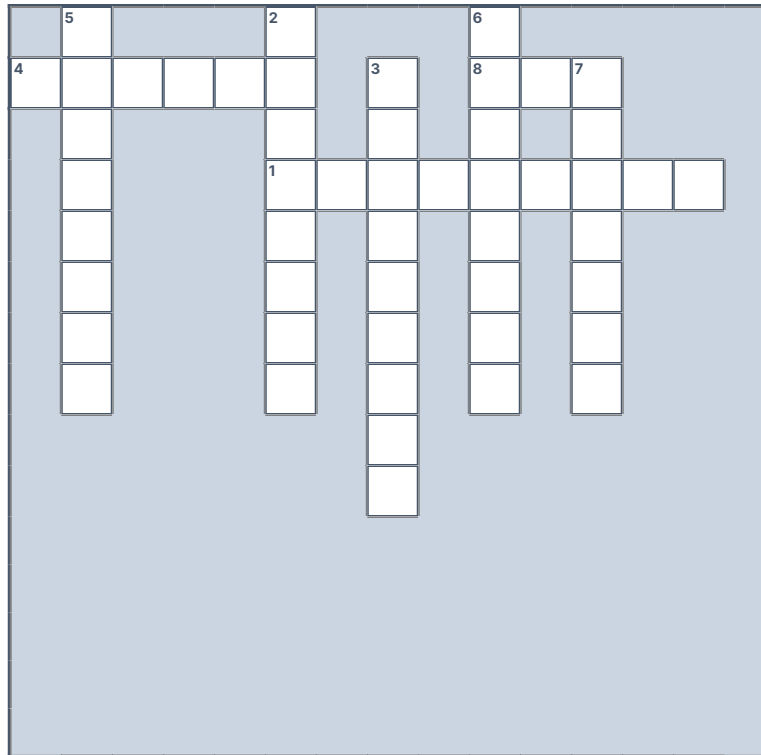
B Volatile memory server hardware that retains no data upon restart.

CIPHERSX

E A strict data retention standard verified by external audits.

Checkpoint 5: Crossword Puzzle

Solve the crossword puzzle by typing letters into the active white boxes. The numbers correspond to the clues below.



ACROSS

1. Process of wrapping data packets inside other packets (9)
4. Remote server that routes traffic and hides your IP (6)
8. Internet Service Provider, logs traffic unless encrypted (3)

DOWN

2. Rules determining how data is sent and encrypted (8)
3. Rate of data transfer across a path (9)
5. Blocking site access based on location (8)
6. Security system that monitors and blocks traffic (8)
7. State of being free from tracking or surveillance (7)

Checkpoint 5 Alternative: Accessible Crossword Clues

Screen-reader and keyboard users can type the crossword answers directly in the text fields below.

ACROSS CLUES

1 Across: NordVPN's custom protocol built on the WireGuard standard. (8 letters):

3 Across: A local security suite that blocks trackers, ads, and malware. (8 letters):

5 Across: A strict data retention standard verified by external audits. (8 letters):

7 Across: A decentralized routing tool to connect devices directly. (8 letters):

DOWN CLUES

2 Down: Volatile memory server hardware that retains no data upon restart. (8 letters):

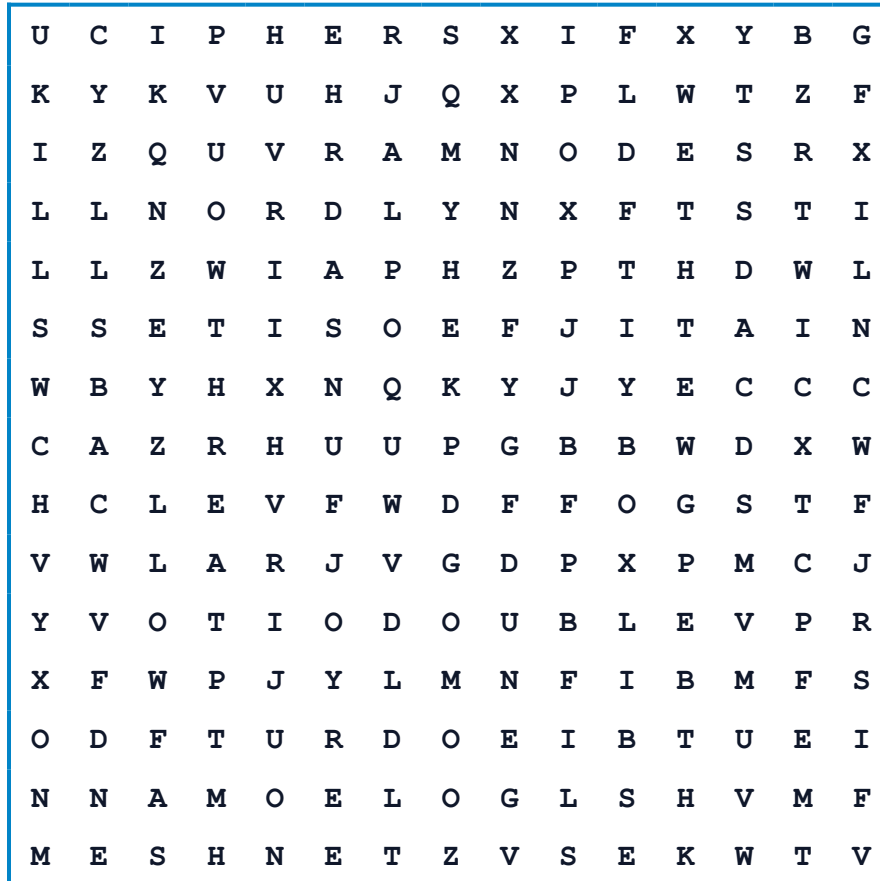
4 Down: Chaining two VPN servers to encrypt data twice. (8 letters):

6 Down: A safety feature that cuts traffic when a VPN drops. (8 letters):

8 Down: Cryptographic algorithms used to secure payload data. (8 letters):

Checkpoint 6: Hidden Word Search

Find the 8 key vocabulary terms hidden in the grid below. Words can be horizontal, vertical, or diagonal.



VOCABULARY WORD LIST

NORDLYNX
ZEROLOGS

RAMNODES
KILLSWCH

THREATPT
MESHNETZ

DOUBLEVP
CIPHERSX

Checkpoint 6 Alternative: Accessible Vocabulary Matching

Match each of the 8 vocabulary terms from the Word Search to its correct definition by writing the letter (A-H) in the blank space.

VOCABULARY TERMS

- A. NORDLYNX
- B. RAMNODES
- C. THREATPT
- D. DOUBLEVP
- E. ZEROLOGS
- F. KILLSWCH
- G. MESHNETZ
- H. CIPHERSX

DEFINITIONS & MATCH FIELDS

- ☐ 1. NordVPN's custom protocol built on the WireGuard standard.
- ☐ 2. Volatile memory server hardware that retains no data upon restart.
- ☐ 3. A local security suite that blocks trackers, ads, and malware.
- ☐ 4. Chaining two VPN servers to encrypt data twice.
- ☐ 5. A strict data retention standard verified by external audits.
- ☐ 6. A safety feature that cuts traffic when a VPN drops.
- ☐ 7. A decentralized routing tool to connect devices directly.
- ☐ 8. Cryptographic algorithms used to secure payload data.

Checkpoint 7: Scrambled Word Challenge

Unscramble the letters below to reveal key Virtual Private Network (VPN) concepts and terms. Write your answers in the input boxes provided.

1. ORDLYNXN

5. EROLOGSZ

2. AMNODESR

6. ILLSWCHK

3. HREATPTT

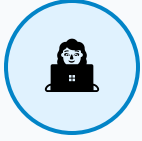
7. ESHNETZM

4. OUBLEVPD

8. IPHERSXC

Checkpoint 8: VPN & Network Case Studies

Apply the concepts you have learned to solve the real-world scenarios below.



CASE STUDY 1: DOUBLE ENCRYPTION DEPLOYMENT

Scenario: A journalist needs to transmit highly sensitive documents from a high-censorship country.

Discussion Question: Which NordVPN server profile should they use to maximize encryption safety?



CASE STUDY 2: MALWARE PREVENTION ON SHARED NETWORKS

Scenario: A remote company wants to prevent employees from downloading malicious files over public Wi-Fi.

Discussion Question: What feature should they keep running in the NordVPN client at all times?

Final Challenge: Decrypting the Cipher

A network engineer secures routing channels and client tunnels. Use the Letter-to-Number key below to decrypt the message by writing the matching letters in the blank spaces.

LETTER-TO-NUMBER ENCRYPTION KEY

A=1	B=2	C=3	D=4	E=5	F=6	G=7	H=8	I=9	J=10	K=11	L=12	M=13
N=14	O=15	P=16	Q=17	R=18	S=19	T=20	U=21	V=22	W=23	X=24	Y=25	Z=26

$\frac{14}{15}$	$\frac{18}{4}$	$\frac{12}{25}$	$\frac{14}{24}$	$\frac{14}{1}$	$\frac{20}{9}$	$\frac{22}{5}$	$\frac{12}{25}$
$\frac{9}{14}$	$\frac{3}{15}$	$\frac{18}{16}$	$\frac{15}{18}$	$\frac{1}{20}$	$\frac{5}{19}$	$\frac{20}{8}$	$\frac{5}{5}$
$\frac{23}{9}$	$\frac{18}{5}$	$\frac{7}{21}$	$\frac{1}{18}$	$\frac{4}{19}$	$\frac{5}{3}$	$\frac{21}{18}$	$\frac{9}{20}$

Decoded cybersecurity message:

TIP: EACH NUMBER REPRESENTS THE POSITION OF THAT LETTER IN THE ALPHABET (E.G. 1 = A, 2 = B, 26 = Z).

Checkpoint 10: Basic VPN FAQs (Part A)

Review the most common questions and answers regarding Virtual Private Networks (VPNs) and tunneling.

Q1: What is NordLynx?

NordVPN's custom protocol built on WireGuard, optimized for speed and security.

Q2: Does NordVPN store logs?

No, NordVPN maintains a strict zero-logs policy audited by Deloitte and PwC.

Q3: What is Threat Protection?

An integrated tool that blocks ads, trackers, and scans downloads for malware.

Q4: What is Double VPN?

A feature that routes your traffic through two separate VPN servers for double encryption.

Q5: How does the kill switch work?

It blocks your device from accessing the internet if the VPN connection drops.

Checkpoint 10: Basic VPN FAQs (Part B)

Review the most common questions and answers regarding Virtual Private Networks (VPNs) and tunneling.

Q6: Are NordVPN servers diskless?

Yes, NordVPN operates a diskless, RAM-only server network to protect user data.

Q7: Where is NordVPN based?

NordVPN is based in Panama, which has no mandatory data retention laws.

Q8: What encryption cipher is used?

AES-256 is used for OpenVPN/IKEv2, while ChaCha20 is used for NordLynx.

Q9: What is Onion Over VPN?

A feature that routes traffic through NordVPN and then the Tor network.

Q10: Does NordVPN protect against leaks?

Yes, NordVPN provides built-in DNS, IPv6, and WebRTC leak protection.

Checkpoint 11: Advanced VPN FAQs (Part A)

Explore advanced technical aspects of VPN tunneling protocols, mobile client integrations, and enterprise deployment.

Q1: How does NordLynx solve privacy?

It uses a double NAT system to assign secure temporary IPs without storing user data on servers.

Q2: How secure is RAM-only hardware?

Since RAM loses all data on reboot, server seizure yields no historical traffic logs.

Q3: What is the App Kill Switch?

Unlike the internet kill switch, it terminates only specified applications if the VPN drops.

Q4: Are NordVPN servers collocated?

Yes, NordVPN is increasing its collocated server count, meaning they own the hardware directly.

Q5: How are security audits conducted?

Independent firms like Cure53 and Deloitte inspect application code and server setups annually.

Checkpoint 11: Advanced VPN FAQs (Part B)

Explore advanced technical aspects of VPN tunneling protocols, mobile client integrations, and enterprise deployment.

Q6: What is the Threat Protection Lite?

A DNS-level blocker for mobile apps, whereas the desktop version runs locally.

Q7: How does Meshnet secure routing?

It creates encrypted point-to-point tunnels between user devices using NordLynx keys.

Q8: Does NordVPN support obfuscation?

Yes, obfuscated servers bypass firewalls by masking VPN traffic as HTTPS packets.

Q9: Is WebRTC leakage prevented?

Yes, NordVPN's private DNS routing prevents browsers from leaking local IPs via WebRTC APIs.

Q10: How does PAN jurisdiction help?

Panama is outside 5/9/14-Eyes alliances and has no legislation forcing data retention.

Part 11: 10 Real-World VPN Facts & Insights

Review real-world facts regarding VPN encryption speeds, protocol audits, mobile connectivity, and enterprise remote work.

1. VPN INSIGHT

NordLynx is NordVPN's proprietary protocol built directly around WireGuard core code.

2. VPN INSIGHT

Panama's jurisdiction has no mandatory data retention laws, preserving user privacy.

3. VPN INSIGHT

Deloitte has independently audited and verified NordVPN's zero-logs implementation.

4. VPN INSIGHT

Threat Protection runs locally to block malicious files, ads, and web trackers.

5. VPN INSIGHT

Double VPN routes packets through two nodes, encrypting the data payload twice.

6. VPN INSIGHT

RAM-only server hardware prevents persistent storage of operational logs or keys.

7. VPN INSIGHT

NordVPN utilizes AES-256-GCM and ChaCha20 ciphers to protect user traffic.

8. VPN INSIGHT

Obfuscated servers mask VPN packet headers to bypass restrictive national firewalls.

9. VPN INSIGHT

Meshnet builds encrypted peer-to-peer networks using local NordLynx configurations.

10. VPN INSIGHT

App-level kill switches terminate selected background processes if a tunnel drops.

Technical References & Sources

The study guide and interactive puzzles are compiled from global technical standards, specifications, and regulatory frameworks.

SCHOLARLY & INDUSTRY REFERENCES

- [1] NordVPN. (2026). Security Architecture & Privacy Protocols. Retrieved from <https://nordvpn.com/features/nordlynx/>
- [2] NordVPN. (2026). Security Architecture & Privacy Protocols. Retrieved from <https://nordvpn.com/features/double-vpn/>
- [3] NordVPN. (2026). Security Architecture & Privacy Protocols. Retrieved from <https://nordvpn.com/features/onion-over-vpn/>
- [4] NordVPN. (2026). Security Architecture & Privacy Protocols. Retrieved from <https://nordvpn.com/features/threat-protection/>
- [5] NordVPN. (2026). Security Architecture & Privacy Protocols. Retrieved from <https://support.nordvpn.com/hc/en-us/articles/19296068205457-What-is-Threat-Protection->
- [6] NordVPN. (2026). Security Architecture & Privacy Protocols. Retrieved from <https://nordvpn.com/features/security-audit/>
- [7] NordVPN. (2026). Privacy Policy & Zero-Logs Commitment. Retrieved from <https://nordvpn.com/privacy-policy/>
- [8] NordVPN. (2026). Privacy Policy & Zero-Logs Commitment. Retrieved from <https://support.nordvpn.com/hc/en-us/articles/19296082260625-What-is-a-no-logs-VPN->
- [9] NordVPN. (2026). Security Architecture & Privacy Protocols. Retrieved from <https://support.nordvpn.com/hc/en-us/articles/19296048596625-What-is-a-kill-switch->
- [10] NordVPN. (2026). Security Architecture & Privacy Protocols. Retrieved from <https://www.vpn.com/vpn/nordvpn/security/>

Answer Key: Checkpoint 1 - Multiple Choice

1 Network Check 1

VPN PROTECTION

Correct Answer: B

TEACHING NOTE

What is NordVPN's proprietary connection protocol?

Citation: IETF VPN RFC [Ref 3].

2 Network Check 2

VPN PROTECTION

Correct Answer: C

TEACHING NOTE

Which architecture runs servers strictly in volatile RAM?

Citation: IETF VPN RFC [Ref 3].

3 Network Check 3

VPN PROTECTION

Correct Answer: C

TEACHING NOTE

Which feature blocks ads, trackers, and malware domains?

Citation: IETF VPN RFC [Ref 3].

4 Network Check 4

VPN PROTECTION

Correct Answer: A

TEACHING NOTE

How does Double VPN enhance transmission security?

Citation: IETF VPN RFC [Ref 3].

5 Network Check 5

VPN PROTECTION

Correct Answer: D

TEACHING NOTE

Which independent firm audited NordVPN's zero-logs policy?

Citation: IETF VPN RFC [Ref 3].

Answer Key: Checkpoint 2 - True or False

6 Network Rule 1

VPN PROTECTION

Correct Answer: True

TEACHING NOTE

NordLynx is built directly on top of the WireGuard protocol.

Citation: IETF VPN RFC [Ref 3].

7 Network Rule 2

VPN PROTECTION

Correct Answer: False

TEACHING NOTE

Threat Protection requires an active VPN connection to run.

Citation: IETF VPN RFC [Ref 3].

8 Network Rule 3

VPN PROTECTION

Correct Answer: True

TEACHING NOTE

Dedicated IPs bypass the shared pool, reducing security isolation.

Citation: IETF VPN RFC [Ref 3].

9 Network Rule 4

VPN PROTECTION

Correct Answer: False

TEACHING NOTE

The App Kill Switch blocks system-wide traffic if a tunnel drops.

Citation: IETF VPN RFC [Ref 3].

10 Network Rule 5

VPN PROTECTION

Correct Answer: True

TEACHING NOTE

NordVPN servers are progressively migrated to diskless RAM nodes.

Citation: IETF VPN RFC [Ref 3].

Vocabulary Keys & Grading Rubric

Instructor Grading Rubric: Award 1 point for each correct matching (8 points total) and context term (6 points total).

CHECKPOINT 4: CONCEPT MATCH KEY

A NORDLYNX

B RAMNODES

C THREATPT

D DOUBLEVP

E ZEROLOGS

F KILLSWCH

G MESHNETZ

H CIPHERSX

CHECKPOINT 3: KEY TERM KEY

1 NORDLYNX

2 RAMNODES

3 THREATPT

4 DOUBLEVP

5 ZEROLOGS

6 KILLSWCH

7 MESHNETZ

8 CIPHERSX

DISCUSSION NOTES FOR INSTRUCTORS

Valuation Accuracy:

Verify that students understand how domain length, extension (.com, .ai), and commercial search volume drive appraisal pricing.

Escrow Security:

Emphasize that funds are held in licensed third-party holding accounts prior to domain WHOIS transfer verification.

Stealth Representation:

Highlight the role of NDAs and third-party representation in preventing speculative price gouging during corporate procurement.

Puzzles Keys & Instructor Notes

WORD SEARCH SOLUTION

U	C	I	P	H	E	R	S	X	I	F	X	Y	B	G
K	Y	K	V	U	H	J	Q	X	P	L	W	T	Z	F
I	Z	Q	U	V	R	A	M	N	O	D	E	S	R	X
L	L	N	O	R	D	L	Y	N	X	F	T	S	T	I
L	L	Z	W	I	A	P	H	Z	P	T	H	D	W	L
S	S	E	T	I	S	O	E	F	J	I	T	A	I	N
W	B	Y	H	X	N	Q	K	Y	J	Y	E	C	C	C
C	A	Z	R	H	U	U	P	G	B	B	W	D	X	W
H	C	L	E	V	F	W	D	F	F	O	G	S	T	F
V	W	L	A	R	J	V	G	D	P	X	P	M	C	J
Y	V	O	T	I	O	D	O	U	B	L	E	V	P	R
X	F	W	P	J	Y	L	M	N	F	I	B	M	F	S
O	D	F	T	U	R	D	O	E	I	B	T	U	E	I
N	N	A	M	O	E	L	O	G	L	S	H	V	M	F
M	E	S	H	N	E	T	Z	V	S	E	K	W	T	V

CROSSWORD SOLUTION

		5	G					2	P					6	F			
4	S	E	R	V	E	R			B					8	I	S	7	P
		O				O			A					R			R	
		B					1	T	U	N	N	E	L	I	N	G		
		L				O		D				W		V				
		O				C		W				A		A				
		C				O		I				L		C				
		K				L		D				L		Y				
								T										
								H										

INSTRUCTOR GUIDE FOR CROSSWORD SOLUTIONS

ACROSS CLUES

1 Across: **TUNNELING** Process of wrapping data packets. (3, 5)

4 Across: **SERVER** Remote computer routing traffic.

8 Across: **ISP** Internet Service Provider. (1, 9)

DOWN CLUES

2 Down: PROTOCOL Rules determining data transmission. (0, 5)

3 Down: BANDWIDTH Rate of data transfer. (1, 7)

5 Down: **GEOBLOCK** Location website restriction.

6 Down: **FIREWALL** Security monitor barrier. (0, 9)

7 Down: **PRIVACY** State of freedom from tracking.
(1, 11)

Scrambled Words & Cipher Solution Key

Grading key for the vocabulary word unscramble activity and Secret Cipher Challenge.

WORD UNSCRAMBLE KEY

1. ORDLYNXN

NORDLYNX

5. EROLOGSZ

ZEROLOGS

2. AMNODESR

RAMNODES

6. ILLSWCHK

KILLSWCH

3. HREATPTT

THREATPT

7. ESHNETZM

MESHNETZ

4. OUBLEVPD

DOUBLEVP

8. IPHERSXC

CIPHERSX

SECRET CIPHER CHALLENGE KEY

**"NORDLYNX NATIVELY INCORPORATES THE WIREGUARD
SECURITY PROTOCOL"**

VPN & Network Case Studies Solution Key

A Case Study 1: Double Encryption Deployment

[Instructor Solution](#)

GRADING GUIDELINE

Student answers should cover the following points:

- **Scenario Analysis:** A journalist needs to transmit highly sensitive documents from a high-censorship country.
- **Recommended Strategy & Solution:** Enable the Double VPN profile to encrypt data through two distinct server nodes.

B Case Study 2: Malware Prevention on Shared Network

[Instructor Solution](#)

GRADING GUIDELINE

Student answers should cover the following points:

- **Scenario Analysis:** A remote company wants to prevent employees from downloading malicious files over public Wi-Fi.
- **Recommended Strategy & Solution:** Keep the Threat Protection feature enabled to scan downloads and block malware.