



Department of Electrical & Computer Engineering

CSE 499A: Senior Design Project

FINAL REPORT

Dark Web – E-commerce sites

Section: 11

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1 Introduction

The dark web is the World Wide Web content that exists on deep nets, overlay networks that use the Internet but require specific software, configurations, or authorization to access. The dark web forms a small part of the deep web, the part of the Web not indexed by web search engines, although sometimes the term deep web is mistakenly used to refer specifically to the dark web. The surface web is everything that's publicly available and accessible through search or typing a URL into your browser. The deep web also known as the invisible web, is all the content on the web that is not indexed by standard search engines, such as email clients, online banking websites, or pages that are inaccessible to crawlers, the software that indexes the web for search engines. Some of those pages can still be accessed if you have the URL while others require you to have login credentials. According to expert estimates, the deep web is 500 times larger than the surface web.

The dark web, however, is a totally different beast—a tiny fraction of the web that is only accessible through specialized software such as the Tor browser. However, the term “dark web” is also often used to refer to the dark net, the overlay networks that are used to anonymize communications and obfuscate both the origin and destination of internet traffic. We may have heard the term "dark web," but it can sometimes be difficult to understand what it really is and what it can mean to us. It may help to look at the internet as made up of different levels based on the access available and common purposes.

There are three levels—the publicly available world wide web, the deep web and the dark web—and we'll explain a bit more here about each:

Public web: If we're like most people, this is where we spend the majority of our time—doing things like online shopping, searching for information and sharing photos and videos on social media. However, this represents only about 4% of the internet.

While this isn't where identity thieves spend most of their time, there are things we can do to protect ourself online and keep your personal information from getting into the wrong hands while you surf the web.

While the dark web crops up in news coverage fairly regularly, not many people actually know what it is or what it's used for. The dark web is effectively a series of between 7,000 and 30,000 sites which require specialized software to access, the most commonly-used of which is the Tor network (The Onion Router). Tor was created by US military researchers in the 1990s as a method of trading information anonymously - hiding both the origin and destination of all exchanged data. It released it to the public to open it beyond sole military operations, and it has since helped citizens of countries where internet access is restricted, and served as host to whistleblowers including Edward Snowden and Julian Assange. The dark web is a small subsection of what is known as the deep web - sites inaccessible through standard search engines, meaning you'll need to know the exact site address to navigate to it, but won't need to download and use specific software. The anonymity afforded by Tor has led to the dark web garnering a reputation as a hotbed for illegal activity: through online black marketplaces to exchange bitcoin for firearms and drugs, hitmen and hackers for hire, scams and phishing sites and for sharing child abuse. The latter is believed to be particularly prolific - a 2015 report found 80 per cent of visits to Tor hidden services were related to child abuse images and videos. In February, a hacker took down around a fifth of the dark web by attacking a hosting provider after realizing it was hosting 10 child abuse

material sites, before handing the details to a security researcher to share with the police. While the continued existence of the dark web has prompted many debates over its ethics, it remains an invaluable tool for law enforcement. Many dark web users are likely to be undercover law enforcement seeking to track and prosecute pedophile rings. The FBI recently arrested more than 1,000 people internationally linked to a dark net child abuse site called Playpen after spreading malware to their computers under a single warrant. Two of the largest marketplaces for illegal goods including drugs and fraudulent IDs, AlphaBay and Hansa, were shut down last week after police tracked AlphaBay's reported creator through an email address. Silk Road, the dark web's most famous illegal marketplace, is believed to have processed around \$1.2bn (£92m) in its two short years of operation between 2011 and 2013, when the FBI shut it down. Privacy advocates have also championed the dark web as governments look to regulate the internet more heavily as part of counter-terrorism measures, which some argue is tantamount to censorship.

2 Background

The Paper is about an analysis how e-commerce websites implement their business strategies using the dark web and to examine whether it works differently for regular internet e-commerce sites. The differences between Surface web e-commerce websites & Dark web e-commerce websites are also be observed. Differences in terms of their structure, contents, advantages, disadvantages are taken into consideration. Web crawling of the websites was tried using different frameworks of Python but major E-commerce websites will also be scrap properly. So the focus is to observe several e-commerce websites of Dark web and to find the difference from the surface web e-commerce websites. Not only difference but also to find the positives that Dark web provides to people. The general idea of this Paper is to observe and find out why people should use Dark web in terms of E-commerce activities.

3 Literature Review

Robert W. Gehl in his book "Archives for the Dark Web: A Field Guide for Study" have done some great work of several years of study about Dark web markets, search engines and social networking sites. Weaving the Dark Web provides a history of Freenet, Tor, and I2P and details the politics of Dark Web markets, search engines, and social networking sites. In the book, writer draw on three main streams of data: participant observation, digital archives, and the experience of running the routing software required to access the Dark Web.

Abdulmuttaleb Abduljalil in their article "Critical-Analysis-of-the-Emerging-Dark-Web" analysis

impact of the Dark web on modern society. In This chapter shows the result of the dissertation study means success or failure of the dissertation study. The final verdict of the dissertation study used to be obtained in this chapter. The researchers after completion of the data analysis and discussion reach to the final opinion about the issue of undertaken dissertation topic.

Mihnea Mirea¹ · Victoria Wang¹ · Jeyong Jung in their article “The not so dark side of the dark net: a qualitative study” suggested that many users of the Dark net might not perceive it as intrinsically criminogenic, despite their acknowledgement of various kinds of criminal activity in this network. Further, our research participants emphasized on the achievement of constructive socio-political values through the use of the Dark net. This achievement is enabled by various characteristics that are rooted in the Dark net’s technological structure, such as anonymity, privacy, and the use of cryptocurrencies. These characteristics provide a wide range of opportunities for good as well as for evil.

4 Algorithms

For our Research purpose, we have to use web-scraping for collecting data from various ecommerce site of Dark web. Web-scraping can be done using multiple tools, library or using different frameworks in Python. And web crawling is another term which actually is not similar with web-scraping. Web crawling is used to index the information on the page using bots also known as Crawlers. On the other hand, Web-scraping is an automated way of extracting the information/content using bots also known as Scrapers. Let see some most commonly used web Scraping tools for Python⁴ :

Urllib2, Requests, BeautifulSoup, Lxml, Selenium, MechanicalSoup .

1. Urllib2: Urllib2 is a python module used for fetching URL’s. It offers a very simple interface, in the form of urlopen function, which is capable of fetching URL’s using different protocols like HTTP, FTP etc.

```
# Using urllib2 module
from urllib.request import urlopen

html = urlopen("http://geeksforgeeks.org")

print(html.read())
```

2. Requests: Requests does not come pre-installed with Python. Requests allows to send

HTTP/1.1 requests. One can add headers, form data, multipart files and parameters with simple Python dictionaries and access the response data in the same way.

Installing requests can be done using pip.

```
# Using requests module
import requests

# get URL
req = requests.get('http://www.geeksforgeeks.org/')

print(req.encoding)
print(req.status_code)
print(req.elapsed)
print(req.url)
print(req.history)
print(req.headers['Content-Type'])
```

3. BeautifulSoup : BeautifulSoup is a parsing library that can use different parsers. BeautifulSoup's default parser comes from Python's standard library. It creates a parse tree that can be used to extract data from HTML; a toolkit for dissecting a document and extracting what you need. It automatically converts incoming documents to Unicode and outgoing documents to UTF-8.

pip can be used to install BeautifulSoup :

```
# importing BeautifulSoup form
# bs4 module
from bs4 import BeautifulSoup

# importing requests
import requests

# get URL
r = requests.get("http://www.geeksforgeeks.org")

data = r.text
soup = BeautifulSoup(data)

for link in soup.find_all('a'):
    print(link.get('href'))
```

4. Lxml: Lxml is a high-performance, production-quality HTML and XML parsing library. If

the user need speed, then go for Lxml. Lxml has many modules and one of the module is etree , which is responsible for creating elements and structure using these elements. One can start using lxml by installing it as a python package using pip tool :

```
# importing etree from lxml module
from lxml import etree
```

```
root_elem = etree.Element('html')
etree.SubElement(root_elem, 'head')
etree.SubElement(root_elem, 'title')
etree.SubElement(root_elem, 'body')
```

```
print(etree.tostring(root_elem, pretty_print = True).decode("utf-8"))
```

5. Selenium: Some websites use javascript to serve content. For example, they might wait until you scroll down on the page or click a button before loading certain content. For these websites, selenium is needed. Selenium is a tool that automates browsers, also known as web-drivers. It also comes with Python bindings for controlling it right from your application.

pip package is used to install selenium :

```
# importing webdriver from selenium module
from selenium import webdriver
```

```
# path for chromedriver
path_to_chromedriver = '/Users/Admin/Desktop/chromedriver'
```

```
browser = webdriver.Chrome(executable_path = path_to_chromedriver)
```

```
url = 'https://www.geeksforgeeks.org'
browser.get(url)
```

6. MechanicalSoup: MechanicalSoup is a Python library for automating interaction with websites. It automatically stores and sends cookies, follows redirects, and can follow links and submit forms. It doesn't do JavaScript.

One can use following command to install MechanicalSoup :

```
# importing mechanicalsoup
import mechanicalsoup
```

```
browser = mechanicalsoup.StatefulBrowser()
value = browser.open("http://geeksforgeeks.org/")
print(value)
```

```
value1 = browser.get_url()
print(value1)
```

```
value2 = browser.follow_link("forms")
print(value2)
```

```
value = browser.get_url()
print(value)
```

7. Scrapy : Scrapy is an open source and collaborative web crawling framework for extracting the data needed from websites. It was originally designed for web scraping. It can be used to manage requests, preserve user sessions follow redirects and handle output pipelines. There are 2-methods to install scrapy :

1. Using pip :
`pip install scrapy`
2. Using Anaconda : First install **Anaconda** or **Miniconda** and then use following command to install scrapy :
`conda install -c conda-forge scrapy`

```
# importing scrapy module
import scrapy
```

```
class GeeksSpider(scrapy.Spider):
```

```
    name = "geeks_spider"
```

```
    start_urls = ['http://www.geeksforgeeks.org']
```



```
# Parse function
def parse(self, response):

    SET_SELECTOR = 'geeks'
    for geek in response.css(SET_SELECTOR):
        pass
```

APIs: An Alternative to Web Scraping

Some website providers offer *Application Programming Interfaces (APIs)* that allow you to access their data in a predefined manner. With APIs, you can avoid parsing HTML and instead access the data directly using formats like JSON and XML. HTML is primarily a way to visually present content to users.

When you use an API, the process is generally more stable than gathering the data through web scraping. That's because APIs are made to be consumed by programs, rather than by human eyes. If the design of a website changes, then it doesn't mean that the structure of the API has changed.

However, APIs *can* change as well. Both the challenges of variety and durability apply to APIs just as they do to websites. Additionally, it's much harder to inspect the structure of an API by yourself if the provided documentation is lacking in quality.

The approach and tools you need to gather information using APIs are outside the scope of this tutorial. To learn more about it, check out [API Integration in Python](#).

5 Available Platforms and Tools

One of the most challenging problems in condensed matter Dark web E-commerce market and it's selling and buying or business strategies. For this research method, we must enter the dark web's ecommerce sites where actually happen legal and illegal deals of the products. Dark Web So Popular with Criminals Because of its hidden nature and the using special applications to maintain anonymity, it's not surprising that the dark web can be a haven for all kinds of illicit

activity (including the trafficking of stolen personal information captured through means such as data breaches or hacks). This means if you've ever been a victim of a data breach, it's a place where your sensitive information might live. According to the ITRC, data breaches in the United States during 2016 hit an all-time high of 1,093, which represents a 40% increase over the previous year. Once exposed, this information that can change hands again and again over time—especially if it's a valuable combination of information that's attractive to those looking to acquire stolen data. On the dark web, people looking for this information can get access to records that live online and are often available inexpensively—such as bundles going for less than \$10 per record. These bundles are often called 'Fullz' because they include the full package for fraudsters: name, SSN, birth date, account numbers and other data that make them desirable since they're rich enough to do immediate damage. Savvy cyber-thieves also may wait some time before using the data they buy, because immediately following a breach, many people are more guarded and on the lookout for red flags on accounts, bills and their credit report. Unfortunately, there are entire communities in the dark web and even sites that provide reviews on identity thieves that indicate if someone is "good to do business with"—meaning their data is valuable (think of it as the Yelp reviews for criminals). These criminals can make a decent living by selling, buying and using personal information.

5.1 Research Methodology

Firstly, we have to install a browser like TOR browser which simply bounces your IP address from one point to another. So that it is hard to be traced.

Next we have to use raspberry pi microcomputer as a router.

Don't use personal internet connection.

Use monero cryptocurrency as a payment method because it is untraceable.

There are many e-commerce sites like Amazon on surface web where seller can sell their products. And then,

1. Download tails on a flash drive using a VPN. That will leave no evidence that our computer has ever been on the dark net.
2. The flash drive will contain TOR and anything else we need to access the dark net. Everything will be run off the flash drive nothing will remain on our hard drive.
3. Do our research and find a market that has been around a long time. Wall Street might be still around.
4. Setting up a vendor account on the dark net will be expensive. For example, Dream Market cost \$600 worth of bitcoin to open a vendor account.

5. Don't slack on our opsec, that's how people get in trouble they get complacent and lazy. Don't communicate with anybody except by pgp encryption.
6. Don't sell anything that's going to hurt or kill anybody.
7. It is far safer to purchase recreational pharmaceuticals on the dark net than it is too on the street or going to somebody's house.
8. If we're ordering something off the dark net, don't open it for a few days. That way if the police come in we have plausible deniability of what's in the package. If our purchase has been compromised they will come in within 24 hours most likely more likely within an hour or so after. If our package is compromised it was probably done so at the post office and had nothing to do with the dark net.

5.2 Dark Web Browsers:

There are so many browsers to browse the dark web. But, only some certain browser can connect with dark web. Some examples of Dark web browsers are given below:

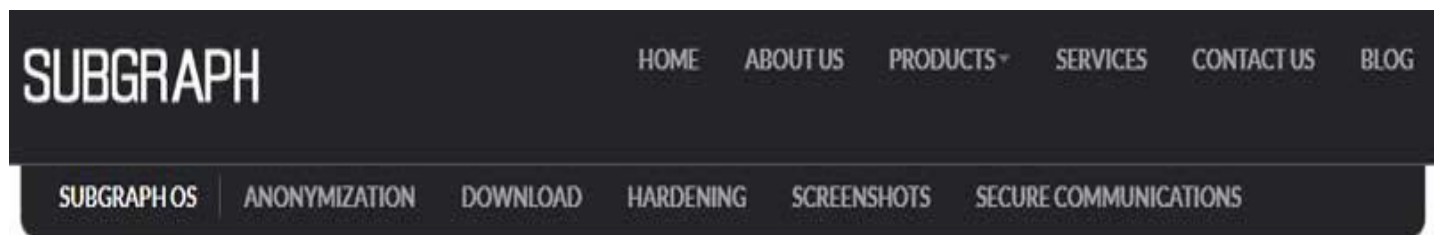
The Tor Browser :



The dark internet browser it all started from. If we want to access the Tor Network, we're always going to be using a version of this hidden web Browser, but for the most basic and simplistic browsing experience, it's a good idea to stick with it.

The Tor dark net Browser is an open-source deep browser that's available for Windows, Mac, and Linux computers, as well as Android mobile devices. This was the first Deep Web browser of its kind and is one of the tightest and most secure ways to start browsing the Dark Web using an anonymous deep web browser.

Subgraph OS:



Subgraph OS: Adversary resistant computing platform.

Subgraph believes that the best way to empower people to communicate and live freely is to develop technology that is secure, free, open-source, and verifiably trustworthy.

Subgraph OS is an important part of that vision.

The Internet is a hostile environment, and recent revelations have made it more apparent than ever before that risk to every day users extends beyond the need to secure the network transport - the endpoint is also at risk.

Subgraph OS was designed from the ground-up to reduce the risks in endpoint systems so that individuals and organizations around the world can communicate, share, and collaborate without fear of surveillance or interference by sophisticated adversaries through network borne attacks.

Subgraph OS is designed to be difficult to attack. This is accomplished through system hardening and a proactive, ongoing focus on security and attack resistance. Subgraph OS also places emphasis on the integrity of installable software packages.

Subgraph OS is a deep web browser based on the Tor dark internet browser and does, in fact, use the same source code for its main build. As we would expect, it's designed to help us to access the internet in a free, private and secure way that helps to protect our safety and anonymity.

Just like the Krypton anonymous browser, the Subgraph anonymous deep web browser is built using multiple layers, as are its internet connections to the Tor Network to help improve this. Some of the other platforms included in this build include Kernel Hardening, Metaproxy and FileSystem Encryption.

Another great feature of this deep dark web browser is the 'container isolation settings'.

This means that any malware containers can be isolated out of the rest of your connection in an instant. This is great for if you're instant messaging and receiving files and messages, using email, or confronting other vulnerabilities while using the internet.

This is easily one of the most popular dark web browsers currently available, and well worth looking into if you're looking for a safe and fast dark web experience.

Firefox:

Yes, we're talking about the well-known dark browser available for free and competes with the likes of Google Chrome, Opera, Safari, and more. In fact, all you need to do is access the settings and route your browser to connect through the Tor Network, instructions for which you should be able to find online.

However, before connecting, you'll want to make sure download some extra privacy plugins, such as HTTPS Everywhere, to ensure you're protected from malicious users. Using a VPN can also help dramatically in this case.

Waterfox:



While we're on the subject of Firefox, we should talk about Waterfox. This is another variety of the Firefox browser (obviously), but with the connection to Mozilla switched off completely.

What's more, this anonymous deep web browser is capable of deleting all your online information from your computer after every session, as does your passwords, cookies, and history. It also automatically blocks trackers while you are browsing.

However, despite having a few radical differences to Firefox, many of the legacy plugins are still supported for you to download and use. There are Windows and Android versions of this browser available, and the community around the dark internet browser is still fairly active.

ISP - Invisible Internet Project:

The image is a screenshot of the Invisible Internet Project (I2P) website banner. At the top left is the I2P logo, which consists of the letters 'I2P' followed by a colorful grid of dots. To the right of the logo are navigation links: 'Download', 'About', 'Help', and 'Volunteer'. Further right is a 'Language' link with a small flag icon. The main heading 'THE INVISIBLE INTERNET PROJECT' is centered at the top. Below the heading, on the left, is a composite image showing a desktop computer screen displaying the I2P Router Console and a smartphone displaying the I2P mobile application. To the right of this image, the text 'What does I2P do for you?' is displayed in a large, white, sans-serif font. Below this text is a paragraph explaining that the I2P network provides strong privacy protections for communication over the Internet, allowing for anonymous activities. At the bottom right, there is a green button with the text 'GET I2P 0.9.33' in white.

The Invisible Internet Project is an I2P program that allows you to access the internet effortlessly, both the surface web and the dark web through a layered stream. Since your data is muddled and masked by this stream of constant data, it makes it much more difficult to pinpoint and identify you.

You can use both public and private keys through this I2P browser and also implements Darknet technology and a decentralized file storage system to help users remain anonymous; a bit like Bitcoin works.

5.3 Browser Over VPN

Using Tor over a VPN:

In the Tor over VPN approach, we start your VPN before we connect our browser to the Tor network. For simplicity, we will assume that we are using the Tor Browser (the browser) for the most secure connection to Tor and that we want to visit the xyz.com website.



Tor over VPN:

- First, we start the VPN. This establishes an encrypted connection between our computer and a VPN server. our ISP knows our IP address and can see we are connected to a VPN, but can't read the data that passes along the encrypted VPN connection.
- Next, we start the Tor Browser and enter the address of xyz.com. The browser establishes a path through the Tor network and encrypts the data it is sending to xyz.com. The VPN can see that the browser is sending encrypted data to a Tor Guard Relay.
- The data passes through the VPN network and exits through the VPN server. The data is still protected by the encryption from the browser.
- The VPN server passes the data to the Tor network. It enters a Guard Relay, which thinks the message originated at the VPN server. The Guard Relay strips off the outermost layer of encryption and passes the message to a Middle Relay.
- The Middle Relay strips off the next layer of encryption and passes the message to an Exit Relay.
- The Exit Relay strips off the final layer of Tor encryption and sends the data to xyz.com. The Exit Relay can read the content of the message but doesn't know the origin IP address.

Data passing from xyz.com to your browser follow the reverse route.

- ☐ on over VPN servers that allow you to use Tor over VPN without any extra effort.
- ☐ CyberGhost: Combining high grade encryption with high speeds, CyberGhost has all the features a Tor user desires.

- ❑ Express VPN: With its own site on the dark web, ExpressVPN promotes Tor on VPN.
- ❑ IPVanish: IPVanish supports Tor, but you might notice a drop in speed.
- ❑ Surfshark: Surfshark's unique security features offer additional protection for Tor users.

Arguments against Using Tor and a VPN Together

One big argument against using Tor and a VPN together is that it slows us down. Browsing with a good VPN will likely be around 10% slower than not using a VPN. Browsing with Tor will be significantly slower than not using Tor. A VPN together with Tor will be slower yet.

The other drawbacks vary depending on how we set things up. We can take the Tor over VPN approach, or the VPN over Tor approach. The developers of the Tails Operating System (which uses Tor by default) are opposed to using a VPN with Tails except in very specific circumstances.



Likewise, the Tor Project team advises setting up something called a **Tor Bridge** as an anonymous entry point into the Tor network.

In both these cases, the idea is that a VPN is not a true anonymous service since the VPN provider does have identifying information about you. In other words, you need to be able to trust your VPN.

Arguments for Using Tor and a VPN Together

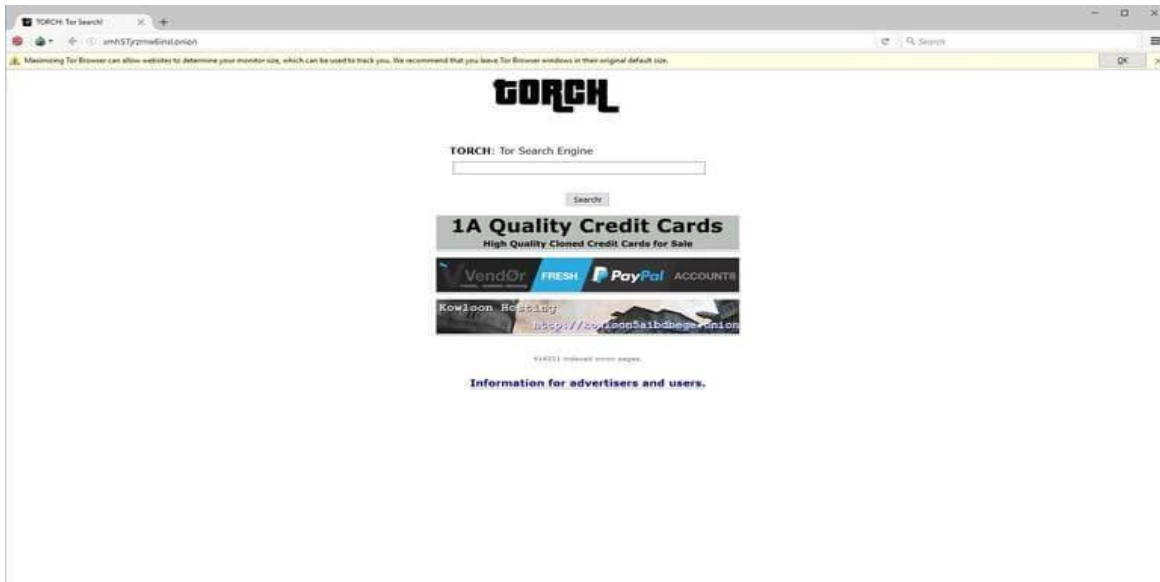
The arguments for using Tor and a VPN together look at the ways that using both together can address some of the weaknesses of each. For example, Tor alone could be vulnerable to attacks on its Exit Relays, while a VPN alone is vulnerable to men with guns showing up at its offices and demanding information.



5.4 Dark Web Browser's Search Engine

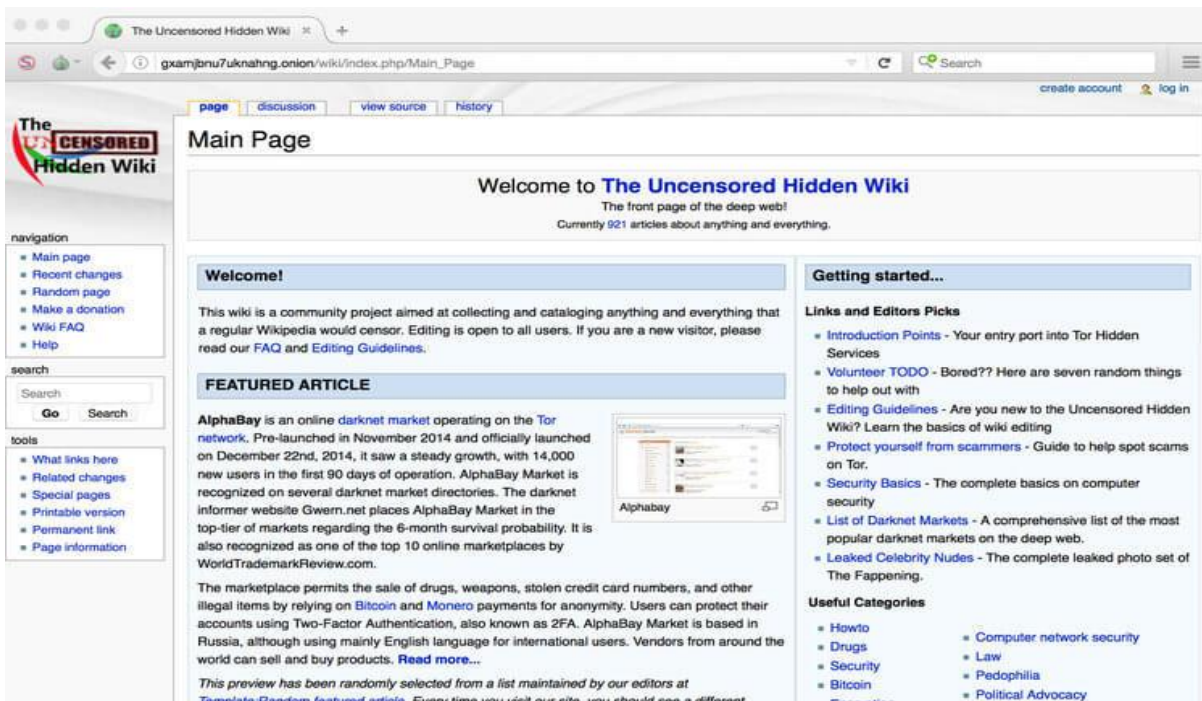
If we plan on sticking with the Tor search engine to browse the Dark Web, there are again plenty of onion search engine download options out there that can help us to stay anonymous while searching for a Tor website you might want to visit.

Torch:



Torch is perhaps one of the most popular dark net search engines URL and websites to date and is renowned throughout the internet for having the largest onion search engine links and indexing database. With more than a million hidden Dark Web results, it's also one of the longest standing onion link search engine websites around.

Uncensored Hidden Wiki:

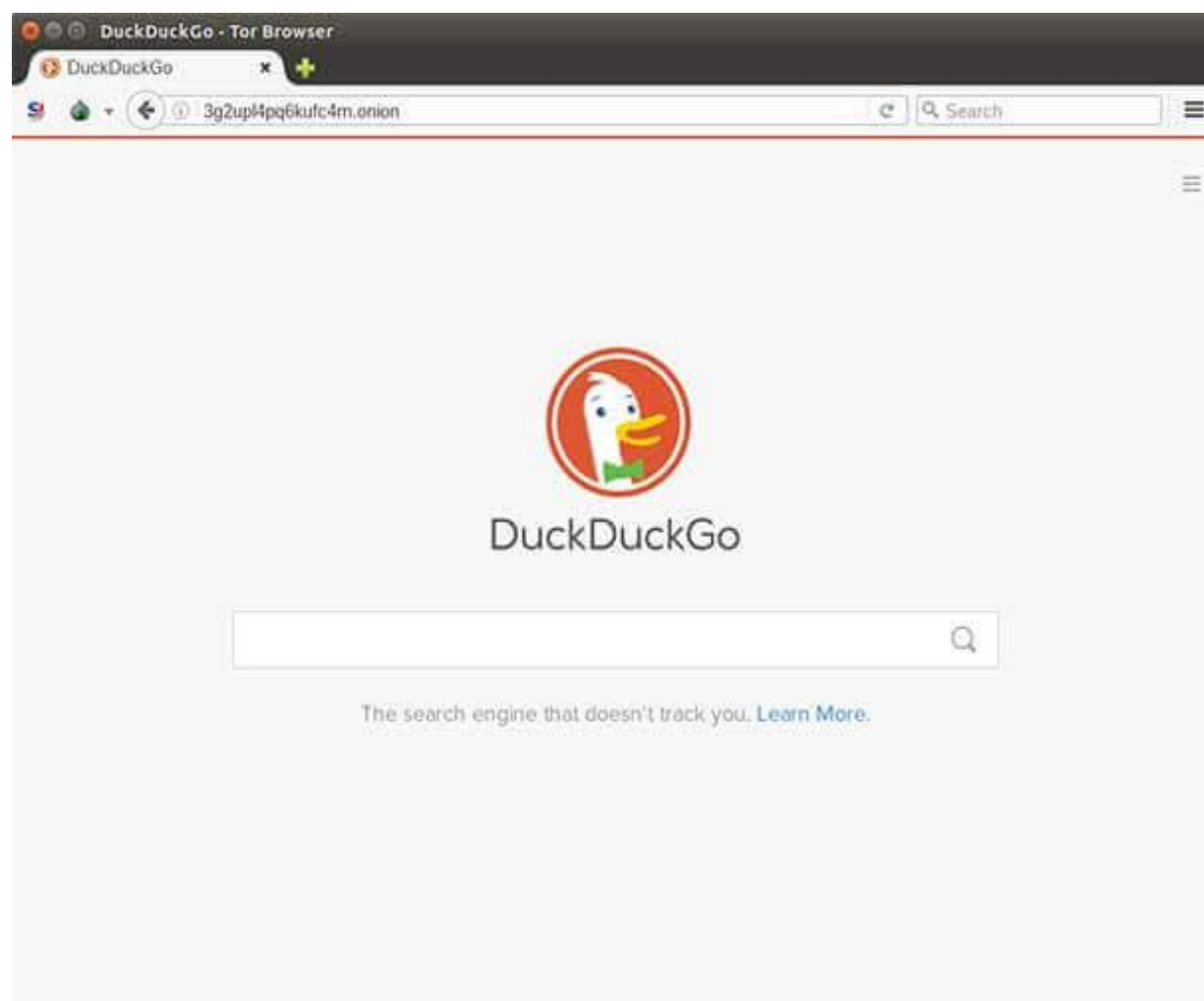


As we've discussed above, when browsing the Dark Web, it's vital that you have your wits about you in order to stay safe and protected. Visiting the Uncensored Hidden Wiki is one of the places you're going to want to stay alert.

While this dark side of the web search engine platform used to be so much worse than it is today, illegal websites can still be found throughout the database, so it's vital you pay attention to what you're clicking on, especially what darknet search engine URL you're clicking on.

Nevertheless, the tor address database is full of great websites and content for you to browse through. Just be aware of what deep web search engines 2019 links and websites you're searching for.

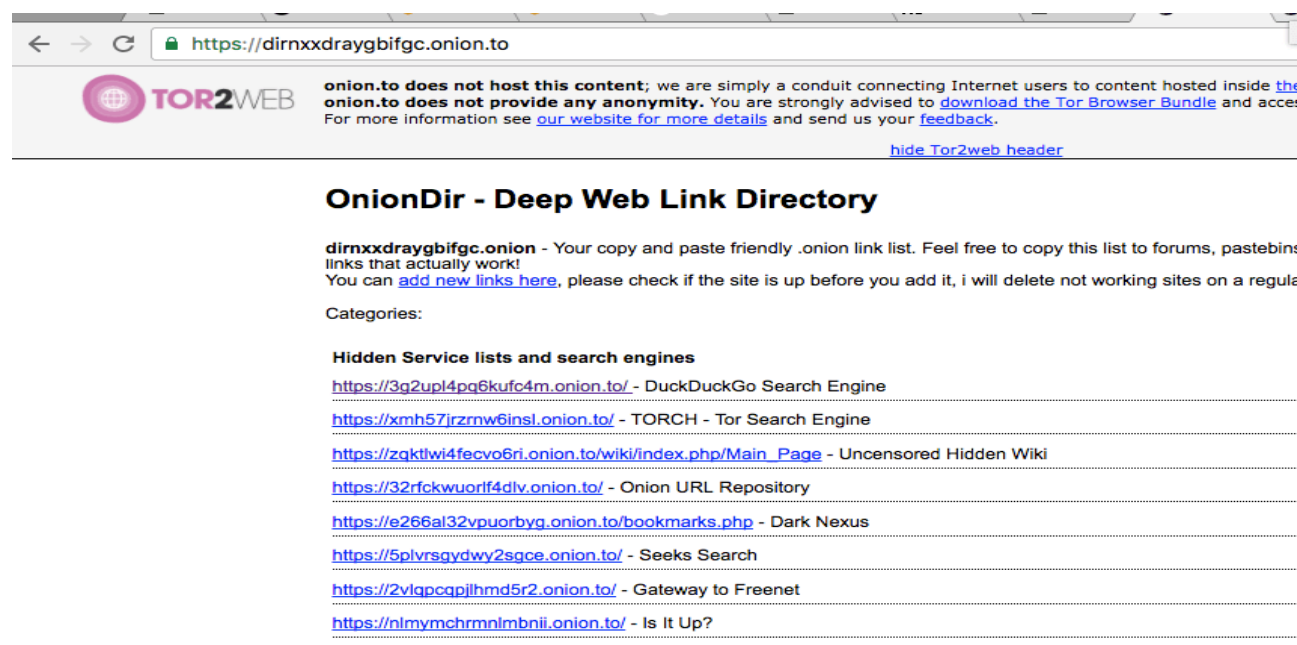
DuckDuckGo:



If we're looking for anything on the Dark Web, DuckDuckGo is probably the best onion link search engine to go for. This tor net platform is known for its stance on beginning to rival Google.

Specifically, this tor search engine doesn't display any ads on its dark web search engine links network and doesn't track user data or activity in any way.

Onion URL Repository:



The Onion Repository is a rather basic and simple onion search engine link website, but it does boast over one million unique darknet search engine URL results and indexed pages, making it incredibly easy to browse a large selection of tor address Dark Web websites.

Virtual Library:



Finally, we come to what is known as one of the oldest dark net search engine archives to exist on the entire internet and all its history. This onion search engine download archive practically has tor website list links and connections to every single topic we can ever imagine from social sciences to shopping channels.

5.5 Protect and Access in Dark Web

Protect Our self from the Dark Web:

People often aren't worried about the dark web until something like a data breach happens and they're notified their information was stolen. There's no fail-proof way to keep your information off the dark web because hackers are always trying the latest new thing to get our information and sell it to those looking to pay for it, but we can be vigilant about looking for red flags that our identity is in someone else's hands, including:

- Monitor your accounts and statements for any information that looks off
- Check our credit report regularly to see if inquiries or new accounts appear that you don't recognize
- Use strong passwords, and change them often
- Consider an online product to help we protect your identity and monitor our credit.
- Know how to respond immediately to suspicious activity
- Use Experian's Free Dark Web Scan to see if our Social Security number, phone number, or email address is on the dark web.

By staying on top of potential issues, we can help minimize the impact if your personal information does fall into the wrong hands.

Access in the dark web:

The most famous tool to get on the dark web is the Tor browser. With Tor, we can access websites whose address ends with the .onion extension. These are websites that are exclusively available on the dark web and can't be accessed through normal browsers. Tor enables us to access all the other surface and deep websites with the added benefit that it anonymizes your browser traffic by encrypting it and deflecting it across several computers—called Tor nodes—before sending it to its destination.

However, there are several things you should know about Tor:

- Tor's browsing experience is considerably slower than normal browsers because of the anonymization technique.
- Some websites block traffic coming from Tor browser.
- While Tor protects you from eavesdropping and surveillance, it won't protect you from websites that contain malicious content.

With those considerations in mind, have fun surfing the dark web, and stay out of trouble.

5.6 E-commerce Markets of Dark Web

There are so many e-commerce site in dark net.

Dark net marketplace is the market where one can sell or buy products online. In dark net markets the payment mode where made more secure and clear. The dark net markets contain more products listed under many categories and each market have unique products in it.

Mostly the dark net markets contain drugs, weapons, fraud, pirated versions of software etc.

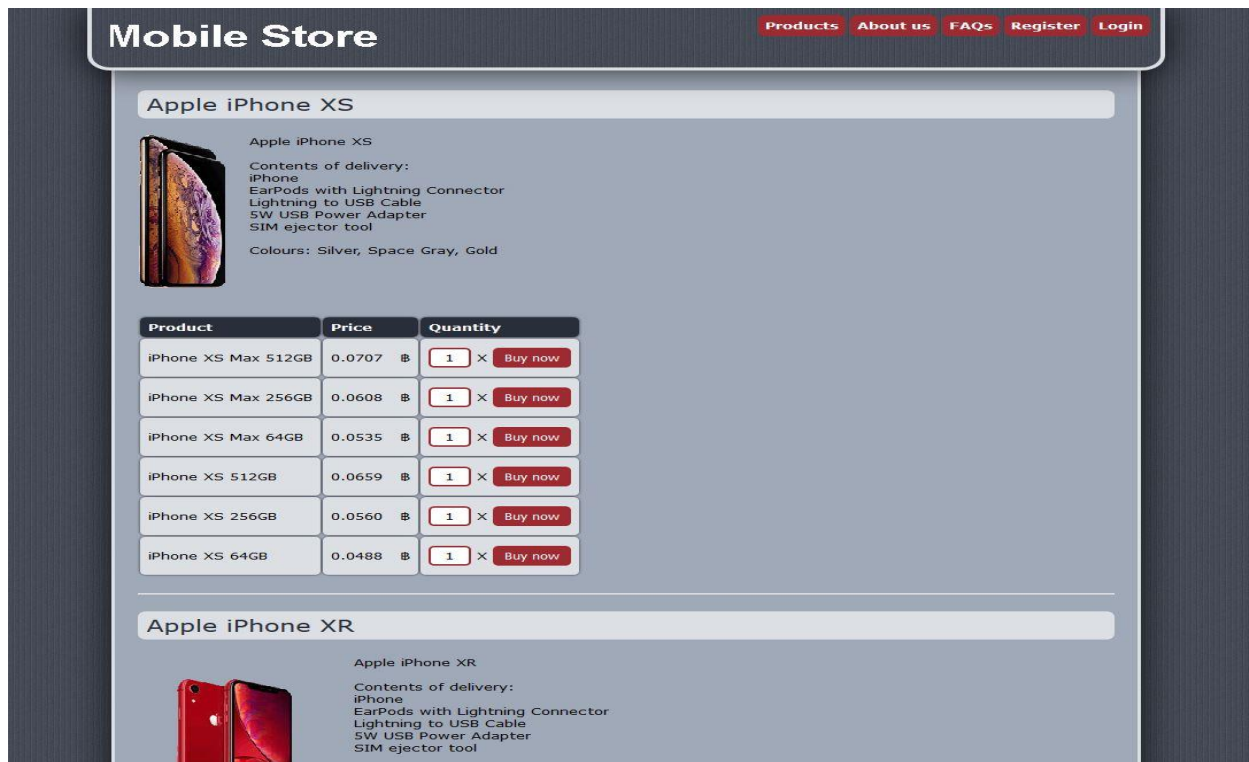
Here are some dark net markets example with links given below:

<http://pwoah7foa6au2pul.onion> –

Alphabay market – Here you can buy drugs, weapons, chemicals, etc., This is one of the best marketplaces in the dark net.

Website Link: mobileay2syyw6qf.onion

So this website sells only brand new mobile phones at a very low price and phones are shipped from US. You can see from the screenshot that Samsung Galaxy S10+ 1TB version is only 0.0857 Bitcoins which is around 51,000 BDT. In Surface Web, if you go to online shopping for Mobile Phones, Galaxy S10+ costs around 950 Dollars and yes, that too only the 128GB version. Now in our country, it costs even more because of duty tax. The name of this website is – Mobile Store.



What this Website offers –

PayPal Transfers

PayPal is a big network where accounts are recognized using their PayPal IDs. If you want to buy PayPal Transfer you only need to leave us your PayPal ID - it's your e-mail you're using to login into the account. You'll get your money in about 3-4 hours after payment. We don't sell stolen accounts, we send you clean money.

Western Union Transfers

Western Union is a company that relays money between people, often between countries all around the globe. If you have WU office in your place of living, you only need to take Tracking Number (MTCN) and go to WU office. We'll send you Tracking Number in about 2 hours after payment and then you can go get cash in any currency.

MoneyGram Transfers

MoneyGram is a company that competes with Western Union. Thanks to that - transaction fees are

a little bit lower so it's more cost-effective to use their services. Everything else goes the same as in WU, we send you Reference Number in about 2 hours after payment, you go to MoneyGram office and that's it, you get the money!

Website Link: electrotev3tgo2p.onion

Electron ion is also a website for very cheap Mobile Phones but all are brand new as well.

There ***about us*** section said that - Electron ion is well known electronics store in Deep web. We are selling brand new electronics to our customers. There are discounts for bulk buyers! You can order gadgets that are not listed on our products page. And also they can deliver you any phone model you want, just e-mail them.

Orders will usually ship within 72 hours. Once shipped, your order will generally take 3-4 days to reach most countries. They ship to European countries, Canada, South and North America, Brazil, Australia, New Zealand, Asia or Southeast Asia. All shipping prices are based on weight, height, width and your location.

Dream market-

It was most popular market. But US government shut down this site at 2008 for security reason.

Samara Market-

Age: 0.3 Years.

No. of Products: 133665

Security Features: 2FA/ Escrow / PGP / Multisig

Currencies Accepted: Bitcoin, Bitcoin Cash, Monero

Vendor Bond: 0.1BTC

Samsara Market stands at the very top of this Darknet Market list for various solid reasons, the prime one being its already established reputation and age, it was established back in 2019 making it one of the oldest standing Darknet Markets.

The second reason being its stock of available products, as of today it has 133665 individual products on the marketplace making it arguably one of the most product-rich Tor markets in the industry.

It's pretty secure as well allowing for 2-factor authentication using PGP, Multisig payments making sure no one party can move the funds without the approval of at least one other party, as well as a trustworthy and unbiased Escrow.

Berlusconi Market-

Market Overview

Age: N/A

No. of Products: 19325

Security Features: Escrow/ PGP / 2-FA/ 6-digit PIN

Currencies Accepted: Bitcoin/ Monero / Litecoin.

Forum: lokwbo54utdfvr4r

Vendor Bond: 0.04688039 BTC

It's one of those marketplaces which for some reasons didn't acquire enough attention or popularity which it very well deserved pertaining to its no. of available products and security features.

It has a total individual listing of 19,325 products which beats the number on WallSt. Market regardless of it being less popular, again it's mostly dominated by Drugs with over 7,000+ individual listings, it allows nearly everything else including Weapons which is a rarity even for darknet markets.

So far, We tried to reach so many dark websites. But most of them are restricted and to enter those websites we need to use powerful VPN. After a lot of effort we finally got access in two websites which are GREY MARKET & EMPIRE MARKET, We will discuss about these two market below:

EMPIRE MARKET :

It is an alternative market of ALPHABAY. EmpireMarket was formerly known as Omega Bay Market, but then a new market called Omega Market was launched, and the Empire Market team didn't want to associate themselves with the later, or confuse users between the two and hence re-branded themselves as Empire Market.

Empire Market URL-

The official Empire Market URL is ***empiremktxgjovhm*** It has been manually verified and tested by us to be the original, legit URL.



Login



LOGIN TO EMPIRE MARKET

We welcome vendors from other marketplaces. Please open up a support ticket to obtain a free vendor account if you can prove you are a trusted vendor.

Welcome to the market! Please login to access the marketplace. If you do not have an account, you can [register](#) to get access to the listings. Registrations are free and open to everyone. If you have lost your password, please use the [forgot password](#) form to reset your password.

User Name:

Password:

Captcha:

Login

Copyright © 2018 Empire Market

Server time: Tuesday, Jun 5, 2018 23:39:22

Registration-

The registration process at the marketplace isn't as short as Dream Market, but it's still simple and secure



Register



REGISTRATION ON EMPIRE MARKET

You are making the right choice by registering on Empire Market! Choose your username and your password and you will be all set to start trading on our marketplace through a secure Escrow system.

You can also enter a login phrase that will be displayed to you when you login. This will ensure that you are on the real Empire Market site and not on a phishing page. This is not mandatory but recommended. Please note that we highly recommend that you enter a PGP public key in your profile; this will enable two-factor authentication (2FA) for more security.

User Information

User Name*:

Password*:

Confirm*:

Six-digit-PIN*:

Login Phrase:

Invite User:

Currency:

Crypto Default:

Security

Captcha:

Join Empire Market



Empire Market

MARKETPLACE FORUMS

Recent Posts

Home Forums

INFORMATION BOARD

Announcements
Discussions: 11 Messages: 66
Latest: Bitmex Update
EmpireMarket, Saturday at 4:51 PM

Introductions
Discussions: 31 Messages: 917
Latest: I really hope this market picks up
brunshelwood, Thursday at 5:00 PM

Forum Statistics

Discussions	301
Messages	1,259
Members	818
Latest Member	Phobos25

LISTING REVIEWS

Fraud Sellers
Discussions: 73 Messages: 326
Fullz, CC+CVV, EMV/DOS, C...
Carded Items - Sell/Buy B...
Refund Sellers
Staff Drops - resellers/for...
Latest: A FREE GUIDE TO USE MY HIGH QUALITY CHECKS (USA ONLY)
cashboy, Today at 1:15 PM

Bank Drops
Dump Sellers & Cashout Ser...
Other Digital Goods
Carding Services

Accounts Sellers
Documents, Plastic & Skim...
Banking Accounts & Trans...

Drugs Sellers
Discussions: 58 Messages: 111
Benzos
Psychedelics
Tobacco
Prescription
Latest: Official Math Review Page
860downlow, Sunday at 7:17 PM

Disassociatives
Cannabis & Hashish
Paraphernalia
Weight Loss

Steroids / Stimulants
Opioids
Ecstasy / MDMA
Other

Weapons Sellers
Discussions: 4 Messages: 10
Pistols
Other
Shotguns
Rifles

Other Listings
Discussions: 7 Messages: 23
Counterfeit
albums
Digital Goods
Other

How Effective Is the Forum?

Do admins actually take notice of what people are saying? Well, apparently Empire Market 's do! Here's a screenshot of people asking for a thread called "Hustle and Scheme" on 17th April, 2018.

Title

- DDOS static page and multiple mirrors.
Ginseng, May 29, 2018
- Edit post.
Ginseng, May 14, 2018
- OTP
Rankiez, May 5, 2018
- Some missing features
Ivsane, May 5, 2018
- notifications
slm-shady, Apr 29, 2018
- Chronological order
Lorenzo, Apr 25, 2018
- Suggested new forum sections
brouhahaoctave, Apr 25, 2018
- New Section ? "Reviews"
vikkiat95, Apr 19, 2018
- Add a Hustles/Schemes section.
canary, Apr 17, 2018

Showing threads 1 to 9 of 9

Vendor Round Table
Discussions: 2 Messages: 8
Latest: Shipping
jim jones, May 26, 2018

Carding
Discussions: 15 Messages: 86
Latest: Looking for guide pack
cashboy, Today at 12:12 PM

Industry News
Discussions: 7 Messages: 43
Latest: Interesting article about AB vendor "Courvoisier"
JACKJACK, Today at 2:26 AM

Hustles & Schemes
Discussions: 1 Messages: 12
Latest: Whats your hustle?
Joecool, Saturday at 3:22 AM

Some information about Grey Market are given below:

Market Overview-

Age: 0.2 Year

No of Products: 600+

Security: PGP, 2FA, Escrow

Currencies Support: Bitcoin, Monero

Registration: Open

Vendor: Yes

If it's Drugs, Fraud-related goods, Digital Goods or services such as Hacking and Cashouts is what you seek, Grey Market can very well cater to that need. It has a product –stock of 712 products in those categories.

Trades are pretty secure as Escrow is available and it's a Wallet-less marketplace. PGP is available as well. Payments can be made both via BTC as well as XMR.

The screenshot displays the Grey Market website interface. At the top, the browser address bar shows the URL `grymktgwyxq3siki.onion/market/`. The website header includes navigation links: "Grey Market", "My orders", "Messages", "Support", "Affiliate", "nexus's settings", and "Logout". A pink banner below the header states: "To create an order you MUST enter a refund BTC or XMR address. Click [HERE](#) to enter your address now."

The main content area features a grid of product listings. The first row includes:

- DOUBLE DOSED XANAX A1 PRESS**: Image of pills, price range USD\$30.0 - USD\$375.0, 15.0 - 500.0 pills, ships from United States, ships to US. Vendor: dazaniofficial (30) with a 9.9 rating.
- pure IMPORTED columbian flake cocaine ROCKET FUEL!**: Image of white powder, price range £10.0 - £780.0, 0.1 - 10.0 grams, ships from United Kingdom, ships to worldwide. Vendor: CharlieUKontor (22) with a 10.0 rating.
- China White #4**: Image of white powder, price range USD\$75.0 - USD\$1300.0, 1.0 - 25.0 grams, ships from United States, ships to US. Vendor: Rauck18faux (3) with a 10.0 rating.


The second row includes:

- Image of two orange pills.
- Image of boxes of ALMIEP.
- Image of boxes of t0.

A sidebar on the left contains filters: "Apply", "Category" (dropdown), "Search text" (input), "Ship from" (dropdown), "Type" (dropdown), "Currency" (dropdown), checkboxes for "Bitcoin", "Monero", "Escrow", and "FE", a checkbox for "Only favorite vendors", "Ship to" (dropdown), and "Sort by" (Rate/Desc).

At the bottom left, there is a "Mirrors" link.

← → ↻ greymtqdzqec5ox.onion/auth/login/next=



Login

Username *

Password *

Captcha *

What is 1 + 8?

☐ Slow connection

Login

Don't have an account? [Register](#) Forgot password? [Reset password](#)

← → ↻ greymtqdzqec5ox.onion/products/0NNkwjuelyiU







Grey Market

My orders Messages Support Affiliate rexus's settings Logout

To create an order you MUST enter a refund BTC or XMR address. Click [HERE](#) to enter your address now.

pure IMPORTED columbian flake cocaine ROCKET FUEL!

Drugs - Stimulants - Cocaine

Product ID: 0NNkwjuelyiU

Stock amount: 970.9 grams Ships from: United Kingdom Ships to: worldwide

- ☒ 0.10 grams, £10.0, **BTC** 0.0018
- ☐ 0.30 grams, £30.0, **BTC** 0.0053
- ☐ 0.50 grams, £50.0, **BTC** 0.0088
- ☐ 0.70 grams, £70.0, **BTC** 0.0124
- ☐ 1.00 grams, £90.0, **BTC** 0.0159
- ☐ 1.40 grams, £135.0, **BTC** 0.0238
- ☐ 2.00 grams, £175.0, **BTC** 0.0309
- ☐ 3.50 grams, £280.0, **BTC** 0.0494
- ☐ 7.00 grams, £495.0, **BTC** 0.0873

CharlieUKontor (22) ★ 10.0 L1 Trusted

Grey Market


My orders Messages Support Affiliate rexus's settings Logout

To create an order you MUST enter a refund BTC or XMR address. Click [HERE](#) to enter your address now.

bluemagic

Views: 5686 Level 5 ★ 9.5 Trusted

Joined: 2019-08-01
Vendor since: 2019-08-01
Last login: 2019-12-07



Orders

- Open: 205
- Completed: 1081
- Refund: 36
- Disputes: 6 won. 1 split.

[View Store](#)

[PGP Public Key](#)

[Send Message](#)

[Add to favorites](#)

[Report](#)

Categories

- Benzos (13)
- Oxycodone (4)
- Relaxants (4)
- XTC Pills (4)
- Cocaine (2)
- Stimulants (1)
- Pharmaceuticals (1)
- Codeine (1)

You've seen American Gangster right? Our product comes direct from source, no one in the middle to bash it, that's not good business, we may not be the cheapest but you get what you pay for - you pay low prices you get low quality, we guarantee this is the finest White you will ever buy - you need only a tiny pinch to get a hit - not a film star line, and it goes a lot lot further

5.7 Dark Web Positive side

- ② Many things that benefit from relative secrecy benefit from the dark web. The obvious use cases are for journalists and dissidents to communicate with each other or for subjugated persons to share their opinions without censorship. There are also less obvious reasons we can highlight in more detail.
- ② **Personal stories:** Like Quora, the dark web offers opportunities for individuals to share their personal stories. On some sites, survivors of abuse can discuss their experiences, name their aggressors, or console their peers who would otherwise feel uncomfortable talking about their experiences. It's like having a few pen pals around the world that no one else knows about.
- ② **Circumvention:** Some countries subjugate their citizens on an arbitrary basis, including sexuality or religion. The dark web offers opportunities for people to form communities in a less extensively policed forum, where they can share tips (see personal stories) or plan to meet up in person. On this respect, the dark web can be used to circumvent persecution.
- ② **Literature:** Access to books can also be restricted for a variety of factors, and the dark web offers plenty of opportunities to read books that may either be doctored or entirely prohibited in the analog world. Have you read the original Grimm's Household Tales (more often known as Grimm's Fairy Tales)? They are not in many bookstores or libraries, but their available on the open web and on the dark web. For billions of people, access through the open web is restricted, leaving only one option.
- ② **Markets:** The dark web offers access to illicit goods, including weapons, drugs, and counterfeits. However, if you require access for a benign purpose, where else would you turn to? This activity is criminal by definition, but that's doesn't prevent their "positive uses."
- ② **Drugs:** There are many drugs , which is not allowed for the common people. Sometimes, we need this type of drug for some non-curable disease.so in this case, people can buy this type of drugs from dark web, actually which is illegal. But, for non-curable disease, it can be cure for some day.

6. Conclusions

So the Dark Web, which is way bigger than our Surface Web in terms of number of contents, number of websites and also in the number of activity. You can everything in the Dark Web which happens and not happens in our Surface Web. But when heard the term “Dark Web”, our usual mind interpret it as a negative term. It is because Dark Web was created for anonymity. Due to this anonymity, all illegal activities started such as Selling drugs and guns, illegal credit card and personal data buying, child pornography, illegal products selling etc. Since we worked on something which is related to E-Commerce of Dark Web, we came to realize that it also has some positive impacts. Providing privacy and the terrible low price of products can be considered to the positive side of Dark Net. Of course products that are being sold is in illegal way. But the reason it happened because of the greed of the general sellers and high Tax over several products. So just checkmating the unfair that is happening with the general people, it is something that people won't find illegal. But anyways, the purpose of this paper is to just observe the difference and similarities between Surface Web sites and Dark Websites in terms of their structure, their contents etc. Not only that, we looked into the procedures of how things are bought and sold, what is the currency of Dark Web, How products are delivered etc. and for that, we opened many websites of Dark Web which is related to E-Commerce, scrapping was not possible for the websites but we just took screenshots to show the structures and contents of the Websites are popular. The popular E-commerce websites that we found in Dark Web were Empire Market, Grey Market, Yellow Brick Market, Darkbay etc. and we also came to know the reason that they are popular because the number of products, the trust they are holding among the people is actually the reason why they are popular. So yes, they are pretty much similar with the E-commerce of Surface in that terms.

It is not illegal to just “browse” the dark web alone, in theory, unless we are watching at sites that host prohibited content such as child pornography, child abuse, sexual harassment etc. If we do it frequently, then it is.

There are also many websites that sell drugs, guns, and stolen goods, but even if we are on such a site, just browsing it is not illegal. Buying something from it, on the other hand, is because we are either intentionally receiving stolen property, or purposely purchasing illegal goods. Not everything found on the so-called “**deep web**” is illegal. Some of the sites are simply communities of people who wish to remain anonymous. For example, I came across a site called the Dark Web Social Network. In theory, it is just a social network like Twitter or Facebook; however, it is possible that some of what's discussed on that network are illegal or clandestine in nature.

It does also depend on upon which country we are accessing the dark web from, of course. In the U.S., for, e.g., there are far fewer restrictions on what websites we can visit than, say, North Korea. In a country with a more intrusive government, we would want to be more careful about which websites we visit.

Many websites have been “shut down” by federal agencies in the U.S. (e.g. FBI, ICE, DEA). I think many of them were allegedly involved in trafficking narcotics and guns. Whether or not it is forbidden to browse those sites merely, I am not certain. However, it makes a major

difference if we purchase something from one of these markets, or if we are one of the site's webmasters.

7. Future Work

First of all we will try to understand how Dark web's sellers group communicate themselves and sells a product and the quality of product.

- Try to collect data from most of dark web's e-commerce sites using web-scrap.
- Run a dataset for both Surface web e-commerce site and Dark web e-commerce site.
- Compare the result accuracy.
- Compare the timing
- and determine the Dark web's business strategies and how they follow it.

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