What's Lurking on the Dark Web

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Agenda

- Introduction
- Key Terms
- Dark Web vs Deep Web
- Access
- Darknet Markets
- Cryptocurrencies
- Communication
- DEMO
- Q&A

Introduction

- So, what is it?

- According to Wikipedia: “The dark web is the World Wide Web content that exists on darknets, 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.”

Introduction

Key Terms

SURFACE WEB

Any website that is indexed by a search engine (for example: ESPN.com or Amazon.com)

DEEP WEB

Websites that may be indexed, but also contain sensitive data that is protected from wider populations via login usernames and passwords (for example: online banking, Travelocity.com Search Results, your Gmail)

DARK WEB

Encrypted websites that are not indexed by search engines that require special browsers in order to view

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Dark Web vs Deep Web

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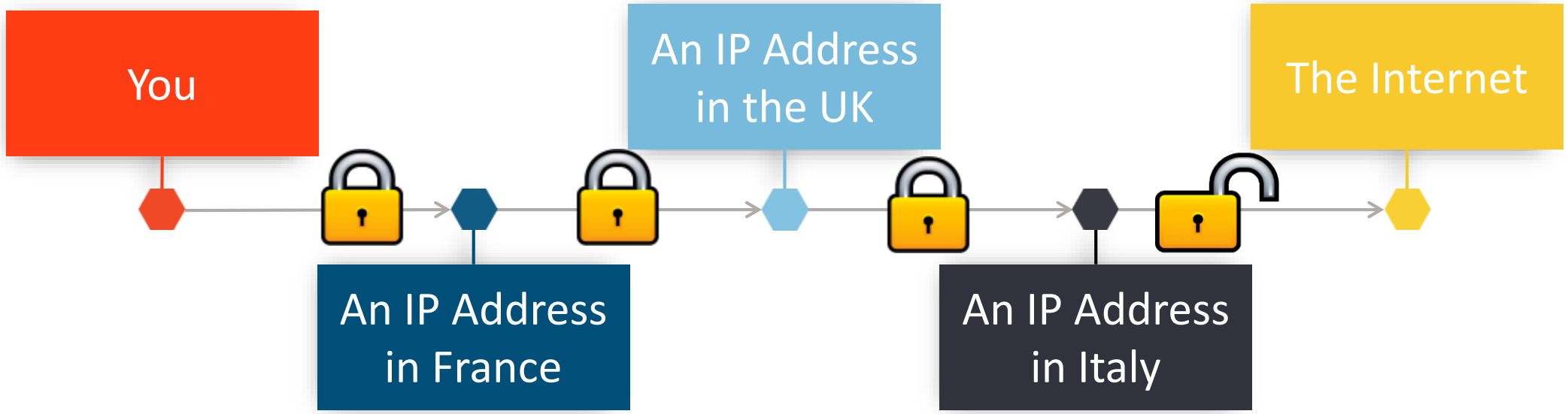
Access

- How do you access the dark web?

- You need a special internet browser
  - **Most popular is “Tor” (“The Onion Router”)**
  - **These browsers provide the user anonymity and the ability to decrypt the dark web**
  - **Bounces your IP Address all over the world**
  - **Dark web websites use the top-level domain of .onion**

Access

So how does the TOR Browser work?



Access

- Due to anonymity of the dark web, most of the websites are not common names, like https://www.abrigo.com or https://www.ibanys.com

- Usually a combination of numbers, letters and punctuation
  - **For example: http://tveoujogp67evxq7.onion**

- There are few “surface websites” that provide information and links to dark web websites, but are increasingly being shut down

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Access

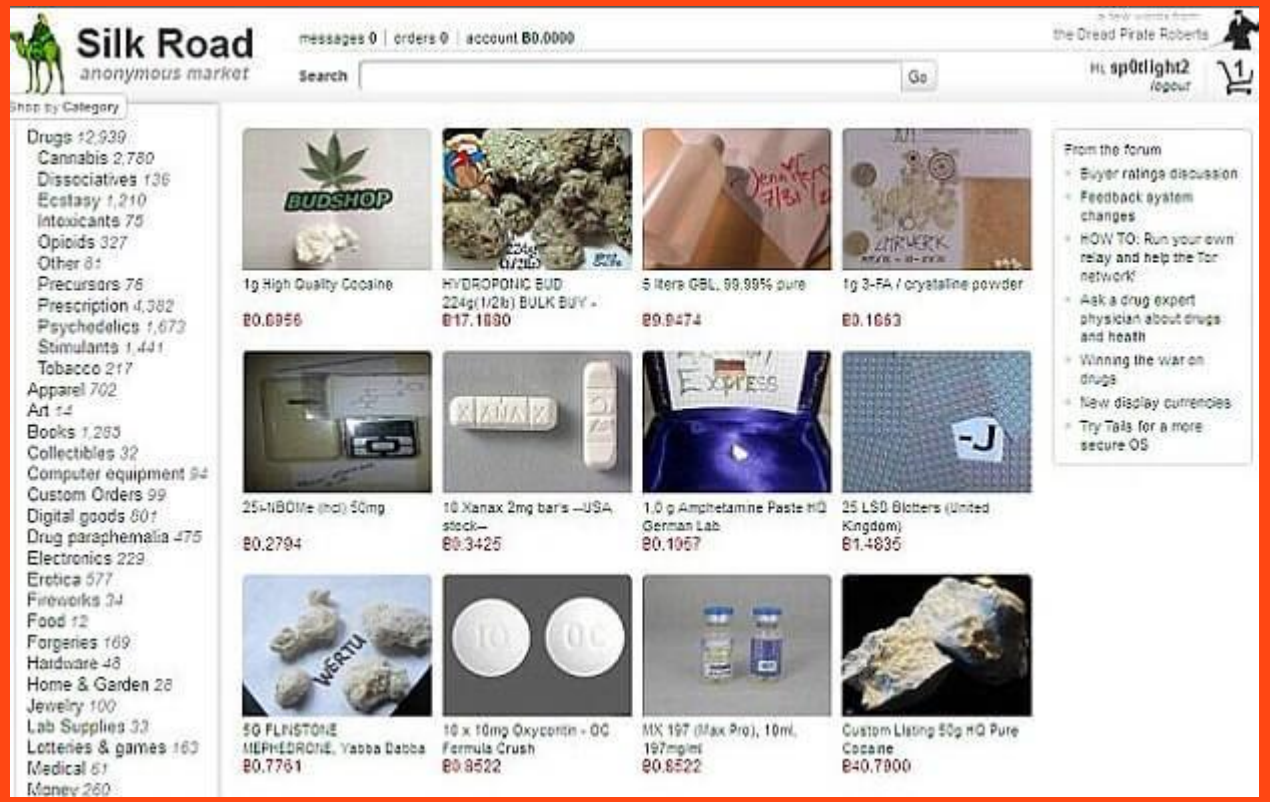
- Until recently, one of the primary “surface” websites that promoted darknet marketplaces and dark web news was https://www.deepdotweb.com/

- **The Justice Department shut this website down in May 2019 and arrested the website owners, charging them with money laundering**

- DeepDotWeb acted as a referral website for many darknet marketplaces, earning “referral fees” from markets like Alphabay, Hansa, Wall Street Market, Agora and more

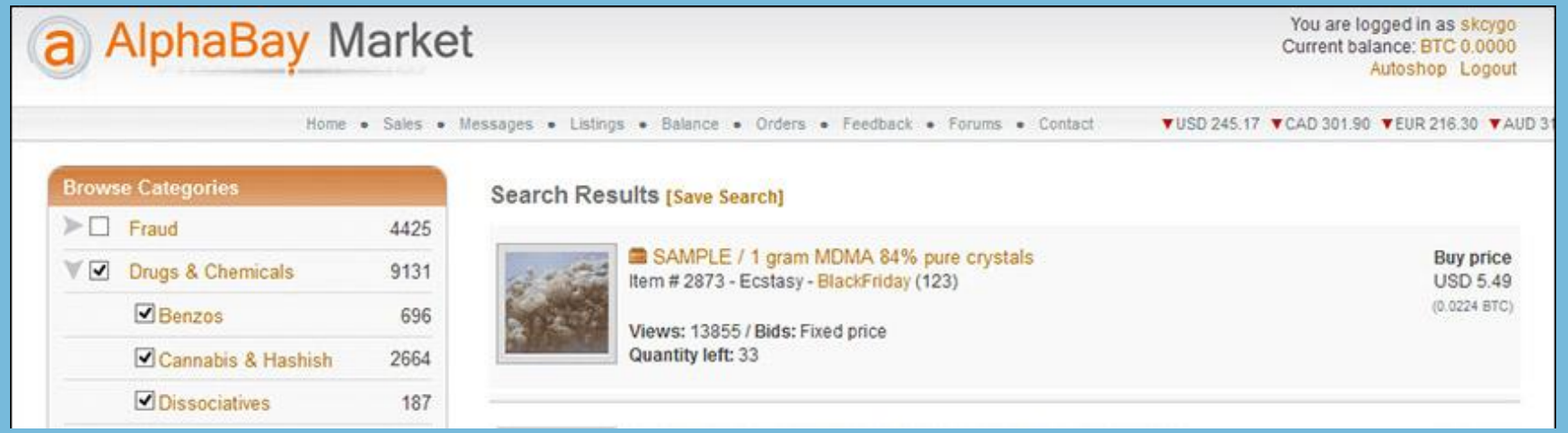
Darknet Markets

- The dark web hosts several “darknet markets”



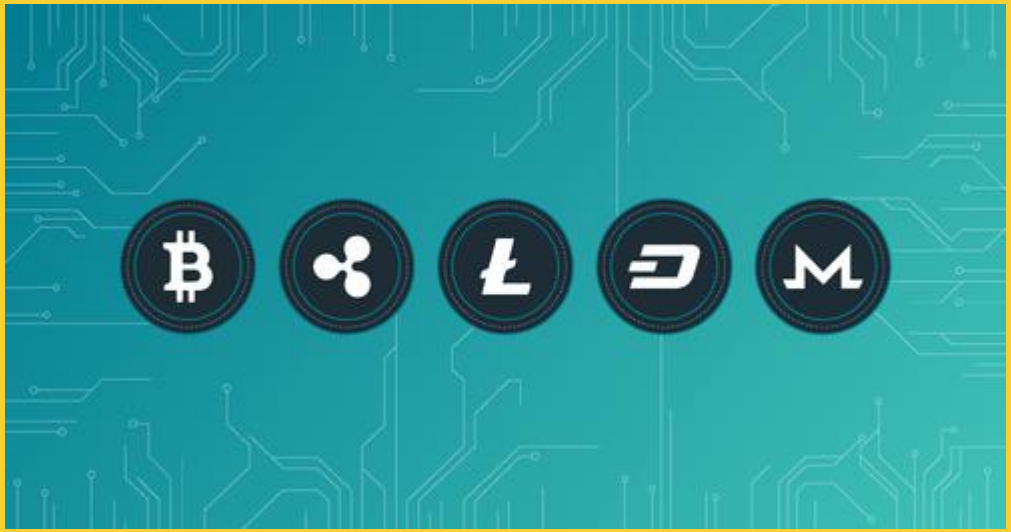
Darknet Markets

- Similar to Amazon or eBay, but usually involve illegal items for sale
  - **Include, stolen or counterfeit identification cards, hacked data, drugs, “services”, credit/debit cards, pornography, weapons and more**



Darknet Markets

- Purchases made with cryptocurrencies like Bitcoin help to make the entire enterprise completely anonymous



Cryptocurrencies

- FinCEN released guidance on May 9, 2019 on "**Application of FinCEN's Regulations to Certain Business Models Involving Convertible Virtual Currencies**"
- **FIN-2019-G001**

- This guidance does not establish any new regulatory expectations or requirements. It consolidates current FinCEN regulations, and related administrative rulings and guidance issued since 2011, and then applies these rules and interpretations to other common business models involving Convertible Virtual Currency (CVC) engaging in the same underlying patterns of activity.

Cryptocurrencies

- FinCEN also released on May 9, 2019 an advisory: "**Advisory on Illicit Activity Involving Convertible Virtual Currency**"
- **FIN-2019-A003**

- "FinCEN is issuing this advisory to assist financial institutions in identifying and reporting suspicious activity concerning how criminals and other bad actors exploit convertible virtual currencies (CVCs) for money laundering, sanctions evasion, and other illicit financing purposes, particularly involving darknet marketplaces, peer-to-peer (P2P) exchangers, foreign-located Money Service Businesses (MSBs), and CVC kiosks."

Communication

- The dark web also allows for encrypted communication
- This is helpful when “whistleblowing” on companies or governments
  - Edward Snowden
  - Wikileaks

Communication

- Also allows for journalists to communicate and keep their sources confidential
  - ProPublica, an online news website, has set up a dark web website
  - https://www.propublica.org/podcast/why-propublica-joined-the-dark-web

Key Dates in Dark Web History

Mid-1990s
US Naval Researchers develop the core principles of "TOR" ("The Onion Router")

2002-2003
TOR is released to the public, along with I2P, another anonymous internet application

2006
The TOR Project becomes a Non-Profit Organization

2009
Bitcoin is created by Satoshi Nakamoto

2011
Ross Ulbricht creates the Darknet marketplace, Silk Road

2013
Ulbricht is arrested and Silk Road is shutdown (Ulbricht would be later convicted of money laundering, computer hacking and more and was sentenced to life in prison)

2017-2019
Many popular Darknet Marketplaces were shut down, including Hansa, AlphaBay, TradeRoute, Bloomsfield, Wall Street Market and more

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Demo

- Before we begin the demonstration, 2 quick announcements:

- As previously mentioned, a lot of the material on the dark web is illegal and in demonstrating some of these websites, we may see adult or risqué images or text. I want everyone to be prepared as I cannot predict what will be visible on these websites.

Demo

- Abrigo periodically hosts free “Thought Leadership” webinars on our website (https://www.abrigo.com)
- A prior webinar was recorded:
- “The Dark Web – A Treasure Trove Of Actionable Threat Intelligence” by Eli Dominitz, CEO of Q6 Cyber.
- The recording is available at:
- https://www.abrigo.com/webinars/webinar-the-darkweb-a-treasure-trove-of-actionable-threat-intelligence/

DEMO

QUESTIONS?

Thank You!