

☐☐ What Are the Deep Web and Dark Web? A Practical Guide to Safe Browsing

Maria Cattini | 14/05/2025 | OSINT

In today's digital world, terms like *Deep Web*, *Dark Web*, and *Darknet* often come up—especially in conversations about **cybersecurity** and **data privacy**. Yet, they're frequently misunderstood or misused. Let's break down what they really mean, how they work, and how you can stay safe online.

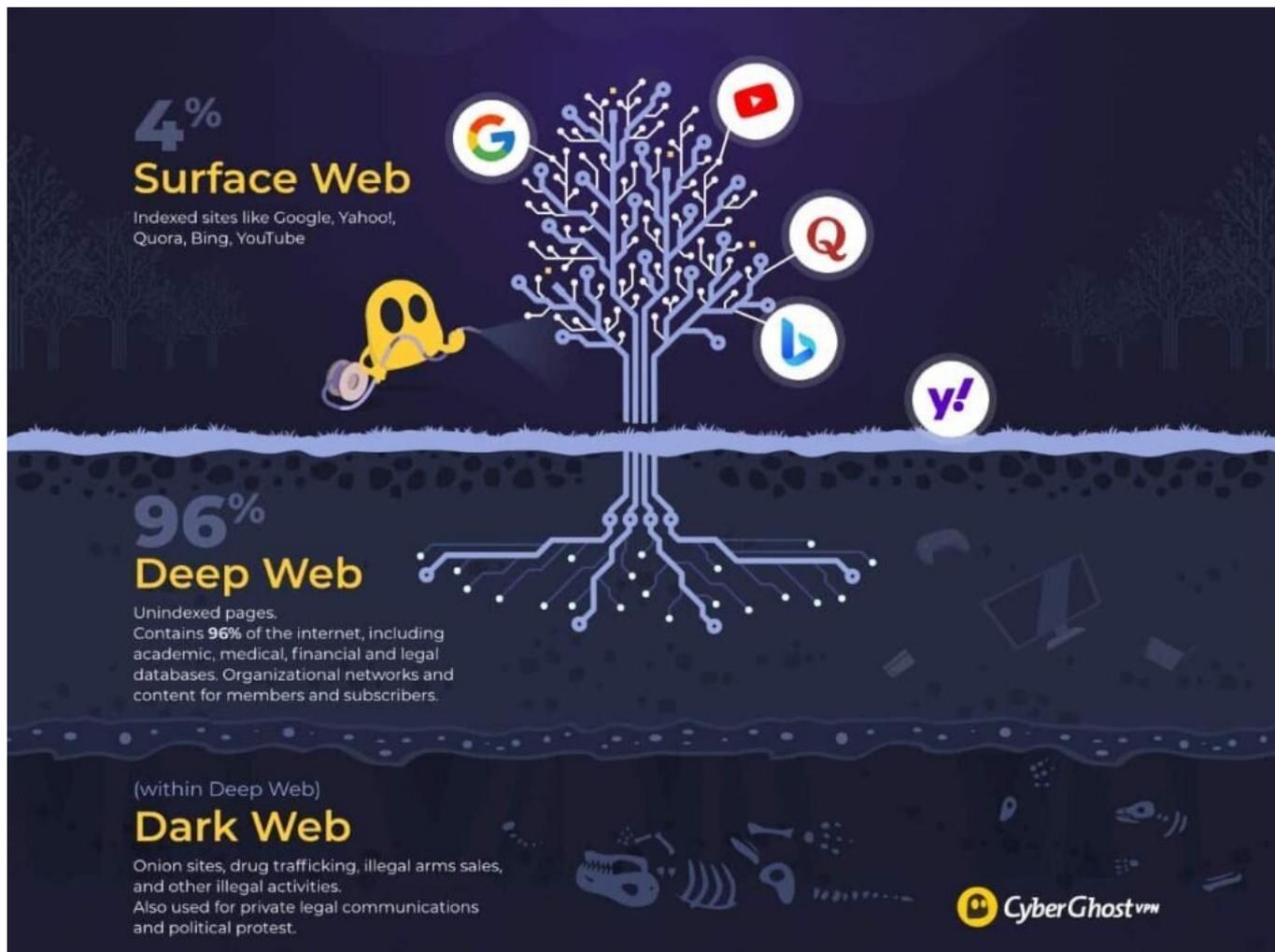
☐☐ What Is the Deep Web?

Imagine the internet as an iceberg. The visible tip above water is the **Surface Web**—the part indexed by search engines like Google, Bing, or Yahoo. This is what most people use every day.

Beneath the surface lies the **Deep Web**—a massive, hidden layer of the internet that's not indexed by traditional search engines. It includes:

- Private corporate networks
- Password-protected portals
- Academic and medical databases
- Unpublished websites or staging environments

In fact, some estimates suggest that the Deep Web makes up **over 96% of the entire internet**, with data volumes hundreds of times larger than the Surface Web.



⚙️ Why Search Engines Can't Reach It

Search engines can't easily access the Deep Web for several reasons:

- Dynamic pages are generated on request and have no permanent URL.
- Login barriers block crawlers from indexing password-protected pages.
- Private networks aren't linked publicly, making them invisible to bots.
- Media-heavy content (videos, images) is harder to index.
- Manual exclusions via robots.txt or meta tags prevent indexing intentionally.

To explore parts of the Deep Web, specialized search engines like **Ahmia**, **Torch**, or **Haystak**—accessible via the **Tor browser**—are used instead.

🗄️ Deep Web vs. Dark Web: What's the Difference?

The **Dark Web** is just a **small, hidden section of the Deep Web**—but with a crucial difference: it's only accessible through encrypted networks like **Tor** (The Onion Router) or **I2P**.

Dark Web websites use masked IP addresses and unique .onion domains to offer **anonymous access** to users and site operators alike. This makes it a haven for both privacy advocates and cybercriminals.

Deep Web vs. Dark Web

Deep Web	Dark Web
 Can protect information stored online	 Makes your online activity anonymous
 Can access from anywhere with specific passwords or unique links	 Can only access with a dark web browser, similar to the Tor Project
 Makes up about 96% of the internet	 Size is unknown
 VPNs can help keep your IP address and identity safe	 Dark web browsers provide automatic encryption

□□ How Tor Works: The Onion Routing Principle

Tor anonymizes your web traffic by bouncing it through multiple encrypted layers—like an onion. Each relay knows only the previous and next step, making it nearly impossible to trace the original source.

Originally developed by the U.S. Navy in the late 1990s, Tor is now used daily by over 750,000 people for anonymous browsing, activism, journalism, and, unfortunately, crime.

□□ What Really Happens on the Dark Web?

Not everything on the Dark Web is illegal—but much of it is. Common activities include:

- Trading stolen credentials (from regular users to top execs)

- Selling illicit goods or services (drugs, weapons, fake IDs)
- Spreading malware or ransomware kits
- Running cyber-extortion campaigns, demanding Bitcoin ransoms

Prices vary based on the type of data and its perceived value. Digital currencies—especially **Bitcoin**—are the standard, offering anonymity for both buyers and sellers.

☐☐ The Rise of RaaSberry and Cybercrime-as-a-Service

Welcome to the **Cybercrime marketplace**. Platforms like **RaaSberry** (Ransomware-as-a-Service) let even non-technical criminals launch ransomware attacks with a few clicks.

These platforms offer:

- Ransomware customization tools
- Real-time dashboards to track infections
- Payout stats in cryptocurrency
- Customer support and refund policies (!)

Profits are often split between the attacker and the service provider, turning hacking into a scalable, profitable business model.

⚠ Is It Dangerous to Browse the Dark Web?

Absolutely. Here are some of the key risks:

- Exposure to disturbing or illegal content
- Being monitored by law enforcement or intelligence agencies
- Phishing traps that steal your credentials or banking info
- Malware infections (Trojans, keyloggers, spyware)
- Unintentional data leaks that compromise your privacy

☐☐ How to Protect Yourself Online

Whether you're researching for work or just curious, follow these essential safety tips:

- ☐☐ Keep your OS, browser, antivirus, and firewall fully updated
- ☐☐♂ Avoid sketchy or unverified websites
- ☐☐ Be cautious with links and attachments in unknown emails
- ☐☐ Use strong passwords and enable two-factor authentication
- ☐☐ Minimize sharing personal information online
- ☐☐ Monitor your financial transactions and digital identity regularly
- ☐☐ Use a reliable VPN to mask your IP and encrypt your connection

☐☐ The Deep Web and the Russia-Ukraine Conflict

The Deep Web has also become a battleground in the **cyber front of modern warfare**.

During the Russia-Ukraine war, hacker groups and digital activists—like **Anonymous** and **KillNet**—have used it for:

- Spreading anti-war messages
- Publishing leaked documents
- Launching ransomware attacks
- Coordinating via anonymous platforms like Telegram

KillNet, for instance, conducted operations in Russian Darknet spaces, attacking rival forums like **RuTor**—accused of supporting Ukrainian intelligence and drug trafficking.

☐☐ **Final Thoughts: Awareness Is the First Line of Defense**

The Deep Web isn't inherently evil. Much of it is perfectly legitimate and necessary. But the **Dark Web** is a different story—an unregulated space with real threats and real consequences.

Whether you're a journalist, activist, researcher, or everyday user, **understanding the risks** and **using the right tools** is critical to staying safe in today's hyperconnected world.

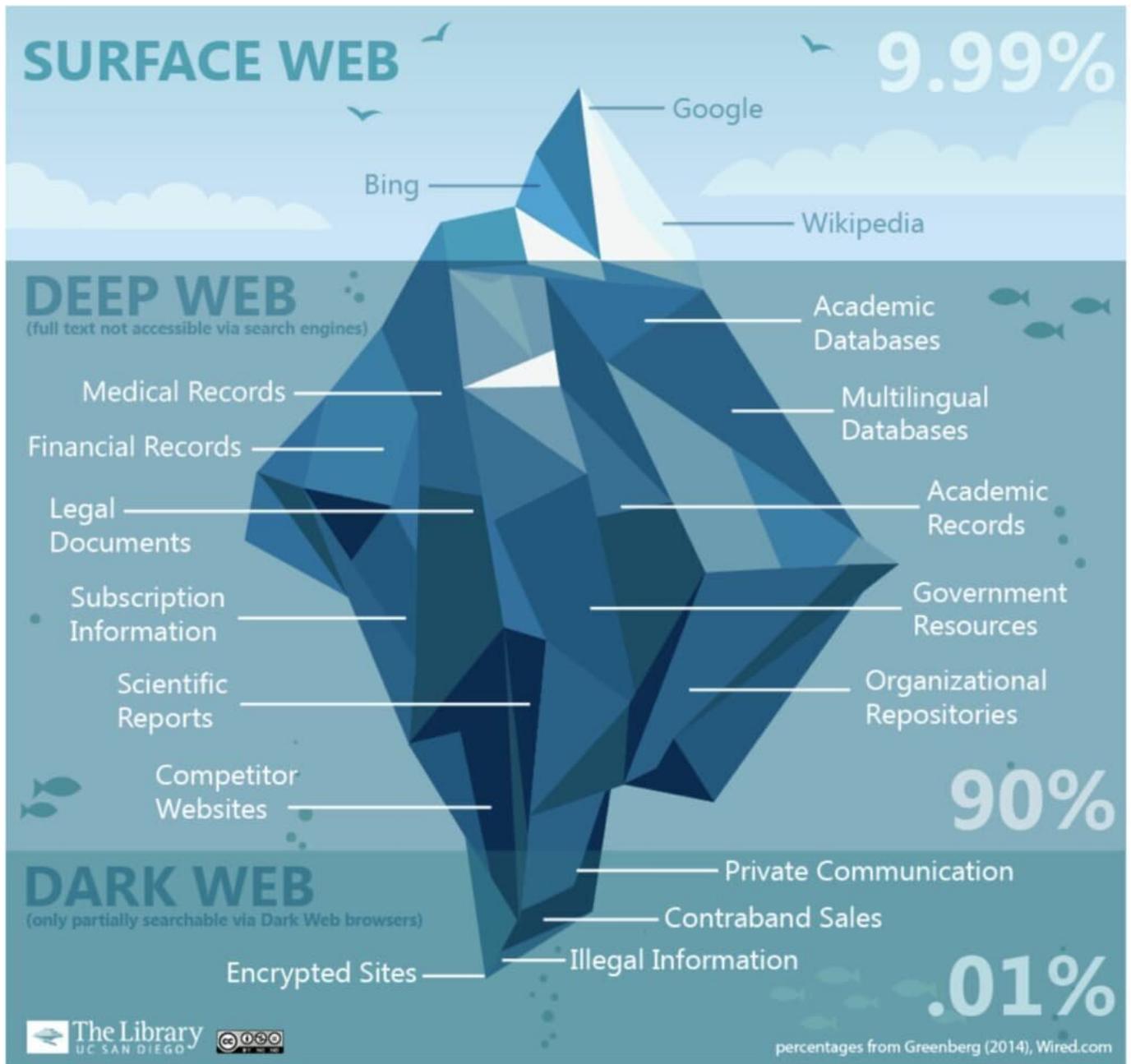
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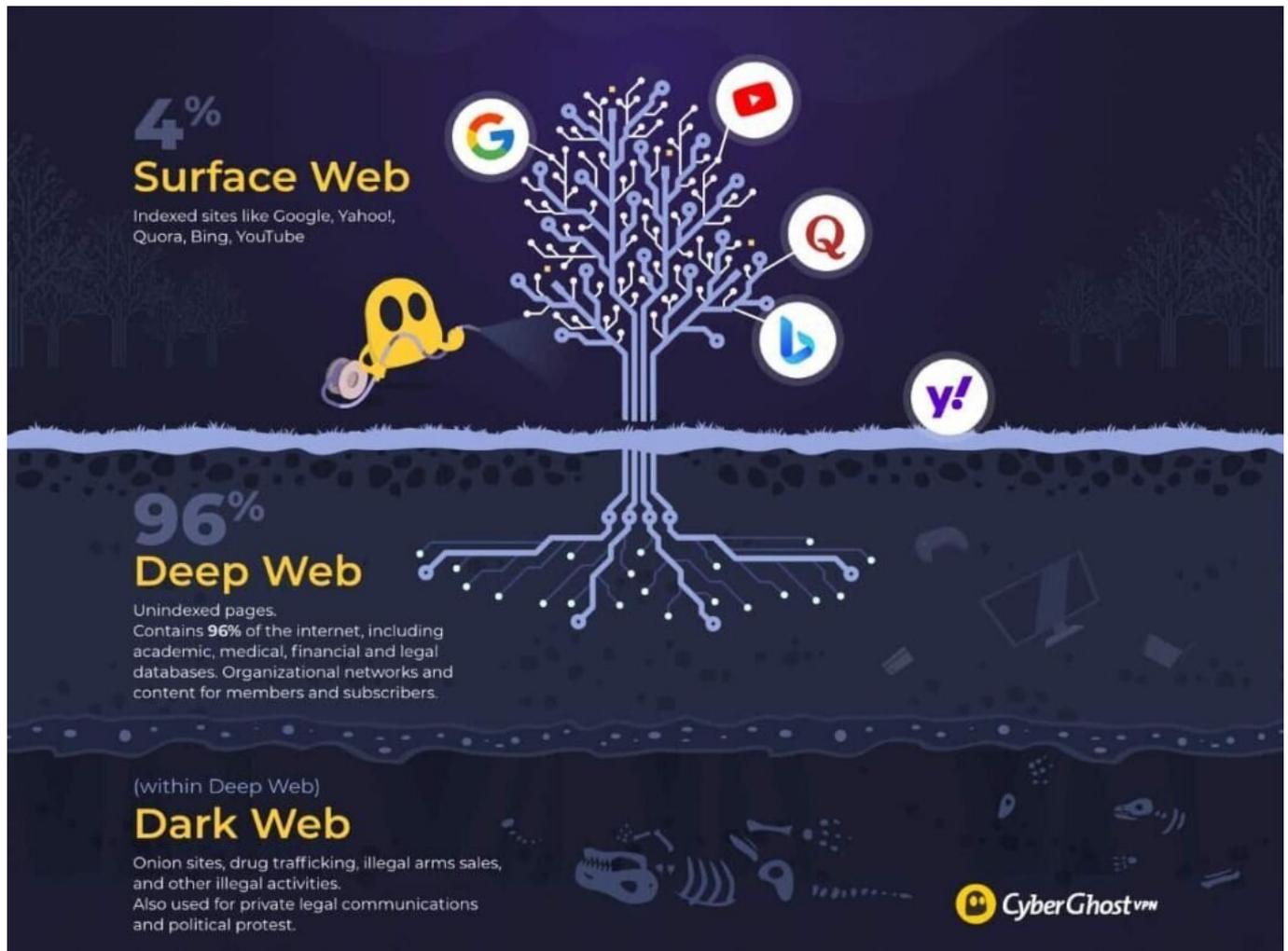
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SURFACE WEB

9.99%

- Google
- Bing
- Wikipedia

DEEP WEB

(full text not accessible via search engines)

- Academic Databases
- Multilingual Databases
- Academic Records
- Government Resources
- Organizational Repositories
- Medical Records
- Financial Records
- Legal Documents
- Subscription Information
- Scientific Reports
- Competitor Websites

90%

DARK WEB

(only partially searchable via Dark Web browsers)

- Private Communication
- Contraband Sales
- Illegal Information
- Encrypted Sites

.01%



percentages from Greenberg (2014), Wired.com