What is Footprinting?

Footprinting is a part of reconnaissance process which is used for gathering possible information about a target computer system or network. Footprinting could be both passive and active. Reviewing a company's website is an example of passive footprinting, whereas attempting to gain access to sensitive information through social engineering is an example of active information gathering.



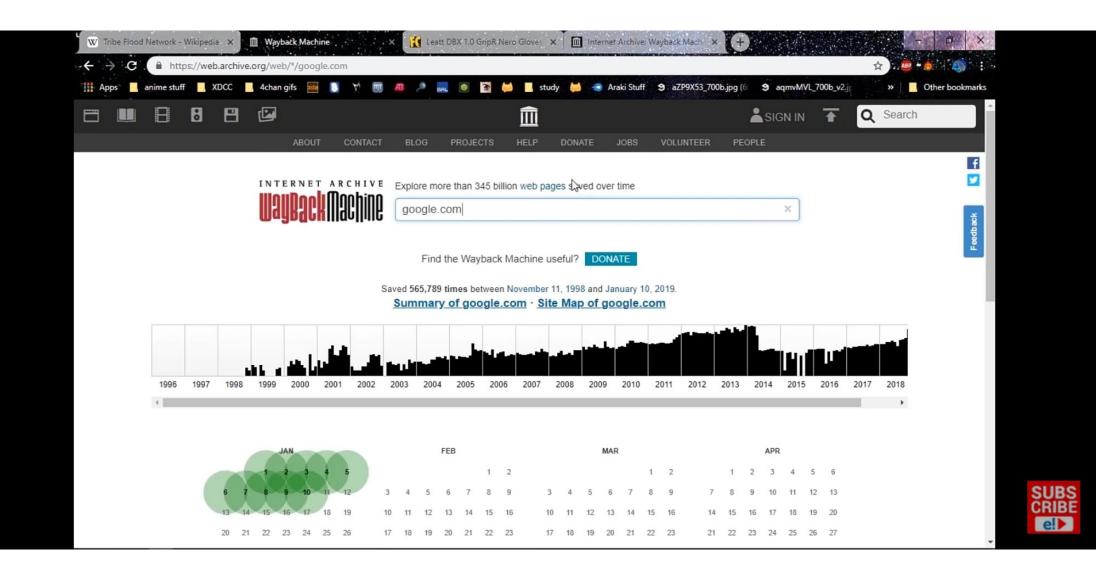




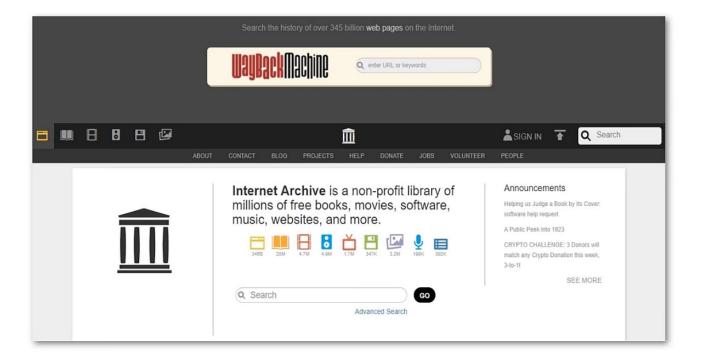




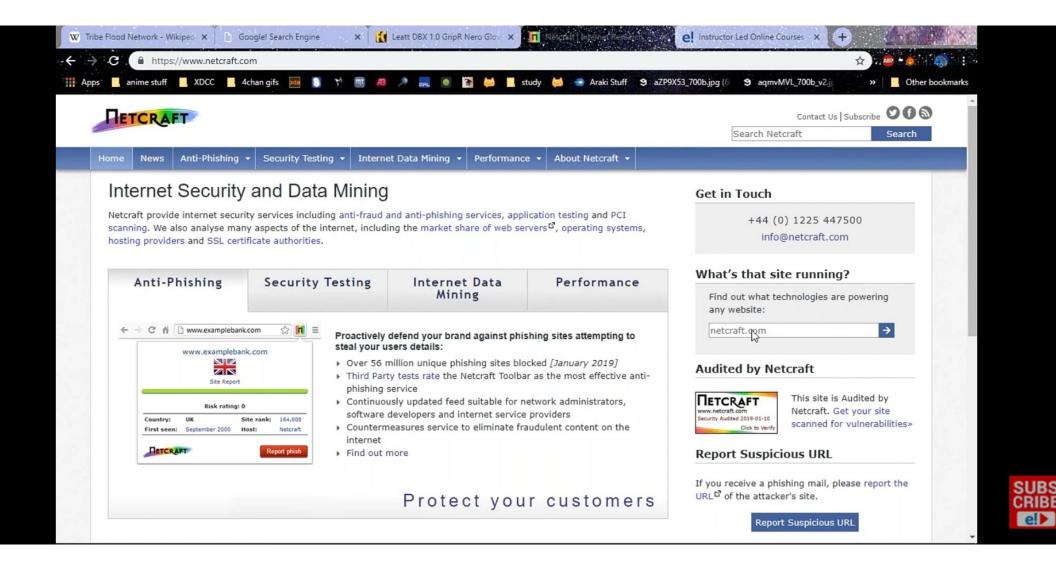




Wayback Machine - Archive.org







ethical hacking:

- 1. active footprinting
- 2. passive footprinting

What is active footprinting?

Active footprinting describes the process of using tools and techniques, like using the <u>traceroute</u> commands or a ping sweep -- <u>Internet Control</u>

<u>Message Protocol sweep</u> -- to collect data about a specific target. This often triggers the target's intrusion detection system (<u>IDS</u>). It takes a certain level of stealth and creativity to evade detection successfully.

What is passive footprinting?

As the name implies, passive footprinting involves collecting data about a specific target using innocuous methods, like performing a Google search, looking through Archive.org, using NeoTrace, browsing through employees' social media profiles, looking at job sites and using Whois, a website that provides the domain names and associated networks fora specific organization. It is a stealthier approach to footprinting because it does not trigger the target's IDS.





What is footprintin... get-com.cdn.ampproject.org





:

How do you start footprinting?

Reconnaissance is similar to footprinting and is a crucial part of the initial hacking exercise. It is a passive footprinting exercise where one collects data about the target's potential vulnerabilities and flaws to exploit while penetration testing.

Security audits

- Highly structured
- · Policy vs. reality
- Business process reviews
- Determines whether controls exist
- •References laws/security standards
- •High-level tools are often used

Vulnerability assessments

- •In-depth view
- Looks at technical flaws
- •Scope is often external and internal systems
- •Relies heavily on lots of good tools
- Typically doesn't include exploitation of weaknesses found
- •Often confused with vulnerability "scans"

Penetration testing

- Less structured
- Tightly-defined scope, typically external systems
- •Sometimes operational
- flaws (i.e. social engineering) are included
- •Time sensitive
- •Relies heavily on limited set of good tools

Footprinting can help ethical hackers find potential vulnerabilities to assess and test.







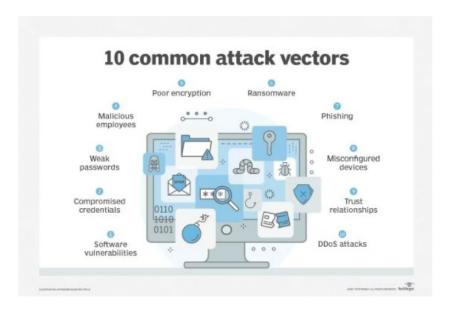




:

Footprinting processes start with determining the location and objective of an intrusion. Once ethical hackers identify a specific target, they gather information about the organization using nonintrusive methods, such as accessing the organization's own webpage, personnel directory or employee bios.

Ethical hackers collect this information and initiate social engineering campaigns to identify security vulnerabilities and achieve ethical hacking goals.



Footprinting is an excellent way to discover vulnerabilities to IT systems and infrastructure.

Advantage of footprinting









Footprinting is an excellent way to discover vulnerabilities to IT systems and infrastructure.

Advantages of footprinting

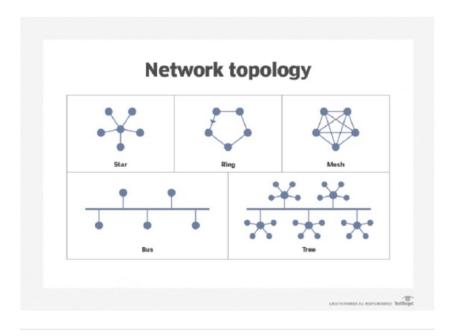
Footprinting techniques in ethical hacking help businesses identify and secure IT infrastructure before a threat actor exploits a vulnerability. Users can also build a database of known vulnerabilities and loopholes.

Footprinting also helps companies better understand their current security posture through analysis of data gathered about the firewall, security configuration and more. Users can update this list periodically and use it as a reference point during security audits.

Drawing a network map helps cover all trusted <u>routers</u>, servers and other <u>network topologies</u>. Users can pursue a reduced attack surface by narrowing it down to a specific range of systems.

Network topology





Drawing network maps of trusted network topologies, including routers and servers, as part of a footprinting exercise is a good way to reduce attack surfaces.

Other types of footprinting

DNA footprinting is the method used to identify the nucleic acid sequence that binds with proteins.

An ecological footprint is an approach to measuring human demand for natural capital or resources. It calculates the amount of natural resources required to support people or an economy. Ecological footprinting uses an ecological accounting system to keep track of this demand.

A <u>digital footprint</u> describes one's unique, traceable digital activities.







binds with proteins.





DNA footprinting is the method used to identify the nucleic acid sequence that

An ecological footprint is an approach to measuring human demand for natural capital or resources. It calculates the amount of natural resources required to support people or an economy. Ecological footprinting uses an ecological accounting system to keep track of this demand.

A <u>digital footprint</u> describes one's unique, traceable digital activities. These include actions, communications and contributions expressed on the internet or digital services. Digital footprints can be either active or passive.



Explore the future of cybersecurity, and