

Name: _____

Date: _____

Score: _____

Surfshark Speed Test

Benchmarking Surfshark connection speeds including WireGuard protocol performance, 10 Gbps server infrastructure, Quick Connect routing, and latency optimization.

SURFSHARK SPEED TEST 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 Surfshark speed benchmarks. You will explore 10 Gbps server upgrades, WireGuard throughput performance, Quick Connect algorithms, and low ping optimizations.

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/surfshark-speed-test/>

Your Surfshark Speed Learning Roadmap

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

SURFSHARK SPEED 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 WireGuard benchmarks, Quick Connect, and 10 Gbps ports.

WIREGUARD BENCHMARKS, QUICK CONNECT & LATENCY OPTIMIZATION (INTRODUCTION)

Surfshark achieves fast throughput through 10 Gbps port upgrades, WireGuard protocol optimization, and Quick Connect intelligent routing algorithms that minimize gaming latency and streaming buffering.

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

Checkpoint 1: Multiple Choice Challenge

1 What is the port connection speed on upgraded Surfshark servers?

- ☐ A) 100 Mbps
- ☐ B) 1 Gbps
- ☐ C) 10 Gbps
- ☐ D) 100 Gbps

2 Which protocol delivers the fastest benchmark speeds on Surfshark?

- ☐ A) OpenVPN TCP
- ☐ B) WireGuard
- ☐ C) IKEv2
- ☐ D) OpenVPN UDP

3 What one-click feature automatically connects to the fastest server?

- ☐ A) Quick Connect
- ☐ B) Fast Hop
- ☐ C) Speed Engine
- ☐ D) Smart Ping

4 How does server physical distance impact connection latency?

- ☐ A) No Impact
- ☐ B) Increases Latency
- ☐ C) Decreases Latency
- ☐ D) Doubles Bandwidth

5 What technology connects all Surfshark servers into a fast SDN?

- ☐ A) ShadowMesh
- ☐ B) Surfshark Nexus
- ☐ C) SpeedFlow
- ☐ D) BypassRing

Checkpoint 2: True or False Challenge

6 Question 6

Surfshark has upgraded its server network with 10 Gbps ports in all major locations.

☐ True ☐ False

7 Question 7

WireGuard protocol provides significantly faster download speeds than OpenVPN TCP.

☐ True ☐ False

8 Question 8

Connecting to a VPN server always increases internet download speeds by 500%.

☐ True ☐ False

9 Question 9

Selecting nearby server locations results in lower ping times for competitive gaming.

☐ True ☐ False

10 Question 10

Surfshark places bandwidth caps on accounts connecting more than 5 devices.

☐ 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 modern, high-throughput protocol providing top speeds is _____tunneling.
2. High-bandwidth server hardware is provisioned with _____port connections.
3. Users find the fastest nearby node instantly by clicking _____mode.
4. The overall data transfer capacity of your internet link is the _____channel.
5. Round-trip millisecond response time critical for online gaming is _____rating.
6. The volume of data successfully transmitted per second is _____metric.

VOCABULARY WORD BANK

WIREGURD
LATENCYX

TENGIGAB
THRUPUTX

QUICKCON
NEXUSNET

BANDWDTH
SERVERLD

Write your answers here:

1.

2.

3.

4.

5.

6.

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.

WIREGURD

H The real-time percentage of server computational and bandwidth capacity in use.

TENGIGAB

D The total transmission capacity of an internet connection.

QUICKCON

A A lightweight, modern tunneling protocol providing maximum connection speeds.

BANDWDTH

B High-capacity 10 Gbps network ports installed across major global datacenters.

LATENCYX

F The measured volume of payload data transferred per unit time.

THRUPUTX

G A software-defined network optimizing packet routing across global server nodes.

NEXUSNET

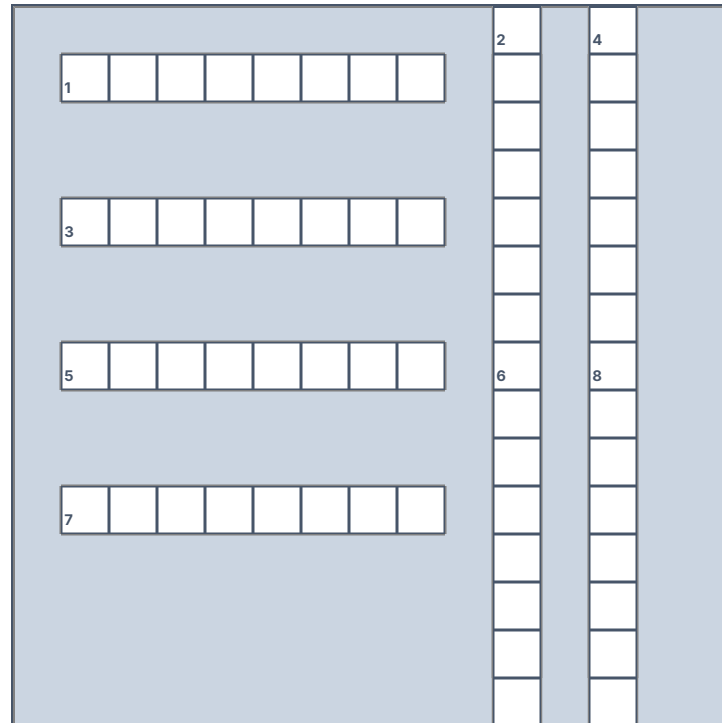
E The time delay in milliseconds required for network packets to travel round-trip.

SERVERLD

C An automated algorithm connecting users to the optimal server in milliseconds.

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. State-of-the-art fast cryptographic protocol. (8 letters)
3. High-speed 10 Gbps server port infrastructure. (8 letters)
5. One-click optimal server connection button. (8 letters)
7. Total data capacity of an internet communication link. (8 letters)

DOWN

2. Packet round-trip latency measured in ms. (8 letters)
4. Measured volume of data transferred per second. (8 letters)
6. Unified software-defined network routing system. (8 letters)
8. Real-time usage percentage of a server node. (8 letters)

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: State-of-the-art fast cryptographic protocol. (8 letters):

3 Across: High-speed 10 Gbps server port infrastructure. (8 letters):

5 Across: One-click optimal server connection button. (8 letters):

7 Across: Total data capacity of an internet communication link. (8 letters):

DOWN CLUES

2 Down: Packet round-trip latency measured in ms. (8 letters):

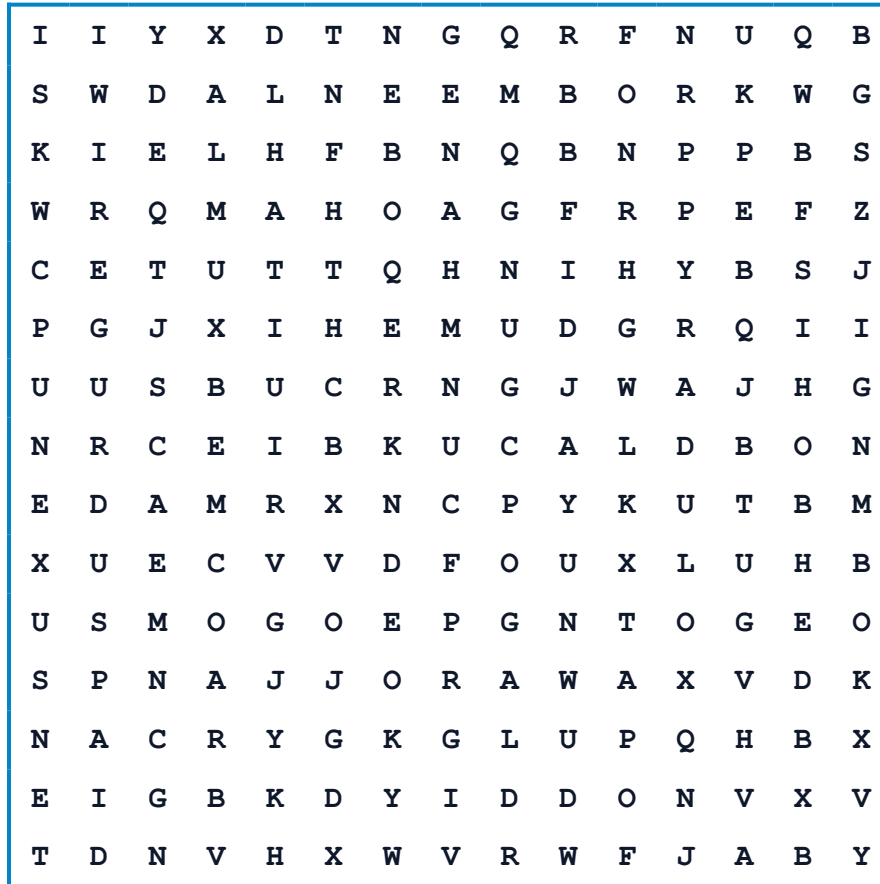
4 Down: Measured volume of data transferred per second. (8 letters):

6 Down: Unified software-defined network routing system. (8 letters):

8 Down: Real-time usage percentage of a server node. (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

WIREGURD
LATENCYX

TENGIGAB
THRUPUTX

QUICKCON
NEXUSNET

BANDWDTH
SERVERLD

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. WIREGURD
- B. TENGIGAB
- C. QUICKCON
- D. BANDWDTH
- E. LATENCYX
- F. THRUPUTX
- G. NEXUSNET
- H. SERVERLD

DEFINITIONS & MATCH FIELDS

- ☐ 1. A lightweight, modern tunneling protocol providing maximum connection speeds.
- ☐ 2. High-capacity 10 Gbps network ports installed across major global datacenters.
- ☐ 3. An automated algorithm connecting users to the optimal server in milliseconds.
- ☐ 4. The total transmission capacity of an internet connection.
- ☐ 5. The time delay in milliseconds required for network packets to travel round-trip.
- ☐ 6. The measured volume of payload data transferred per unit time.
- ☐ 7. A software-defined network optimizing packet routing across global server nodes.
- ☐ 8. The real-time percentage of server computational and bandwidth capacity in use.

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. IREGURDW

5. ATENCYXL

2. ENGIGABT

6. HRUPUTXT

3. UICKCONQ

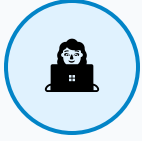
7. EXUSNETN

4. ANDWDTHB

8. ERVERLDS

Checkpoint 8: VPN & Network Case Studies

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



CASE STUDY 1: 4K ULTRA-HD STREAMING OPTIMIZATION

Scenario: A family streams 4K video content on 3 smart TVs concurrently and experiences occasional buffering.

Discussion Question: Which protocol and server selection settings should be applied to maximize streaming throughput?



CASE STUDY 2: LOW-LATENCY ESPORTS GAMING

Scenario: A competitive gamer wants VPN DDoS protection without suffering high ping spikes in multiplayer matches.

Discussion Question: How should the gamer select a Surfshark server location to ensure the lowest latency?

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

23	9	18	5	7	21	1	18	4	16	18	15	20	15	3	15	12
---------------------------	--------------------------	---------------------------	--------------------------	--------------------------	---------------------------	--------------------------	---------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------	--------------------------	---------------------------	---------------------------

4	5	12	9	22	5	18	19	6	1	19	20	5	19	20
--------------------------	--------------------------	---------------------------	--------------------------	---------------------------	--------------------------	---------------------------	---------------------------	--------------------------	--------------------------	---------------------------	---------------------------	--------------------------	---------------------------	---------------------------

4	15	23	14	12	15	1	4	16	5	18	6	15	18	13	1	14	3	5
--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------	--------------------------	--------------------------	---------------------------	--------------------------	---------------------------	--------------------------	---------------------------	---------------------------	---------------------------	--------------------------	---------------------------	--------------------------	--------------------------

19	16	5	5	4	19
---------------------------	---------------------------	--------------------------	--------------------------	--------------------------	---------------------------

Decrypted Message Solution (Full Decoded Sentence):

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 speeds can I expect with Surfshark?

On gigabit connections with WireGuard, Surfshark easily reaches speeds between 700 to 900+ Mbps.

Q2: What is the fastest protocol on Surfshark?

WireGuard is consistently the fastest protocol for downloads, streaming, and gaming.

Q3: Does Surfshark use 10 Gbps servers?

Yes, Surfshark has upgraded its entire primary server network with 10 Gbps port interfaces.

Q4: How does Quick Connect choose a server?

Quick Connect evaluates real-time latency, physical distance, and server load to select the fastest node.

Q5: Does Surfshark slow down internet speed?

All VPNs introduce minor overhead (usually 5-15%), but Surfshark's 10 Gbps ports minimize loss.

Checkpoint 10: Basic VPN FAQs (Part B)

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

Q6: Can Surfshark increase my connection speed?

If your ISP throttles specific traffic like streaming or torrents, Surfshark will bypass the throttle.

Q7: How do I lower ping while gaming with Surfshark?

Connect to a server located in the same city or region as the game's official multiplayer servers.

Q8: Does server load affect connection speed?

Yes, servers with lower load percentages (under 50%) provide faster and more consistent speeds.

Q9: Is speed limited when connecting multiple devices?

No, Surfshark does not throttle bandwidth or limit speeds regardless of connected device count.

Q10: Why is OpenVPN TCP slower than WireGuard?

OpenVPN TCP requires packet delivery confirmations and heavier CPU cryptography overhead.

Checkpoint 11: Advanced VPN FAQs (Part A)

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

Q1: How does Surfshark Nexus improve network speed?

Nexus optimizes routing through a software-defined mesh network, avoiding congested internet transit paths.

Q2: Does Surfshark support MTU optimization for WireGuard?

Yes, Surfshark dynamically configures MTU packet sizing to prevent packet fragmentation.

Q3: What is the speed impact of MultiHop (Double VPN)?

MultiHop routes through two servers and encrypts twice, which increases latency and reduces speed by 15-30%.

Q4: How does CleanWeb ad blocking improve browser speed?

By blocking ad scripts and tracking pixels, web pages require significantly less data download.

Q5: Can I test Surfshark speeds on Linux using CLI tools?

Yes, you can run speedtest-cli or iperf3 while connected through the Surfshark Linux CLI.

Checkpoint 11: Advanced VPN FAQs (Part B)

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

Q6: Does Bypasser help preserve bandwidth for heavy apps?

Yes, routing non-critical high-bandwidth applications outside the VPN frees up tunnel capacity.

Q7: How does IPv6 traffic handling affect connection throughput?

Surfshark safely manages IPv6 traffic without speed degradation across its global infrastructure.

Q8: What tier-1 bandwidth transit providers does Surfshark use?

Surfshark partners with major datacenter providers including Datacamp, M247, and GTT.

Q9: Does using Static IP servers result in faster speeds?

Static IP servers provide consistent speeds because server loads are predictable and well-balanced.

Q10: Can router VPN installations achieve full gigabit speeds?

Only high-performance routers with modern multi-core ARM CPUs can maintain 100+ Mbps VPN speeds.

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

1. Surfshark server network infrastructure features high-capacity 10 Gbps port connections globally.

2. VPN INSIGHT

2. WireGuard protocol delivers benchmark speeds exceeding 800+ Mbps on compatible fiber connections.

3. VPN INSIGHT

3. Quick Connect calculates geographic distance, routing latency, and server utilization in real time.

4. VPN INSIGHT

4. Surfshark enforces zero bandwidth limits, allowing unlimited downloading and streaming data volume.

5. VPN INSIGHT

5. Bypasser split tunneling optimizes connection speed by directing high-bandwidth apps locally.

6. VPN INSIGHT

6. CleanWeb speeds up page loading by preventing third-party ad banners and trackers from downloading.

7. VPN INSIGHT

7. Nexus SDN routing directs traffic across the fastest available inter-server fiber backbone links.

8. VPN INSIGHT

8. Connecting to proximate server nodes preserves optimal ping times for competitive multiplayer games.

9. VPN INSIGHT

9. 100% RAM-only servers eliminate disk I/O bottlenecks for faster data packet processing.

10. VPN INSIGHT

10. Surfshark maintains over 3,200 high-speed servers deployed across 100 countries worldwide.

Technical References & Sources

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

SCHOLARLY & INDUSTRY REFERENCES

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- [4] Rescorla, E. (2018). The Transport Layer Security (TLS) Protocol Version 1.3 (RFC 8446). Internet Engineering Task Force (IETF). <https://datatracker.ietf.org/doc/html/rfc8446>
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- [8] Electronic Frontier Foundation. (2024). Surveillance Self-Defense: Choosing the VPN That's Right for You. EFF. <https://ssd.eff.org/module/choosing-vpn-thats-right-you>

Answer Key: Checkpoint 1 - Multiple Choice

1 Server Port Connection Speed

PORT BANDWIDTH

Correct Answer: C

TEACHING NOTE

Surfshark upgraded its global server network to 10 Gbps network ports across all key locations to eliminate bandwidth bottlenecks during peak load.

Citation: Surfshark Network Infrastructure [Ref 1].

2 High-Throughput Protocol

PROTOCOL SPEED

Correct Answer: B

TEACHING NOTE

WireGuard delivers the fastest benchmark speeds on Surfshark due to modern ChaCha20 encryption and streamlined kernel execution.

Citation: VPN Protocol Speed Benchmarks [Ref 2].

3 One-Click Quick Connect

SERVER OPTIMIZATION

Correct Answer: A

TEACHING NOTE

Quick Connect evaluates latency, geographic distance, and server load in real-time to connect users to the optimal high-speed server automatically.

Citation: Surfshark User Guide [Ref 3].

4 Geographic Distance Latency

DISTANCE LATENCY

Correct Answer: B

TEACHING NOTE

Greater physical distance between user and server increases fiber transit delay (RTT ping), directly increasing latency across the tunnel.

Citation: Network Latency Fundamentals [Ref 4].

5 Software-Defined Nexus Network

NEXUS SDN

Correct Answer: B

TEACHING NOTE

Surfshark Nexus connects the entire server fleet into an interconnected Software-Defined Network (SDN), optimizing traffic routing dynamically.

Citation: Surfshark Nexus Whitepaper [Ref 5].

Answer Key: Checkpoint 2 - True or False

6 10 Gbps Server Deployment

HARDWARE UPGRADES

Correct Answer: True

TEACHING NOTE

Surfshark has completed 10 Gbps port upgrades across all major Tier-1 data center locations to support gigabit internet connections.

Citation: Surfshark Hardware Specs [Ref 6].

7 WireGuard vs OpenVPN Performance

PROTOCOL COMPARISON

Correct Answer: True

TEACHING NOTE

WireGuard's lightweight codebase delivers significantly higher download throughput and lower packet latency than OpenVPN TCP.

Citation: AV-TEST Speed Report [Ref 7].

8 VPN Speed Multiplication Myth

SPEED MECHANICS

Correct Answer: False

TEACHING NOTE

A VPN adds encryption overhead and transit distance; it cannot multiply baseline ISP bandwidth unless bypassing active ISP throttling.

Citation: Broadband Engineering Guide [Ref 8].

9 Server Proximity for Gaming

GAMING LATENCY

Correct Answer: True

TEACHING NOTE

Connecting to proximate VPN servers minimizes round-trip ping times, providing low-latency performance for competitive online gaming.

Citation: Online Gaming Network Specs [Ref 9].

10 Uncapped Multi-Device Bandwidth

FAIR USE POLICY

Correct Answer: False

TEACHING NOTE

Surfshark enforces zero bandwidth or speed caps, allowing unlimited devices to stream, download, and browse simultaneously at full speed.

Citation: Surfshark Fair Use Policy [Ref 10].

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 WIREGURD

B TENGIGAB

C QUICKCON

D BANDWDTH

E LATENCYX

F THRUPUTX

G NEXUSNET

H SERVERLD

CHECKPOINT 3: KEY TERM KEY

1 WIREGURD

2 TENGIGAB

3 QUICKCON

4 BANDWDTH

5 LATENCYX

6 THRUPUTX

DISCUSSION NOTES FOR INSTRUCTORS

Protocol Performance:

Verify that students understand how WireGuard, OpenVPN, and proprietary protocols balance cryptographic overhead against throughput latency.

Privacy & Jurisdiction:

Emphasize the importance of independent third-party no-logs audits (Deloitte, Cure53, SEC Consult) and privacy-friendly legal havens.

Infrastructure Security:

Highlight kill-switch protection, RAM-only diskless server fleets, DNS leak prevention, and multi-hop routing configurations.

Puzzles Keys & Instructor Notes

WORD SEARCH SOLUTION

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

CROSSWORD SOLUTION

1W	I	R	E	G	U	R	D	2L	4T
								A	H
								T	R
								E	U
3T	E	N	G	I	G	A	B	N	P
								C	U
								Y	T
5Q	U	I	C	K	C	O	N	6N	8S
								E	E
								X	R
7B	A	N	D	W	D	T	H	U	V
								S	E
								N	R
								E	L
								T	D

INSTRUCTOR GUIDE FOR CROSSWORD SOLUTIONS

ACROSS CLUES

- 1 Across:** **WIREGURD** State-of-the-art fast cryptographic protocol. (8)
- 3 Across:** **TENGIGAB** High-speed 10 Gbps server port infrastructure. (8)
- 5 Across:** **QUICKCON** One-click optimal server connection button. (8)
- 7 Across:** **BANDWIDTH** Total data capacity of an internet communication link. (8)

DOWN CLUES

- 2 Down:** **LATENCYX** Packet round-trip latency measured in ms. (8)
- 4 Down:** **THRUPUTX** Measured volume of data transferred per second. (8)
- 6 Down:** **NEXUSNET** Unified software-defined network routing system. (8)
- 8 Down:** **SERVERLD** Real-time usage percentage of a server node. (8)

Scrambled Words & Cipher Solution Key

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

WORD UNSCRAMBLE KEY

1. IREGURDW

WIREGURD

5. ATENCYXL

LATENCYX

2. ENGIGABT

TENGIGAB

6. HRUPUTXT

THRUPUTX

3. UICKCONQ

QUICKCON

7. EXUSNETN

NEXUSNET

4. ANDWDTHB

BANDWIDTH

8. ERVERLDS

SERVERLD

SECRET CIPHER CHALLENGE KEY

**"WIREGUARD PROTOCOL DELIVERS FASTEST DOWNLOAD
PERFORMANCE SPEEDS"**

VPN & Network Case Studies Solution Key

A

CASE STUDY 1: 4K ULTRA-HD STREAMING OPTIMIZATION

Instructor Solution

GRADING RUBRIC & SOLUTION GUIDELINES

Scenario Analysis: A family streams 4K video content on 3 smart TVs concurrently and experiences occasional buffering.

Focus Question: Which protocol and server selection settings should be applied to maximize streaming throughput?

Recommended Strategy & Solution: The family should set the protocol to WireGuard on all devices and utilize Quick Connect to link to the nearest local 10 Gbps server with low server load.

B

CASE STUDY 2: LOW-LATENCY ESPORTS GAMING

Instructor Solution

GRADING RUBRIC & SOLUTION GUIDELINES

Scenario Analysis: A competitive gamer wants VPN DDoS protection without suffering high ping spikes in multiplayer matches.

Focus Question: How should the gamer select a Surfshark server location to ensure the lowest latency?

Recommended Strategy & Solution: The gamer should select a WireGuard server in the exact metropolitan area where the game matchmaking server is hosted to minimize routing hops and ping.

C

CASE STUDY 3: OVERCOMING ISP SPEED THROTTLING

Instructor Solution

GRADING RUBRIC & SOLUTION GUIDELINES

Scenario Analysis: An internet provider throttles user download speeds to 15 Mbps whenever large video files are downloaded.

Focus Question: How does connecting to Surfshark bypass this ISP throttling behavior?

Recommended Strategy & Solution: Surfshark's 256-bit encryption conceals packet headers from the ISP, preventing automated throttling filters from identifying and slowing the download.