

Final Assignment

EE 382V Blockchains

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<https://github.com/alihmaredia/ee382v-blockchains>

The project

- **What did I make?** It's a simple Python CLI tool that provides two useful features:
 - You can query basic data on for a Bitcoin address and collect a history of transactions in a tabular format.
 - Each Bitcoin address queried gets checked to see if it is on OFAC's Specially Designated Nationals list.
- **Why did I make it?** In a previous role I worked at a hedge fund focused on building software to handle various financial regulations, but it was all in the fiat currency space.
 - It's an interesting exercise to see how this applies to digital currencies like Bitcoin.

Office of Foreign Assets Control

- Part of the US Department of the Treasury.
- All about ***sanctions***.
 - Individual people and groups (referred to as “specially designated nationals”).
 - Countries (embargoes, regime sanctions, etc.)
- In general, if you are a US resident, you can't do business with sanctioned entities.
 - ^ Not legal advice.

An example

PRESS RELEASES

Treasury Sanctions Individuals Laundering Cryptocurrency for Lazarus Group



March 2, 2020

WASHINGTON – The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) today sanctioned two Chinese nationals involved in laundering stolen cryptocurrency from a 2018 cyber intrusion against a cryptocurrency exchange. This cyber intrusion is linked to Lazarus Group, a U.S.-designated North Korean state-sponsored malicious cyber group. Specifically, OFAC is designating 田寅寅, Tian Yinyin (Tian), and 李家东, Li Jiadong (Li), for having materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of, a malicious cyber-enabled activity. Tian and Li are also being designated for having materially assisted, sponsored or provided financial, material, or technological support for, or goods or services to or in support of, Lazarus Group.

“The North Korean regime has continued its widespread campaign of extensive cyber-attacks on financial institutions to steal funds,” said Secretary Steven T. Mnuchin. “The United States will continue to protect the global financial system by holding accountable those who help North Korea engage in cyber-crime.”

Cyber-related Designations; North Korea Designations; North Korea Designations Removals



03/02/2020

SPECIALLY DESIGNATED NATIONALS LIST UPDATE

The following individuals have been added to OFAC's SDN List:

LI, Jiadong (Chinese Simplified: 李家东) (a.k.a. "blackjack1987"; a.k.a. "khaleesi"), Anshan, Liaoning, China (Chinese Simplified: 鞍山, 辽宁, China); DOB 10 Jan 1987; nationality China; Gender Male; Digital Currency Address - XBT 1EfMVkxQQuZfBdpcpJu6RUscJvenQWbQyE; alt. Digital Currency Address - XBT 17UVSMegvrzfobKC82dHXpZLtlcqzW9stF; alt. Digital Currency Address - XBT 39eboeqYNFe2VoLC3mUGx4dh6GNhLB3D2q; alt. Digital Currency Address - XBT 39fhoB2DohisGBbHvvfmkdPdShT75CNHdX; alt. Digital Currency Address - XBT 3E6rY4dSCDW6y2bzJNwrjvTtdmMQjB6yeh; alt. Digital Currency Address - XBT 3EeR8FbcPbkGj77D6ttneJxmsr3Nu7KGV; alt. Digital Currency Address - XBT 3HQRveQzPifZorZLDXHernc5zjoZax8U9f; alt. Digital Currency Address - XBT

How does OFAC really enforce this?

https://home.treasury.gov/system/files/126/virtual_currency_guidance_brochure.pdf

562. How will OFAC identify digital currency-related information on the SDN List?

OFAC may add digital currency addresses to the [SDN List](#) to alert the public of specific digital currency identifiers associated with a blocked person. [OFAC's digital currency address listings are not likely to be exhaustive.](#) Parties who identify digital currency identifiers or wallets that they believe are owned by, or otherwise associated with, an SDN and hold such property should take the necessary steps to block the relevant digital currency and [file a report with OFAC](#) that includes information about the wallet's or address's ownership, and any other relevant details.

Released on March 19, 2018

Getting the data from OFAC

84. Does OFAC maintain its files on an FTP server or in locations other than on its website? Does OFAC provide its files via Secure FTP (SFTP)?

Yes. OFAC maintains many of its sanctions list files on an FTP server.

This server can be accessed at: <ftp://ofacftp.treas.gov>.

The server will accept an anonymous login. OFAC's data is stored in the directories listed below. OFAC does not currently support connections to this server via SFTP.

/fac_sdn - SDN human-readable lists, legacy zip archive (XML and delimited files), and the advanced zip archive (advanced XML file)

/fac_delim - SDN data files (advanced XML file, legacy XML file, legacy delimited files) in an archived format

/ssi_list - All Sectoral Sanctions List files

/fse_list - All Foreign Sanctions Evaders List files

/ns_plc - All Non-SDN Palestinian Legislative Council Lists files

/consolidated_list - All Consolidated Non-SDN List data files

April 13, 2017

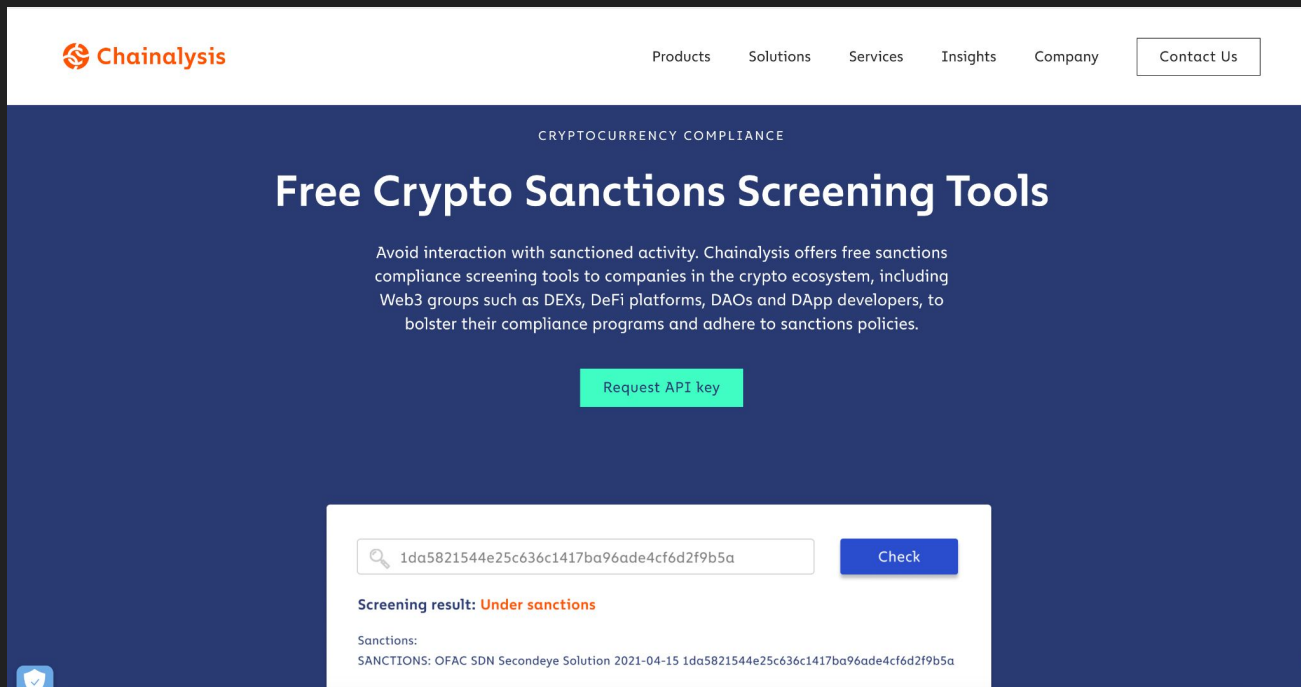


treasury.gov/ofac/downloads/sdn_advanced.xsd

Not found

Getting the data from OFAC

<https://github.com/0xB10C/ofac-sanctioned-digital-currency-addresses>



The screenshot shows the Chainalysis website's 'Free Crypto Sanctions Screening Tools' page. The header includes the Chainalysis logo and navigation links for Products, Solutions, Services, Insights, Company, and a Contact Us button. The main heading is 'Free Crypto Sanctions Screening Tools' under the sub-header 'CRYPTOCURRENCY COMPLIANCE'. A paragraph explains that Chainalysis offers free sanctions compliance screening tools to companies in the crypto ecosystem. A green button labeled 'Request API key' is positioned below the text. At the bottom, a white search box contains the address '1da5821544e25c636c1417ba96ade4cf6d2f9b5a' and a blue 'Check' button. Below the search box, the results show a 'Screening result: Under sanctions' in red text, followed by a list of sanctions from OFAC.

Chainalysis

Products Solutions Services Insights Company [Contact Us](#)

CRYPTOCURRENCY COMPLIANCE

Free Crypto Sanctions Screening Tools

Avoid interaction with sanctioned activity. Chainalysis offers free sanctions compliance screening tools to companies in the crypto ecosystem, including Web3 groups such as DEXs, DeFi platforms, DAOs and DApp developers, to bolster their compliance programs and adhere to sanctions policies.

[Request API key](#)

[Check](#)

Screening result: Under sanctions

Sanctions:
SANCTIONS: OFAC SDN Secondeye Solution 2021-04-15 1da5821544e25c636c1417ba96ade4cf6d2f9b5a

What's the goal?

- At the end of the day, it's pretty much just a list of Bitcoin addresses, but diving into the data can be interesting.