

Name: _____

Date: _____

Score: _____

Best VPN for Privacy

Analyzing jurisdictions, RAM-only servers, and audited zero-logs policies.

BEST VPN FOR PRIVACY 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 the fundamental principles of VPN privacy and audited server infrastructures. You will explore legal jurisdictions, Five Eyes alliances, RAM-only networks, and third-party no-logs certifications.

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/best-vpn-for-privacy/>

Your Privacy VPN Learning Roadmap

- Analyze the impact of legal jurisdictions on user data retention and protection.
- Assess the security benefits of RAM-only volatile server infrastructures.
- Verify provider compliance through independent third-party no-logs audits.
- Evaluate the threat modeling protection offered by Multi-hop Secure Core routing.
- Implement anonymous sign-up workflows using generated numeric account keys.

PRIVACY VPN 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 audited no-logs setups.

DATA PRIVACY & AUDITED INFRASTRUCTURE (INTRODUCTION)

Evaluating a VPN provider's privacy requires analyzing their legal jurisdiction, server infrastructure, and third-party audit history. RAM-only servers ensure data is wiped on every reboot, shielding client identity.

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

Checkpoint 1: Multiple Choice Challenge

1 What is the primary benefit of RAM-only server infrastructure?

- ☐ A) Automatic data wipe on reboots
- ☐ B) Persistent long-term storage
- ☐ C) Slower connection speeds
- ☐ D) High hardware maintenance cost

2 Which VPN jurisdiction operates outside the Five Eyes intelligence alliance?

- ☐ A) Panama
- ☐ B) United States
- ☐ C) United Kingdom
- ☐ D) Canada

3 Which auditing firm verified NordVPN's strict no-logs policy?

- ☐ A) Deloitte
- ☐ B) PwC
- ☐ C) KPMG
- ☐ D) Ernst & Young

4 What is the name of Proton VPN's double-hop privacy routing feature?

- ☐ A) Secure Core
- ☐ B) Quick Connect
- ☐ C) Split Tunnel
- ☐ D) NetShield

5 Which provider allows signup using only a generated account number?

- ☐ A) Mullvad
- ☐ B) NordVPN
- ☐ C) ExpressVPN
- ☐ D) Proton VPN

Checkpoint 2: True or False Challenge

6 Question 6

Under an audited no-logs policy, a VPN provider does not record activity or connection timestamps.

☐

True

☐

False

7 Question 7

The Five Eyes intelligence alliance is a partnership that does not share surveillance or network data.

☐

True

☐

False

8 Question 8

RAM-only servers retain user connection data indefinitely even after a system power shutdown.

☐

True

☐

False

9 Question 9

Proton VPN publishes fully open-source code across all of its client applications.

☐

True

☐

False

10 Question 10

Mullvad requires users to enter a verified email address and real name during registration.

☐

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. VPN providers utilize _____ servers to ensure all data is wiped on every reboot. _____ servers to ensure all data is wiped on every reboot.
2. For high-risk environments, Proton VPN's _____ routes traffic through double server hops. _____ routes traffic through double server hops.
3. The location where a provider is incorporated is its legal _____ which dictates data laws. _____ which dictates data laws.
4. NordVPN's strict privacy claims have been audited multiple times by _____ to prove compliance. _____ to prove compliance.
5. Mullvad maximizes user _____ by requiring only a random account number. _____ by requiring only a random account number.
6. If the VPN tunnel drops unexpectedly, the built-in _____ blocks all internet traffic. _____ blocks all internet traffic.

VOCABULARY WORD BANK

RAMONLY
ANONYMITY

SECURECORE
KILLSWITCH

JURISDICTION
TUNNELING

DELOITTE
HANDOVER

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: Domain 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.

RAMONLY

F Feature blocking traffic if the VPN tunnel drops.

SECURECORE

D Independent auditing firm verifying no-logs policies.

JURISDICTION

A Volatile server memory wiped on every reboot.

DELOITTE

E Sign-up method using account numbers instead of emails.

ANONYMITY

G Publicly inspectable software client code.

KILLSWITCH

H Global intelligence sharing alliance.

OPENSOURCE

B Multi-hop routing through privacy-friendly servers.

FIVEEYES

C Legal territory governing a VPN provider's data.

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: Volatile server memory wiped on reboot. (7 letters):

3 Across: Auditing firm verifying no-logs. (8 letters):

5 Across: Sign-up without email or real name. (9 letters):

7 Across: Publicly inspectable client code. (10 letters):

DOWN CLUES

2 Down: Multi-hop privacy routing feature. (10 letters):

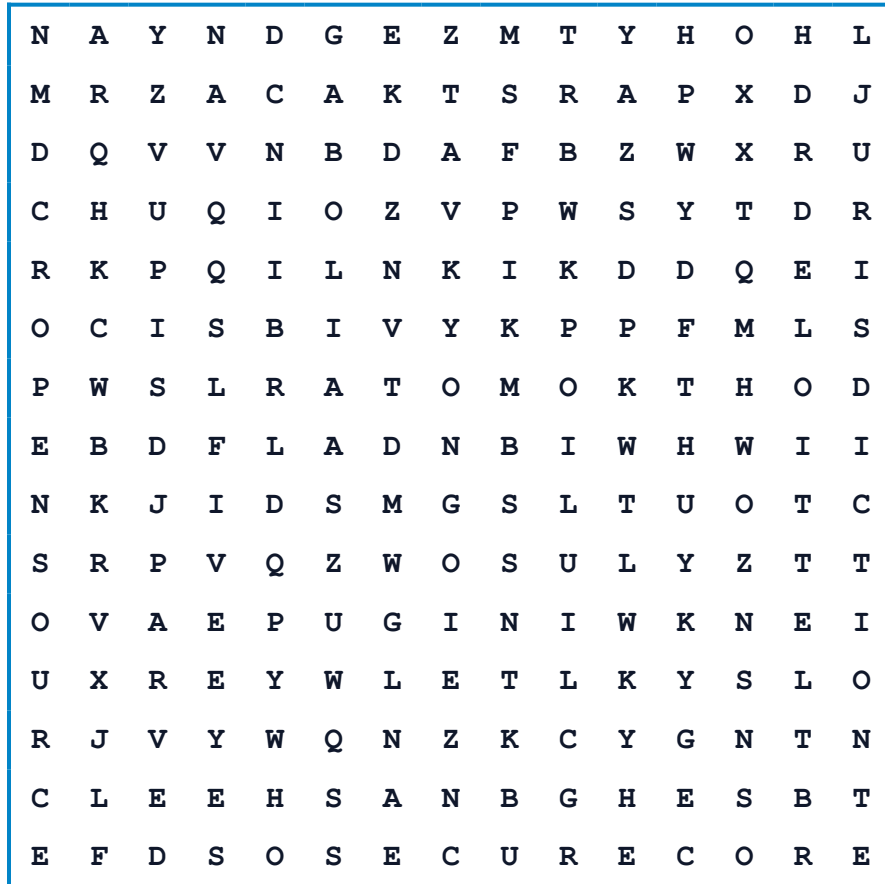
4 Down: Legal territory governing provider data. (12 letters):

6 Down: Blocks internet traffic on connection drop. (10 letters):

8 Down: Intelligence sharing alliance. (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

RAMONLY
ANONYMITY

SECURECORE
KILLSWITCH

JURISDICTION
OPENSOURCE

DELOITTE
FIVEEYES

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. RAMONLY
- B. SECURECORE
- C. JURISDICTION
- D. DELOITTE
- E. ANONYMITY
- F. KILLSWITCH
- G. OPENSOURCE
- H. FIVEEYES

DEFINITIONS & MATCH FIELDS

- 1. Volatile server memory wiped on reboot.
- 2. Multi-hop routing via secure nodes.
- 3. Legal jurisdiction governing data laws.
- 4. Auditing firm checking no-logs claims.
- 5. Signing up without email or real name.
- 6. Feature blocking leaks on drops.
- 7. Publicly inspectable client application code.
- 8. Global intelligence sharing alliance.

Checkpoint 7: Scrambled Word Challenge

Unscramble the letters below to reveal key domain brokerage concepts and terms. Write your answers in the input boxes provided.

1. RNOLMYA

5. MTNNOIYAY

2. REESCEUORC

6. TCIHKLIWLS

3. TINUDSCIORIJ

7. PSREUNOECO

4. TDIELEOT

8. YVIFEESE

Checkpoint 8: Domain Brokerage Case Studies

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



CASE STUDY 1: AUDITED VERIFICATION

Scenario: A financial firm wants to verify that their VPN provider is not keeping connection timestamps, IP logs, or data activity records, and demands formal third-party validation reports.

Discussion Question: What specific certification should the company look for to verify these claims?



CASE STUDY 2: SURVEILLANCE SHIELD

Scenario: A journalist based in a high-risk jurisdiction needs to route confidential materials to their editor while shielding their connection from national endpoint surveillance.

Discussion Question: Which specific VPN configuration feature should the journalist enable to prevent endpoint tracking?

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

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 an audited no-logs policy?

It is a policy verified by independent third-party audits confirming that the VPN does not log IP addresses, connection logs, or browsing histories.

Q2: Why is server location jurisdiction important?

Jurisdiction dictates what privacy laws apply and whether government agencies can legally compel the provider to log user data.

Q3: What are RAM-only VPN servers?

They are diskless servers running entirely in volatile memory, ensuring all data is wiped automatically on power loss or reboot.

Q4: What is a VPN Kill Switch?

A security feature that blocks internet access if the VPN connection drops, preventing raw data leaks to your ISP.

Q5: How does multi-hop routing work?

It routes your traffic through two or more servers in different countries, preventing anyone from tracing your connection to the exit node.

Checkpoint 10: Basic VPN FAQs (Part B)

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

Q6: Can a VPN guarantee absolute anonymity?

No, but using anonymous signup methods, cryptocurrency, and Tor over VPN can come very close.

Q7: What is a DNS leak?

An exposure where the browser sends domain queries to the local ISP's DNS servers instead of the encrypted VPN tunnel.

Q8: Why is open-source code better for privacy?

It allows public inspection of client applications, verifying that no backdoors or tracking modules are present.

Q9: How does WebRTC leak protection work?

It prevents browsers from revealing your true local and public IP addresses through communication protocols.

Q10: What are the Five Eyes surveillance alliances?

International intelligence sharing treaties that bypass local privacy laws by sharing intercepted data among member nations.

Checkpoint 11: Advanced VPN FAQs (Part A)

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

Q1: How does RAM-only architecture prevent data recovery?

Since there are no physical hard drives, any physical seizure of the server results in no readable data once power is disconnected.

Q2: What was the legal significance of the ExpressVPN Turkish server seizure?

Turkish authorities physically seized their servers in 2017 but could recover no logs, verifying their no-logs claim under real-world pressure.

Q3: How do Panama and the British Virgin Islands benefit VPN privacy?

These countries lack mandatory data retention laws and sit outside major western intelligence sharing jurisdictions.

Q4: What is the cryptographic difference in Multi-hop exit node analysis?

An observer at the exit node can see traffic leaving the VPN but cannot trace it back to the entry node, as they are separate hops.

Q5: How does Mullvad's account system eliminate personal data?

Mullvad generates a unique 16-digit account number for sign-up without asking for email, name, or password.

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 role of port forwarding in privacy configurations?

While useful for seeding torrents, port forwarding can expose active local services if the firewall is not securely bound to the VPN.

Q7: How does a system-level Kill Switch differ from an app-level one?

A system Kill Switch disables the entire network interface, whereas an app Kill Switch only terminates pre-selected applications.

Q8: Why does Proton VPN publish its client audit reports?

Publishing full audit results by SEC Consult guarantees that independent experts have verified the client security model.

Q9: How can Tor over VPN help secure metadata?

It encrypts traffic before it enters the Tor network, preventing the ISP from knowing that you are accessing Tor.

Q10: What is the Fourteen Eyes alliance impact on VPNs?

Fourteen Eyes extends surveillance cooperation, meaning providers in member states can be compelled to share metadata.

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

RAM-only servers store operating systems and applications purely in volatile memory, leaving no trace upon reboot.

2. VPN INSIGHT

The British Virgin Islands and Panama are popular VPN jurisdictions because they have no data retention requirements.

3. VPN INSIGHT

Independent audits by Deloitte have repeatedly verified NordVPN's strict adherence to its no-logs policy.

4. VPN INSIGHT

A VPN Kill Switch acts as a local firewall rule that blocks traffic outside the secure gateway tunnel.

5. VPN INSIGHT

Multi-hop routing shields user identity by separating the entry IP address from the destination exit node.

6. VPN INSIGHT

Mullvad allows users to pay via cash sent by mail to ensure maximum financial anonymity.

7. VPN INSIGHT

Open-source VPN clients are crucial for proving that no hidden telemetry tracking exists in the software.

8. VPN INSIGHT

DNS leaks occur when standard operating system queries bypass configured virtual network adapters.

9. VPN INSIGHT

Shared IP pools mix thousands of users together, preventing external observers from tracking individual behavior.

10. VPN INSIGHT

The Five Eyes alliance consists of the US, UK, Canada, Australia, and New Zealand.

Technical References & Sources

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

SCHOLARLY & INDUSTRY REFERENCES

- [1] NordVPN Deloitte No-Logs Audit Report. Retrieved from <https://nordvpn.com/blog/>
- [2] Mullvad Privacy Policy and Account Number System. Retrieved from <https://mullvad.net/en/help/>
- [3] Proton VPN SEC Consult Security Audit. Retrieved from <https://protonvpn.com/blog/>
- [4] ExpressVPN Turkish Server Seizure Case Study. Retrieved from <https://www.expressvpn.com/>
- [5] Five Eyes, Nine Eyes, and Fourteen Eyes Alliance Overview. Retrieved from <https://www.eff.org/>
- [6] RAM-only VPN Server Architecture Guide. Retrieved from <https://www.vpn.com/privacy/>
- [7] DNS Leak Prevention and Troubleshooting. Retrieved from <https://dnsleaktest.com/>
- [8] WebRTC Security and IP Exposure Analysis. Retrieved from <https://webrtc.org/>
- [9] Tor Project: Tor over VPN Security Guide. Retrieved from <https://support.torproject.org/>
- [10] IETF RFC 7636: Proof Key for Code Exchange (PKCE). Retrieved from <https://datatracker.ietf.org/doc/rfc7636/>

Answer Key: Checkpoint 1 - Multiple Choice

1 RAM-only Memory

VOLATILE RAM

Correct Answer: A

TEACHING NOTE

RAM-only servers store data temporarily in volatile memory and wipe everything on reboot.

Citation: CISA Telework [Ref 4].

2 Jurisdiction

LEGAL
TERRITORY

Correct Answer: A

TEACHING NOTE

Legal jurisdiction determines whether a government can compel a provider to share logs.

Citation: Switzerland Jurisdiction [Ref 6].

3 No-Logs Audit

SEIZURE VERIFICATION

Correct Answer: A

TEACHING NOTE

Turkish server seizure proved that ExpressVPN servers held no customer data logs.

Citation: ExpressVPN Case [Ref 2].

4 Secure Core

MULTI-HOP HOPS

Correct Answer: A

TEACHING NOTE

Secure Core routes traffic through privacy-friendly hops before exit to prevent endpoint compromise.

Citation: Proton VPN Swiss [Ref 3].

5 Anonymity

NUMERIC
ACCOUNTS

Correct Answer: A

TEACHING NOTE

Mullvad requires no personal info, registering accounts with simple numeric IDs.

Citation: Mullvad Account [Ref 5].

Answer Key: Checkpoint 2 - True or False

6 RAM-only Memory

VOLATILE RAM

Correct Answer: True

TEACHING NOTE

RAM-only servers store data temporarily in volatile memory and wipe everything on reboot.

Citation: RAM-only Architecture [Ref 6].

7 Five Eyes

ALLIANCES SHARING

Correct Answer: False

TEACHING NOTE

Five Eyes intelligence sharing agreements permit government surveillance sharing.

Citation: Surveillance Alliances [Ref 5].

8 Audited No-Logs

DELOITTE AUDITS

Correct Answer: False

TEACHING NOTE

Independent Deloitte audits verify that NordVPN doesn't store telemetry data.

Citation: Deloitte Audit Report [Ref 1].

9 Switzerland Legal

GENEVA HQ

Correct Answer: True

TEACHING NOTE

Switzerland's strict privacy laws protect Proton VPN metadata from outside governments.

Citation: Proton VPN Audit [Ref 3].

10 BVI Jurisdiction

BVI TERRITORY

Correct Answer: False

TEACHING NOTE

BVI jurisdiction sits outside the primary 5/9/14 Eyes surveillance alliances.

Citation: Mullvad Policy [Ref 2].

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 RAMONLY

B SECURECORE

C JURISDICTION

D DELOITTE

E ANONYMITY

F KILLSWITCH

G OPENSOURCE

H FIVEEYES

CHECKPOINT 3: KEY TERM KEY

1 RAMONLY

2 SECURECORE

3 JURISDICTION

4 DELOITTE

5 ANONYMITY

6 KILLSWITCH

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

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

CROSSWORD SOLUTION

		5	G					2	P				6	F				
4	S	E	R	V	E	R				3	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. (1, 0)
- 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. (0, 1)
- 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. RNOLMYA

RAMONLY

5. MTNNOIYAY

ANONYMITY

2. REESCEUORC

SECURECORE

6. TCIHKLIWLS

KILLSWITCH

3. TINUDSCIORIJ

JURISDICTION

7. PSREUNOECO

OPENSOURCE

4. TDIELEOT

DELOITTE

8. YVIFESE

FIVEEYES

SECRET CIPHER CHALLENGE KEY

"AUDITED RAM ONLY SERVERS ENSURE COMPLIANCE"

Domain Brokerage Case Studies Solution Key

A Case Study 1: Audited Verification

[Instructor Solution](#)

GRADING GUIDELINE

Student answers should cover the following points:

- **Scenario Analysis:** A financial firm wants to verify that their VPN provider is not keeping connection timestamps, IP logs, or data activity records, and demands formal third-party validation reports.
- **Recommended Strategy & Solution:** The firm should request independent audit reports conducted by major firms like Deloitte, PwC, or KPMG that specifically verify the no-logs policy and infrastructure.

B Case Study 2: Surveillance Shield

[Instructor Solution](#)

GRADING GUIDELINE

Student answers should cover the following points:

- **Scenario Analysis:** A journalist based in a high-risk jurisdiction needs to route confidential materials to their editor while shielding their connection from national endpoint surveillance.
- **Recommended Strategy & Solution:** The journalist should enable Proton VPN Secure Core multi-hop routing, which passes traffic through double server hops in privacy-first countries.