PHC-DEX 1.0

Secure Standardized Distributed Exchange Network

Concept Overview

"Decentralized exchanges are complementary to and important for the development of the ecosystem by acting as a middle ground." ~ Megan Hernbroth (Coinbase) [1]

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TABLE OF CONTENTS

Abstract

Crypto-currencies require real world use by holders, investors, and miners to maintain or achieve long-term growth. To encourage ‶utility″ or commercialized adoption as: Users must be able to purchase a coin with the ability to sell at a fair price in the future. That′s called liquidity... The power presently given to a select few services whom operate semi-legal, unlicensed, insecure, money transmitting and often commodity or security exchange ‶businesses″. A significant struggle is encountered by development teams not willing to pay ‶bribe fees″ to get listed on popular ‶reputable″ centralized or decentralized exchange services. These over-inflated ‶listing fees″ are often used to directly manipulate the volume, supply, and price of newly established coins.

Unsuspecting investors are tricked by insider trading performed by the exchange themselves or through robotic ‶Pump & Dump″ groups. Malicious investors simply exploit the lack of security, counter-measures, morals, or monitoring of unlicensed exchange services; Whom control a large volume of coins for the global marketplace.

> *‶Any news on exchanges″ ~ Anonymous*
>
> *‶Most of them are corrupt from what we can see″ ~ Profit Hunters Coin Community*
>
> *‶If the exchange does not protect the coins well enough and gets hacked, it doesn′t really change the fundamentals of the coin they are protecting.″ ~ Charlie Lee [2]*

"Layering security... so there´s not a dependence on a single critical piece of code, cryptography, or security throughout the system that will cause a broad-based catastrophic outcome in the case of compromise˝ ~ Andreas Antonopoulos [3]

Summary

PHC-DEX aims to give users the ability to run their own exchange similar to the "big ones" on their own PHC master-nodes, home/office computers or remote web-servers; While maintaining funds in their physical control that act as collateral for the orders placed on the Secure Standardized Distributed Exchange Network (SSDEN)

Fully "brand-able": administrators can also invite public users to access trades on the network and earn transaction fees for their services if they chose to follow all guidelines and regulations, licenses, etc.

PHC-DEX is a distributed peer to peer exchange platform running virtually any RPC compatible crypto-currency (BTC, LTC, DASH, etc) that can be easily implemented by users with very minimal technical experience. Profit Hunters Coin started out as an experimental crypto-currency, after proving its own security features; We´ve decided to use it as a side-chain implementation to enable cross-block-chain coin exchanges through Trusted, MultiSig, SegWit, script-able swaps

Hold the coins in your Private DEX node running a semi-hot wallet... This can be your home PC with outgoing connections only! Essentially, you can trade the coins sitting in your cold wallets too!

> *"Bitcoin exchanges are an integral part of the virtual currency world and its ecosystem in particular. Prior to the fall, Mt. Gox enjoyed the status of being a monopolist as it dominated an estimated 80-90% of the Bitcoin-Dollar trading volume. Though the collapse of Mt. Gox raised many questions, but the aftermath only lasted for a short span and the trading volumes rose again at various other exchanges." [4]*

Use-case

Alice has Bitcoin but wants to buy PHC from Bob.

Existing exchange services usually don´t add new coins without receiving a very large "listing fee" that´s used apparently to eliminate scam projects.

PHC is a community supported project with very limited resources. Most of the development is done by volunteers contributing their spare time. Investors and supporters mine (generate coins), tell their friends and others about the unique security features it has. Few large exchanges want to support a coin with low volume.

Alice and Bob have no exchange intermediary to escrow the exchange transaction.

Alice downloads the PHC-DEX software onto her personal computer and configures it to connect with her local block-chain wallets via RPC commands. In the future; she will also have full DEX access available directly through the PHC wallet and others.

Bob has exchanged PHC with a few of his friends in the past, and anticipates random re-sales as demand for the coins continues to grow. He rents a Virtual Private Server, downloads the PHC-DEX software. Instead of installing the PHC and Bitcoin wallet on the same public computer as the DEX software; He chooses to run a Private Node (Ghost) on his office computer. This will be the physical location of all his coins.

Alice logs into her PHC-DEX account and can now see Bob´s sell orders and chooses to execute, with a small buy order using the Trusted (direct) swap method.

Bob receives Bitcoin from Alice, and his Ghost node verifies she has not tried to cheat him... Approved by block-chain consensus and side-chain dual-verification. His Ghost node sends her PHC directly to her wallet as soon as possible and removes a fee.

Alice receives her PHC into her wallet almost immediately, after a selected minimum Bitcoin transactions confirmed by the mining network; she is grateful and gives Bob´s node an excellent rating, this permanent record is recognized as network node reputation.

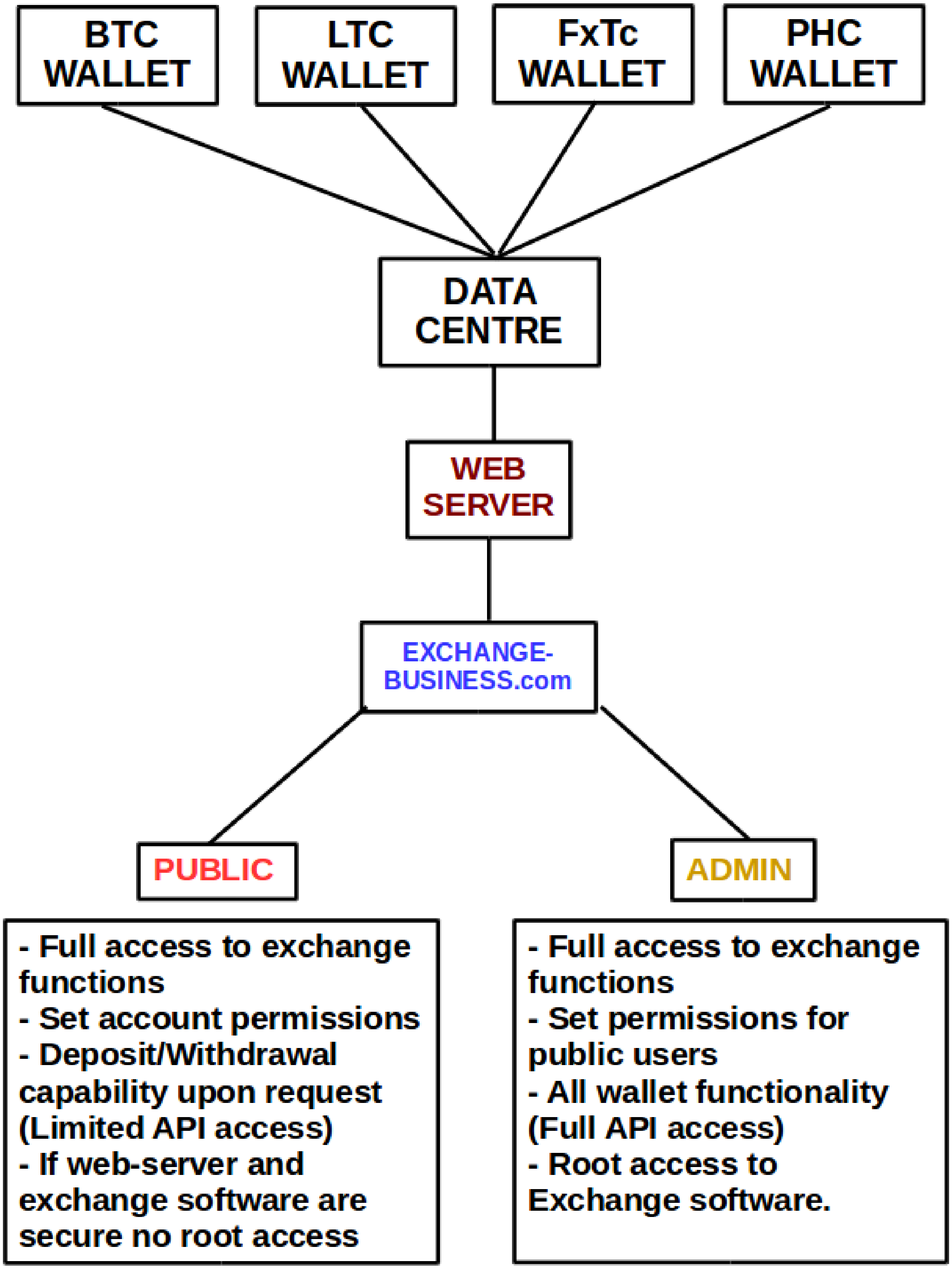
Bob can further increase trust of his PHC-DEX node by allocating master-node collateral and activating master-node mode. This enhances node security and block-chain interaction permissions and could enable specialized services.

Centralized Exchanges

YourFavorite.com service most likely uses a cloud based or dedicated server setup located in a data-centre. Web-server software runs the exchange platform, all user data is saved (sometimes NOT encrypted) on the same physical machine as the web-scripting. Network traffic has full incoming access from the internet, this same computer communicates directly to Bitcoin, Litecoin and other wallets via RPC running locally or on a remote computer within the same local cloud network.

If someone compromised the web-server security; Through cross-site scripting, SQL injections or similar attacks targeted towards the web-server software, exchange platform or database server... They have a very good chance to be able to send RPC commands directly to all of the "hot-wallets" white-listed by the platform. An attacker can simply impersonate the exchange platform software once they have elevated privileges on the dedicated server.

> *"Its collapse into bankruptcy last week – and the disappearance of $460 million, apparently stolen by hackers, and another $27.4 million missing from its bank accounts – came as little surprise to people who had knowledge of the Tokyo-based company's inner workings." [5]*
>
> *"South Korea's Bithumb, one of the largest Crypto-currency exchanges in the world by trading volume, has halted deposit and withdrawal services after hackers stole 35 billion won ($31 million) from the platform." - June 20, 2018 (CoinDesk.com) [6]*



- Full access to exchange functions
- Set account permissions
- Deposit/Withdrawal capability upon request (Limited API access)
- If web-server and exchange software are secure no root access

- Full access to exchange functions
- Set permissions for public users
- All wallet functionality (Full API access)
- Root access to Exchange software.

Conventional DEX solutions

Crypto-Bridge and other DEX solutions are struggling with technological problems, lack of node operators and inability to include new coin capabilities without network wide-upgrades. Most of these platforms, wallets and protocols are not fully open-source and lack the ability to be properly analyzed by outside security experts. When vulnerabilities are discovered, they can often become very costly or disruptive.

An often over-looked aspect of some implementations; They´re central in nature. They have been designed to be operated by a select few administrators, not average users. Simply cloning a piece of closed-functionality source code and allowing their databases to synchronize across multiple servers; owned by an elite group. This is not establishing a true open-source decentralized exchange protocol.

These semi-decentralized exchange protocols are closed networks. They´re not standardized protocols anyone can write new clients, applications, or node software. This fundamentally goes against the basics of decentralization and ‶FREE″ software.

Although some conventional DEX solutions are struggling with technological issues and lack of competent development teams; They may very well be operated by honest administrators with good intentions for their users. Extreme caution should be followed when using platforms that centralize exchange volume, price manipulations, and potential attack vectors. Industry wide-improvements should prioritize addressing these issues before massive marketing campaigns overshadow vulnerabilities.

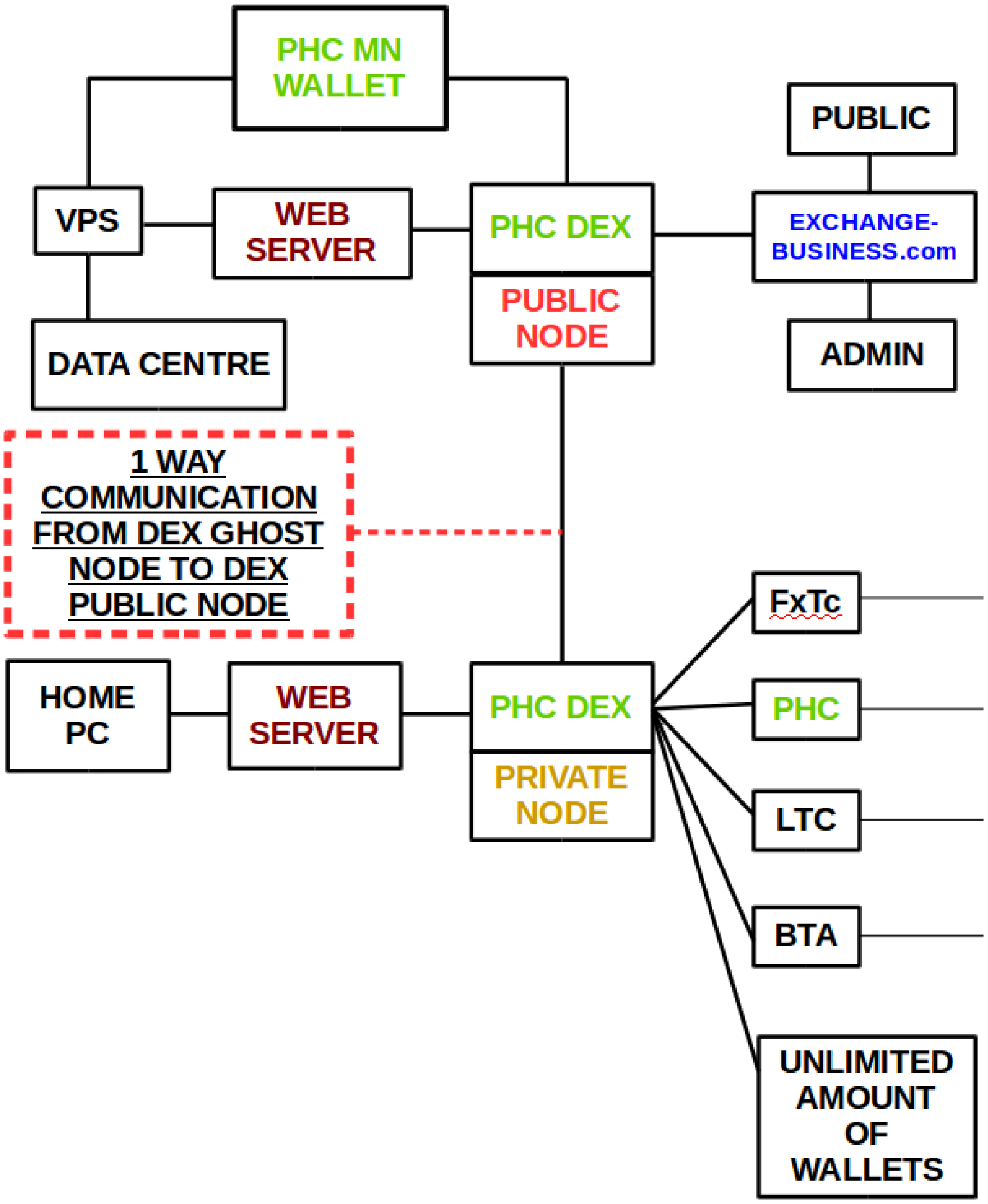
PHC-DEX Protocol Overview

A standardized protocol has been initially developed to streamline the process of passing peer to peer data in the form of exchange order requests and confirmations in a secure distributed network.

Quick order matching, processing, execution, and validation can be done using a public / private node network pair protocol. PHC-DEX 1.0, authored in PHP (Hypertext Preprocessor), executed on Apache configured VPS (Virtual Private Servers), deployed in world-wide data-centres. Master-node wallets can run along-side the DEX software to further enhance security and reliability of the exchange services.
These public nodes can be accessed by multiple users via the web-based HTML graphical user interfaces and configured by the administrator with very little technical knowledge required.

Ghost nodes can be established to communicate with public nodes and match orders eligible for exchange based on outstanding bids or asks submitted by users with other nodes on the network. Ghost nodes can be configured to have exclusive access to RPC commands and communicate with hot Bitcoin / PHC wallets. Virtually unlimited ghost nodes can safely run as "hot" wallets as required by a PHC-DEX node. This "virtual safe" can be run on a home or office PC or in a secure data-centre dissimilar from the public node VPS. One way, "blind" communication from the private node will help eliminate possible attack vectors directly upon the computers securing the funds waiting for trade.

Layered security of private / public node pairing can also be beneficial to prevent down-time as it can be configured similar to a cloud-server by switching to another available ghost node automatically when one is offline or down for maintenance.



Methods for coin-swaps

Trusted (direct)

A near-instant "simple-swap" can be performed as long as you trust the node: will process the order when your coins have been confirmed in their wallet address. This node will directly send the coins you wish to receive from their wallet and the process will not require other network nodes. Be sure to verify their network reputation, licenses, and even physical location before you fully trust them!

Trusted SegNode (Randomized Escrow)

Two or more random trusted nodes could be allocated to perform dual-escrow services. This method is very simple: splitting the responsibility and liability, also the size of the exchange between multiple nodes... Until confirmation of a valid trade is executed. Automated "funds-transfers" can be used as a trusted third-party escrow.

Multi-SegNode (Multi-signature)

A random or user defined amount of 3rd party nodes are selected to hold MultiSig keys for the transfer. A signature is updated in the order data-chains for both coin transfers after the funds have been confirmed on their respective coin block-chains. The 3rd party segregated witness nodes never hold the coins, they only provide consensus signatures; The smart-contract will execute only after verification has been achieved. This swap option is a very secure escrow but could be subject to delays.

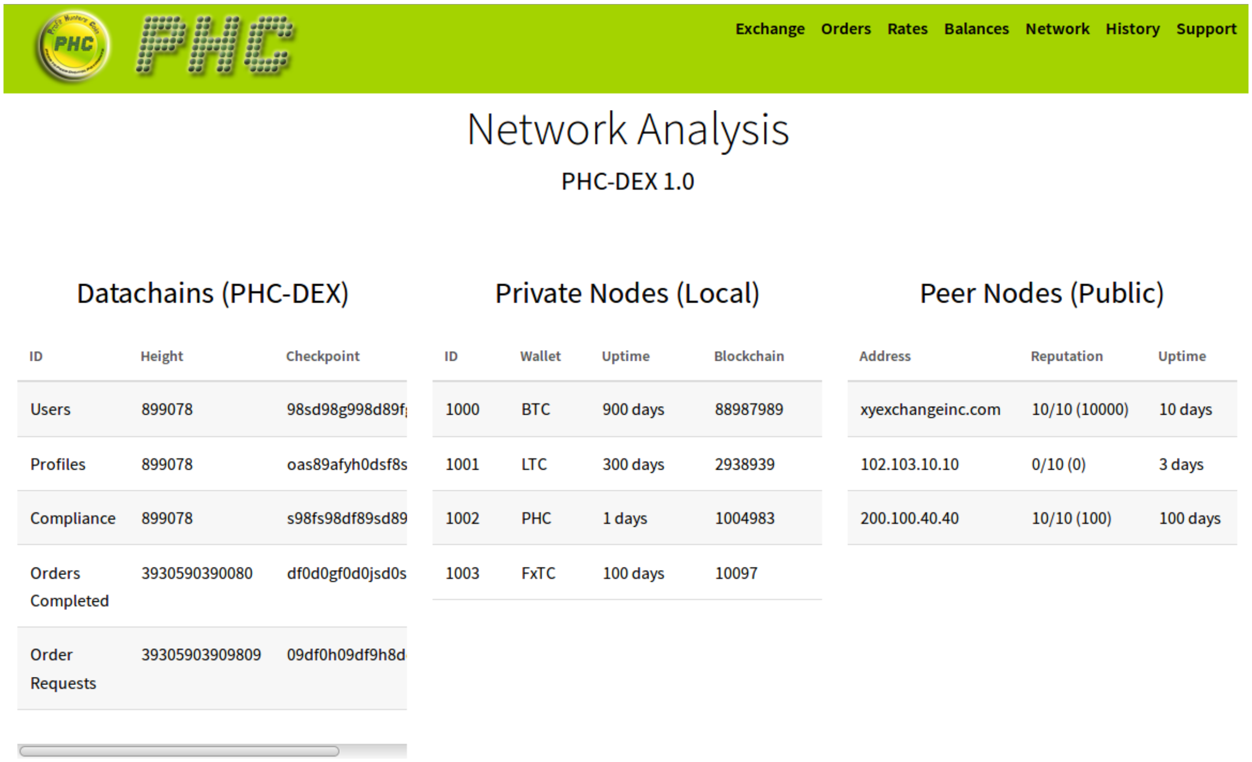
Atomic (Cross-chain script-able swaps)

A random or user defined amount of 3rd party nodes are selected. Custom scripts are written to the coin block-chain and executed as needed that include conditional, time-locked, reveal on secret transactions. Key-pairs are matched from two different coin block-chains and then swapped to their users to provide ownership exchange.

Graphical User Interfaces

Users will interact with public and private PHC-DEX software via Mobile, Desktop, Tablet or other web-enabled device. Running Apache & PHP coded with HTML, CSS, JAVASCRIPT.

Network & Wallet Health



Network Analysis

PHC-DEX 1.0

Datachains (PHC-DEX)

ID	Height	Checkpoint
Users	899078	98sd98g998d89f
Profiles	899078	oas89afyh0dsf8s
Compliance	899078	s98fs98df89sd89
Orders Completed	3930590390080	df0d0gf0d0jsd0s
Order Requests	39305903909809	09df0h09df9h8d

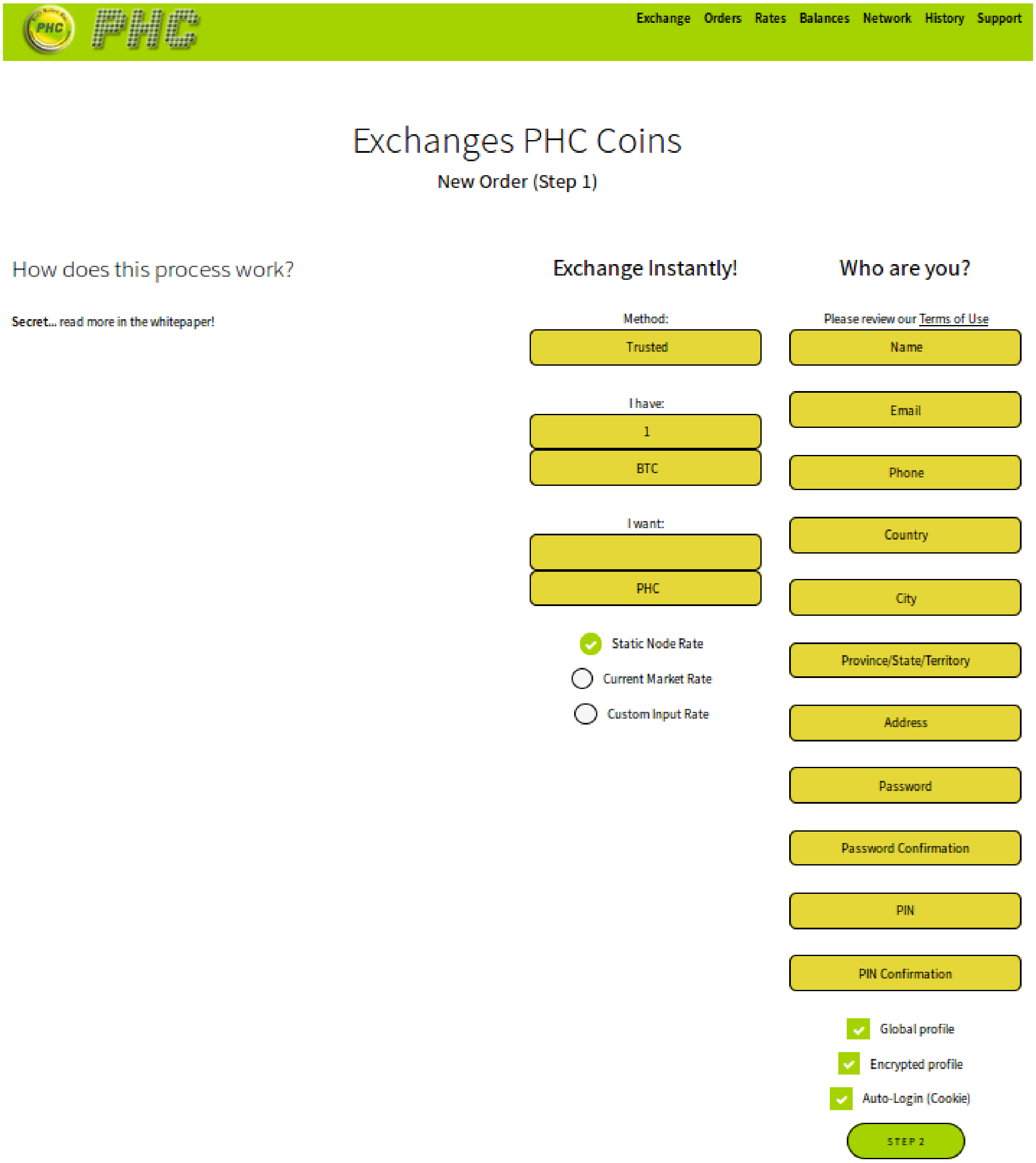
Private Nodes (Local)

ID	Wallet	Uptime	Blockchain
1000	BTC	900 days	88987989
1001	LTC	300 days	2938939
1002	PHC	1 days	1004983
1003	FxTC	100 days	10097

Peer Nodes (Public)

Address	Reputation	Uptime
xyexchangeinc.com	10/10 (10000)	10 days
102.103.10.10	0/10 (0)	3 days
200.100.40.40	10/10 (100)	100 days

Exchange Order Process



Exchanges PHC Coins

New Order (Step 1)

How does this process work?

Secret... read more in the whitepaper!

Exchange Instantly!

Method:
Trusted

I have:
1
BTC

I want:

PHC

● Static Node Rate
○ Current Market Rate
○ Custom Input Rate

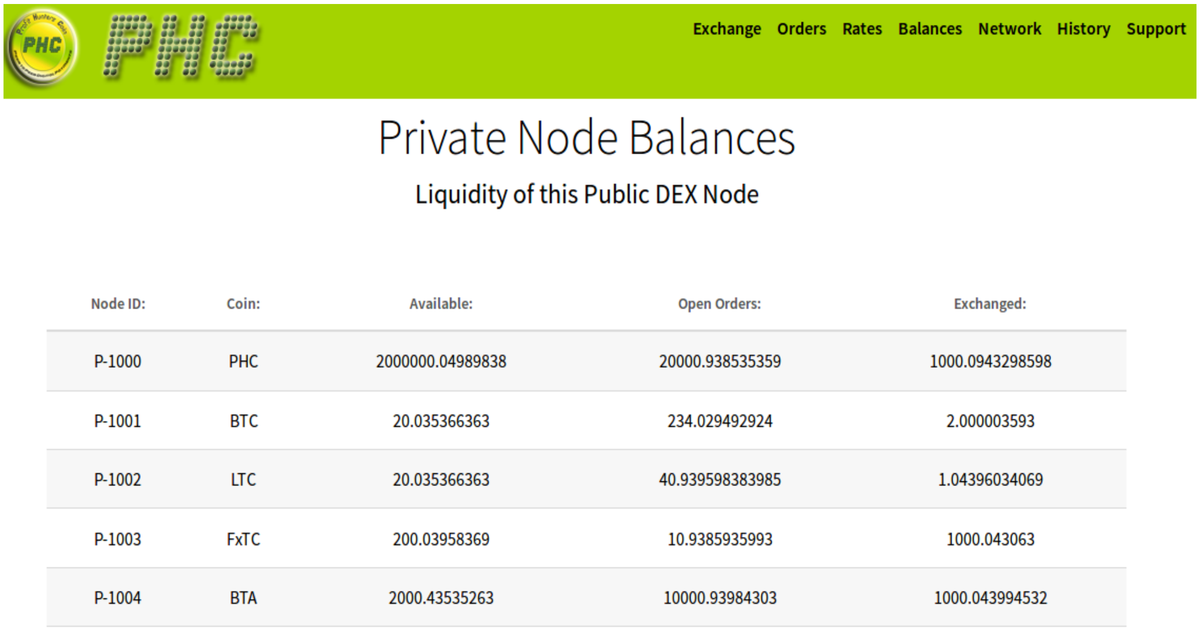
Who are you?

Please review our Terms of Use

Name
Email
Phone
Country
City
Province/State/Territory
Address
Password
Password Confirmation
PIN
PIN Confirmation

☑ Global profile
☑ Encrypted profile
☑ Auto-Login (Cookie)

Live Balances for Private Hot/Cold Wallets

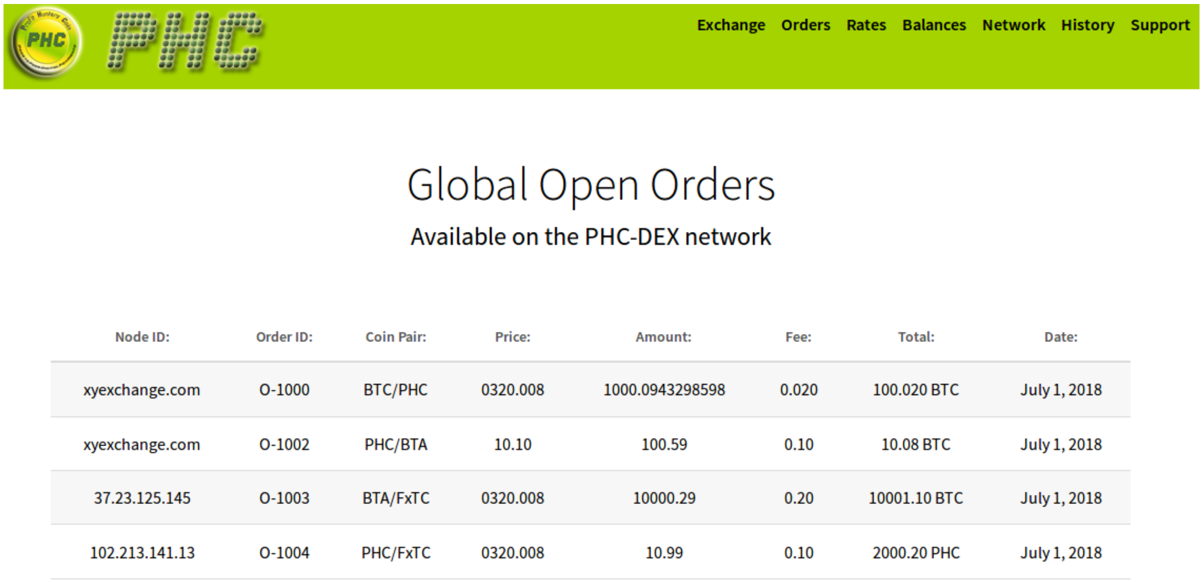


Private Node Balances

Liquidity of this Public DEX Node

Node ID:	Coin:	Available:	Open Orders:	Exchanged:
P-1000	PHC	2000000.04989838	20000.938535359	1000.0943298598
P-1001	BTC	20.035366363	234.029492924	2.000003593
P-1002	LTC	20.035366363	40.939598383985	1.04396034069
P-1003	FxTC	200.03958369	10.9385935993	1000.043063
P-1004	BTA	2000.43535263	10000.93984303	1000.043994532

View Open Orders on all network nodes

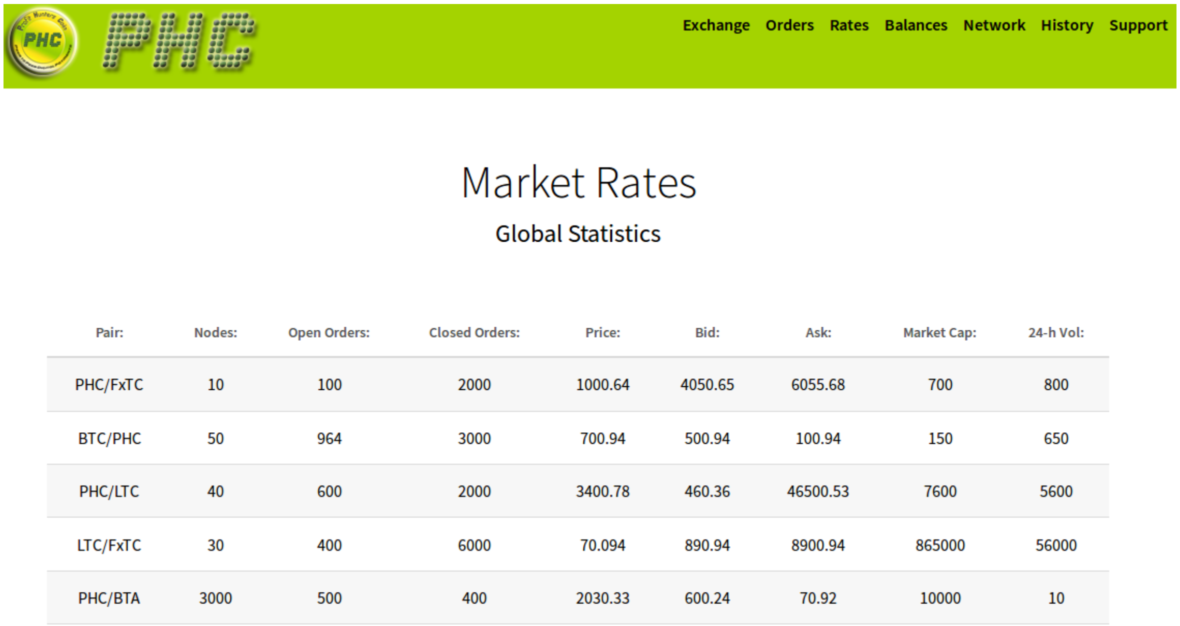


Global Open Orders

Available on the PHC-DEX network

Node ID:	Order ID:	Coin Pair:	Price:	Amount:	Fee:	Total:	Date:
xyexchange.com	O-1000	BTC/PHC	0320.008	1000.0943298598	0.020	100.020 BTC	July 1, 2018
xyexchange.com	O-1002	PHC/BTA	10.10	100.59	0.10	10.08 BTC	July 1, 2018
37.23.125.145	O-1003	BTA/FxTC	0320.008	10000.29	0.20	10001.10 BTC	July 1, 2018
102.213.141.13	O-1004	PHC/FxTC	0320.008	10.99	0.10	2000.20 PHC	July 1, 2018

Live global market statistics



Market Rates

Global Statistics

Pair:	Nodes:	Open Orders:	Closed Orders:	Price:	Bid:	Ask:	Market Cap:	24-h Vol:
PHC/FxTC	10	100	2000	1000.64	4050.65	6055.68	700	800
BTC/PHC	50	964	3000	700.94	500.94	100.94	150	650
PHC/LTC	40	600	2000	3400.78	460.36	46500.53	7600	5600
LTC/FxTC	30	400	6000	70.094	890.94	8900.94	865000	56000
PHC/BTA	3000	500	400	2030.33	600.24	70.92	10000	10

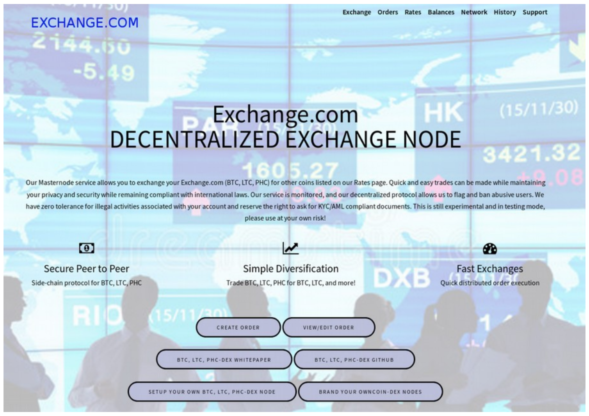
Personal Nodes

If you don´t feel comfortable using traditional centralized exchange services or commercialized nodes; it´s 100% free to run the open-source software on your own Home PC, network or public and private VPS. Privacy and security can always remain in your physical hands. You WILL always control your coins waiting to be traded in your wallets. Stake, and protect them! You´re not required to pay a yearly PHC-DEX license fee for personal nodes, but can if you would like additional network reputation. You will not (or might) have to register for AML/KYC compliance or MSB licensed, but you´re still responsible for paying all capital gains taxes due within your jurisdiction.

Commercial (Brand-able) Nodes

Exchange services

Attract new users with your PHC-DEX licensed service, earn a consistent income through escrow/exchange fees. If you want to allow third-party users to access and use your exchange node: Be sure to consult your legal representative and follow all KYC/AML laws, apply for your money transmission business licenses if required.



Exchange.com
DECENTRALIZED EXCHANGE NODE

Our Masternode service allows you to exchange your Exchange.com (BTC, LTC, PHC) for other coins listed on our Rates page. Quick and easy trades can be made while maintaining your privacy and security while remaining compliant with international laws. Our service is monitored, and our decentralized protocol allows us to flag and ban abusive users. We have zero tolerance for illegal activities associated with your account and reserve the right to ask for KYC/AML compliant documents. This is still experimental and in testing mode, please use at your own risk!

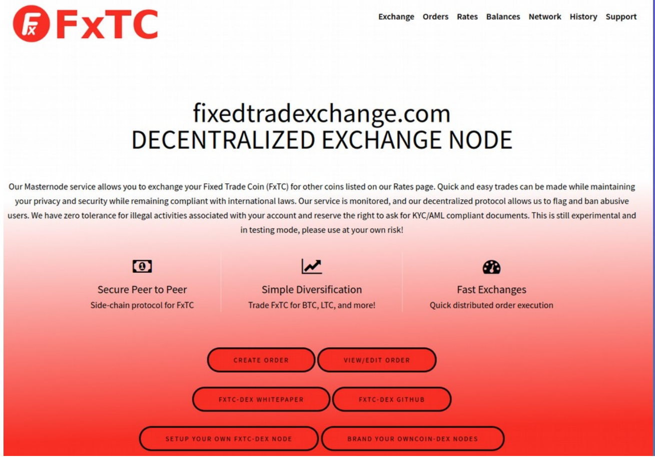
Secure Peer to Peer
Side-chain protocol for BTC, LTC, PHC

Simple Diversification
Trade BTC, LTC, PHC for BTC, LTC, and more!

Fast Exchanges
Quick distributed order execution

Coin Developers

For a small yearly fee, you can become a PHC-DEX licensed coin and use the exchange protocol for your own project. Customize your logo, coin name, etc, and Initial Node Offering parameters and receive full marketing rights! Optionally, you could also run your own official exchange service... Trusted by your community that is compatible with all PHC-DEX (or branded) nodes.


FxTC
Exchange Orders Rates Balances Network History Support
CREATE ORDER
VIEW/EDIT ORDER
FXTC-DEX WHITEPAPER
FXTC-DEX GITHUB
SETUP YOUR OWN FXTC-DEX NODE
BRAND YOUR OWNCOIN-DEX NODES

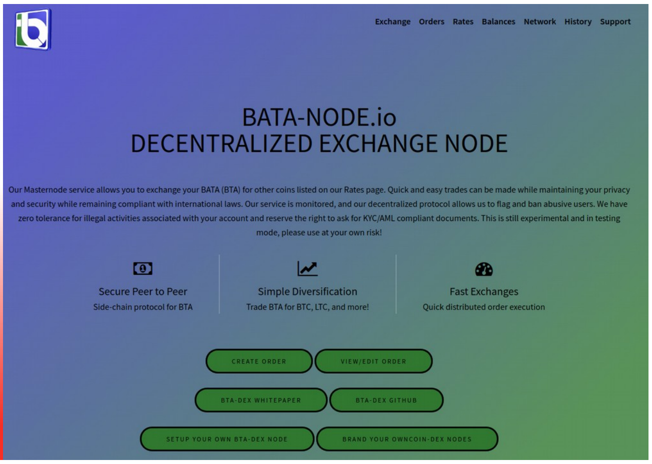
fixedtradexchange.com
DECENTRALIZED EXCHANGE NODE

Our Masternode service allows you to exchange your Fixed Trade Coin (FxTC) for other coins listed on our Rates page. Quick and easy trades can be made while maintaining your privacy and security while remaining compliant with international laws. Our service is monitored, and our decentralized protocol allows us to flag and ban abusive users. We have zero tolerance for illegal activities associated with your account and reserve the right to ask for KYC/AML compliant documents. This is still experimental and in testing mode, please use at your own risk!

Secure Peer to Peer
Side-chain protocol for FxTC

Simple Diversification
Trade FxTC for BTC, LTC, and more!

Fast Exchanges
Quick distributed order execution


Exchange Orders Rates Balances Network History Support
CREATE ORDER
VIEW/EDIT ORDER
BTA-DEX WHITEPAPER
BTA-DEX GITHUB
SETUP YOUR OWN BTA-DEX NODE
BRAND YOUR OWNCOIN-DEX NODES

BATA-NODE.io
DECENTRALIZED EXCHANGE NODE

Our Masternode service allows you to exchange your BATA (BTA) for other coins listed on our Rates page. Quick and easy trades can be made while maintaining your privacy and security while remaining compliant with international laws. Our service is monitored, and our decentralized protocol allows us to flag and ban abusive users. We have zero tolerance for illegal activities associated with your account and reserve the right to ask for KYC/AML compliant documents. This is still experimental and in testing mode, please use at your own risk!

Secure Peer to Peer
Side-chain protocol for BTA

Simple Diversification
Trade BTA for BTC, LTC, and more!

Fast Exchanges
Quick distributed order execution

Network Reputation

Upon successful or unsuccessful order execution: the traders may rate each others node performance. Positive and negative votes will be verified as valid by other nodes and chained together to prevent any attempts for reversal by malicious users. Network fees can be allocated to pay for 3rd party reputation verification if required.

> *"We as users and the Bitcoin community have to be self-regulating." - John McAfee [7]*

Pre-Release

Node administrators can execute real trades under caution, with full knowledge that bugs and security issues will be discovered, fixed, and may cause unexpected loss.

Main-network protocol will also be established but inactivated until official release. Critical test-net data will be migrated during the pre-release to the main-net.

Official Release

Full network functionality, and marketing will be available. More information will be publicly available during the pre-release phase.

Risk Factors & Terms of Use

Legal Responsibility

You´re responsible to make sure that the use of this software is legal and you´re in full compliance in your jurisdiction of residence.

You must comply with Money Transmission Business licenses, Anti-Money Laundering and Anti-Terror legislation. Operating a node that allows third-party access might require you to collect sufficient verified customer information to conform to Know Your Customer banking legislation.

PHC-DEX software is open-source and community developed and supported. It is protected by: Creative Commons Attribution-ShareAlike 4.0 International License.

You are free to:

Share — copy and redistribute the material in any medium or format

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

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You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation.
No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material.

Initial Node Offering

Legally contribute to the success of this project: Become one of the first decentralized coin exchanges on the network. We're not selling coins for master-node collateral... This is an open-source license with exclusive rights granted to early adopters. Jump-start profits and network reputation, learn technical specifications, or build a strong relationship with your user-base before the protocol grows into mass-adoption. The INO is scheduled to begin on July 1st, 2018 and end January 1st, 2019

Development Road-map

January 1st, 2018 – PHC 1.0.0.0 (Genesis)
Begin establishing core block-chain network, develop dynamic block rewards. Develop community support and fix issues with Bitcoin core 8. Begin PoS & master-node migration to Core 10.

January 1st, 2019 – PHC-DEX (Pre-Launch)
Test-net and Main-net pre-launch, source code license available through Initial Node Offering to exclusive early adopters. Prices will increase daily until the term end.

January 1st, 2020 – PHC-DEX (Official Launch)
Test-Net and Main-Net Official Launch, marketing campaigns, public source code licenses available, full network functionality through graphical user-interfaces. Commercialization and cooperation with other coin development teams, exchange businesses, banks, money transmitters, and even our competition DEX platforms.

Contribute to this project

If you′re a programmer, software developer, exchange service, skilled computer user, marketer or investor; and would like to contribute your free time and skills. Please contact admin@profithunterscoin.com for more information.

If you prefer to make a financial donation (be sure to email us):

Bitcoin: 19Zx5YH9AigoN233EAF47FMkav126N4NgJ
Litecoin: LTMMp7MrHLS4SD5ZacbGjAuxwbvvVpgmaW
Dash: XqCR4wfq4cxy861Wye2xBMr5fiqBQ6r3ZP

The Development Team

Justin K. Percy (Biznatch Enterprises)
PHP & C++ Programmer - Profit Hunters Coin (Founder)

Derek J. McMahon (DJ)
Support & Marketing - Profit Hunters Coin (Co-Founder)

Jozef Uhľár (Uhlik)
C++ Programmer - Profit Hunters Coin (Developer)

Swordfish
Support - Profit Hunters Coin - (Developer)

Collaboration with: Bitcoin, Litecoin, BATA, FxTC Core, Ignitioncoin

Inspirations: Peer Assets, Escodex, Crypto-Bridge, BarterDEX (Komodo), Waves, AtomicWallet, Blocknet, Bisq, IDEX, OpenLedgerDEX (Bitshares), OasisDex, RadarRelay, StellarDex, Enigma, Exchange Union, OmiseGo, LeverJ, Airswap, Kyber, Saturn Network

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https://cointelegraph.com/news/bithumb-hack-does-not-change-bitcoin-fundamentals-says-litecoin-founder-charlie-lee

[3] Bitcoin Q&A: Protocol development security
https://www.youtube.com/watch?v=4fsL5XWsTJ4

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[7] John McAfee on the future of crypto

https://www.facebook.com/CryptoCrunchApp/videos/482985802157111/

Bitcoin BIP 65

https://github.com/bitcoin/bips/blob/master/bip-0065.mediawiki

Bitcoin Multisignature

https://en.bitcoin.it/wiki/Multisignature

2018 The Year of The DEX

https://medium.com/@George_harrap/2018-the-year-of-the-dex-b48c611bc370

Dex-Protocols (List)

https://github.com/evbots/dex-protocols

A Practical Native DEX

https://github.com/KomodoPlatform/KomodoPlatform/wiki/BarterDEX-%E2%80%93-A-Practical-Native-DEX

NoSQL Meets Bitcoin and Brings Down Two Exchanges

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