





#### **Homeland Security Investigations (HSI)**

Established in 2003 with the creation of the U.S. Department of Homeland Security (DHS).

One of the three components of the U.S. Immigration and Customs Enforcement (ICE).

The largest criminal investigative agency within the Department of Homeland Security (DHS). Combine legacy agencies' statutory authorities.

Over 126 domestic field offices and 72 international offices.





#### Criminal Exploitation of Digital Currencies





#### What is a Virtual Currency?

- An alternative financial value system involving the exchange of funds to purchase precious metals or other value base which can later be used in exchange for products and services.
- Is not registered anywhere and it is not governed by any law other than arbitration private forums.
- Personal data is not required.
- The system focuses strictly on activities of the forum.
- Information stored for two months and then permanently deleted.



#### **Types of Virtual Currencies**

E-Currency / E-Wallets

Digital Gold

Virtual World

Virtual Games

Merchants (FB, Amazon)

Crypto-Currencies \*\*





























- Created in 2008 by Satoshi Nakamoto
  - A purely peer-to-peer version of electronic cash would allow payments to be sent directly from one party to another without going through a financial institution....
- Digitally created units of currency.
- Sent from one address to another in the same way you might send cash from your bank account to a friend, but no name would be needed as part of the address.



• Instead: human-readable strings of numbers and letters thirty-three characters length, always beginning with the digit one or three. Therefore:



175tWpb8K1S7NmH4Zx6rewF9WQrcZv245W

Might send 1.30000001 BTC to

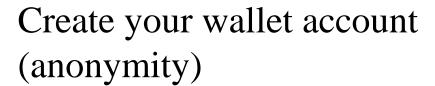
132tQpb(K1B5NmH8Vx2rewF9AOrcKv215H

- The transaction is instantaneous and does not travel through a third party such as a bank.
- The owners of the addresses will need to keep in an account known as a wallet (computer or phone).



## **How To Acquire Bitcoins?**

Locate and download to your computer, tablet or phone a **bitcoin wallet.** 



Used to store and transfer your crypto-currency













## **How To Acquire Bitcoins?**

Purchase a bitcoin from an exchanger.

A web-based platform for users to sell and buy crypto-currencies. Domestic (MSB's and BSA) and Foreign. **Offer anonymity.** 

#### Send Currency to an Exchanger:

- Bank account
- PayPal
- Western Union
- Cash
- Money transmitter.













Sign up free Log in

#### Buy bitcoins with cash in US Dollar (USD)

LocalBitcoins.com user jdev wishes to sell bitcoins to you.

107.62 USD / BTC Price:

User: idev

(feedback score 100 %, see feedback)

Trade limits: 300 - 5000 USD

Location: Baltimore, MD 21230, USA

...or look up other cities in United States

#### Terms of trade with jdev

Contact hours: 11am-6pm Mon-Saturday

Meeting preferences: Starbucks, chipotle, or something in or around Federal Hill

- Buy bitcoins online in Venezuela Sell bitcoins online in Venezuela

#### Puerto Rico

Cities with cash trade (total 11)

- San Juan (4)
- Cayey (1)

Online trade

- Buy bitcoins online in Puerto Rico
- Sell bitcoins online in Puerto Rico

Palestine, State of

Cities with cash trade (total 2)

Online trade

- Buy bitcoins online in Palestine. State of Sell bitcoins online in Palestine. State of



**USD** 300

BTC 2.79

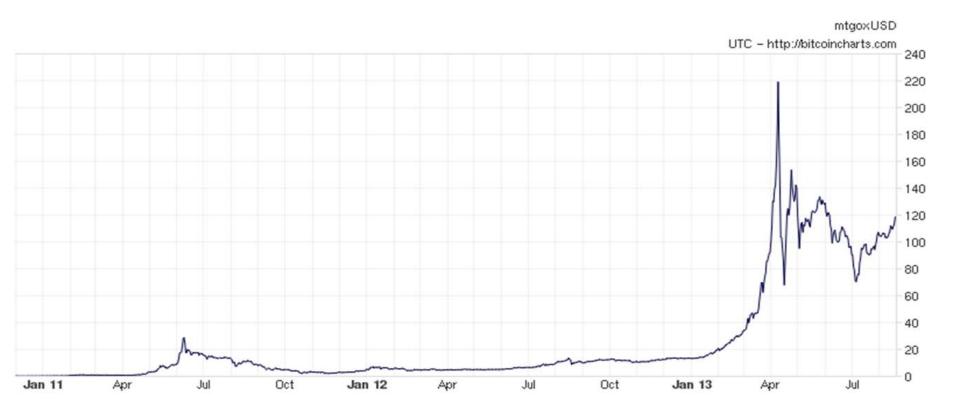
Send trade request

! Please ≜ log in or ✓ sign up to begin trading instantly.

Signing up is free and takes only 30 seconds.

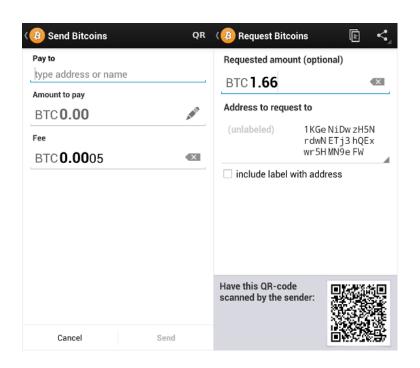


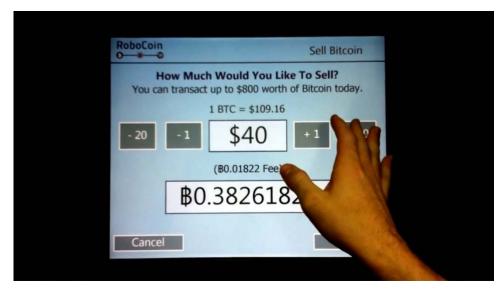
The price of a bitcoin is determined by supply and demand. When demand for bitcoins increases, the price increases, and when demand falls, the price falls.





#### **How To Acquire Bitcoins?**





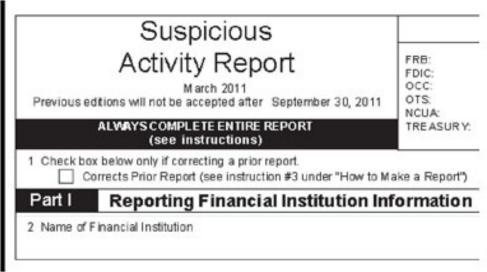
- Block Chain Shared public transaction log on which the entire BTC network relies. (<a href="http://blockchain.info">http://blockchain.info</a>)
  - All confirmed transactions are included in the BC-Ensures verification and enforced with cryptography.
  - Every 10 minutes a new block is created and 25 BTC are released. By 2017 it will be reduced to 12.5 BTC a halved every four years until the limit of 21 million BTC is reached.



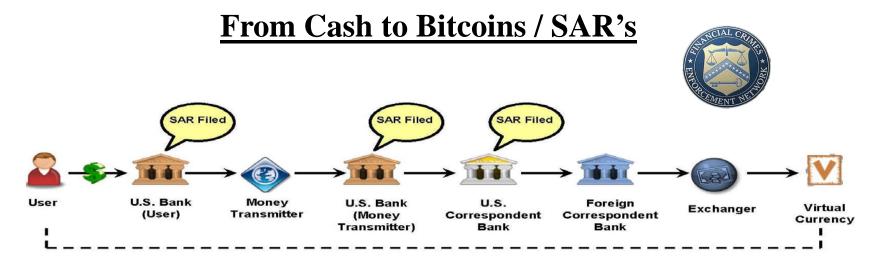


## When to File a SAR?

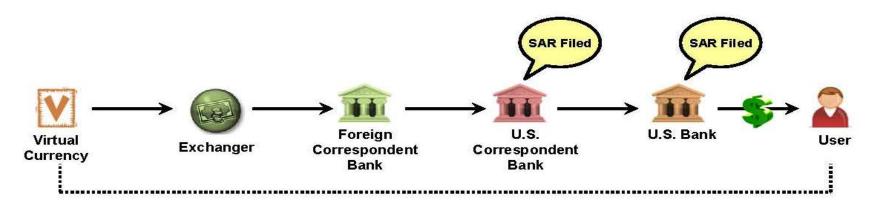








#### From Bitcoins to Cash / SAR's





# How Criminals Use and Exploit Crypto-Currencies Bitcoins



#### **Criminal Exploitation of Crypto-Currencies**

Virtual Currency Systems & Exchange Makers

"Carding" Forums

Drug Forums

Firearms Forums

Child Pornography Forums



#### **How I Get into the Black Market?**

STEP BY STEP GUIDE TO GETTING STARTED ON THE BLACK MARKET RELOADED.

- Head to www.blockchain.info/wallet and click create wallet
- Time to purchase some <u>bitcoins</u>. Bitcoins are the <u>currency used</u> on TSR
  so head to <u>www.mtgox.com</u> and sign up for a free <u>account</u>. You can come
  back later to buy the bitcoins once you know how many you need
- 3. After you've gotten a feel for what the bitcoins will cost you, its now time to access The Silk Road. To do this you will need the tor browser. The tor browser provides added security to browsing and gives access to websites using the .onion extension You can get tor from here www.torproject.org
- With tor installed and the tor browser running, copy this link into the address bar <a href="http://sonwnspjvuk7cwvk.onion">http://sonwnspjvuk7cwvk.onion</a>
   Click on create user and there you go, access to The Black Market Reloaded :)

#### Tor

- Tor stands for "The Onion Router"
- Tor is free & open source software
- Originally designed by the U.S. Naval Research Laboratory for the protecting government communications
- Download from "www.torproject.org"
- Prevents anyone from learning location or browsing habits
- Tor is for web browsers, instant messaging, & remote logins
- Tor works by bouncing your communications around a distributed network of relays run by volunteers





Home

About Tor

Documentation

#### **Anonymity Online**

Protect your privacy. Defend yourself against network surveillance and traffic analysis.



**Download Tor ®** 

- Tor prevents anyone from learning your location or browsing habits.
- Tor is for web browsers, instant messaging clients, remote logins, and more.
- Tor is free and open source for Windows, Mac, Linux/Unix, and Android

#### What is Tor?

Tor is free software and an open network that helps you defend against a form of network surveillance that threatens personal freedom and privacy, confidential business activities and relationships, and state security known as traffic analysis

Learn more about Tor »

#### Why Anonymity Matters

Tor protects you by bouncing your communications around a distributed network of relays run by volunteers all around the world: it prevents somebody watching your Internet connection from learning what sites you visit, and it prevents the sites you visit from learning your physical location. Tor works with many of your existing applications, including web browsers, instant messaging clients, remote login, and other applications based on the TCP protocol.

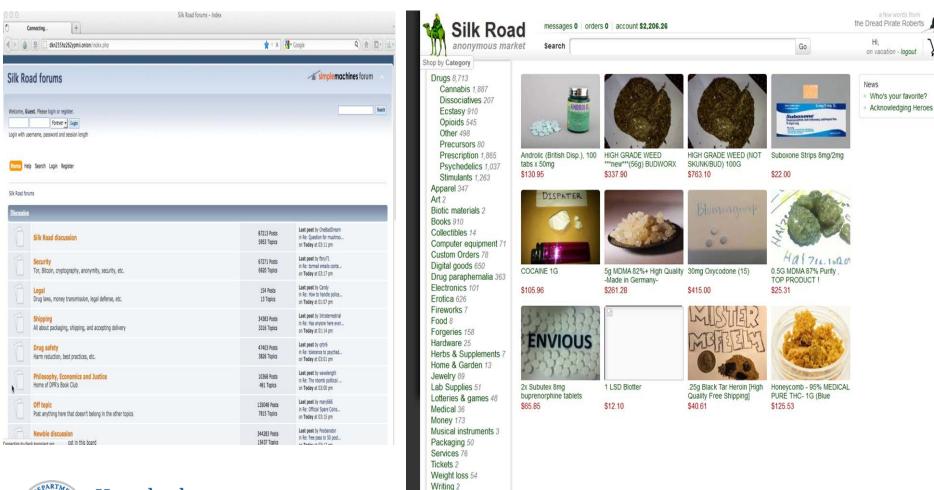
Get involved with Tor »

#### **Carding Forums**

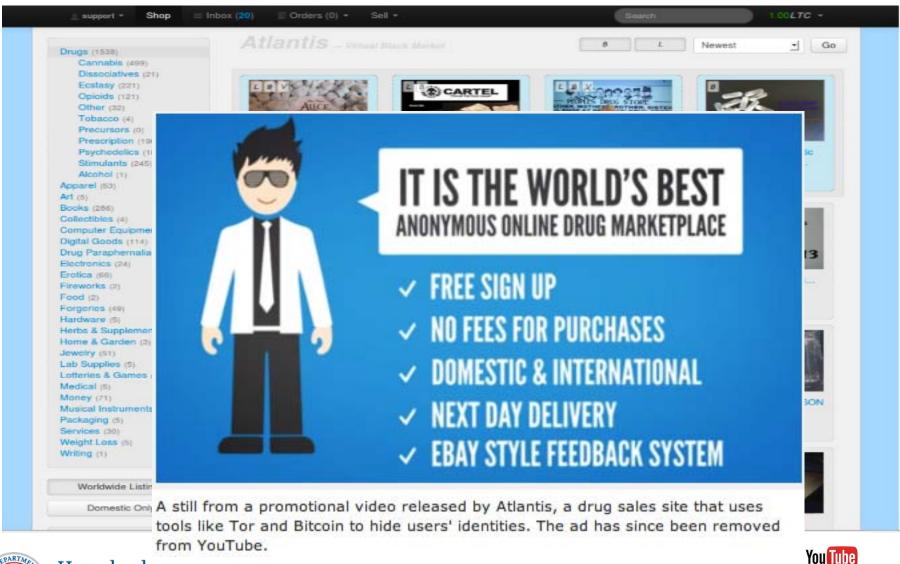




#### **Drug Forums**

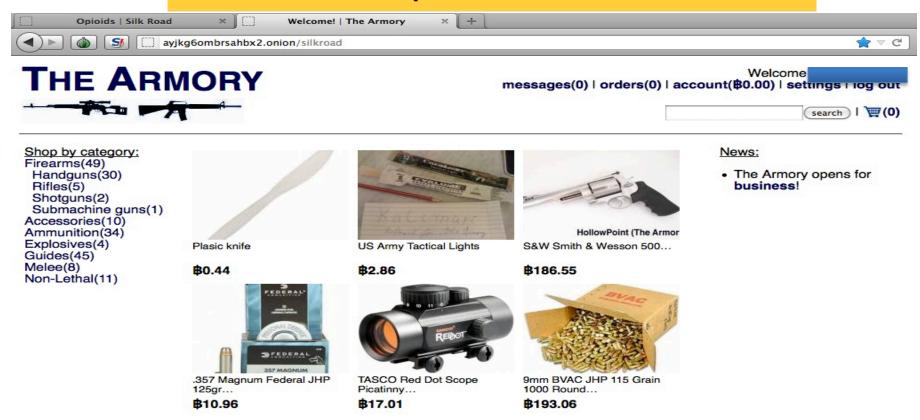


community forums | wiki | support





#### Weapons Forums



become a seller | how does it work? | community forums | contact us



#### **HSI's Investigative Approach to Crypto-Currencies**

- 1. Build the capacity of field agents to identify virtual currency exchangers and online black markets.
- 2. Exploit the financial angle and employ financial investigative tools in all HSI investigations, to include cyber enabled crime.
- 3. Coordinate Anti-Money Laundering regulations related to virtual currency with FinCEN and Treasury.
- 4. Engage HSI International Operations Attachés to leverage international counterparts and multilateral organizations to create enforcement actions against and regulate virtual currency exchangers.
- 5. Continue to enhance HSI's engagement with academia and subject matter experts in an effort to develop tools and capabilities to combat TCO's who hide behind online anonymity.





#### The Real Exploit of Crypto-Currencies & Bitcoins



#### Liberty Reserve Case Study



Create Account Login Get protected by Liberty Guard

Kep

**LibertyGuard** 

Services new!

Service Fees

Buy/Sell LR

Merchants

Downloads

**Consumer Alert** 





#### **Featured Merchants**

Marketiva.com — Popular Forex company!

Instaforex.com — Award winning forex.

Masterforex.org — Award winning forex.

#### **Featured Exchange Services**

wm-center.com (English, Russian) — Fast and reliable service 24/7.

e-Naira.com (English) — Reputable exchanger located in Africa.

ExchangeZone.com (English)

#### **Wholesale Exchange Services**

eCardOne.com (English, Italian, Spanish, German, Czech) - Author

Ebuygold.com (English, Chinese) — Authorized wholesaler

SwiftExchanger.com (English) — Official Liberty Reserve merchant



- Established in Costa Rica on May 8th, 2006 by Arthur Budovsky and others.
- Centralized digital currency service that allowed users to register and transfer money to other users with only a name, e-mail address, and birth date. No verification. For .75\$ cents the user can hide his/her account information.
- Deposits made to third-parties (exchangers located in Russia, Nigeria and Vietnam) using a credit card or bankwire, among other deposit options. NOT DIRECTLY to Liberty Reserve.
- Deposited funds were "converted" into Liberty Reserve Dollars or Liberty Reserve Euros, which were tied to the value of the US dollar and the euro or to ounces of gold.
- No limits were placed on transaction sizes. They charged a small fee, about 1% on each transfer. Offered shopping cart functionality and other merchant services.

#### The Merchants at Liberty Reserve

• 19 of merchants involved in selling stolen credit card data or personal identification information

• 7 Websites involved in **fraudulent investment** or **gambling operations** 

• 5 websites were "privacy" and "security" services used by cybercriminals

• 2 websites were **pre-paid credit/debit card** sites





#### **Dollar Amount of Liberty Reserve Activity**

- \$6 Billion dollars laundered
- 55 million transactions
- 1 million users

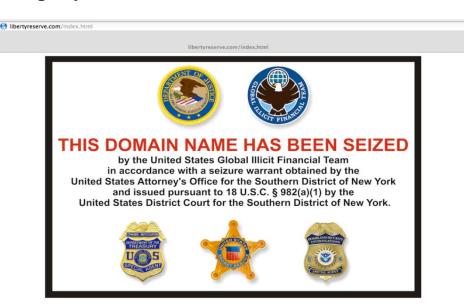


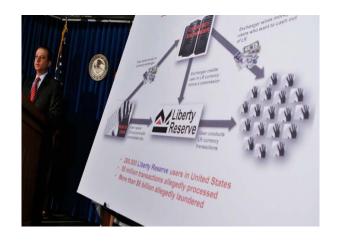




#### End Result...

Indictment charges the seven principal employees, as well as Liberty Reserve itself, with money laundering and operating an unlicensed money transmitting business. The charges were leveled using a provision of the U.S. Patriot Act, since Liberty Reserve was not an American company.









## Silk Road Case Study











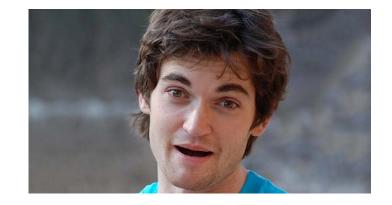






#### What is Silk Road?

• Silk Road is a website located on the on an encrypted network **Tor**. Founded by Ross William Ulbricht AKA Dread Pirate Robert (DPR)



- The website is a digital black market that allows users to purchase illegal drugs using anonymity technology and utilizing a sophisticated user-feedback system like eBay.
- The only currency allowed on Silk Road to be exchanged for drugs/contraband are bitcoins. SR profited charging a fee for each transaction.







## Who are the players on Silk Road?





Operators of Silk Road (Admin and Mods)



**SR Vendors** 

SR Drug Users/Buyers



+150,000 User accounts on Silk Road (2012)

## Mt. Gox Seizure - \$5,032,921

- During the course of investigation Mt. Gox was identified as the Silk Road money exchanger and conducting business as a Money Service Business (MSB). Mt. Gox is the largest BTC Exchange (80%)
- Baltimore Silk Road Task Force executed 3 Federal seizure warrants (Wells Fargo Bank and Dwolla)
- On May 9, 2013 USSS/Baltimore SR Task Force seized \$2,117,414
- On May 14, 2013, HSI Baltimore seized \$2,915,507



Law Enforcement Sensitive



#### **Key Points regarding Silk Road**

- Estimated \$1.2 billion in transactions on Silk Road
- Over +950,000 user accounts registered
- The largest trafficked website on Tor
- All types of contraband were sold on SR (Firearms, explosives, fraudulent IDs, stolen CC info, & IPR)





#### Indictment of DPR

On May 1, 2013 JOHN DOE aka DREAD PIRATE ROBERTS was indicted in the by District of Maryland for Use of Interstate Commerce Facilities in Commission of Murder-for-Hire; Conspiracy to Distribute a Controlled Substance; Attempted Witness Murder; Aiding and Abetting

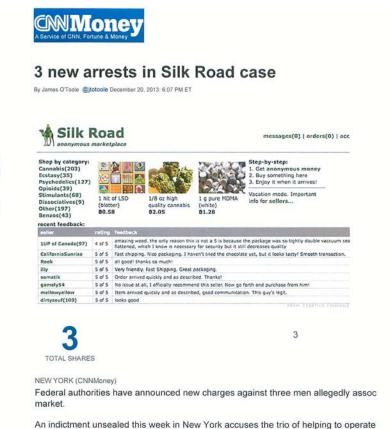
#### Still Ongoing...



Road from Dec. 2011 to Oct. 2013, selling bitcoins to those looking to buy drugs on the site



anonymously.



October that offered an anonymous place to buy drugs, weapons and other illicit pro



# Homeland Security Investigations Illicit Finance and Proceeds of Crime Unit The Exploitation of Interstate Funnel Accounts

#### **Interstate Funnel Account Evolution**

Dramatic increase of suspicious activity reports (SARs) concerning interstate funnel account usage:

- In 2008, banks filed approximately **1,000** SARs which denote funnel account activity in the U.S.
- That figure steadily increased to over **15,188** SARs filed in 2011.
- A check of SAR filings on funnel accounts in the past six months, from November 2012 until May 2013, yielded over **12,000** results.

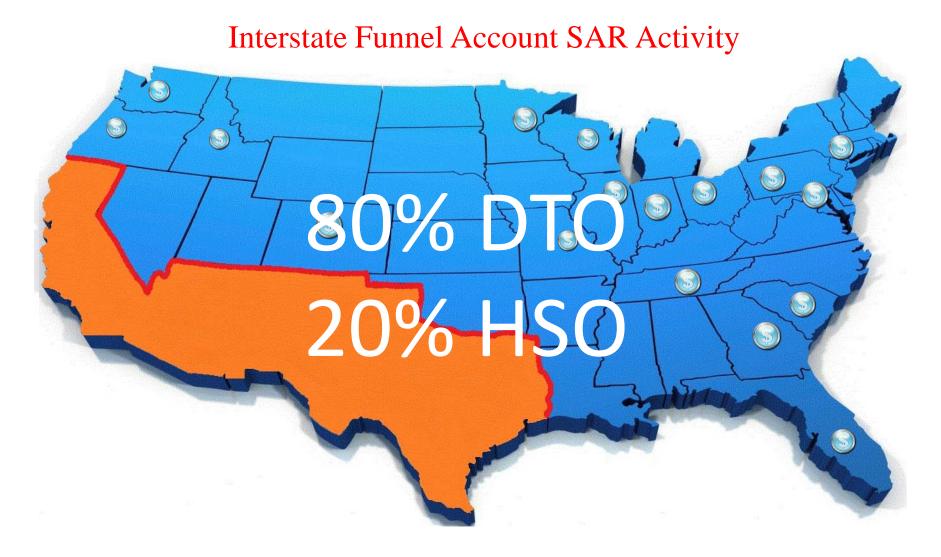
According to AML officials, interstate funnel accounts are the **second most** generated SAR, behind structuring.



#### **Interstate Funnel Account Definition**

Interstate Funnel Account is defined as a bank account opened/held by a nominee that receives cash deposits from an out of state, unidentified third party that are readily available for withdrawal from the domiciled account.







#### Benefits of Interstate Funnel Accounts

Rapid movement of funds for little or no cost Deposits lower denominations while withdrawals are for high denominations

Criminal organizations avoid highway, airport and parcel interdiction

Withdrawals are free from narcotic smells or residues, less likely to be identified by K-9

More secure than smuggled cash



#### **Interstate Funnel Accounts**



Criminal Organization Account Manager Contacts Depositors (Phone, text message, email, etc.)





Funds are ultimately transferred to Mexico (BCS or wire transfer) to further conspiracy



Homeland Security Investigations Straw Account Holder withdraws and delivers the funds to Account Manager.



Funnel Account Holder





#### Gilberto Figueroa Rios

**Section Chief** 

Financial, Narcotics and Special Operations Division

Illicit Finance and Proceeds of Crime Unit

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