### How HTTrack Can Improve the Use Of OPSEC

Sahmer Ismael CYSE 409 4/15/24

We are in a era of technology, that continues to advance every single year, with a never ending path of data that lives on the internet. However, this is also a nest for many cyber criminals that continue to cause chaos for, individuals, organizations, and communities, throughout continuous cyber-attacks. Which makes the use of Operational Security (OPSEC), more prevalent than ever to maintain one's sensitive data on the internet. Whether these activities online would be, doing research on a sensitive topic, downloading data from a website before it is altered, or even scrolling on the web for continuous hours, they all have their equal set of vulnerabilities they can conclude. On average there are over 2,328 individuals a day that fall victim to cyber-attacks, just by the amount of time that they stay online browsing, and creating themselves a digital footprint, for hackers to exploit (Palatty,2024). Most of these attacks are commonly known as spear phishing attacks, which is when hackers can build up a resume of an individual through different open-source intelligence tools, and target a individual through different interactional platforms, to fake filling a desire or a need (Sen,2022). Furthermore, studies have shown that over 91 percent of unauthorized attacks have come from phishing messages (Sen,2022). However, there is a solution that can help mitigate this issue, while surfing the web, this is the HTTrack tool. This tool is one the best tools when it comes to creating a SafetyNet for browsing the web, due to its website mirroring capability, this allows for users to create a copy of the website they want to view without even visiting the site. This allows for users, not to be under surveillance when viewing content since they are offline and are less likely to become victim of a cyber-attack,

because hackers can't build a history for them. This tool also helps when creating copy's for websites that won't be up on the internet for too long. and has many more unique features.

#### What is HTTrack and what does it do?

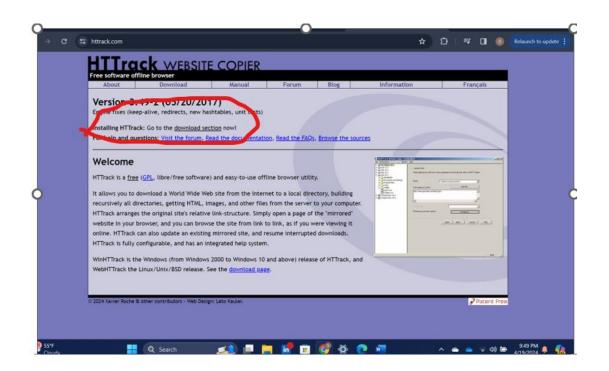
The HTTrack tool was created by Xavier Roche in the year 1998, and allows user to freely download any websites, images, and other files that are located in a website, and transports it to the users local directory(HTTrack, .N.D). Furthermore, HTTrack tool, is a open source web crawler tool, that can be used by any operating system such as Linux, windows, and macOS, with any version, new or old. This tool is widely used across many disciplines such as web developers, researchers, and journalist (HTTrack, .N.D). A example of how the tool can be used, is that if a web developer where to be hired for a certain organization, and they asked them to remodel the site, they would be able to use the HTTrack tool, to first make a copy of the previous site, and start to edit it offline, to match the criteria of what is needed for the new site.

#### Installing HTTrack

The way in which individuals are able to download the HTTrack tool, is to first visit the main website at <u>https://www.httrack.com/</u>. After this step they will be guided to a page that displays, what is the best download option for their device which will be labeled in green, this depends on factors such as there operating system , and the version type the computer is running on. For the example of my device, we will be running the windows 10 and above version, which is about a 64-bit installer version, which was released on the date 5/20/2017. Next, they will be guided to a setup page and they will hit next and accept the License agreement. Then after they accept the agreement, they will get a option to store the website in a folder in there drive. Then after they finish setting the tool, in a specified folder, then they will go forward and click next, or if they want to set up the tool, as a desktop icon, they will select that option and then they will click the

next button. After the previous step, the user will be guided to a page, that ask them, the option to finish the setup and they will click that option to finish, so the tool can be fully downloaded on there desktop. Below is a guide, with photos, on how a individual should be able to install the HTTrack tool.

### Step1: click the download section.



## Step2: click the right file, that is highlighted in green to dowload.

D	ownload HTTrack Website Copier 3.49-2		-
	Platform	Choose file to download	Version
	Windows (from Windows 2000 to Windows 10 and above) installer version WinHTTrack (also included: command line version)	httrack-3.49.2.exe [alternate site]	3.49-2 4 MiB (4199216 B) (20/May/2017)
	We recommend: Windows (from Windows Vista to Windows 10 and above) 64-bit installer version WinHTTrack (also included: command line version)	httrack_x64-3,49.2,exe [alternate site]	3.49-2 4.3 MiB (4513224 B) (20/May/2017)
	Windows (from Windows 2000 to Windows 10 and above) <u>without</u> installer (eg: USB key) WinHTTrack (also included: command line version)	httrack-noinst-3.49.2.zig [alternate site]	3.49-2 4.43 MiB (4640129 B) (20/May/2017)
	Windows (from Windows Vista to Windows 10 and above) 64-bit <u>without</u> installer (eg: USB key) WinHTTrack (also included: command line version)	httrack_x64-noinst-3.49.2.zip [alternate_site]	3.49-2 4.83 MiB (5064206 B) (20/May/2017)
	Linux/OSX/BSD/Unix sources version WebHTTrack (also included: httrack, command line version)	httrack-3.49.2.tar.gz [alternate site]	3.49-2 1.75 MiB (1835116 B) (20/May/2017)
	Android (>= 2.2) on Google Play HTTrack (Android)	com.httrack.android	3.47.99 (trunk) 2.22 MiB

### Step3: click the next option.

Download HTTrack We H Setup - WinHTTrack Websit	e Copier	- • ×		
		e WinHTTrack	load	Version
Windows (from Windows 2000 to WinHTTrack (also included: comm We recommend: Windows (from Windows Vista to version WinHTTrack (also included: comm	•	r Setup Wizard k Website Copier 3.49-2 (x64) on	<u>ate site]</u>	3.49-2 4 MiB (4199216 B) (20/May/2017)
	It is recommended that yo continuing. Click Next to continue, or	<u>rnate site</u> ]	3.49-2 4.3 MiB (4513224 B) (20/May/2017)	
Windows (from Windows 2000 to (eg: USB key) WinHTTrack (also included: comm			alternate	3.49-2 4.43 MiB (4640129 B) (20/May/2017)
Windows (from Windows Vista to Installer (eg: USB key) WinHTTrack (also included: comm		Next > Cancel	- <u>2.zip</u>	3.49-2 4.83 MiB (5064206 B) (20/May/2017)
Linux/OSX/BSD/Unix sources version WebHTTrack (also included: httrack, command line version	)	httrack-3.49.2.tar.gz [alte	ernate site]	3.49-2 1.75 MiB (1835116 B) (20/May/2017)
Android (>= 2.2) on Google Play HTTrack (Android)		com.httrack.andro	<u>vid</u>	3.47.99 (trunk) 2.22 MiB

# Step4: Click the accept option

Download HTTrack We	Setup - WinHTTrack Website Copier - >		
	Please read the following important information before continuing.	load	Ve
Windows (from Windows 2000 to WinHTTrack (also included: comm	Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.	ate site]	3. 4 MiB (4 (20/M
We recommend: Windows (from Windows Vista to version WinHTTrack (also included: comm	HTTrack Website Copier License Agreement: HTTrack Website Copier, Offline Browser for Windows and Unix Copyright (C) Xavier Roche and other contributors	rnate site]	3. 4.3 MiB (20/Ma
Windows (from Windows 2000 to (eg: USB key) WinHTTrack (also included: comm	This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 3 of the License, or any later version.	<u>alternate</u>	3. 4.43 MiE (20/Ma
Windows (from Windows Vista to ) installer (eg: USB key) WinHTTrack (also included: comm	I do not accept the agreement     I do not accept the agreement     Sack Next > Cancel	<u></u>	3. 4.83 Mie (20/M

## Step5: choose the folder, you want the tool in

Download HTTrack We	Setup - WinHTTrack Website Copier Select Destination Location Where should WinHTTrack Website Copier be installed	×	load	Version
Windows (from Windows 2000 to WinHTTrack (also included: comm	Setup will install WinHTTrack Website Copier in	5	ate site]	3.49-2 4 MiB (4199216 B) (20/May/2017)
We recommend: Windows (from Windows Vista to V version WinHTTrack (also included: comm	To continue, dick Next. If you would like to select a dit <u>C:\Program Files\WinHTTrack- Sahmer</u>	ferent folder, click Browse.	rnate site]	3.49-2 4.3 MiB (4513224 B) (20/May/2017)
Windows (from Windows 2000 to (eg: USB key) WinHTTrack (also included: comm			<u>alternate</u>	3.49-2 4.43 MiB (4640129 B) (20/May/2017)
Windows (from Windows Vista to installer (eg: USB key) WinHTTrack (also included: comm	At least 13.9 MB of free disk space is required.	k Next > Cancel	<u>2.zip</u>	3.49-2 4.83 MiB (5064206 B) (20/May/2017)
Linux/OSX/BSD/Unix sources version WebHTTrack (also included: httrack,	command line version)	httrack-3.49.2.tar.gz [alte	ernate site]	3.49-2 1.75 MiB (1835116 B) (20/May/2017)
Android (>= 2.2) on Google Play HTTrack (Android)		com.httrack.andro	<u>vid</u>	3.47.99 (trunk) 2.22 MiB

### Step 6: click next, unless you want to create as a desktop icon.

Download HTTrack W€∎	Setup - WinHTTrack Website Copier - Select Additional Tasks Winkin additional Tasks Should be performed?	X	Version
Windows (from Windows 2000 to WinHTTrack (also included: comm	Select the additional tasks you would like Setup to perform while installing WinHTTrack Website Copier, then click Next.	ate site]	3.49-2 4 MiB (4199216 (20/May/2017
We recommend: Windows (from Windows Vista to ) version WinHTTrack (also included: comm	Setup: Register WinHTTrack file types and program setup Additional icons: Create a desktop icon	3.49-2 4.3 MiB (451322 B) (20/May/2017)	
Windows (from Windows 2000 to (eg: USB key) WinHTTrack (also included: comm	Create a quick launch icon		3.49-2 4.43 MiB (46401 B) (20/May/2017
Windows (from Windows Vista to ' installer (eg: USB key) WinHTTrack (also included: comm	< Back Next > Canc	el	3.49-2 4.83 MiB (50642 B) (20/May/2017
Linux/OSX/BSD/Unix sources versior WebHTTrack (also included: httrack		[alternate site]	3.49-2 1.75 MiB (18351 B) (20/May/2017
Android (>= 2.2) on Google Play HTTrack (Android)	com.httrack.a	Indroid	3.47.99 (trunk 2.22 MiB

## Step7: click the install option.

Download HTTrack We	Ready to Install Setup is now ready to begin Installing WinHTTrack	- C	load	Version
Windows (from Windows 2000 to WinHTTrack (also included: comm	computer. Click Install to continue with the installation, or click change any settings.	Back If you want to review or	ate site]	3.49-2 4 MiB (4199216 B (20/May/2017)
We recommend: Windows (from Windows Vista to ' version WinHTTrack (also included: comm Windows (from Windows 2000 to (eg: USB key) WinHTTrack (also included: comm	Start Menn Iolder: WinHTTrack Additional fasts: Sactation and the start and program setup Additional fasts: Create a destop ion		3.49-2 4.3 MiB (4513224 B) (20/May/2017)	
			<u>ilternate</u>	3.49-2 4.43 MiB (464012 B) (20/May/2017)
Windows (from Windows Vista to ' installer (eg: USB key) WinHTTrack (also included: comm	۰ د	Back Install Cancel	Lzip	3.49-2 4.83 MiB (5064200 B) (20/May/2017)
Linux/OSX/BSD/Unix sources versior WebHTTrack (also included: httrack		httrack-3.49.2.tar.gz [a	Iternate site]	3.49-2 1.75 MiB (183511) B) (20/May/2017)
Android (>= 2.2) on Google Play HTTrack (Android)		com.httrack.and	troid	3.47.99 (trunk) 2.22 MiB

### Step8 : Click the finish button

Setup - WinHTTrack Website	Copier	—		$\times$
	Completing the Wir Website Copier Set	up Wiz Track Website be launched	e Copier on	
		Finish		

#### How to use HTTrack

Once the tool has fully downloaded on the user device, the user will then open the tool, and be brought to a screen, that ask them to hit the next button to start a new project. For this example, I ended up using the 409 Assignment for the projects name, and saved the project in my C drive, in a folder called my websites. Creating this easy path, to find new and past projects, make it simpler to locate, then having to look around my whole directory to locate the project I desire, A example is shown below.

## Step 1

File Preferences Mirror L	og Window Help	
	Welcome to WinHTTrack Website Copier! Please click on the NEXT button to - start a new project - or resume a partial download	
	< Back Next > Ext Help	
Ready		

Preferences Mirror Log	Window Help		
	New project name: Project category: info New project	409 Assignent	
PerfLogs Program Files (x86) Users Windows XboxGames DimpStack.log Memory Setup.log	Base poly.	C:\My Web Sites	
Serop.og		< Back Ment > Cancel Help	

The next step in the process, for how to use the tool, is to find the website that you want to end up mirroring. For this example, I ended up using the Wells Fargo website, they way in which I ended up mirroring the website was by copying the URL of the website. However there are many ways that the HTTrack tool, can allow you to mirror the website, for instance you can end up selecting, the mirroring depth, you can set bandwidth constraints, and you can choose the specified files from the site to download. For my example below, I just ended up copying the website completely, without any further configurations.

### Step2

	Apps         - Heroing Mode -           dell         Enter addressini in URL box           brivers         e-logo           MM Web Stres         Action:           409 final.whit         Add Infal           409 final.whit         Web Addresser (URL)           6 dad final.whit         Web Addresser (URL)           6 final.gef         Hegs, //www.Built.com/           6 final.gef         Hegs, //www.Built.com/           6 Pertugs         e           Program Files (b8)         e           Verst         UPL List (bc)	- 0 X	
The Preferences Memor Leg W The Line of the Construction of the Co	Indow Help	Add UPL	- 0 X
Ready			

The next step is to watch the process, of the website that you ended up mirroring, because you can make certain that it ends up working. For the example of the Wells Fargo website, that I was using, this ended up taking my PC around 20-30 mins to fully complete, the download. Below is a example of how the tool is supposed to be looking, while completing the mirroring process for the website.

### Step3

Preferences Mirror Log Wi	ndow neip					 
Apps	In progress:	Transferring data				
dell		, and a second second				
Drivers	Information					
e-logo	Bytes saved:	53.06KiB	Links scanned:	3/34		
My Web Sites	Time:	56	Files written:	1		
⊕ 409 A	Transfer rate:	38B/s (893B/s)	Files updated:	0		
- 409 Assigment	Active connections:	4	Errors:	0		
accountoffers.wellsf						
⊕ cdnjs.cloudflare.cor	Actions:					
+ hclp-cdn.harlandcla						
⊕- hts-cache	scanning ttps://	accounckingoffer/css			SKIP	
script.crazyegg.com	request ttps://	accounckingoffer/css/st	/les.css		SKIP	
- www17.wellsfargom	request ttps://	accounckingoffer/css/ov	vl.theme.default.min.cs		SKIP	
- backblue.gif	request ttps://	accounckingoffer/css/no	omolize.css		SKIP	
- cookies.txt					SKIP	
- fade.gif					SKIP	
- hts-log.txt					SKIP	
- index.html					SKIP	
🗊 409 final					SKIP	
_ 409 A.whtt			· · · · · · · · · · · · · · · · · · ·		SKIP	
409 Assigment.whtt					SKIP	
- 409 final.whtt					SKIP	
- backblue.gif				70	SKIP	

Then the final step is to end up comparing the original website, to the one that was just mirrored, and to make sure that you can still access the tools that are on the main site.

This is a photo of the original website, before it was mirrored.

## Get a \$300 new checking customer bonus\*

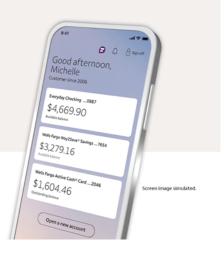
Open an Everyday Checking account<sup>\*\*</sup> with a minimum opening deposit of \$25 from this offer webpage. Complete the <u>qualifying requirements</u> to receive your \$300 bonus. This offer is for new checking customers only. <u>See how to avoid the \$10 monthly service fee</u> for the Everyday Checking account.

#### Join the millions who trust Wells Fargo with their banking needs

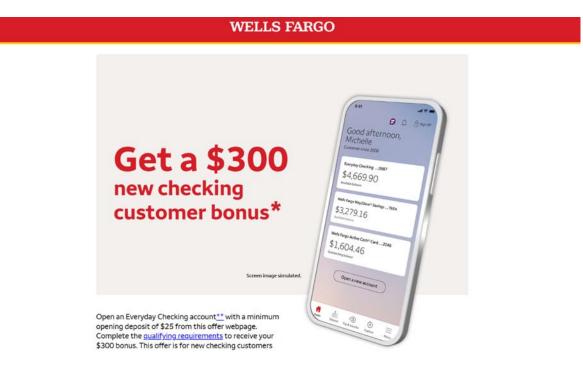
Open your account online in minutes.

Open online >>

Enter your information below to get the bonus offer code to provide to a banker at account opening. This bonus offer code will also be sent to you via email.



That photo below, is a example of the same exact site, however now it is mirrored.



Below is a example, of where the files, of the project would end up being stored on my PC.

409 Assigment							
← → ↑ ♂	<b>□</b>	This PC > OS (C:) > My Web Sites	> 409 Assigment >		Search	n 409 Assigment	
⊕ New ~ 🐰 🗘	î a	😥 🛅 🐴 cort ~ 🗮 Vien	w ~			Det	etails
> 🔁 Fws Hours and jounral	1	Name	Date modified	Туре	Size		
> 🛅 Important material		accountoffers.wellsfargo.com	4/21/2024 12:50 PM	File folder			
> 🚞 Pictures		hts-cache	4/21/2024 12:50 PM	File folder			
> 🦰 Random stuff		backblue	4/21/2024 12:50 PM	GIF File	5 KB		
		cookies	4/21/2024 12:50 PM	Text Document	1 KB		
🥅 Desktop	*	🧧 fade	4/21/2024 12:50 PM	GIF File	1 KB		
🛓 Downloads	*	🗖 📄 hts-log			3 КВ		
🔀 Pictures	*_	💽 index	4/21/2024 12:50 PM	Microsoft Edge HTM	6 KB		
Documents	*						

### Conclusion of HTTrack

When looking at the overall aspect of the HTTrack tool, there are many positives and negatives that make it unique for professionals, and a challenge, when it comes to limitations. There are many positives that can come from the tool, such as the mirroring process when an individual is offline and looking at a website, they are more prone not to create for themselves a digital footprint for hackers to perceive and are better-off safeguarding their devices. Furthermore, another positive trait that the HTTrack tool portrays, is the compatibility when it comes to the mirroring process. This allows individuals the chance to be able to set up different guidelines, when they are completing the mirroring process of a website, such as, setting download limits, choosing specific files to download, and much more. The profession that I feel can benefit from this tool, is law enforcement agents, because if they see something online that is completely wrong, and want to find out more information about it, they probably are aware the website won't be up for too long, however when they use HTTrack tool, they can save a offline copy of the site. While the HTTrack tool is a great tool, it does have limitations when it comes to mirroring websites. For example, there are many questions that come to mind, of what websites

you should be mirroring, I feel that the tool should create a better description of websites you should not be mirroring so individuals don't end up in legal trouble. Because some websites, have rules in which they ask users, not to copyright their websites, so users should respect this decision and not proceed unless they have asked. Furthermore, another issue with the tool, is the maintenance when it comes to mirroring of different websites, since websites continue to update every single day for the most part, how will the tool stay UpToDate when it comes to the mirrored version of the website. Does that mean that users will continuously have to remirror the website, every time a update concludes on the main website online. The final issues that I will address with the HTTrack tool, is the compatibility when it comes to sharing the mirrored website, I feel that users should be able to work together when it comes to improving the website offline, such as web developer professionals. However I feel that this a great tool that can have many advantages across many different discipline fields, but some improvements would help the tool be more recognized throughout daily work across the globe

### Reference page

. 90+ cyber crime statistics 2024: Cost, industries & trends. Astra Security Blog. (2024, January 24). https://www.getastra.com/blog/security-audit/cyber-crimestatistics/#:~:text=Cybercrime%20statistics%20show%20that%20a,800%2C944%20complaints %20registered%20in%202022

Clark, C. (2022, April 15). Your Digital Footprints are more than a privacy risk – they could help hackers infiltrate computer networks. Texas A&M Today.

https://today.tamu.edu/2022/04/11/your-digital-footprints-are-more-than-a-privacy-risk-theycould-help-hackers-infiltrate-computer-networks/

HTTrack website Copier - Free Software Offline Browser (GNU GPL). HTTrack Website Copier

- Free Software Offline Browser (GNU GPL). (n.d.). https://www.httrack.com/

Wikimedia Foundation. (2024, February 18). HTTrack. Wikipedia.

https://en.wikipedia.org/wiki/HTTrack