Groestlcoin—SegWit, Taproot and Lightning Network Ready

By Christopher Paul Thompson

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ISBN:

GROESTLCOIN

SEGWIT, TAPROOT AND LIGHTNING NETWORK READY

2014-2015-2016-2017-2018-2019-2020-2021
A CONCISE GROESTLCOIN HISTORY BOOK

CHRISTOPHER P. THOMPSON

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GROESTLCOIN SPECIFICATION

Hashing Algorithm:
2 rounds of Grøstl / Groestl

Consensus Mechanism:
Proof of Work (PoW)

Maximum Coin Supply:
105,000,000 GRS

52,500,000 Mined By:
07/11/2014

78,750,000 GRS Mined By:
06/11/2021

GRS Block Time:
1 minute

GRS Block Size:
1 MB

Initial GRS Block Reward:
512 GRS

GRS Block Reward:
5 GRS (since 27/09/2017)

Difficulty Re-target Time:
Every Block

TEAM GROESTLCOIN

The Groestlcoin Team consists of dedicated members who deliver continuous development to Groestlcoin Core and other related GRS wallets and application tools:

FOUNDER
gruve_p (The Netherlands)

LEAD DEVELOPER
jackielove4u (The Netherlands)

FULL STACK DEVELOPER
Hashengineering (USA)

C# DEVELOPER
Ufasoft (Russia)

PYTHON DEVELOPER
Kefkius (USA)

C DEVELOPER
QuantumExplorer (USA)

.NET DEVELOPER
Yokomoto (UK)

WHAT IS GROESTLCOIN?

Blockchain or distributed ledger technology (DLT) has been active since the launch of the Bitcoin blockchain on 3rd January 2009. Many developers across the globe have contributed to its innovative code and others have advocated for how it can be used to improve different processes.

On 22nd March 2014, a new cryptocurrency called Groestlcoin (GRS) was launched as an improved alternative to Bitcoin and other cryptocurrencies active at the time. It was founded by a developer known by the alias gruve_p who introduced Groestlcoin as a fairer and more energy efficient alternative to other proof of work cryptocurrencies (a fork of Bitcoin). It initially permitted a more efficient mining process allowing anyone to mine GRS with either a CPU or GPU (in 2018 it became possible to use ASIC miners to mine GRS).

Similar to how other UTXO-based blockchains function, Groestlcoin is used primarily to transfer value between parties without the need for a trusted intermediary to verify and validate transactions. Instead, miners provide the necessary computational power (hashrate) to successfully generate GRS (then subsequently grouped together in blocks) and validate all GRS transactions. New GRS are then rewarded to miners as an incentive for securing the Groestlcoin network. Groestlcoin users can take advantage of the following:

- **Secure:** the Groestl hashing algorithm provides a high hashrate (about 50 Th/s in late 2021) protecting the network from potential attack vectors such as a 51% attack.
- **Decentralised:** a copy of the Groestlcoin blockchain is stored on many computers (nodes) across the globe. This peer-to-peer network of nodes verifies transactions that cannot be changed or deleted (immutability). There is no single point of failure.
- **Efficient:** GRS blocks are mined every minute (ten times faster than Bitcoin). Groestlcoin is also Lightning Network (LN) ready.
- **SubAtomic Fees**: users can send GRS at almost zero fees. It costs between 0.000045 GRS and 0.00007 GRS to send 10,000 GRS, depending on which Groestlcoin wallet is used. The Groestlcoin Core wallet has the cheapest transaction fees.
- **Open-source:** developers are free to view, modify, criticise and distribute the code relating to Groestlcoin Core and GRS wallet software. The Groestlcoin Team (see left) releases new GRS wallets (and upgrades) and application tools every three months.

WHAT IS GROESTLCOIN?

Every three months, the Groestlcoin Team reveals the latest development release containing innovative GRS wallets, new feature upgrades and other useful application tools for the community to experiment with. The team has also maintained the Groestlcoin Core codebase to ensure it is updated to include the latest Bitcoin Core code features (Groestlcoin Core v22.0 was released on 22nd September 2021).

What follows are several key milestones of the Groestlcoin blockchain:

- On 22nd March 2014, the Groestlcoin blockchain launched at 13:41:11 UTC
- On 24th January 2017, Groestlcoin became the first blockchain to successfully activate SegWit (block number 1,439,424).
- On 27th September 2017, the GRS block reward reached the static 5 GRS beginning at block number 1,772,800.
- On 25th June 2021, Groestlcoin became the first blockchain to successfully activate Taproot via softfork (block number 3,644,928).

This book covers the history of Groestlcoin from 22nd March 2014 to the end of 2021. All information on the following pages was meticulously researched from official sources. If the reader wishes to investigate further, informative material is available on the official Groestlcoin website at www.groestlcoin.org and other Groestlcoin social media channels (Twitter, Discord, Reddit, Telegram etc.).

WHERE TO BUY GROESTLCOIN

Upbit Korea (BTC, KRW)
Upbit Indonesia (BTC)
Binance (BTC)
Changelly (GRS Direct Swap)
Bithumb Global (USDT)
Bittrex (BTC)
Huobi Global (BTC)
DigiFinex (BTC)
CoinEx (BTC, USDT)
Hotbit (BTC)
Bitclover (USDT)
WazirX (USDT)
CoinDCX (BTC)
Bitbns (INR)
c-patex (BTC, LTC)
Flyp.me (GRS Direct Swap)
Instaswap (GRS Direct Swap)
Bittylicious (USD, EUR, GBP)
XCHANGE.ME (GRS Direct Swap)
Easybit (GRS Direct Swap)
GODEX (GRS Direct Swap)
ChangeNOW (GRS Direct Swap)
SimpleSwap (GRS Direct Swap)
AtomicDEX (Atomic Swap)
Bitladon (EUR)
StealthEx (GRS Direct Swap)
Changeangel (GRS Direct Swap)
Cripto Intercambio
Dove Wallet (BTC, USDT, others)
Biteeu (BTC)
Pionex (BTC)
Swapzone (GRS Direct Swap)
Bitexen (TRY)

PAST MILESTONES

2014

22/03/2014 —Groestlcoin announced on Bitcointalk Forum
22/03/2014 —Groestlcoin blockchain launched at 13:41:11 UTC
24/03/2014 —Dwarf Pool became the first working GRS mining pool
30/03/2014 —Comkort exchange added GRS trading
03/04/2014 —Bittrex exchange added GRS trading
03/04/2014 —Official Groestlcoin Twitter @GroestlcoinTeam created
03/04/2014 —Official Groestlcoin Subreddit …/r/groestlcoin created
08/04/2014 —Poloniex exchange added GRS trading
11/04/2014 —MintPal exchange added GRS trading
11/04/2014 —CoinMarketCap added Groestlcoin
14/04/2014 —2014 high GRS fiat price recorded at US$0.006036
22/04/2014 —Official Groestlcoin Facebook group created
30/04/2014 —Current Groestlcoin logo unveiled
02/05/2014 —Current Groestlcoin logo adopted (replaced the original)
09/05/2014 —Official Groestlcoin Forum went live
15/05/2014 —Groestlcoin Core v2.0.5 upgrade released
20/05/2014 —Groestlcoin blockchain 1st hardfork at block 100,000
23/05/2014 —CoinedUp exchange added GRS trading
02/06/2014 —CoinGecko added Groestlcoin
02/08/2014 —First jackielove4u Groestlcoin Bitcointalk thread post
16/08/2014 —Bittrex exchange delisted GRS trading
07/11/2014 —Half of all GRS already mined at block 334,361
17/11/2014 —All time low GRS fiat price recorded at US$0.00006022
23/12/2014 —First ever Groestlcoin Android wallet released
31/12/2014 —Groestlcoin Android wallet uploaded to Google Play Store

2015

07/01/2015 —General Bytes ATMs added support for Groestlcoin
18/01/2015 —2015 low GRS fiat price recorded at US$0.00008558
22/03/2015 —Groestlcoin blockchain first year anniversary
22/03/2015 —Electrum-GRS wallet (v2.0.3) for desktop released
22/03/2015 —Groestlcoin Multibit wallet released
22/03/2015 —Groestlcoin BIP-0032/39/44 HD Android wallet released
22/03/2015 —Groestlcoin JSwallet released
29/06/2015 —Groestlcoin Easyminer (v1.0) released
29/06/2015 —Groestlcoin-wpf alternative full node client released
29/06/2015 —Electrum-GRS wallet for Android released
29/06/2015 —Aegis Groestlcoin wallet for Android released
29/06/2015 —Groestlcoin Multisig secure storage tool released

PAST MILESTONES

2015

19/08/2015 —Groestlcoin Testnet blockchain launched at 20:55:29 UTC
20/08/2015 —Groestlcoin Core v2.11.0 upgrade released
22/09/2015 —Groestlcoin Address Utility tool released
22/09/2015 —Groestlcoin BIP-0032 HD Blackberry wallet released
22/09/2015 —Groestlcoin Easyminer (v2.0) upgrade released
22/09/2015 —Groestlcoin Armory released
14/10/2015 —Groestlcoin blockchain first softfork at block 800,000
03/11/2015 —2015 high GRS fiat price recorded at US$0.0021

2016

02/01/2016 —Electrum-GRS wallet (v2.5.4) for desktop upgrade released
02/01/2016 —Groestlcoin Vanitygen (address generator) released
02/01/2016 —Groestlcoin SPH-Sgminer (SGminer5-grs) released
02/01/2016 —Aegis Groestlcoin wallet for Blackberry released
02/01/2016 —Groestlcoin BIP-0032/39/44 HD Blackberry wallet released
02/01/2016 —Electrum-GRS wallet for Blackberry released
24/01/2016 —Bittrex exchange re-listed GRS trading
08/03/2016 —Groestlcoin block 1,000,000 mined at 08:15:05 UTC
22/03/2016 —Groestlcoin BIP-0032 HD Android wallet (v4.46.2) released
22/03/2016 —Groestlcoin Wallet32 Android wallet (v0.3.17) released
22/03/2016 —Electrum-GRS wallet for Android (v0.5.22) released
22/03/2016 —Aegis Groestlcoin wallet for Android (v1.1.6.3) released
22/03/2016 —Groestlcoin Core Full Node for Android (v2.1.0.6) released
22/03/2016 —MultiGroestl Classic for desktop (v0.5.19) released
22/03/2016 —MultiGroestl HD for desktop released
22/03/2016 —Groestlcoin BIP-0032 HD Blackberry wallet (v4.46.2) released
22/03/2016 —Groestlcoin Wallet32 Blackberry wallet (v0.3.17) released
22/03/2016 —Electrum-GRS wallet for Blackberry (v0.5.22) released
22/03/2016 —Aegis Groestlcoin wallet for Blackberry (v1.1.6.3) released
22/03/2016 —Groestlcoin Core Full Node for Blackberry (v2.1.0.6) released
22/03/2016 —2016 high GRS fiat price recorded at US$0.005362
22/06/2016 —AGCore Android application released
22/06/2016 —Simple Groestlcoin Android wallet released
22/06/2016 —Simple Groestlcoin Blackberry wallet released
22/06/2016 —Groestlcoin Lite wallet for Desktop released
10/09/2016 —2016 low GRS fiat price recorded at US$0.0007849
17/09/2016 —Cryptopia exchange added GRS trading
25/10/2016 —Groestlcoin Samourai Android wallet released
25/10/2016 —Groestlcoin Samourai Blackberry wallet released

PAST MILESTONES

2016

25/10/2016 —Groestlcoin Sentinel Android application released
25/10/2016 —Groestlcoin Sentinel Blackberry application released

2017

11/01/2017 —Groestlcoin added to Zpool mining pool
13/01/2017 —2017 low GRS fiat price recorded at US$0.0007657
17/01/2017 —Groestlcoin Core v2.13.3 upgrade released
21/01/2017 —Groestlcoin blockchain began to signal support for SegWit
23/01/2017 —Groestlcoin blockchain locked in SegWit
24/01/2017 —Groestlcoin blockchain activated SegWit
22/03/2017 —Electrum-GRS Lite (Groestlcoinomi) desktop wallet released
22/03/2017 —Groestlcoin browser based Webwallet released
22/03/2017 —Groestlwallet Android application released
22/03/2017 —Groestlwallet iOS application (1st GRS iOS app) released
30/03/2017 —Syscoin blockchain activated SegWit
02/04/2017 —GRS fiat price surpassed US$0.01 for the first time
26/04/2017 —1st to perform Lightning Network (LN) trans on mainnet
10/05/2017 —Bitcoin blockchain activated SegWit
05/06/2017 —GRS fiat price surpassed US$0.10 for the first time
22/06/2017 —Groestlsight blockchain explorer released
22/06/2017 —Groestlpay wallet (desktop & mobile devices) released
26/06/2017 —Btc100 Chinese exchange added GRS trading
28/06/2017 —CoinPayments.net added support for GRS
06/07/2017 —LiteBit.eu added support for GRS
24/08/2017 —Litecoin blockchain activated SegWit
05/09/2017 —C-Cex exchange added GRS trading
22/09/2017 —Groestlcoin cross-platform JSwallet released
22/09/2017 —Groestlcoin JSwallet Android wallet released
22/09/2017 —Groestlcoin JSwallet Blackberry wallet released
22/09/2017 —Groestlcoin Vanitygen (v1.02b) upgrade released
25/09/2017 —Livecoin exchange added GRS trading
24/10/2017 —Upbit exchange added GRS trading
31/10/2017 —CoinCodex added Groestlcoin
01/11/2017 —GRS fiat price surpassed US$1 for the first time
14/11/2017 —Groestlcoin official website donation page launched
21/11/2017 —Upbit exchange opened GRS/KRW trading
21/12/2017 —2017 high GRS fiat price recorded at US$2.69
25/12/2017 —Groestlcoin BIP-0032 HD Android Testnet wallet released
25/12/2017 —Groestlcoin BIP-0032 HD Blackberry Testnet wallet released

PAST MILESTONES

2017

25/12/2017 —Groestlcoin BIP-0032 HD Android (v5.24.1) wallet released
25/12/2017 —Groestlcoin BIP-0032 HD Blackberry (v5.24.1) wallet released
25/12/2017 —Groestlcoin Testnet Paperwallet released
25/12/2017 —Groestlcoin JSwallet for iOS released
25/12/2017 —Groestlcoin SegWit Paperwallet generator released
25/12/2017 —Groestlcoin Webwallet (Segwit support added) released
25/12/2017 —Groestlcoin Easyminer 2018 (v3.0) released

2018

05/01/2018 —2018 high GRS fiat price recorded at US$2.49
11/01/2018 —Bittylicious exchange added GRS trading
20/01/2018 —1st ever GRS atomic swap occurred with KMD on BarterDEX
01/02/2018 —CryptoWolf exchange added GRS trading
20/02/2018 —CoinSwitch exchange aggregator added GRS trading
25/02/2018 —Official Groestlcoin Subreddit surpassed 5,000 subscribers
12/03/2018 —Groestlcoin block 2,000,000 mined at 21:57:24 UTC
22/03/2018 —Groestlcoin BIP39 Tool released
22/03/2018 —Electrum-GRS wallet (v3.0.6) for desktop upgrade released
22/03/2018 —Electrum-GRS wallet for Android (v1.5.28) released
22/03/2018 —Electrum-GRS wallet for Blackberry (v1.5.28) released
22/03/2018 —Groestlcoin Sentinel Android wallet (v2.7.1) released
22/03/2018 —Groestlcoin Sentinel Blackberry wallet (v2.7.1) released
22/03/2018 —Groestlcoin P2Pool re-launched
04/04/2018 —Binance exchange added GRS trading
06/04/2018 —CoinBit added GRS trading
09/04/2018 —Coinomi iOS wallet application added support for GRS
09/04/2018 —Sistemkoin exchange added GRS trading
11/04/2018 —Coinrail exchange added GRS trading
12/04/2018 —FuBT exchange added GRS trading
13/04/2018 —Stocks.Exchange (now STEX) added GRS trading
04/05/2018 —OOOBTC exchange added GRS trading
04/05/2018 —NERAEX exchange added GRS trading
10/05/2018 —BuyBitcoin exchange added GRS trading
14/05/2018 —Xchange.me exchange added GRS trading
18/05/2018 —Easyrabbit exchange added GRS trading
20/05/2018 —QIEX exchange added GRS trading
26/05/2018 —Coindelta exchange added GRS trading
30/05/2018 —Flyp.me exchange added GRS trading
01/06/2018 —GODEX exchange added GRS trading

PAST MILESTONES

2018

06/06/2018 —ChainRift exchange added GRS trading
07/06/2018 —InstaSwap added support to purchase GRS
12/06/2018 —KoinOK exchange added GRS trading
22/06/2018 —Groestlcoin Core v2.16.0 upgrade released
22/06/2018 —Electrum-GRS wallet (v3.1.2) for desktop upgrade released
22/06/2018 —Electrum-GRS wallet (v3.1.2) for Android upgrade released
22/06/2018 —Groestlcoin BIP-0032 HD Android (v5.24.2) wallet released
22/06/2018 —Groestlcoin BIP-0032 HD Blackberry (v5.24.2) wallet released
22/06/2018 —Groestlcoinomi Android wallet (v1.5.29) released
22/06/2018 —Groestlcoin Vanitygen (v1.03b) upgrade released
22/06/2018 —Groestlsight testnet blockchain explorer released
22/06/2018 —Groestlcoin P2Pool Testnet released
24/06/2018 —InstaSwap added support to deposit GRS
25/06/2018 —Trezor One hardware wallet added support for GRS
29/06/2018 —BitBns exchange added GRS trading
01/07/2018 —Groestlcoin logo rebranding vote began
10/07/2018 —CryptoBridge DEX added GRS trading
15/07/2018 —Groestlcoin logo rebranding vote ended
25/07/2018 —Guarda Desktop and Web wallets added support for GRS
26/07/2018 —ChangeNOW swap exchange added GRS trading
31/07/2018 —OpenBazaar exchange added GRS trading
02/08/2018 —SimpleSwap swap exchange added GRS
24/08/2018 —Melis Wallet added support for GRS
21/09/2018 —Huobi Global exchange added GRS trading
24/09/2018 —GRSPay payment processor launched
24/09/2018 —Groestlcoin Core v2.16.3 upgrade released
24/09/2018 —Electrum-GRS wallet (v3.2.2) for desktop upgrade released
24/09/2018 —Electrum-GRS wallet (v3.2.2) for Android upgrade released
24/09/2018 —Groestlcoin EasyVanity released
24/09/2018 —Groestlcoin P2SH Paperwallet generator released
24/09/2018 —Groestlcoin BECH32 Paperwallet generator released
24/09/2018 —Groestlcoin Webwallet (v1.4) upgrade released
25/09/2018 —SWFT Blockchain swap exchange added GRS
28/09/2018 —Huobi Korea exchange added GRS trading
13/10/2018 —Groestlcoin Subreddit surpassed 100,000 subscribers
16/10/2018 —Groestlcoin added to Blockfolio Signal application
19/10/2018 —Changelly swap exchange added support for GRS
02/11/2018 —GRSPay integrated Changelly
05/11/2018 —CoinGecko Beam added support for GRS

PAST MILESTONES

2018

05/11/2018 —Jaxx Liberty wallet added support for GRS
07/11/2018 —Trezor Model T hardware wallet added support for GRS
02/12/2018 —Pungo.app added support for GRS
06/12/2018 —Groestlcoin added to Direct Delta application
10/12/2018 —AtomicPay payment processor added support for GRS
11/12/2018 —StealthEx exchange added GRS trading
14/12/2018 —Tokenview added support for GRS
15/12/2018 —2018 low GRS fiat price recorded at US$0.192
22/12/2018 —Groestlcoin Sentinel application for Windows released
22/12/2018 —Groestlcoin BIP39 Tool (v0.3.9) upgrade released
22/12/2018 —Electrum-GRS wallet (v3.2.3) for desktop upgrade released
22/12/2018 —Electrum-GRS wallet (v3.2.3) for Android upgrade released
22/12/2018 —Groestlcoin integration by ivendPay announced
26/12/2018 —Groestlcoin added to ivendPay vending machine hardware
27/12/2018 —PayByte payment processor added support for GRS

2019

09/01/2019 —Coinomi desktop wallet added support for GRS
14/01/2019 —ExRates exchange added GRS trading
28/01/2019 —ELLIPAL Titan hardware wallet added support for GRS
28/01/2019 —MyCryptoCheckout added support for GRS
28/01/2019 —SideShift AI exchange added GRS trading
29/01/2019 —CoinRoom exchange added GRS trading
31/01/2019 —Magnum Wallet added support for GRS
05/02/2019 —Ledger added support for GRS
07/02/2019 —Paytomat added support for GRS
25/02/2019 —FLXWallet added support for GRS
27/02/2019 —Bit-Z exchange added GRS trading
28/02/2019 —ZelCore wallet added support for GRS
02/03/2019 —Changeangel swap exchange added GRS
04/03/2019 —OnepageX swap exchange added GRS
08/03/2019 —XBTS DEX added GRS trading
11/03/2019 —2019 high GRS fiat price recorded at US$0.7491
11/03/2019 —First GRS debit card (PolisPay Mastercard) released
14/03/2019 —Bitfi hardware wallet added support for GRS
18/03/2019 —Equicex exchange added GRS trading
20/03/2019 —ChangeHero swap exchange added GRS trading
21/03/2019 —DigiFinex exchange added GRS trading
22/03/2019 —Groestlcoin Core v2.17.2 upgrade released

PAST MILESTONES

2019

22/03/2019 —Electrum-GRS wallet (v3.3.4) for desktop upgrade released
22/03/2019 —Electrum-GRS wallet (v3.3.4) for Android upgrade released
22/03/2019 —Groestlcoin Broadcast Tool released
27/03/2019 —BC Bitcoin exchange added GRS trading
02/04/2019 —SatoWallet (wallet and exchange) added support for GRS
09/04/2019 —Chameleon Pay wallet added support for GRS
10/04/2019 —CoinAll exchange added GRS trading
16/04/2019 —SwirlPay added support for GRS
17/04/2019 —ARCHOS Safe-T mini added support for GRS
19/04/2019 —MrCoin exchange added GRS trading
19/04/2019 —CryptofacilEX exchange added GRS trading
03/05/2019 —Boost X exchange added GRS trading
03/05/2019 —Suworld exchange added GRS trading
03/05/2019 —CoinDCX exchange added GRS trading
06/05/2019 —Huobi Korea opened the GRS/KRW trading pair market
10/05/2019 —Groestlcoin added to hodlhodl.com
13/05/2019 —Trust Wallet added support for GRS
28/05/2019 —Bitinka exchange added GRS trading
31/05/2019 —Atomic Wallet added support for GRS
19/06/2019 —Blockchair blockchain analytics service added GRS
21/06/2019 —SecuX wallet added support for GRS
22/06/2019 —Groestlcoin Samourai wallet (v0.98.86.3) upgrade released
22/06/2019 —Electrum-GRS wallet (v3.3.6) for desktop upgrade released
22/06/2019 —Electrum-GRS wallet (v3.3.6) for Android upgrade released
22/06/2019 —GroestlImage Tool released
22/06/2019 —Groestlcoin Core Config Generator released
22/06/2019 —Groestlcoin Dumb Block Explorer released
22/06/2019 —Groestlcoin SMS Push Tx released
24/06/2019 —CoinRequest added support for GRS
02/07/2019 —KeepKey hardware wallet added support for GRS
03/07/2019 —Cobo Wallet added support for GRS
08/07/2019 —Vertbase (now Sequoir) added GRS trading
10/07/2019 —Neblidex exchange added GRS trading
11/07/2019 —DrApis.com added GRS
12/07/2019 —DynX exchange added GRS trading
22/07/2019 —Switchain exchange added GRS
23/07/2019 —C-Patex exchange added GRS trading
24/07/2019 —NOWNodes added support for GRS

PAST MILESTONES

2019

25/07/2019 —Melis Wallet added support for GRS
26/07/2019 —NOWPayments added support for GRS
30/07/2019 —DigiFinex Korea exchange added GRS trading
31/07/2019 —AcceptCryptoz Stickers added Groestlcoin
22/09/2019 —Groestl Nodes website launched
22/09/2019 —Groestlcoin Transaction Tool released
22/09/2019 —AGCore Android application (v0.73) upgrade released
22/09/2019 —Electrum-GRS wallet (v3.3.8) for desktop upgrade released
22/09/2019 —Electrum-GRS wallet (v3.3.8) for Android upgrade released
22/09/2019 —Groestlcoin BIP-0032 HD Android (v7.11.1) wallet released
22/09/2019 —Groestlwallet iOS application (v0.7.3) upgrade released
22/09/2019 —Groestlwallet Android application (v89) upgrade released
22/09/2019 —Groestlcoinomi desktop wallet (v1.1) upgrade released
22/09/2019 —Groestlcoinomi Android wallet (v1.6) upgrade released
30/09/2019 —Lbank exchange added GRS trading
01/10/2019 —InstaEx exchange added GRS trading
02/10/2019 —Crypto Intercambio exchange added GRS trading
08/10/2019 —Dove Wallet exchange added GRS trading
11/10/2019 —Biteeu exchange added GRS trading
28/10/2019 —VCC exchange added GRS trading
11/11/2019 —NLexch exchange added GRS trading
12/11/2019 —Abra added support for GRS
13/11/2019 —P2PB2B exchange added GRS trading
14/11/2019 —HebeBlock Wallet added support for GRS
18/11/2019 —ZG.com exchange added GRS trading
05/12/2019 —Pionex exchange added GRS trading
22/12/2019 —Groestlcoin Eclair for desktop (v0.3.2.1) released
22/12/2019 —Groestlcoin Eclair for Android (+Testnet) released
22/12/2019 —Groestlcoin Lightning Wallet (GLW) (+Testnet) released
22/12/2019 —Groestlcoin Lightning Network Explorer (+Testnet) launched
22/12/2019 —KWH-GRS (companion browser extension) released
22/12/2019 —Zeus GRS Android wallet (v0.1.2) released
22/12/2019 —GRSPay payment processor (v1.0.3.146) (+Testnet) released
22/12/2019 —C-lightning (v0.8.0) for MacOSX and Linux released
22/12/2019 —Groestlcoin Spark for desktop (v0.2.9) released
22/12/2019 —Groestlcoin Spark for Android (v0.2.9) released
22/12/2019 —Lightning Network Daemon (LND) (v0.8.2) released
22/12/2019 —ZAP GRS desktop wallet (v0.5.5 beta) released
22/12/2019 —ZAP GRS Android wallet (v0.2.9) released

PAST MILESTONES

2019

22/12/2019 —Grsd alternative full-node (v0.20.1) released
31/12/2019 —2019 low GRS fiat price recorded at US$0.1514

2020

27/01/2020 —Groestlcoin Epay card by PolisPay released
20/02/2020 —Hotbit exchange added GRS trading
11/03/2020 —Groestlcoin block 3,000,000 mined at 18:04:53 UTC
13/03/2020 —2020 low GRS fiat price recorded at US$0.08311
22/03/2020 —Groestlcoin Core v2.18.2 upgrade released
22/03/2020 —Groestlcoin BIP39 Key Tool (Windows) released
22/03/2020 —Groestlcoin Testnet P2Pool upgrade released
22/03/2020 —Groestlcoin-wpf (v2.19.0.18) upgrade released
22/03/2020 —HODL GRS Android wallet (v3.3.4) (+Testnet) released
22/03/2020 —Groestlcoin Seed Savior (+Testnet) released
22/03/2020 —Groestlcoin Electrum Personal Server (v0.2.0) released
22/03/2020 —GRS Moonshine Android and iOS wallets released
22/03/2020 —Groestlcoin VanitySearch released
22/03/2020 —Groestlcoin EasyVanity released
22/03/2020 —Groestlcoin BIP-0032 HD Android (v7.38.1) wallet released
22/03/2020 —Groestlcoin Sentinel Android wallet (v3.5.06) released
20/04/2020 —Flare Wallet added support for GRS
21/04/2020 —Vidulum App added support for GRS
02/06/2020 —NGRAVE added support for GRS
04/06/2020 —OPOLO Wallet added support for GRS
22/06/2020 —Groestlcoin Core v2.19.1 upgrade released
22/06/2020 —HODL GRS iOS wallet (v3.1.10) released
22/06/2020 —Groestlcoin BlueWallet for Android & iOS (v5.3.8) released
22/06/2020 —Groestlcoin Unstoppable Android Wallet (+Testnet) released
22/06/2020 —Groestlcoin Webwallet (v1.5) upgrade released
22/06/2020 —Groestlcoin Esplora (+Testnet) released
22/06/2020 —Zeus GRS iOS application released
22/06/2020 —GRS Lightning desktop application released
22/06/2020 —GRS Lightning Android application released
22/06/2020 —GRS LND for WP (v0.1.2) released
22/06/2020 —Groestlcoin Eclair (v0.3.3) upgrade released
22/06/2020 —C-lightning (v0.8.2) for MacOSX and Linux released
22/06/2020 —Lightning Network Daemon (LND) (v0.10.0) released
22/06/2020 —Groestlcoin Spark for desktop (v0.2.14) released
22/06/2020 —Groestlcoin Spark for Android (v0.2.14) released

PAST MILESTONES

2020

08/07/2020 —WazirX exchange added GRS trading
28/07/2020 —GetBlock added support for GRS
07/08/2020 —BitGlobal exchange added GRS trading
13/08/2020 —Dundle added support for GRS
16/09/2020 —Shopping.io added support for GRS
22/09/2020 —Groestlcoin Core v2.20.1 upgrade released
22/09/2020 —Electrum-GRS wallet (v4.0.2) for desktop upgrade released
22/09/2020 —Electrum-GRS wallet (v4.0.2) for Android upgrade released
22/09/2020 —GRSPay payment processor (v1.0.5.5) (+Testnet) released
22/09/2020 —C-lightning (v0.9.0) for MacOSX and Linux released
22/09/2020 —Groestlcoin Spark for desktop (v0.2.16) released
22/09/2020 —Groestlcoin Spark for Android (v0.2.16) released
22/09/2020 —Groestlcoin Extended Public Key Converter released
13/10/2020 —Meconcash added support for GRS
06/11/2020 —BoxWallet added support for GRS
19/12/2020 —Groestlcoin Testnet blockchain activated Taproot
19/12/2020 —2020 high GRS fiat price recorded at US$0.735
20/12/2020 —First GRS Taproot trans performed on testnet blockchain
22/12/2020 —Groestlcoin Core v2.21.0 upgrade released
22/12/2020 —Electrum-GRS wallet (v4.0.7) for desktop upgrade released
22/12/2020 —Electrum-GRS wallet (v4.0.7) for Android upgrade released
22/12/2020 —C-lightning (v0.9.2) for MacOSX and Linux released
22/12/2020 —GroestlSeed recovery seed encryption tool released
22/12/2020 —Groestlcoin Emoji Seed tool released
22/12/2020 —Groestlcoin StegoSeed tool released
22/12/2020 —GroestlDice tool released
22/12/2020 —Groestlcoin Seed Guardian tool released
22/12/2020 —Groestlcoin BIP39 Builder tool released

2021

04/01/2021 —Groestlcoin blockchain began to signal support for Taproot
07/01/2021 —Groestlcoin Core v2.21.0 became available on Debian
11/01/2021 —2021 low GRS fiat price recorded at US$0.2893
01/03/2021 —AtomicDEX v0.4.0 added support for GRS
22/03/2021 —Electrum-GRS wallet (v4.0.9) for desktop upgrade released
22/03/2021 —Electrum-GRS wallet (v4.0.9) for Android upgrade released
22/03/2021 —C-lightning (v0.9.3) for MacOSX and Linux released
22/03/2021 —GRS Wallet (v4.4.3.4) for Android (+testnet) released
22/03/2021 —Groestlcoin Hardware Wallet Interface (HWI) released

PAST MILESTONES

2021

22/03/2021 —GRSPay (v1.0.7.0) (+testnet) upgrade released
22/03/2021 —GRSPayServer Vault (v1.0.7) for desktop released
22/03/2021 —Sparrow-GRS wallet (v1.0.0) for desktop released
22/03/2021 —GRS RPC Explorer (+testnet) released
23/03/2021 —Hotbit Korea exchange added GRS trading
31/03/2021 —DigiFinex exchange opened the GRS/USDT trading pair
09/04/2021 —Travala.com integration of Groestlcoin announced
09/04/2021 —2021 high GRS fiat price recorded at US$2.79
11/04/2021 —Groestlcoin added to mining-coins.com
13/04/2021 —iKing added support for GRS
26/04/2021 —Travala.com fully integrated GRS
26/04/2021 —Binance Pay fully integrated GRS
04/05/2021 —Groestlcoin began to collaborate with KNIT Finance
10/05/2021 —Microsoft integrated GRS into Azure Blockchain Template
20/05/2021 —Simplex added support for GRS
24/05/2021 —sevenb crypto broker added GRS
28/05/2021 —Groestlcoin Telegram news channel created
31/05/2021 —Swyftx exchange added GRS trading
03/06/2021 —Block Monitor added support for GRS
22/06/2021 —Groestlcoin Core v2.21.1 upgrade released
22/06/2021 —Electrum-GRS wallet (v4.1.2) for desktop upgrade released
22/06/2021 —Electrum-GRS wallet (v4.1.2) for Android upgrade released
22/06/2021 —C-lightning (v0.10.0) for MacOSX and Linux released
22/06/2021 —Groestlcoin Eclair for desktop (v0.6.0) upgrade released
22/06/2021 —Groestlcoin HWI (v2.0.1) upgrade released
22/06/2021 —GRSPayServer Vault (v2.0.1) for desktop released
22/06/2021 —GRSPay (v1.1.2.0) (+testnet) upgrade released
22/06/2021 —GroestlTip released
22/06/2021 —Groestlcoin Electrum Personal Server (v0.2.2) released
22/06/2021 —Groestlcoin Core RPC Auth Generator tool released
24/06/2021 —Groestlcoin blockchain officially locked-in Taproot
25/06/2021 —Groestlcoin blockchain officially activated Taproot
10/07/2021 —Coinzark added support for GRS (Coinzark re-launched)
01/09/2021 —Take Toys began to accept GRS payments
04/09/2021 —Infinity Wallet added support (v1.0.77 beta) for GRS
22/09/2021 —Groestlcoin Core v22.0 upgrade released
22/09/2021 —Electrum-GRS wallet (v4.1.5) for desktop upgrade released
22/09/2021 —Electrum-GRS wallet (v4.1.5) for Android upgrade released
22/09/2021 —GRSPay (v1.2.3.0) (+testnet) upgrade released

PAST MILESTONES

2021

22/09/2021 —C-lightning (v0.10.1) for MacOSX and Linux released
22/09/2021 —GRS RPC Explorer (v3.2.0) (+testnet) upgrade released
22/09/2021 —Groestlcoin VerifySignature tool released
22/09/2021 —Groestlcoin BIP-0032 HD Android (v8.14) wallet released
06/10/2021 —PlayHubCasino began to accept GRS payments
13/10/2021 —MonsterMegsHost began to accept GRS payments
20/10/2021 —PitaBarcelona began to accept GRS payments
22/10/2021 —Gamerall began to accept GRS payments
06/11/2021 —Uquid added support for GRS
12/11/2021 —Marley Tattoo began to accept GRS payments
17/11/2021 —149.net began to accept GRS payments
18/11/2021 —CryptoCove.io began to accept GRS payments
19/11/2021 —House of CO-KY began to accept GRS payments
26/11/2021 —LeatherUp.ca began to accept GRS payments
10/12/2021 —BitRefill added support for GRS
19/12/2021 —Coinsbee added support for GRS
22/12/2021 —GRSPay (v1.3.6.0) (Taproot Edition) upgrade released
22/12/2021 —C-lightning (v0.10.2) for MacOSX and Linux released
22/12/2021 —Groestlcoin Spark for desktop (v0.3.1) released
22/12/2021 —Groestlcoin Spark for Android (v0.3.1) released
22/12/2021 —Groestlcoin BlueWallet for Android & iOS (v6.1.9) released
22/12/2021 —GRS RPC Mainnet Explorer (v3.3.0) upgrade released
22/12/2021 —GRS RPC Testnet (v3.3.0) upgrade released
22/12/2021 —GRS RPC Signet (v3.3.0) upgrade released
22/12/2021 —Audio2bip39 tool released
22/12/2021 —Groestlcoin Blockbook signet blockchain explorer launched

Groestlcoin Blockchain Launched	22 March 2014
Dwarf Pool was the First GRS Supported Mining Pool	24 March 2014
Comkort Exchange Added GRS Trading	30 March 2014
Bittrex Exchange Added GRS Trading	3 April 2014
Poloniex Exchange Added GRS Trading	8 April 2014
CoinMarketCap Added Groestlcoin	11 April 2014
New Groestlcoin Logo Unveiled & Adopted	30 April 2014
Groestlcoin Core v2.0.5 Upgrade Released	15 May 2014
Half of all GRS already mined	7 November 2014
Groestlcoin Android Wallet Released	23 December 2014

2014

GROESTLCOIN BLOCKCHAIN LAUNCHED

SUMMARY

When Groestlcoin was announced on the 'Bitcoin Forum' called Bitcointalk on 22nd March 2014, the cryptocurrency landscape looked markedly different from today. The Bitcoin fiat price was approximately US$500 and there were less than 200 recognised cryptocurrencies according to the CoinMarketCap price-tracking website.

The Groestlcoin blockchain launched on the same day, slightly after it was announced, as a fairer and more energy efficient alternative to other proof of work cryptocurrencies. It initially permitted a more efficient mining process allowing anyone to mine GRS with either a CPU or GPU (in 2018 it became possible to use ASIC miners to mine GRS).

Several cryptocurrency trading exchanges and mining pools began to add Groestlcoin in March and April 2014. Most notably, both Bittrex and Poloniex opened GRS/BTC trading pair markets.

On 20th May 2014, the first Groestlcoin hardfork occurred to resolve a 'timewarp' attack (see page 25). The difficulty re-targeting algorithm was updated from DGW v1 to DGW v3 (DGW = Dark Gravity Wave).

The Groestlcoin developers spent most of the year ensuring the future security and stability of the code protocol. There was only one single development release in 2014; the release of the first Groestl based Android wallet (beta v0.20) on 23rd December 2014. Without significant problems reported by beta testers, and as promised, the Groestlcoin Android wallet application was uploaded to the Google Play Store on 31st December 2014.

ORIGINAL GROESTLCOIN BLOCKCHAIN SPECIFICATION

Hashing Algorithm:
Grøstl / Groestl

Total Coins:
105,000,000 GRS

Minimum Block Reward:
5 GRS

Block Target Time:
60 seconds

Difficulty Adjustment Algorithm:
DGW (Dark Gravity Wave)

Block Reward Reduction:
6% every 10,080 blocks

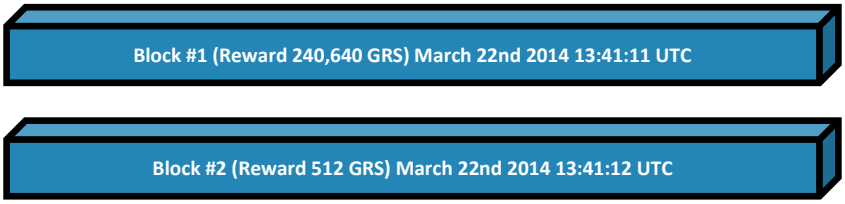
Pre-mine:
240,640 GRS

Groestlcoin Blockchain Launched — 22 March 2014

A new cryptocurrency utilising the Groestl proof of work hashing algorithm successfully launched on 22nd March 2014. Groestlcoin had come to the market as one of the most GPU and CPU friendly cryptocurrencies to mine using the lowest power consumption hardware. No ASIC had been developed for the Groestl hashing algorithm at the time.

Groestlcoin block number 1 generated the initial GRS pre-mine (0.22918% of the total 105 million GRS mined supply cap) used to kickstart the project as well as fund initial giveaways (see bottom of page 27).

Block number 2 generated 512 GRS after which the first GRS block reward reduction (6% fall) occurred at block number 10,080. The block reward continued to decrease by 6% every 10,080 blocks until block number 120,000 (GRS block reward 250 GRS) on 4th June 2014.



Dwarf Pool was the First GRS Supported Mining Pool — 24 March 2014

After the successful launch of the Groestlcoin blockchain, mining pool operators quickly began to create GRS compatible pools as an alternative way for people to mine GRS. One definition of a mining pool is:

> **"The pooling of resources by miners, who share their processing power over a network, to split the reward equally, according to the amount of work they contributed to the probability of finding a block. A "share" is awarded to members of the mining pool who present a valid partial proof-of-work."**

Dwarf Pool (founded by Atrides) was the first mining pool to add support for Groestlcoin on 24th March 2014. It was an anonymous pool with no user registration required. In May 2014, over half of all the Groestlcoin network hashrate was being created (~8.5 GH/s) on Dwarf Pool.

https://dwarfpool.com/grs

The first three mining pools to add support for GRS were Dwarf Pool, https://grs.suprnova.cc and https://cpu-pool.net/grs.

Comkort Exchange Added GRS Trading

30 March 2014

After winning the latest Comkort exchange voting round, the exchange quickly opened three GRS trading pairs (as well as trading pairs for MET, PLC, CREA, CLR, RAIN and RED). Comkort was the first official cryptocurrency exchange to add GRS trading.

https://comkort.com/market/trade/grs_btc (CLOSED)
https://comkort.com/market/trade/grs_ltc (CLOSED)
https://comkort.com/market/trade/grs_doge (CLOSED)

Comkort launched in beta testing mode on 20th February 2014 and then went fully operational on 1st March 2014. It was an exchange based in Tallinn, Estonia. Despite striving to deliver the best possible service, the exchange was not profitable. It closed on 20th July 2015. Registered users had about three weeks to withdraw their funds before it closed.

Bittrex Exchange Added GRS Trading

3 April 2014

Unlike Comkort, the Bittrex cryptocurrency exchange (initially US based) has been active for over eight years. It opened a single GRS trading pair market (GRS/BTC) on 3rd April 2014. Richie Lai (one of the co-founders of Bittrex) announced the listing as live on the official Groestlcoin Bitcointalk thread. No voting or donations were sent to Bittrex.

https://www.bittrex.com/Market/Index?MarketName=BTC-GRS (ACTIVE)

What follows is a table of historical GRS/BTC trading figures on 3rd April 2014 derived from Bittrex. Taking into account the closing US$444.72 BTC fiat price, according to CoinMarketCap, on the same day, the closing GRS fiat price was approximately US$0.00255714.

	Open (BTC Sat)	High (BTC Sat)	Low (BTC Sat)	Close (BTC Sat)
3rd April 2014	575	575	575	575

Bittrex delisted the GRS/BTC trading pair market on 16th August 2014.

Poloniex Exchange Added GRS Trading

8 April 2014

A top twenty cryptocurrency exchange in late 2021, Poloniex opened a GRS/BTC trading pair market on 8th April 2014. It quickly became one of the top destinations (besides Bittrex) to trade GRS.

On 5th September 2016, 881 days after activation, Poloniex announced the delisting of GRS trading on their official Twitter account. A total of 27 cryptocurrencies, and their respective market pairs, were removed (ABY, ADN, BITUSD, CNMT, DAO, DSH, FIBRE, FLT, GAP, GRS, HYP, IFC, LQD, MCN, MINT, MMC, MNTA, PIGGY, PTS, SILK, SWARM, WDC, XC, XCR, XPB, XUSD and YACC). Poloniex described them as either too small or defunct.

POLONIEX
CRYPTOCURRENCY EXCHANGE

https://poloniex.com/exchange/btc_grs (CLOSED)

Poloniex launched as a US based exchange on 19th January 2014. It was founded by Tristan D'Agosta. On 26th February 2018, Poloniex was acquired by Circle Internet Financial Ltd reportedly for US$400 million.

On 11th April 2014, according to historical data sourced from CoinMarketCap, the top 10 cryptocurrencies were:

Bitcoin, BTC = US$420.95
US$5,318,038,822.45

Litecoin, LTC = US$10.95
US$299,840,538.78

XRP, XRP = US$0.006582
US$51,455,991.36

Peercoin, PPC = US$1.72
US$36,702,820.57

Dogecoin, DOGE = US$0.0004401
US$30,552,349.63

Nxt, NXT = US$0.02327
US$23,265,762.30

Omni, OMNI = US$27.49
US$17,026,771.48

Namecoin, NMC = US$1.72
US$14,627,205.15

Bitleu, BTL = US$0.005362
US$13,430,957.17

Auroracoin, AUR = US$1.17
US$12,499,354.72

On the same day, Groestlcoin was ranked 88 on CoinMarketCap with a market capitalisation of US$66,878.70 and US$0.004628 GRS fiat price

CoinMarketCap Added Groestlcoin

11 April 2014

A price-tracking website called CoinMarketCap integrated Groestlcoin on 11th April 2014. It primarily ranks thousands of cryptocurrencies (coins, tokens etc.) in descending order of market capitalisation. CoinMarketCap was founded by Brandon Chez in May 2013 and is officially described as:

"CoinMarketCap is the world's most referenced price-tracking website for cryptoassets in the rapidly growing cryptocurrency space. Its mission is to make crypto discoverable and efficient globally by empowering retail users with unbiased, high quality and accurate information for drawing their own informed conclusions."

CoinMarketCap

According to CoinMarketCap historical data, the initial Groestlcoin market capitalisation was recorded below US$100,000 (opening US$0.004271 GRS fiat price). What follows is a table of recorded GRS fiat prices:

	Open (US$)	High (US$)	Low (US$)	Close (US$)
11th April 2014	0.004271	0.005428	0.004247	0.004628
12th April 2014	0.004627	0.005830	0.003697	0.004414

New Groestlcoin Logo Unveiled & Adopted

30 April 2014

On the official Groestlcoin Bitcointalk thread, the new (and current) GRS logo was unveiled to the community on 30th April 2014. Two days later, Bitcointalk user 'child_harold' posted the following:

> **"We would like to establish our new look and feel now in preparation for the weeks and months of excitement ahead as we revolutionize the space of crypto-mining, armed with the ultimate PoW.**
>
> **We've gone for a sophisticated new logo and merged it with a stunning new campaign which in our opinion negotiates the 'hard-to-pronounce' name with breathtaking aplomb, humour and ingenuity. We hope you agree it is clever, original and totally fresh! Once you get what we've done we hope you'll see the scale of the concept.**
>
> **We believe we have deciphered the mysterious scrabble tile clue left to use by our Satoshi, gruve_p. We have thus turned our most difficult challenge into a great asset."**

Groestlcoin Core v2.0.5 Upgrade Released

15 May 2014

On 11th May 2014, it was reported that the Groestlcoin blockchain was suffering a 'timewarp' attack. An incorrect block timestamp had been put into the blocks, either by accident or purposefully, to reduce the subsequent mining difficulty. As a consequence, more GRS blocks were being mined as usual (higher inflation). Over the last couple of days, it was estimated that 86% more GRS had been mined than usual.

GRS Developer srcxxx notified the Groestlcoin community that a fix to the problem was being developed to implement code protocol changes as a hardfork. The hardfork would primarily change the difficulty adjustment or re-targeting algorithm from DGW v1 to DGW v3.

On 15th May 2014, Groestlcoin Core version 2.0.5 (see page 28) was released for miners, mining pools, exchanges and other third parties to upgrade their software before a scheduled hardfork of the Groestlcoin blockchain at block number 100,000 (see below). It was a mandatory upgrade.

Block #100,000 (Reward 293.37333871 GRS) May 20th 2014 15:16:27 UTC

Half of all GRS already mined

7 November 2014

What follows is the GRS block reward schedule changes which occurred at block numbers 120,000 and 150,000 on 4th June 2014 and 26th June 2014 respectively:

- Beginning at block number 120,000, the block reward decreased by 10% on a daily basis (every 1,440 blocks).
- Beginning at block number 150,000, the block reward was initially 25 GRS and then decreased by 1% weekly (every 10,080 blocks).

On 7th November 2014, half of all GRS had already been mined as soon as block number 334,361 timestamped (extracted by the SuprNova.cc pool).

Groestlcoin Android Wallet Released

23 December 2014

After hard work from Developer Hashengineering adapting the latest Bitcoin Android wallet (v4.14) to Groestlcoin, the first Groestl based Android wallet (beta v0.20) was released on 23rd December 2014. The Groestlcoin Team encouraged the community to test it and give feedback.

https://github.com/Groestlcoin-Archives/groestlcoin-wallet-old/releases/tag/v0.20

Without significant problems reported by beta testers, and as promised, the Groestlcoin Android wallet application was uploaded to the Google Play Store on 31st December 2014. Groestlcoin Founder gruve_p posted:

"Have your GroestlCoins always with you, in your pocket! You pay by quickly scanning a QR-code. As a merchant, you receive payments reliably and instantly. GroestlCoin Wallet is the first mobile GroestlCoin app, and arguably also the most secure! This is beta software. Some feature such as Paper Wallet Sweep may not yet work."

Groestlcoin Android Wallet (open-source and free software) features:

- No registration required. The wallet is decentralised and peer-to-peer
- Option to display GRS balance amounts in GRS, mGRS and µGRS
- Option to convert to and from national currencies
- Can send and receive GRS via NFC, QR-codes or GRS URLs
- Address book available to store regularly used GRS addresses
- Option to pay via Bluetooth when offline
- System notification for received GRS coins
- Option to sweep GRS paper wallets (e.g. those used for cold storage)

OTHER HISTORICAL EVENTS

- On 22nd March 2014, the pre-mined GRS was designated towards kickstarting the project. The specific expenditures of the pre-mine were recorded into the Groestlcoin code (see image below).
- On 3rd April 2014, the official Groestlcoin Twitter was created. It is still operational today (@GroestlcoinTeam).
- On 3rd April 2014, the official Groestlcoin Subreddit was created.
- On 11th April 2014, the Mintpal cryptocurrency exchange based in the UK added GRS trading.
- On 22nd April 2014, the official Groestlcoin Facebook group was created.
- On 9th May 2014, the official Groestlcoin Forum went live at https://www.groestlcoin.org/forum/
- On 23rd May 2014, the Coined Up cryptocurrency exchange added GRS trading (a single GRS/BTC trading pair market).
- On 2nd June 2014, CoinGecko added Groestlcoin. It provides a fundamental analysis of the crypto market (tracking price, volume and market capitalisation, community growth, open-source code development). CoinGecko was founded in 2014 by TM Lee (CEO) and Bobby Ong (COO).
- On 2nd August 2014, first Bitcointalk Forum post by jackielove4u.
- On 16th August 2014, the Bittrex cryptocurrency exchange delisted GRS trading (re-listed GRS on 24th January 2016).
- On 31st December 2014, Groestlcoin Android Wallet v0.22 Beta was released. It fixed the paper wallet sweep features.

```
46      if (nHeight == 1)
47      {
48          return nPremine;
49          /*
50          optimized standalone cpu miner  60*512=30720
51          standalone gpu miner        120*512=61440
52          first pool          70*512 =35840
53          block-explorer          60*512 =30720
54          mac wallet binary           30*512 =15360
55          linux wallet binary         30*512 =15360
56          web-site            100*512 =51200
57          total               =240640
58          */
59      }
```

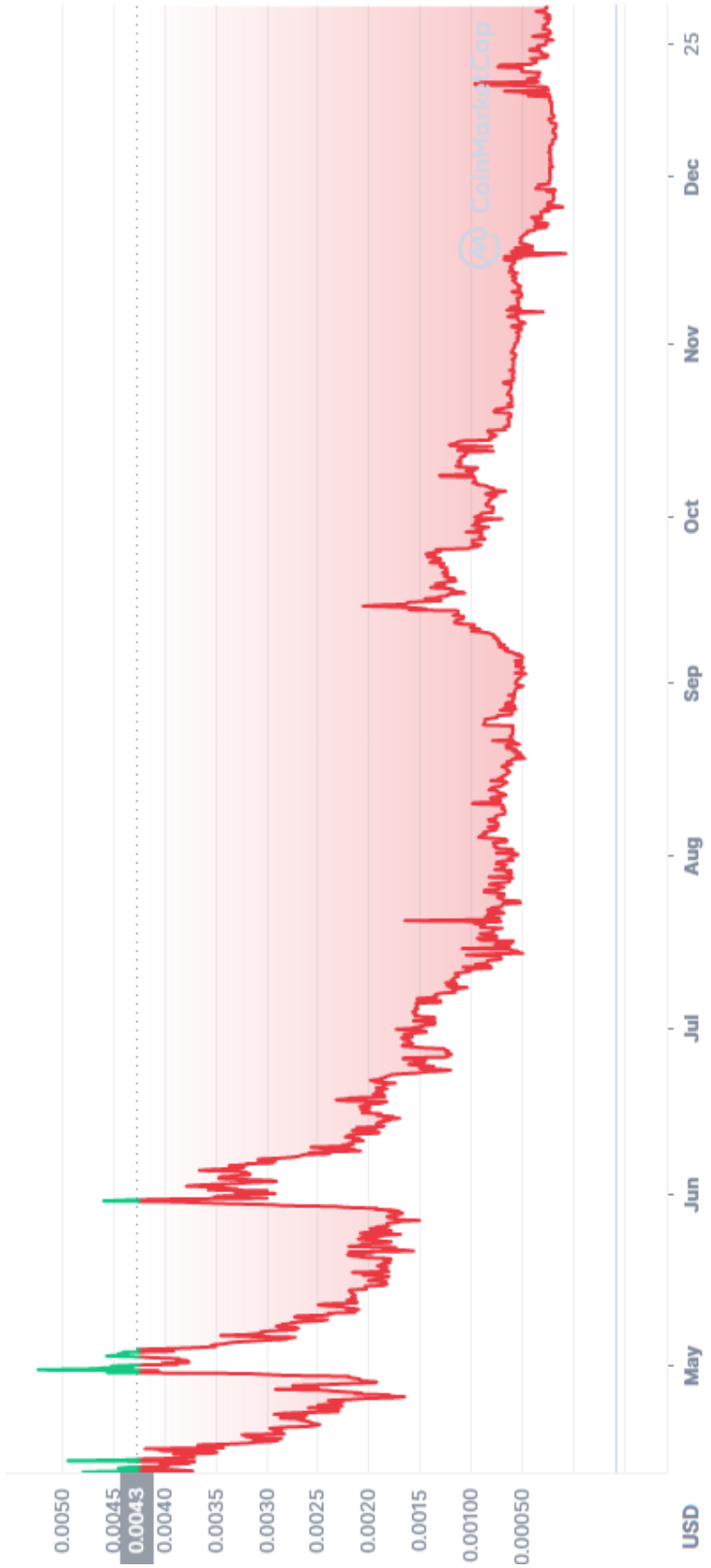
GROESTLCOIN 2014 FIAT PRICE HISTORY

OPEN 2014 GRS Fiat Price	11 April 2014
US$0.004271	
HIGH 2014 GRS Fiat Price	14 April 2014
US$0.006036	
LOW 2014 GRS Fiat Price	17 November 2014
US$0.00006022	
CLOSE 2014 GRS Fiat Price	31 December 2014
US$0.0002377	

Taking into account the opening and closing GRS fiat prices, according to CoinMarketCap, the price decreased 94.4% from 11th April 2014 to the closing GRS fiat price on 31st December 2014.

The 2014-2021 low GRS fiat price was US$0.00006022 (lowest ever).

GROESTLCOIN 2014 FIAT PRICE CHART



General Bytes Added Support for GRS	7 January 2015
Groestlcoin Blockchain First Year Anniversary	22 March 2015
Groestlcoin Electrum Wallet (v2.0.3) Released	22 March 2015
Groestlcoin JSWallet Released	22 March 2015
Groestlcoin Easyminer (v1.0) Released	29 June 2015
Groestlcoin Electrum-GRS Android Wallet Released	29 June 2015
Groestlcoin Core v2.11.0 Upgrade Released	20 August 2015
Groestlcoin Armory Wallet Released	22 September 2015
Groestlcoin Blockchain BIP66 Softfork Activated	14 October 2015
2015 High GRS Fiat Price Recorded	3 November 2015

2015

MULTIPLE GROESTLCOIN WALLETS RELEASED

SUMMARY

Similar to all other cryptocurrencies, and the blockchain technology space in general, 2015 was a relatively quiet year. This did not deter the Groestlcoin Team from working diligently on code and releasing different Groestlcoin wallet applications. It was the year during which the following (and others) were initially released:

- On 22nd March 2015, the first Groestlcoin Electrum wallet (also called Electrum-GRS) for desktop (see page 33).
- On 22nd March 2015, a new instant HTML5 (cross-browser and platform) Groestlcoin wallet called JSWallet (see page 33).
- On 29th June 2015, the first Groestlcoin Easyminer to make the process of mining GRS as easy as possible (see page 34).
- On 29th June 2015, the first Electrum-GRS wallet for Android mobile devices (see page 34).
- On 22nd September 2015, the Groestlcoin Armory wallet became available for desktop as the most secure way to generate and store GRS private keys (see page 34).

Another Groestlcoin blockchain milestone occurred at block number 800,000 on 14th October 2015. The first softfork of the blockchain was described as a resounding success. It primarily implemented two Bitcoin Improvement Proposals, BIP34 and BIP66, to strengthen the Groestlcoin blockchain against possible consensus issues and attack vectors.

General Bytes Added Support for GRS

7 January 2015

General Bytes announced the integration of Groestlcoin into their new terminal and BATMServer software version on 7th January 2015. It became possible to buy or sell GRS at ATMs in a very simple and fast way across the world. General Bytes is described as:

"GENERAL BYTES is the world's largest Bitcoin, Blockchain, and Cryptocurrency ATM manufacturer. We bring Android, Bitcoin, and blockchain based technologies to new and unexpected places. Our mission is to become the leading Bitcoin and blockchain technology provider. We spread our innovations around the world from our headquarters in Prague, Czech Republic and Bradenton, Florida, USA."

General Bytes was founded in 2013 and sold its first Bitcoin ATM in spring 2014. In December 2021, the company has sold just over 11,500 machines in over 60 countries.

Groestlcoin Blockchain First Year Anniversary

22 March 2015

The Groestlcoin blockchain turned one year old when block number 518,728 was mined and extracted by the Dwarf Pool mining pool. The Groestlcoin Team described the first year as a wild ride with many obstacles overcome. Groestlcoin Founder gruve_p posted the following:

"Just being here after a year is a massively more major victory than many—probably most—will ever realise. We celebrate our year with a burning desire to become the number 1 home of GPU miners. Over the course of the past 12 months Groestlcoin has endured 2 separate hard forks. Committed development, several updates and a very turbulent altcoin market. With an explosion of altcoins last year—many of them wouldn't last more than a week or month—the altcoin market got very heated. But with a great devteam and loyal community, we have stayed true to this day. Our sincerest thanks to all of you who stood with us.

Groestlcoin has maintained its vision and goal clearly throughout, we feel that with every passing day Groestlcoin becomes a stronger contender in the cryptocurrency field. While others are forced to promise the moon and other aggressive over-promises—but under-deliver—we will promise nothing and over-deliver. When you expect nothing and get everything that's destiny. What we do promise is this: Groestlcoin is here for the long-haul!"

Block #518,728 (Reward 17.4103303 GRS) March 22nd 2015 13:42:23 UTC

On 22nd March 2015, Groestlcoin Founder gruve_p also posted:

"We are very excited for what the future holds and very committed to the long term success of Groestlcoin. We are working on several exciting projects to push Groestlcoin forward in 2015. During 2015 you will see more end user tools increasing the ease of use as well to ensure we are present on all possible platforms."

Groestlcoin Electrum Wallet (v2.0.3) Released

22 March 2015

The first Groestlcoin Electrum wallet (Electrum-GRS v2.0.3) was released for the Windows, Mac OSX and Linux operating systems on 22nd March 2015. Electrum-GRS is a lightweight 'thin client' based on a client-server protocol. The Groestlcoin Team officially describe it as:

"Electrum-GRS's focus is speed and simplicity, with low resource usage. It uses remote servers that handle the most complicated parts of the Groestlcoin system, allowing you to recover your wallet from a secret phrase."

https://github.com/Groestlcoin/electrum-grs

The major Electrum-GRS advantages over the original Groestlcoin Core client include support for multi-signature wallets and not requiring users to download the entire Groestlcoin blockchain (code written in Python by developers guruvan and Kefkius).

Groestlcoin Electrum Wallet (open-source and free software) features include:

File containing GRS is protected with a password (Encryption)

Wallet can be recovered from its seed (Deterministic Key Generation)

Electrum-GRS does not download any script

No single point of failure

Users' private keys are not shared with the server (transactions are locally signed)

Electrum servers are decentralised and redundant (no downtime)

Split the permission to spend GRS between several wallets using parallel BIP32 derivations and P2SH addresses ("2 of 2", "2 of 3") (Multi-signature)

Groestlcoin JSWallet Released

22 March 2015

After listening to the community, a new instant HTML5 Groestlcoin wallet called JSWallet was released on 22nd March 2015. It is cross-browser and platform (functions on multiple devices) compatible allowing users to create a Groestlcoin wallet in under 5 seconds by randomly moving their mouse cursor. The client side input of the mouse cursor motion generates randomness which creates a random Groestlcoin address. Also, no user information or login details are required to use it.

JSWallet is also described by the Groestlcoin Team as the 'Beginner's Wallet' due to its ease of use. All keys and information are stored client-side. The wallet can also be imported into another GRS wallet system.

Groestlcoin Team described the JSWallet as follows:

"You can consider JSWallet a hot wallet where your secret URL is your key, a key that can be further secured with a password should you so choose. JSWallet generates a brand new wallet with a public key. Look in the URL/address bar and you will see a random-looking string starting with '#' or hash—the code after the hash is your brain wallet seed, and is a 'secret link' not visible anywhere other than on your local browser. Either copy the full URL somewhere safe or bookmark it for future access."

Multiple Groestlcoin Wallets Released

Groestlcoin Easyminer (v1.0) Released

29 June 2015

Groestlcoin Easyminer (v1.0) (open-source and free software) features include:

- Automatically searches for and joins mining pools
- In-built Electrum-GRS wallet allows quick access to mined GRS without waiting for the Groestlcoin blockchain to download
- No need to edit bat files
- Works with all GPUs/CPUs
- If necessary, the software prompts users to update to the latest video card drivers
- No technical knowledge required of how mining works

As part of the second Groestlcoin Development Release in 2015, the first version of the Groestlcoin Easyminer was released as a software package to make the process of mining GRS as seamless as possible. GRS mining became easier without massive effort required to properly configure files based on a miner's GPU/CPU model. The package included the latest auto-tuning mining software for Groestlcoin and the Electrum-GRS wallet for fast and easy access to mined GRS.

https://github.com/Groestlcoin/Groestlcoin-Easyminer

Groestlcoin Electrum-GRS Android Wallet Released

29 June 2015

Electrum-GRS Android wallet (open-source and free software) features include:

- Supports exchange rates for various national currencies
- Wallet only needs to be backed up once (on initial creation)
- Wallet backup consists of a simple list of 12 common words (BIP-0039)
- Automatic connectivity management with fast reconnects and detection of network change
- Can create a password to protect the recovery phrase
- Wallet user has complete control over their private keys. The private keys stay secure on the user's mobile device
- Warning appears when there is no connection to servers

On 29th June 2015, the first release of the Electrum-GRS Android wallet (v0.5.22) was introduced as an improved application. Unlike the previous Groestlcoin Android wallet released in December 2014, the Electrum-GRS application included support for not requiring users to synchronise with the entire blockchain. It was described as ready for testing.

https://github.com/Groestlcoin/android-electrum-grs
https://github.com/Groestlcoin/groestlcoinomi

Electrum-GRS Android wallet (lightweight "thin client") implementations:

- BIP-0032 to implement hierarchical deterministic wallet.
- BIP-0039 to implement a mnemonic code of mnemonic sentence for the generation of deterministic wallets (process for turning into a BIP-0032 seed).

Groestlcoin Core v2.11.0 Upgrade Released

20 August 2015

The first Groestlcoin Core upgrade (v2.11.0) for 2015 was released on 20th August 2015. It contained very important security features and all users running a full Groestlcoin node or a local Groestlcoin Core wallet had to upgrade as soon as possible. In particular, the upgrade implemented BIP66 (Strict DER encoding for signatures) detailed as follows:

> **"Strict DER encoding for signatures, BIP66, introduces block version 3 and a new consensus rule which prevents non-standard transactions from being included in blocks. This also removes the dependency on OpenSSL's signature parsing. Eventually, libsecp256k1 will be used for all consensus related tasks, deprecating the need for OpenSSL entirely."**

The Groestlcoin Team made the community aware that Groestlcoin Core v2.11.0 would continue to accept blockversion 112 (aka 1) and blockversion 2 blocks until the future activation of the softfork (as soon as 95% of all GRS blocks mined with new consensus rules) and the enforcement of the BIP66 rule.

Groestlcoin Armory Wallet Released

22 September 2015

As part of the third Groestlcoin Development Release 2015, Groestlcoin Armory (v0.93.99.1—never upgraded) was released for the Windows and Mac OSX operating systems as the most secure way for advanced users and enterprise businesses to generate and store Groestlcoin private keys. Groestlcoin Armory relies on the Groestlcoin Core code to securely connect to peers, validate blockchain data, and broadcast transactions to the network. The Groestlcoin Team posted:

> **"If you want to manage multiple wallets (deterministic and watching-only), print paper backups that work forever, import or sweep private keys, and keep your savings in a computer that never touches the internet (while still being able to manage incoming payments, and create outgoing payments with the help of a USB key) Groestlcoin Armory is the right choice for you!"**

Groestlcoin Armory (open-source and free software) features include:

- **Wallet encryption with GPU-resistant key derivation function AES256**
- **Maintain offline wallets for 100% security from online attackers**
- **Import addresses created with VanityGen or sweep funds from paper wallets**
- **Ability to add "Watching-only" wallets. "Watching-only" wallets can be used generate addresses and confirm incoming payments, but cannot spend the money**
- **Multi-wallet interface for managing as many wallets simultaneously**
- **Deterministic wallets**

Groestlcoin Blockchain BIP66 Softfork Activated

14 October 2015

Both BIP34 and BIP66 Bitcoin Improvement Proposals activated at block number 800,000 (see below) on 14th October 2015. The first softfork of the Groestlcoin blockchain was described as a resounding success (now over 95% of GRS blocks were being mined by the upgraded software).

Wallet users, mining pools and exchanges, following the softfork at block number 800,000, had to be using Groestlcoin Core v2.11.0, otherwise they would have found themselves syncing with the wrong chain.

Block #800,000 (Reward 13.13991198 GRS) October 14th 2015 06:52:20 UTC

2015 High GRS Fiat Price Recorded

3 November 2015

At the beginning of 2015, the opening GRS fiat price was recorded at US$$0.0002379 according to CoinMarketCap price metrics. The 2015 high GRS fiat price occurred on 3rd November 2015. It was recorded at US$0.0021 (nearly a ten fold increase since beginning of 2015).

At the 2015 high, the GRS market capitalisation was about US$125,000 with just over 60 million GRS mined to date.

CoinMarketCap historical data showing the top ten cryptocurrencies on 3rd November 2015 is shown in the left margin. Ethereum had a market capitalisation at approximately US$75 million (1 ETH = US$1.01).

On 3rd November 2015, according to historical data sourced from CoinMarketCap, the top 10 cryptocurrencies were:

Bitcoin, BTC = US$403.42
US$5,969,854,064.40

Litecoin, LTC = US$4.59
US$197,420,659.80

XRP, XRP = US$0.005383
US$178,480,296.99

Ethereum, ETH = US$1.01
US$75,434,372.65

Dash, DASH = US$2.69
US$15,999,082.90

Dogecoin, DOGE = US$0.0001559
US$15,844,937.47

Peercoin, PPC = US$0.4746
US$10,793,140.65

Stellar, XLM = US$0.002189
US$10,587,576.55

BitShares, BTS = US$0.00379
US$9,520,568.98

Nxt, NXT = US$0.008429
US$8,428,816.42

On the same day, Groestlcoin was ranked 185 on CoinMarketCap with a market capitalisation of US$89,297.39 and US$0.001472 GRS fiat price

OTHER HISTORICAL EVENTS

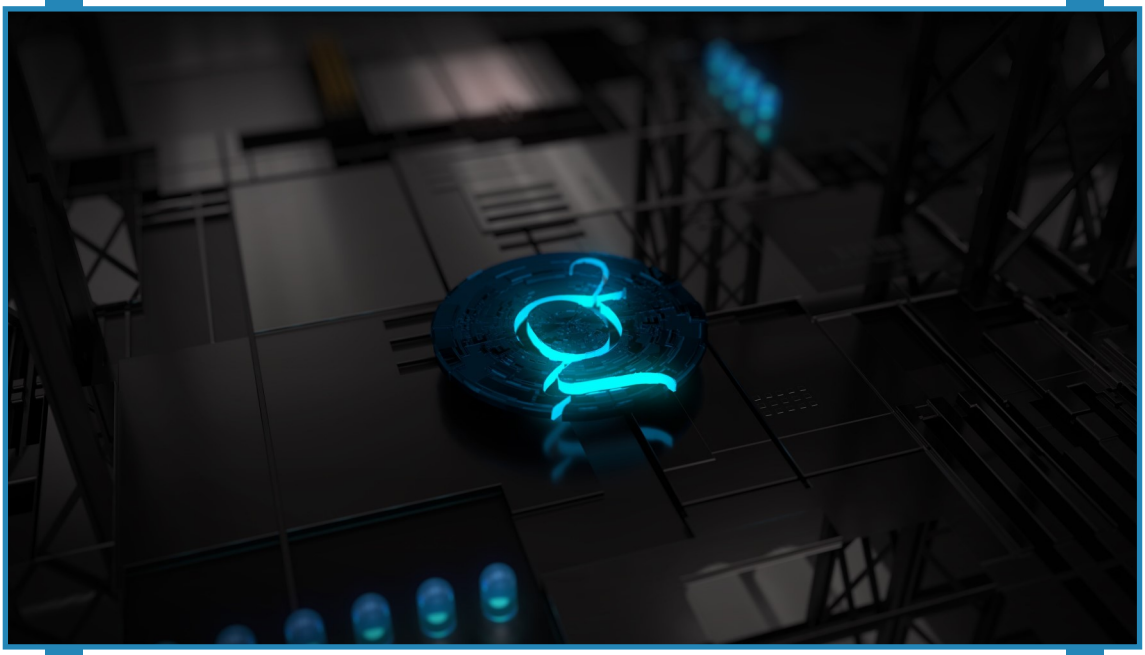
- On 29th June 2015, the Groestlcoin-wpf alternative full node client was released. WPF, which stands for Windows Presentation Foundation, is Microsoft's latest approach to a GUI framework, used with the .NET framework.
- On 29th June 2015, the Groestlcoin Multisig secure storage tool was released. It features decentralized offline key generation, offline signing, watch-only shared wallets, full support for BIP32 (hierarchical deterministic wallets) and general m-of-n multi-signature transactions.
- On 19th August 2015, the Groestlcoin testnet blockchain launched (currently active) at 20:55:29 UTC.
- On 22nd September 2015, a Groestlcoin Easyminer (v2.0) upgrade was released. It included code fixes, efficiency improvements and new GUI. It also change the default mining option to GPU if available, otherwise revert to CPU (instead of using both).
- On 22nd September 2015, Groestlcoin Address Utility was released as a useful tool for converting GRS addresses into various formats, encrypt and decrypt them, and print them as paper wallets.

GROESTLCOIN 2015 FIAT PRICE HISTORY

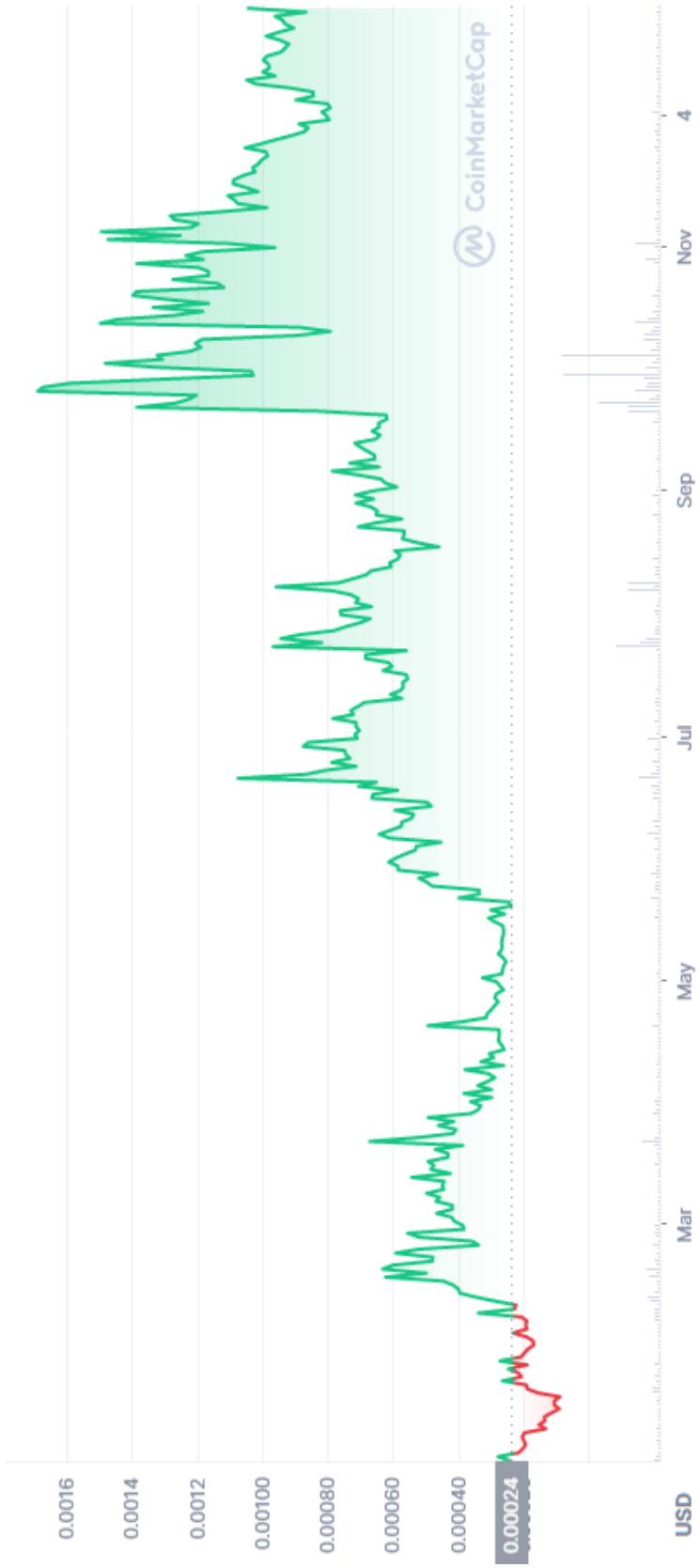
OPEN 2015 GRS Fiat Price	1 January 2015
US$0.0002379	
HIGH 2015 GRS Fiat Price	3 November 2015
US$0.0021	
LOW 2015 GRS Fiat Price	18 January 2015
US$0.00008558	
CLOSE 2015 GRS Fiat Price	31 December 2015
US$0.001046	

Taking into account the opening and closing GRS fiat prices, according to CoinMarketCap, the price increased by 340% for the year.

The Groestlcoin market capitalisation stood at below US$100,000 for most of the year. It peaked at approximately US$125,000 on 3rd November 2015.



GROESTLCOIN 2015 FIAT PRICE CHART



Groestlcoin Electrum Wallet (v2.5.4) Released	2 January 2016
Groestlcoin Vanitygen Released	2 January 2016
Bittrex Exchange Added GRS Trading Again	24 January 2016
Groestlcoin Block Number 1,000,000	8 March 2016
2016 High GRS Fiat Price Recorded	22 March 2016
Groestlcoin Lite Wallet Released	22 June 2016
Groestlcoin Simple Wallet Released	22 June 2016
Cryptopia Exchange Added GRS Trading	17 September 2016
Groestlcoin Samourai Mobile Wallet Released	25 October 2016
Groestlcoin Sentinel Mobile Application Released	25 October 2016

2016

GROESTLCOIN SAMOURAI & SENTINEL

SUMMARY

During the course of 2016, there were over twenty different wallet and application tool releases including many upgrades to existing ones. Some of the major initial development releases included:

- On 2nd January 2016, the Groestlcoin Vanitygen tool was released used to create more personalised GRS wallet addresses rather than the random, cryptic addresses generated by regular Groestlcoin clients (see page 42).
- On 22nd June 2016, the Groestlcoin Lite wallet for desktop was released based on groestlcoinj (see page 44).
- On 22nd June 2016, the Groestlcoin Simple wallet application was released for Android and Blackberry mobile devices (see page 45).
- On 25th October 2016, the Groestlcoin Samourai wallet for Android and Blackberry was released enabling users to send and receive GRS private transactions and mask their identity (see page 46).
- On 25th October 2016, Groestlcoin Sentinel was released (a fork of Samourai with all the code for spending and transacting GRS removed) for Android and Blackberry mobile devices (see page 46).

The number of cryptocurrency exchanges on which to buy or sell GRS was very small in 2016. Bittrex reactivated GRS trading on 24th January 2016, whereas Poloniex delisted GRS on 5th September 2016. The vast majority of GRS trading volume was happening on Bittrex and Cryptopia.

Groestlcoin Electrum Wallet (v2.5.4) Released

2 January 2016

The first upgrade to Electrum-GRS for desktop operating systems, for ordinary users simply seeking the convenience of a web wallet with the security of a real application and support for multi-signatures, was released on 2nd January 2016. The upgrade included fixes to sweeping private keys and signing/verifying messages.

ELECTRUM
Groestlcoin - Electrum wallet

https://github.com/Groestlcoin/electrum-grs/releases/tag/v2.5.4

Groestlcoin Vanitygen Released

2 January 2016

As part of the first Groestlcoin Development Release in 2016, Groestlcoin Vanitygen v1.0 was released on 2nd January 2016. It is a tool used to create more personalised GRS wallet addresses rather than the random, cryptic addresses generated by regular Groestlcoin clients. It was released as a command-line (CL) address generator with the option to generate GRS addresses offline.

groestlcoinvanitygen

https://github.com/GroestlCoin/vanitygen

Groestlcoin Vanitygen (open-source and free software) features include:

- It accepts a pattern input, or list of patterns to search for, and then produces a list of addresses and private keys
- The time required to find a given pattern depends on complexity and computer speed
- Vanitygen uses the OpenSSL random number generator
- To speed up address generation, vanitygen uses the RNG to choose a private key, and literally increments the private key in a loop searching for a match
- Vanitygen written in C code (short and easy to review)

Bittrex Exchange Added GRS Trading Again

24 January 2016

The Bittrex cryptocurrency exchange reactivated the GRS/BTC trading pair market on 24th January 2016 (closed on 16th August 2014). The opening Bitcoin Satoshi price of each GRS was 220 (approximately US$0.00088 per GRS) on the day of reactivation. It is still possible to trade GRS directly with BTC on Bittrex today.

BITTREX GLOBAL

https://global.bittrex.com/Market/Index?MarketName=BTC-GRS

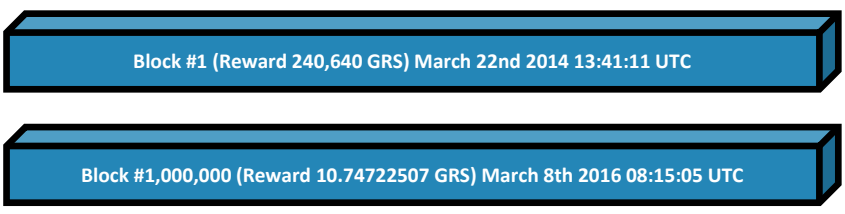
Bittrex began operations in beta testing mode on 13th February 2014. On 28th February 2014, twelve cryptocurrencies, including Bitcoin and Litecoin, went live and twenty one trading pairs were initially available. It was founded by CEO Bill Shihara, Richie Lai and Rami Kawach.

Groestlcoin Block Number 1,000,000

8 March 2016

Since the launch of the Groestlcoin blockchain on 22nd March 2014, or 717 days to be exact, the 1,000,000th GRS block was mined (see below) and extracted by the Suprnova.cc mining pool. When the block timestamped:

- A total of 62,670,853.9283127 GRS had been mined to date.
- A total of 61,929,234 seconds (716 days, 18 hours, 33 minutes and 54 seconds) had passed from block number 1 to block number 1,000,000. Therefore, the average time between GRS blocks had been 61.93 seconds.



On 22nd March 2016, according to historical data sourced from CoinMarketCap, the top 10 cryptocurrencies were:

Bitcoin, BTC = US$418.09
US$6,416,020,302.57

Ethereum, ETH = US$11.27
US$883,435,417.04

XRP, XRP = US$0.00811
US$279,308,176.44

Litecoin, LTC = US$3.23
US$145,667,509.49

MaidSafeCoin, MAID =US$0.08676
US$39,261,211.50

Dash, DASH = US$6.09
US$38,436,134.64

Dogecoin, DOGE = US$0.0002168
US$22,463,616.67

Monero, XMR = US$1.39
US$15,792,408.91

Factom, FCT = US$1.79
US$15,696,841.14

BitShares. BTS = US$0.006056
US$15,433,772.03

On the same day, Groestlcoin was ranked 101 on CoinMarketCap with a market capitalisation of US$266,683.68 and US$0.004241 GRS fiat price

2016 High GRS Fiat Price Recorded

22 March 2016

On the second anniversary of the Groestlcoin blockchain, the day on which many development release upgrades were released, the GRS fiat price recorded its all time high at US$0.005362 for the year. The GRS price had remained below US$0.01 according to CoinMarketCap price metrics beginning on 11th April 2014. What follows is a table of historical data derived from CoinMarketCap showing the days when the yearly GRS fiat price highs occurred:

	Open (US$)	High (US$)	Low (US$)	Close (US$)
14th April 2014	0.003678	0.006036	0.003201	0.004126
3rd November 2015	0.001105	0.0021	0.001094	0.001472
22nd March 2016	0.001686	0.005362	0.001575	0.004241

CoinMarketCap historical data showing the top ten cryptocurrencies on 22nd March 2016 is shown in the left margin. The ETH fiat price had surpassed US$5 and US$10 for the first time ever on 11th February 2016 and 4th March 2016 respectively.

Groestlcoin Lite Wallet Released

22 June 2016

An alternative and simplistic wallet for Windows, Mac OSX and Linux based on groestlcoinj (the groestlcoinj library is a Java implementation of the Groestlcoin code protocol) was released on 22nd June 2016. Unlike the Groestlcoin Core wallet client, users of the Groestlcoin Lite wallet are not required to download the entire blockchain. Other features included:

- All private keys kept encrypted on a user's local computer.
- Synchronises with the Groestlcoin blockchain by downloading only the block headers.
- No need to search for extra nodes and edit the conf file.

Groestlcoin Lite

https://github.com/Groestlcoin/vortex

Groestlcoin Simple Wallet Released

22 June 2016

The Groestlcoin Simple wallet application, for Android and Blackberry mobile devices, was released on 22nd June 2016. Wallet users have full control over their GRS and private keys. It is a single-page application allowing users to easily transfer and store GRS. Unlike the original Groestlcoin Android and Blackberry wallets, it includes support for hierarchical deterministic (HD) wallets:

"Simple Groestlcoin is a so called HD wallet: all Groestlcoin addresses and private keys come from a single mnemonic code which is essentially a phrase comprising of 12 random words. Please remember: whoever knows your mnemonic code also fully controls your Groestlcoins so it should be kept private at all times."

Simple Groestlcoin

Simple Groestlcoin

Groestlcoin Simple Wallet (open-source and free software) features include:

- **It is lightweight, quick and functions well with slow Internet connectivity**
- **Wallet data is encrypted and password-protected**
- **It does not store the full blockchain but instead acquires all the relevant data from random Groestlcoin nodes using a SPV technique**
- **Wallet backed up on initial creation (BIP-0039)**
- **Self-destruction functionality option available to set up a secret code to wipe all wallet data. Use mnemonic code to restore the wallet again**

Cryptopia Exchange Added GRS Trading

17 September 2016

On 17th September 2016, the Cryptopia cryptocurrency exchange added support for Groestlcoin by activating three trading pair markets (GRS/BTC, GRS/LTC and GRS/XMR). The GRS fiat price opened and closed at US$0.001493 and US$0.001479 respectively on the same day, according to CoinMarketCap price metrics.

CRYPTOPIA

https://www.cryptopia.co.nz/Exchange/?market=GRS_BTC (CLOSED)
https://www.cryptopia.co.nz/Exchange/?market=GRS_LTC (CLOSED)
https://www.cryptopia.co.nz/Exchange/?market=GRS_XMR (CLOSED)

Cryptopia was a New Zealand based cryptocurrency exchange. It was operational for just over four years. It was also a marketplace used to buy or sell goods. It suffered a major security breach and held funds were stolen in January 2019. Registered users were able to trade between hundreds of cryptocurrencies on the exchange.

Groestlcoin Samourai & Sentinel

Groestlcoin Samourai Wallet (open-source and free software) features include:

- BIP39 passphrase enforced when creating a new wallet
- Supports BIP47 "Reusable Payment Code"
- Users' private keys are stored on their local device
- Wallet addresses are never used more than once
- Stealth mode option to hide app on user's mobile device
- Remote SMS commands can be enabled to regain access to GRS if mobile device gets lost
- Can choose the level of blockchain obfuscation with each transaction sent
- Tor and VPN support to allow GRS transactions through an anonymous IP address

Groestlcoin Samourai Mobile Wallet Released

25 October 2016

A Groestlcoin mobile wallet application enabling users to send and receive GRS private transactions and mask their identity was introduced on 25th October 2016. Groestlcoin Samourai for Android and Blackberry (v0.81) was described as "a wallet for the streets" by the Groestlcoin Team.

https://github.com/Groestlcoin/groestlcoin-samourai-wallet-android

Groestlcoin Samourai was active until it was deprecated in 2020 after being upgraded twelve times. It primarily allowed users to anonymously send GRS and use private stealth addresses with onboard AES-256 encryption.

Groestlcoin Sentinel App (open-source and free software) features include:

- Only uses public keys (no private keys necessary)
- Track multiple XPUB's or GRS addresses on 'Sentinel Watchlist'
- Deterministically derives GRS addresses associated with added wallets without access or knowledge of private keys
- Can create payment request QR codes with address and amount encoded into the image
- Support for the most popular national fiat currencies
- Can add a secure PIN code

Groestlcoin Sentinel Application Released

25 October 2016

A fork of the Groestlcoin Samourai wallet, with all the code for spending and transacting GRS removed, Groestlcoin Sentinel (v2.0.5) was released for Android and Blackberry on 25th October 2016. Groestlcoin Sentinel had been designed as an easy way to keep track of other Groestlcoin wallets. The Groestlcoin Team described Sentinel as follows:

"Groestlcoin Sentinel is a great solution for anyone who wants the convenience and utility of a hot wallet for receiving payments directly into their cold storage (or future hardware wallet). Sentinel accepts XPUBS's and individual Groestlcoin addresses. Once added you will be able to view balances, view transactions, and (in the case of XPUB's) deterministically generate addresses for that particular wallet."

https://github.com/Groestlcoin/groestlcoin-sentinel-android

OTHER HISTORICAL EVENTS

- On 2nd January 2016, the Groestlcoin SPH-Sgminer (SGminer5-GRS) was released for GRS solo miners. Its main benefit over the original SGminer5 binary included support to sign mined GRS blocks. It was written in the C programming language.
- On 2nd January 2016, the Groestlcoin Aegis wallet was released for Blackberry mobile devices. It included support for Android wear, watch addresses, NFC tag as encryption and sending GRS over SMS.
- On 2nd January 2016, the Groestlcoin Wallet32 was released for Blackberry mobile devices. It was designed as a BIP-0032/-0039/-0044 compatible Hierarchical Deterministic (HD) Groestlcoin wallet.
- On 2nd January 2016, the Electrum-GRS wallet (v0.5.22) was made available for Blackberry mobile devices. Similar to the Electrum-GRS for Android, it included support for not requiring users to synchronise with the entire blockchain.
- On 22nd March 2016, upgrades to the Groestlcoin BIP-0032 compatible Hierarchical Deterministic Android and Blackberry wallet (v4.46.2) applications were released.
- On 22nd March 2016, upgrades to the Groestlcoin Wallet32 BIP-0032/-0039/-0044 compatible Hierarchical Deterministic Android and Blackberry wallet (v0.3.17) applications were released.
- On 22nd March 2016, upgrades to the Electrum-GRS wallets for Android and Blackberry (v0.55.2) were released. It Improved the UI for setting a BIP39 passphrase, fixed memory leaks when restoring a wallet and included other code optimisations.
- On 22nd March 2016, upgrades to the Aegis Groestlcoin wallet (v1.1.6.3) for Android and Blackberry were released. It primarily updated the DNS seeds, checkpoints and protocol number.
- On 22nd March 2016, the MultiGroestl HD wallet for Windows, Mac OSX and Linux was released. It had been designed to remove as much complexity and unnecessary functionality as possible leaving only what is essential for a normal user of Groestlcoin.
- On 22nd June 2016, the AGCore Android application (v0.46) was released. It had been developed to make it easier to run a Groestlcoin Core node on active Android appliances such as set top boxes or repurposed tables/phones.
- On 10th September 2016, the 2016 low GRS fiat price was recorded at US$0.0007849.

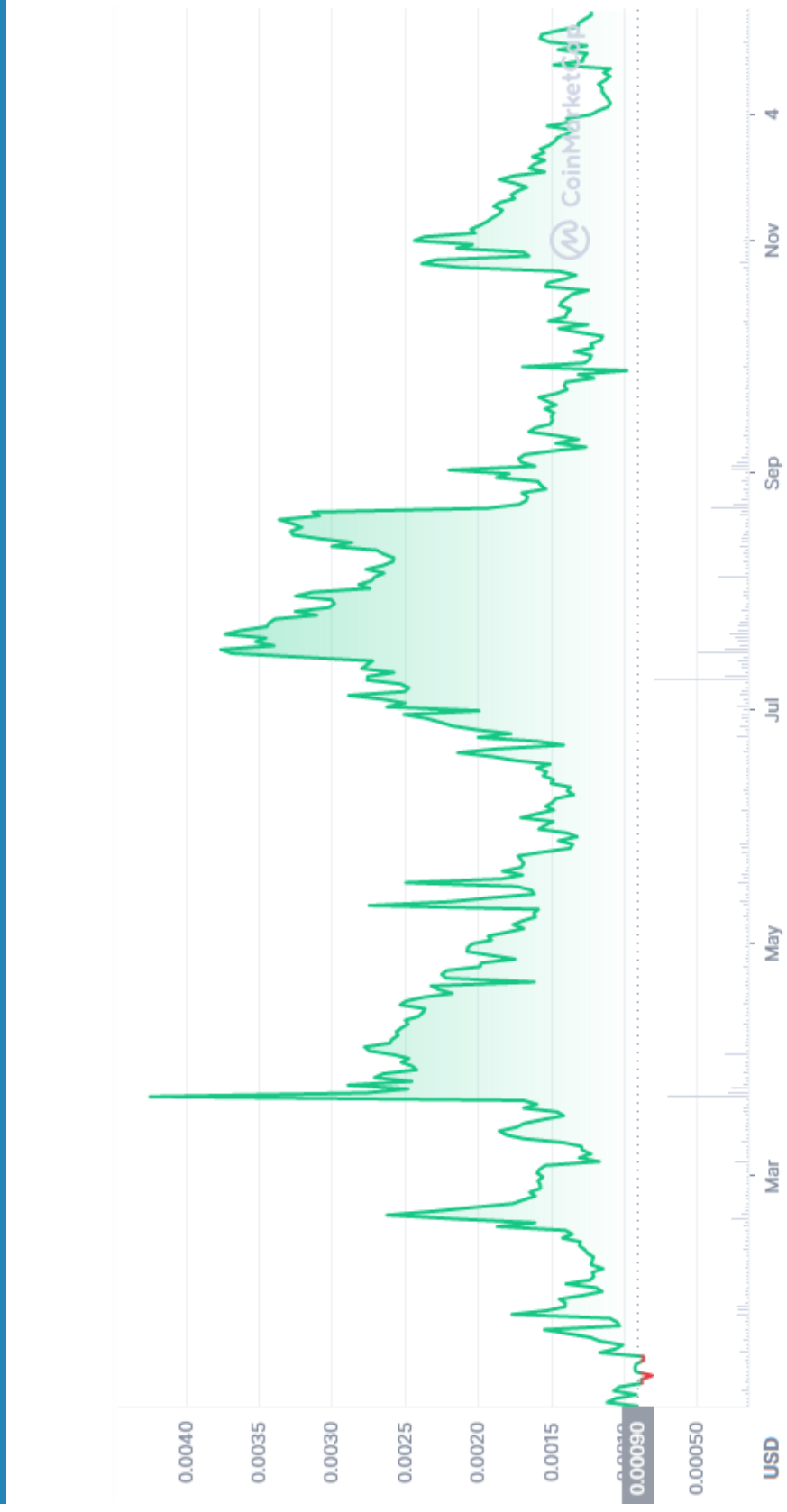
GROESTLCOIN 2016 FIAT PRICE HISTORY

OPEN 2016 GRS Fiat Price	1 January 2016
US$0.001046	
HIGH 2016 GRS Fiat Price	22 March 2016
US$0.005362	
LOW 2016 GRS Fiat Price	10 September 2016
US$0.0007849	
CLOSE 2016 GRS Fiat Price	31 December 2016
US$0.001224	

Taking into account the opening and closing GRS fiat prices, according to CoinMarketCap, the price increased by 17.02% for the year.

The 2014-2016 high GRS fiat price had been at US$0.006036 since 14th April 2014.

GROESTLCOIN 2016 FIAT PRICE CHART



Groestlcoin Core v2.13.3 Upgrade Released	17 January 2017
Groestlcoin Blockchain Activated SegWit	24 January 2017
1st Groestlcoin iOS Mobile Wallet (v0.6.6) Released	22 March 2017
1st to Perform Lightning Network Trans on Mainnet	26 April 2017
GroestlPay Wallet Released	22 June 2017
Groestlsight Block Explorer Launched	22 June 2017
LiteBit.eu Trading Platform Added Support for GRS	6 July 2017
Upbit Exchange Added GRS Trading	24 October 2017
GRS Fiat Price Surpassed US$1 for the First Time	1 November 2017
Groestlcoin Easyminer 2018 Released	25 December 2017

2017

SEGREGATED WITNESS (SEGWIT) ACTIVATION

SUMMARY

Blockchain technology awareness, adoption and utilisation grew leaps and bounds in 2017. Almost all cryptocurrencies reached all time high fiat prices and market capitalisations in December 2017.

In January 2017, Groestlcoin became the first blockchain to activate SegWit and implemented Lightning Network (LN) readiness. Other Groestlcoin milestones which occurred during the year included:

- On 22nd March 2017, the first ever Groestlcoin wallet application for iOS devices was released with built-in implementations for BIP-0032 and BIP-0039 (see page 53).
- On 26th April 2017, the Groestlcoin blockchain was the first mainnet to perform a Lightning Network transaction (see page 53).
- On 31st October 2017, the Groestlcoin network hashrate surpassed 100 GH/s for the first time.

The Groestlcoin Team reiterated their commitment to release new wallets and applications every quarter avoiding hype and hassle. Over twenty developers were helping to drive Groestlcoin development forward to make a variety of wallets available for the community. The aim remained to target as many user preferences, hence increase mainstream adoption.

At the end of 2017, the team was in talks with Ledger and Trezor to integrate GRS into their respective hardware wallets.

Segregated Witness (SegWit) Activation

Groestlcoin Core v2.13.3 Upgrade Released — 17 January 2017

Groestlcoin Core v2.13.3 (aligned with features present in the Bitcoin Core v0.13.3 and v0.14.0 codebases) became the new official major release on 17th January 2017. It was mandatory for everyone using the Groestlcoin code protocol to update to it as soon as possible. The upgrade included code improvements and optimisations, especially the ability to deploy several soft forks simultaneously (BIP9). The highly anticipated Segregated Witness (SegWit) innovation, csv (checksequenceverify) and BIP65 (allows a transaction output to be made unspendable until some point in the future) were awaiting future activation.

The Groestlcoin Team highlighted the fully backwards compatible nature of the softfork. It meant that it would still be safe to send and receive GRS whether or not SegWit, csv and BIP65 had been activated.

Miners were able to begin signalling support for the enforcement of the new rules starting at block number 1,435,392 (see below). If over 95% of blocks had been mined by miners using Groestlcoin Core v2.13.3, within the next 2,016 blocks, the softfork would then lock in.

Block #1,435,392 (Reward 6.97605186 GRS) January 21th 2017 15:51:53 UTC

Groestlcoin Blockchain Activated SegWit — 24 January 2017

On 23rd January 2017, miners had successfully signalled support by mining 95% of the preceding 2,016 blocks with the new rules. The code changes locked in at block number 1,437,408 (see below).

The Groestlcoin blockchain successfully activated SegWit and the parallel softforks at block number 1,439,424 (see below) on 24th January 2017. It had, as a result, become the first blockchain to do so. Syscoin, Bitcoin and Litecoin activated SegWit on 30th March 2017, 10th May 2017 and 24th August 2017 respectively.

The Groestlcoin Team thanked all miners, mining pools and exchanges for the smooth and fast softfork. Suprnova, Dwarf Pool, Zpool, Miningpoolhub, Coinmine.pl, Chainz, Bchain, Cryptoguru, Fogify, Bittrex and Cryptopia were highly praised amongst others.

Block #1,437,408 (Reward 6.97605186 GRS) January 23rd 2017 02:46:53 UTC

Block #1,439,424 (Reward 6.97605186 GRS) January 24th 2017 14:50:11 UTC

1st Groestlcoin iOS Mobile Wallet (v0.6.6) Released

22 March 2017

The first Groestlcoin mobile wallet application (v0.6.6) for iOS devices was released on the third anniversary of the Groestlcoin blockchain. It was named Groestlwallet with built-in implementations for BIP-0032 and BIP-0039. It was stated that should the Groestlwallet disappear from the Apple Store, the wallet can be easily imported into the Android version of Groestlwallet (also released on the same day).

Groestlwallet

https://github.com/Groestlcoin/groestlwallet

Shortly after the release of Groestlwallet, the Groestlcoin Team was proud to note the number of different Groestlcoin wallets that had already been released. It was the case that there were ten different Android wallets, nine different Blackberry wallets and over ten different desktop wallets.

Groestlwallet iOS application (open-source and free software) features include:

- **Simplified Payment Verification (SPV) for high performance and not required to download the entire Groestlcoin blockchain**
- **Can use a simple recovery phrase enabling a user to recover funds when their mobile device is lost or broken**
- **Private keys never leave a user's mobile device**
- **Support for the most popular national fiat currencies**
- **Support for multiple languages**
- **Can import password protected wallets**
- **Built-in hardware encryption**

1st to Perform Lightning Network Trans on Mainnet

26 April 2017

The Groestlcoin Team performed a Lightning Network (LN) GRS transaction on the Groestlcoin mainnet blockchain on 26th April 2017. Furthermore, the Groestlcoin blockchain became the first chain to do so. It was not yet ready for production release at the time. The official Wikipedia definition of a Lightning Network is:

> **"The Lightning Network (LN) is a "layer 2" payment protocol layered on top of a blockchain-based cryptocurrency such as Bitcoin or Litecoin. It is intended to enable fast transactions among participating nodes and has been proposed as a solution to the Bitcoin scalability problem. It features a peer-to-peer system for making micropayments of cryptocurrency through a network of bidirectional payment channels without delegating custody of funds."**

GroestlPay Wallet (open-source and free software) features include:

- Can secure GRS with multiple signatures, or just one
- BIP32 Hierarchical Deterministic (HD) address generation and backups
- Private keys are stored locally on the device, not in the cloud
- Synchronous access to wallets across all major mobile and desktop platforms
- Support for multiple languages
- Supports mnemonic (BIP39) wallet backups
- Supports paper wallet sweep (BIP38)

GroestlPay Wallet Released

22 June 2017

A new and secure open-source, multi-signature wallet platform for both desktop (Windows, Mac OSX, Linux and Chrome) and mobile devices (Android and iOS) was released on 22nd June 2017. It introduced the ability for friends and family to share Groestlcoin wallets. It enabled the sharing of GRS in multi-signature wallets, which prevent unauthorised payments by requiring multiple approvals. In particular, the GroestlPay wallet supported:

"Payment protocol (BIP70-BIP73) support: easily-identifiable payment requests and verifiable, secure Groestlcoin payments. GroestlPay is one of the first Groestlcoin wallets to support the full Groestlcoin Payment Protocol (BIP 0070-0073). When you send money to a Payment Protocol-enabled merchant, GroestlPay securely verifies that your payment will go to the right place."

https://github.com/groestlcoin/groestlpay

Groestlsight Block Explorer (open-source and free software) features include:

- Can verify that a message comes from a specific Groestlcoin address
- Can broadcast a raw transaction in hex format over the network
- Supports multiple languages
- Supports all browsers
- Uses groestlcoind RPC interface to validate blockchain information
- Reports on double spend attempts, outpoints confirmations and outputs spend status reports
- Can check which mining pool mined a specific GRS block
- Uses client side javascript rendering with AngularJS

Groestlsight Block Explorer Launched

22 June 2017

The Groestlcoin community's very own block explorer called Groestlsight launched on 22nd June 2017. It is a convenient, powerful and simple way to read data from the Groestlcoin network and build services with it. The official description for Groestlsight is:

"Groestlsight is an open-source Groestlcoin blockchain explorer with complete REST and websocket APIs that can be used for writing web wallets and other apps that need more advanced blockchain queries than provided by groestlcoind RPC."

Groestlsight

https://groestlsight.groestlcoin.org/

Similar to other block explorers, Groestlsight provides information about mined GRS blocks, wallet balances, transaction details and so on. It is a service still active today and is written in node.js and based on the powerful groestlcore nodejs library.

LiteBit.eu Trading Platform Added Support for GRS

6 July 2017

On 6th July 2017, a cryptocurrency broker service called LiteBit added support for Groestlcoin with the ability for its registered users to buy or sell GRS with EUR.

On 12th April 2021, LiteBit removed support to buy or sell GRS due to unfulfilled requirements . Feathercoin, Blackcoin, Myriadcoin, Peercoin, UBIQ, Validity, OKCash, Crypto.com, CROWN, Gulden, ORBS, Sirin, Viacoin, Polymath, Navcoin, Particl and Status also were removed from sale or purchase. LiteBit users had until 22nd October 2021 to completely withdraw the aforementioned cryptocurrencies.

https://www.litebit.eu/en/buy/groestlcoin (CLOSED)
https://www.litebit.eu/en/sell/groestlcoin (CLOSED)

LiteBit was established in The Netherlands in 2013. It focuses on European users by allowing its customers to buy or sell about 50 cryptocurrencies. It added support for Litecoin before Bitcoin (hence the name LiteBit).

CRYPTO EXCHANGES WHICH ADDED GRS TRADING IN 2017

BTC100 (26/06/2017)
LiteBit.eu (06/07/2017)
C-Cex (05/09/2017)
Livecoin (25/09/2017)
Upbit (24/10/2017)

Upbit Exchange Added GRS Trading

24 October 2017

The Upbit cryptocurrency exchange activated the GRS/BTC trading pair market on 24th October 2017. The opening Bitcoin Satoshi price of each GRS was 1,836 (approximately US$0.1090 per GRS) on Upbit. It is still possible to trade GRS directly with BTC on Upbit today.

For some time, the majority of online GRS trading (GRS/KRW) has occurred on Upbit. It is evident that the top GRS wallet (Upbit's GRS cold wallet) contains approximately 40 million GRS (in late 2021/early 2022).

https://upbit.com/exchange?code=CRIX.UPBIT.KRW-GRS (ACTIVE)
https://upbit.com/exchange?code=CRIX.UPBIT.BTC-GRS (ACTIVE)

The Korean based Upbit cryptocurrency exchange launched on 24th October 2017 with the help of their partnership with the American based Bittrex exchange. The parent company of Upbit is Dunamu.

On 21st November 2017, Upbit activated the GRS/KRW trading pair market on its exchange platform.

On 25th December 2017, the Groestlcoin Team reported that the official GRS website had been updated in terms of its content and visual appeal. A 'Development Progress' section was added showing what the team is working on. Moreover, short descriptions of endorsed wallets were included to help people choose the most suitable GRS wallet.

On 25th December 2017, according to historical data sourced from CoinMarketCap, the top 10 cryptocurrencies were:

Bitcoin, BTC = US$14,026.62
US$235,127,099,177.69

Ethereum, ETH = US$765.83
US$73,955,785,310.06

Bitcoin Cash, BCH = US$2,954.69
US$49,862,981,940.60

XRP, XRP = US$1.12
US$43,477,871,608.77

Litecoin, LTC = US$273.39
US$14,891,741,050.64

Cardano, ADA = US$0.4164
US$10,795,072,892.96

IOTA, MIOTA = US$3.50
US$9,732,746,322.75

Dash, DASH = US$1,175.89
US$9,142,732,083.72

NEM, XEM = US$1.01
US$9,077,382,801.95

Monero, XMR = US360.78
US$5,600,608,599.61

On the same day, Groestlcoin was ranked 111 on CoinMarketCap with a market capitalisation of US$141,167,632.88 and US$2.04 GRS fiat price

GRS Fiat Price Surpassed US$1 for the First Time

1 November 2017

Similar to most cryptocurrencies in 2017, the GRS fiat price increased astronomically until it achieved parity with the US Dollar on 1st November 2017. The GRS fiat price had risen approximately 81,600% since the beginning of the year. What follows is a table of historical data derived from CoinMarketCap showing the days on which the GRS fiat price surpassed US$0.01, US$0.10 and US$1 respectively:

	Open (US$)	High (US$)	Low (US$)	Close (US$)
2nd April 2017	0.007015	0.01718	0.007015	0.0132
5th June 2017	0.05942	0.1259	0.05441	0.06853
1st November 2017	0.7457	1.33	0.7037	0.9723

On 1st November 2017, the Groestlcoin market capitalisation climbed over US$90,000,000 but did not break the US$100,000,000 barrier.

Groestlcoin Easyminer 2018 Released

25 December 2017

Groestlcoin Team member Yokomoko had been developing an updated version of the Easyminer application released in September 2015. On 25th December 2017, the Groestlcoin 2018 Easyminer (v3.0) became available thanks to his community-driven effort. He praised everyone who had beta tested the software and provided feedback.

Yokomoko had completely overhauled the application with a brand new graphical user interface (GUI). Other notable changes made were:

- Now have to manually install Electrum-GRS if you want to automatically have the address come over. This is to prevent previous issues of the packaged version becoming out of date.
- Can now mine with CPU and GPU if required.
- More reliable at finding GRS Electrum addresses.
- Better log integration in the application.
- Selects mining pool with the best latency.

OTHER HISTORICAL EVENTS

- On 11th January 2017, the Zpool mining pool added support for Groestlcoin (https://zpool.ca).
- On 22nd March 2017, the Electrum-GRS Lite wallet for desktop was released. It was a port of the Electrum-GRS Android wallet and was renamed to Groestlcoinomi in 2019.
- On 22nd March 2017, the hierarchical deterministic (BIP32) browser based Groestlcoin Webwallet was released including support for multi-signatures, OP_HODL, RBF and others.
- On 26th June 2017, Coinpayments.net added support for Groestlcoin. It is a payment processor that allows merchants to accept Bitcoin and hundreds of other cryptocurrencies.
- On 16th September 2017, after maintenance checks and graphical user interface improvements, an updated official Groestlcoin website at https://www.groestlcoin.org went live (see page 58).
- On 22nd September 2017, an upgrade of the Groestlcoin JSwallet (running in node.js) was released.
- On 22nd September 2017, an upgrade of the Groestlcoin Vanitygen (v1.02b) application was released including an improved UI for setting up a BIP39 passphrase and multiple other code fixes.
- On 27th September 2017, the GRS block reward reached the static 5 GRS beginning at block number 1,772,800.
- On 31st October 2017, CoinCodex added Groestlcoin. It provides useful information needed to stay informed about cryptocurrencies.
- On 14th November 2017, the official Groestlcoin website donation page launched (https://www.groestlcoin.org/donations).
- On 25th December 2017, the HD (BIP32) browser based Groestlcoin Webwallet at https://groestlcoin.org/webwallet/ became the first ever Groestlcoin wallet with enabled SegWit support. It was also the day on which the Groestlcoin SegWit Paperwallet generator tool was launched (utilised Segregated Witness (SegWit) Pay To Witness Public Key Hash (P2WPKH) addresses and transactions).

On 30th November 2017, after listening to the community, some Groestlcoin wallets were deprecated in order to fully focus on those most used:

Groestlcoin Armory (Windows, Mac OSX and Linux)

Groestlcoin Multisig (Windows, Mac OSX and Linux)

Groestlcoin JSWallet (Web, Android & Blackberry)

Multigroestl HD (Windows, Mac OSX and Linux)

Multigroestl Classic (Windows, Mac OSX and Linux)

Groestlcoin WPF (Windows)

Electrum-GRS Lite (Windows, Mac OSX and Linux)

Groestlcoin Lite (Windows, Mac OSX and Linux)

Groestlcoin AG Core (Android)

Groestlcoin Aegis (SMS) (Android & Blackberry)

Groestlcoin Wallet32 (Android & Blackberry)

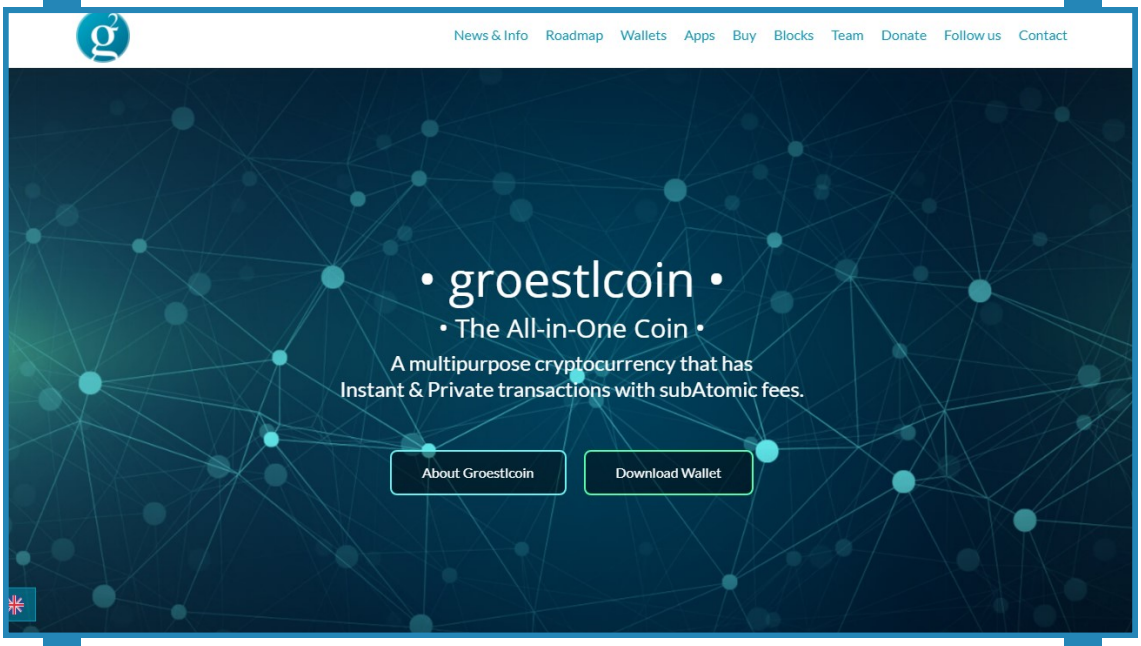
Groestlcoin-QT (Blackberry)

GROESTLCOIN 2017 FIAT PRICE HISTORY

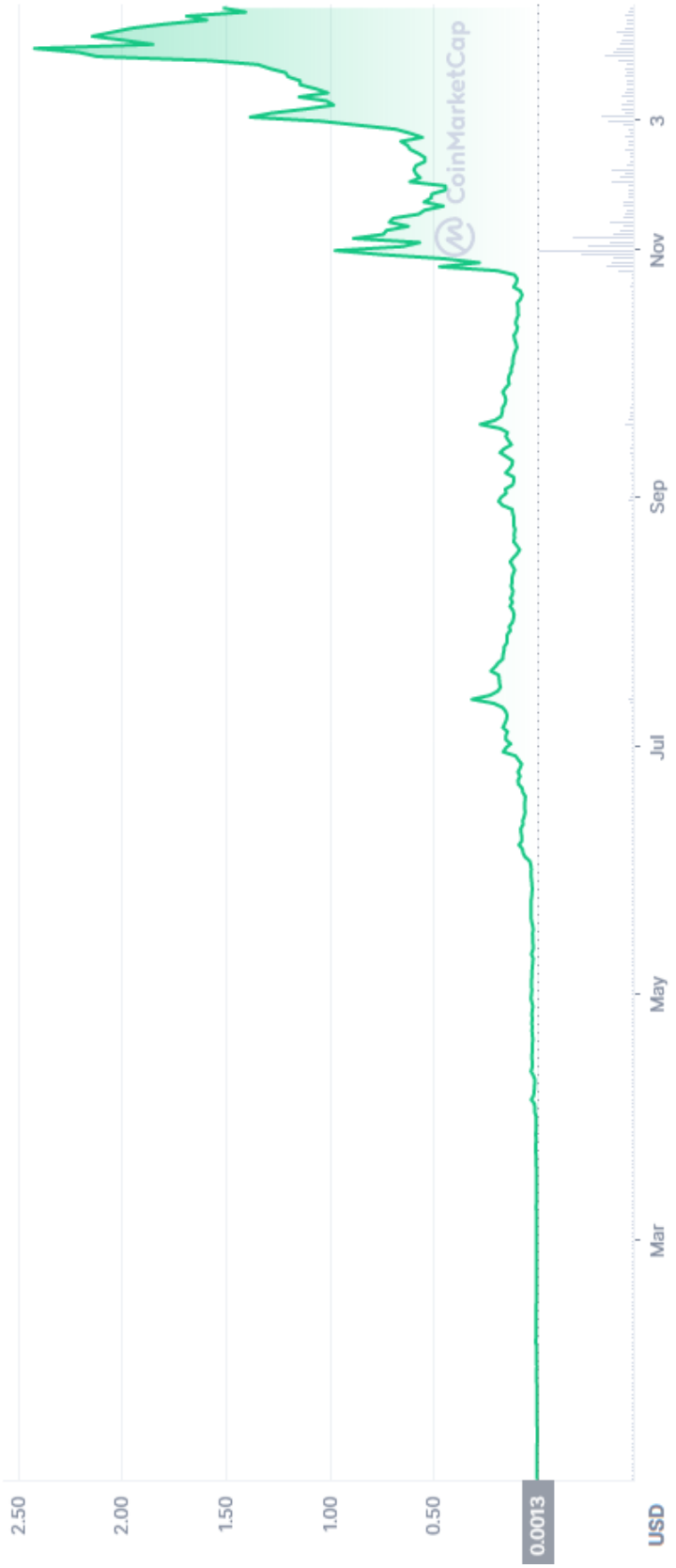
OPEN 2017 GRS Fiat Price	1 January 2017
US$0.001224	
HIGH 2017 GRS Fiat Price	21 December 2017
US$2.69	
LOW 2017 GRS Fiat Price	13 January 2017
US$0.0007657	
CLOSE 2017 GRS Fiat Price	31 December 2017
US$1.51	

Taking into account the opening and closing GRS fiat prices, according to CoinMarketCap, the price increased by 123,266% for the year. The GRS market capitalisation surpassed US$100 million in December 2017.

It was an explosive year for cryptocurrency (coins and tokens) fiat prices especially in November and December 2017. It was possible to trade GRS on Bittrex (BTC), Litebit.eu (EUR), Upbit (BTC, KRW), Cryptopia (BTC, LTC, XMR), Coinexchange (BTC), C-Cex (BTC, USD) and Livecoin (BTC, USD).



GROESTLCOIN 2017 FIAT PRICE CHART



Groestlcoin Electrum Wallet (v3.0.6) Released	22 March 2018
Binance Exchange Added GRS Trading	4 April 2018
Groestlcoin Core v2.16.0 Upgrade Released	22 June 2018
Groestlcoin Electrum Wallet (v3.1.2) Released	22 June 2018
Trezor Hardware Wallet Added Support for GRS	25 June 2018
Groestlcoin Rebranding Vote Occurred	1-15 July 2018
Huobi Global Exchange Added GRS Trading	21 September 2018
GRSPay Payment Processor Launched	24 September 2018
Groestlcoin Electrum Wallet (v3.2.2) Released	24 September 2018
Groestlcoin Integration by ivendPay Announced	22 December 2018

2018

GIGANTIC RISE IN GROESTLCOIN DEVELOPMENT

SUMMARY

Over four years had passed since the Groestlcoin blockchain launched on 22nd March 2014. The Groestlcoin Team had regularly released innovative wallets each one offering users different levels of security, ease of use and feature functionality. Groestlcoin applications released during 2018 included:

- On 22nd March 2018, the Groestlcoin BIP39 Tool was released for converting BIP39 mnemonic phrases to addresses and private keys.
- On 22nd March 2018, the Groestlcoin P2Pool was relaunched as a more decentralised pool to help miners receive smaller, but more consistent GRS rewards.
- On 24th September 2018, the GRSPay payment processor was released allowing users to receive GRS payments with no fees (barring those used by the blockchain) or third party intermediaries.
- On 24th September 2018, the Groestlcoin EasyVanity tool was released allowing users to create bespoke Groestlcoin addresses.
- On 24th September 2018, the GRS P2SH & BECH32 paper wallet generators were released utilising SegWit P2WPKH (Pay To Witness Public Key Hash) addresses and transactions.

One major Groestlcoin blockchain milestone occurred on 12th March 2018. The 2,000,000th GRS block was mined by a solo miner (see below).

Block #2,000,000 (Reward 5.0 GRS) March 12th 2018 21:57:24 UTC

DEVELOPMENT RELEASE 22nd MARCH 2018

Groestlcoin BIP39 tool was released for converting BIP39 mnemonic phrases to addresses and private keys

Groestlcoin Sentinel was upgraded (v2.7.1) for Android and Blackberry. It added support for the Groestlsight block explorer and Haptic PIN entry. It also enabled users to sweep P2PKH and SegWit P2SH-P2WPHK amounts into selected accounts or addresses

Groestlcoin P2Pool was relaunched as a more decentralised pool to help miners receive smaller, but more consistent GRS rewards. A P2Pool Node-Scanner was also released

Groestlcoin Electrum Wallet (v3.0.6) Released

22 March 2018

On the 4th anniversary of the Groestlcoin blockchain, the Groestlcoin Team described the first quarter of 2018 as the busiest development period so far. The number of GRS electrum servers had already increased from 80 to 120 in 2018.

A new version of Electrum-GRS (updated from v2.5.4 to v3.0.6) was released on 22nd March 2018. Developer Kefkius received GRS bounties (1,150 GRS) for his hard work upgrading it. The official description of the upgrade was:

> **"Electrum-GRS has been updated from version 2.5.4 to 3.0.6—That's quite a jump! But as we saw with Electrum 2.7 and the vulnerabilities that were found several months after release, you cannot be too careful. We are sure as we can be that Electrum 3.0.6 is the most secure version of Electrum-GRS to date. Additionally this version brings with it BIP-0032 addresses. You can now create a SegWit wallet with Electrum which will give you addresses that start with 'grs1' instead of 'F'."**

Electrum-GRS for Android and Blackberry (v1.5.28) were also released on the same day. It included BIP-0032 and BIP-0039 support for using non-native and native SegWit addresses and other technical improvements.

Other Groestlcoin development releases are listed in the left margin.

CRYPTO EXCHANGES WHICH ADDED GRS TRADING IN 2018

Bittylicious (11/01/2018)
CryptoWolf (01/02/2018)
CoinSwitch (21/02/2018)
Binance (04/04/2018)
Coinbit (06/04/2018)
Sistemkoin (09/04/2018)
Coinrail (11/04/2018)
FuBT (12/04/2018)
Stocks.Exchange (13/04/2018)
OOOBTC (04/05/2018)
NERAEX (04/05/2018)
BuyBitcoin (10/05/2018)
Xchange.me (14/05/2018)
Easyrabbit (18/05/2018)
QIEX (20/05/2018)

On 22nd May 2018, there were 20 exchanges on which to trade GRS. Fiat pairings included USD, EUR, GBP and KRW. Crypto pairings included BTC, ETH and USDT.

Binance Exchange Added GRS Trading

4 April 2018

GRS trading opened on the cryptocurrency renowned exchange called Binance on 4th April 2018. A single GRS/BTC trading pair market activated (the closing GRS/BTC price recorded at 12,973 Bitcoin Satoshi on the day).

https://www.binance.com/en/trade/GRS_BTC (ACTIVE)

Binance is one of the largest, if not the largest, cryptocurrency exchanges in the world. In summer 2021, the overall daily trading volume on the exchange was regularly in the tens of billions of US Dollars across hundreds of trading markets. It is registered in the Cayman Islands (moved from its initial base in China due to Chinese government regulations) and was founded in 2017 by CEO Changpeng Zhao.

In 2019, Binance was banned in the United States of America on regulatory grounds. In response, Binance and other investors opened Binance US, a separate exchange registered with the United States Financial Crimes Enforcement Network designed for compliance with all US applicable laws.

Groestlcoin Core v2.16.0 Upgrade Released

22 June 2018

On 22nd June 2018, Groestlcoin Core v2.16.0 became the latest major release including many different code protocol improvements and optimisations. In particular, it introduced new features such as the ability to send or receive GRS to/from BECH32 and SegWit addresses. Other changes in the upgrade included:

- The minimum fee required to send GRS was reduced.
- The client icons were overhauled to Groestlcoin colours.
- The validation speed and network propagation performance were greatly improved. It resulted in quicker synchronisation times (the time it takes to fully download the Groestlcoin blockchain).
- The splash screen for the mainnet and testnet were updated.
- When the Groestlcoin Core software has not fully synched, a semi-transparent information layer now shows over the top of the normal client display. This layer shows details about the current synchronisation progress (estimates the time remaining until it finishes the synchronisation process).

Groestlcoin Electrum Wallet (v3.1.2) Released

22 June 2018

In addition to other releases and upgrades (see right margin) on 22nd June 2018, Electrum-GRS was upgraded (v3.1.2) with new features including:

- It added support for the pending Trezor firmware update (both the Trezor One and Trezor T hardware wallets support Groestlcoin).
- Ledger hardware wallet supported (pending implementation) (Ledger added support for Groestlcoin on 5th February 2019).
- For each outgoing GRS transaction, the difference between the acquisition and liquidation GRS prices is displayed in the wallet history (capital gains taxes).
- It became possible to save GRS transaction in the wallet without having to broadcast them (local transactions).
- The 'Send' tab had been changed to display how GRS transaction fees are calculated depending on the size of the transaction.
- It became possible to filter the wallet history by time.
- It became possible to encrypt watch-only and hardware wallets.

DEVELOPMENT RELEASE 22nd JUNE 2018

Electrum-GRS wallet (v3.1.2) was released for Android (the mobile equivalent to the GRS-Electrum desktop client). Users can restore their private keys on the desktop GRS-Electrum easily on the mobile version

Groestlcoin BIP-0032 HD wallet upgrade (v5.24.2) was released for Android and Blackberry. It improved the graphics and other functionalities

An upgrade to the Groestlcoin Vanitygen (v1.03b) application was released including support for compressed addresses (OCL and keyconv)

The Groestlcoin P2Pool was upgraded to accept BECH32 addresses (first coin to do this) and adapted for Groestlcoin Core v2.16.0 due to certain removed RPC calls

Groestlsight testnet block explorer was launched as a convenient, powerful and simple way to read data from the Groestlcoin testnet blockchain

Groestlcoin P2Pool for testnet was launched with added support for BECH32 addresses

Groestlcoin BIP-0032 HD testnet wallet upgrade (v5.24.2) was released for Android and Blackberry. It improved the graphics and other functionalities

"The Trezor Model T is the next-generation cryptocurrency hardware wallet, designed to be your universal vault for all of your digital assets. Store and encrypt your coins, passwords and other digital keys with confidence. The Trezor Model T now supports over 500 cryptocurrencies."

Trezor Hardware Wallet Added Support for GRS

25 June 2018

In early April 2018, Groestlcoin integration into Trezor firmware was reported at about 90% according to the 'Groestlcoin Development Progress' section on the www.groestlcoin.org website.

On 25th June 2018, the Trezor One firmware v1.6.2 upgrade (titled 'Zcash Overwinter, Cashaddr, Expanded Coin Support') was released with the addition of Groestlcoin (GRS), Lisk (LSK), Decred (DCR), Bitcoin Private (BTCP), Fujicoin (FJC), Vertcoin (VTC), Viacoin (VIA) and Zcoin (now known as Firo).

TREZOR

https://trezor.io/

On 7th November 2018, the Trezor T firmware v2.0.9 upgrade was released with the addition of Groestlcoin (GRS), Monero (XMR), Cardano (ADA), Stellar (XLM), XRP (XRP), Tezos (XTZ), Decred (DCR), Lisk (LSK), Zencash (now known as Horizen (ZEN)). Groestlcoin developer Yura Pakhuchiv was praised for making it a reality.

Groestlcoin Rebranding Vote Occurred

1-15 July 2018

There had been calls from some people in the Groestlcoin community to rebrand the name and visual representation of the project for quite a while. The Groestlcoin Team posted the following about a potential future rebrand:

"Please take into consideration that a rebrand will cause delisting from big exchanges, and the loss of our iOS wallet from the Apple App Store.

If the rebrand occurs, the work for developing Groestlcoin will shift towards rebranding it."

On 1st July 2018, the Groestlcoin rebranding vote webpage went live at https://www.groestlcoin.org/rebranding showing two GRS QR code wallet addresses. Each vote cost 1 GRS (all GRS went to fund ongoing code development). On 15th July 2018, the vote ended with the result that Groestlcoin had kept its name and image for the foreseeable future.

Huobi Global Exchange Added GRS Trading

21 September 2018

Since the GRS/BTC trading pair market went live on Binance on 4th April 2018, the number of exchanges on which to buy or sell GRS had increased to about thirty (see right for exchanges May 2018 to October 2018).

Huobi Global became the latest exchange to open a GRS/BTC trading pair on 21st September 2018. At the time, it was the third largest crypto exchange in terms of daily trading volume in the world. In November 2021, it is ranked 7th (just over US$5 billion daily volume) below Binance, Coinbase, FTX, Kraken, FTX US and KuCoin.

https://www.huobi.com/en-us/exchange/grs_btc/ (ACTIVE)

On 21st September 2018, the opening and closing GRS fiat prices were US$0.6199 and US$0.6119 respectively.

Huobi is a Seychelles based cryptocurrency exchange. It was founded in China by co-founders Leon Li and Du Jun in 2013.

On 28th September 2018, it became possible for Koreans to trade GRS on the Huobi Korea exchange (GRS/BTC and GRS/ETH trading pair markets).

CRYPTO EXCHANGES WHICH ADDED GRS TRADING IN 2018

CoinDelta (26/05/2018)
Flyp.me (30/05/2018)
GODEX (01/06/2018)
Chainrift (06/06/2018)
InstaSwap (07/06/2018)
KoinOK (12/06/2018)
BitBns (29/06/2018)
CryptoBridge (10/07/2018)
OpenBazaar (31/07/2018)
SimpleSwap (02/08/2018)
Huobi Global (21/09/2018)
Huobi Korea (28/09/2018)
Changelly (19/10/2018)

GRSPay Payment Processor Launched

24 September 2018

As part of the third quarterly development release of the year, a new payment processor called GRSPay was initially released as a major push forward for Groestlcoin adoption. It is a free application that can be quickly integrated into websites for merchants and online stores to easily accept GRS as a means of payment for goods or services. It is described as:

"It is a free and open-source cryptocurrency payment processor which allows you to receive payments in Groestlcoin with no fees, transaction costs or a middleman. GRSPay is a non-custodial invoicing system which eliminates the involvement of a third-party. Payments with GRSPay go directly to your wallet, which increases the privacy and security. Your private keys are never uploaded to the server."

https://grspay.com/

Built using .Net Core with C#, GRSPay does not re-use GRS addresses. Each invoice automatically generates a new address derived from the user's xpubkey or zpubkey.

GRSPay Payment Processor (open-source and free software) features include:

Anyone can deploy a server and become a self-hosted payment processor in order to receive GRS transactions

An unlimited number of stores can be attached to a single GRSPay server

Eliminates third parties. GRS payments are peer-to-peer (no middlemen or KYC)

Censorship resistant

Users have complete control over their private keys (only needs an xpubkey (public key) to generate invoices

SegWit address support

No transaction or processing fees (other than those required by the blockchain)

DEVELOPMENT RELEASE 24th SEPTEMBER 2018

Electrum-GRS wallet (v3.2.2) was released for Android. It added 2FA (only provides additional security if one time passwords are generated on a separate device)

Groestlcoin Core v2.16.3 was released as a major upgrade to fix a DoS component and a critical inflation vulnerability exploitable by miners

Groestlcoin P2SH & BECH32 Paper Wallet Generator Tools were released utilising SegWit P2WPKH (Pay To Witness Public Key Hash) addresses and transactions

Groestlcoin EasyVanity was released to make it easier than ever before to create bespoke Groestlcoin addresses

Groestlcoin Electrum Wallet (v3.2.2) Released

24 September 2018

Despite the downtrend in cryptocurrency market capitalisations since the beginning of the year, the Groestlcoin development team had not slowed down coding. On 24th September 2018, besides the release of a new payment processor called GRSPay, other releases and upgrades (see left) became available for the community. The Electrum-GRS wallet (v3.2.2) upgrade added support for the client to recognise connected Ledger and Trezor devices. Other changes to Electrum-GRS included:

- Hardware wallets show debug message during device scan.
- Transactions that are dropped from the mempool are kept in the wallet as 'local', and can then be rebroadcast. Previously these transactions were deleted from the wallet.
- The script Sig and witness part of transactions inputs are no longer parsed, unless actually needed.
- SegWit multi-sig for BIP39 and hardware wallets now enabled (both P2WSH-P2SH and native P2WSH).

DEVELOPMENT RELEASE 22nd DECEMBER 2018

Sentinel Application for Windows Desktop. It is the easiest and fastest way to track balances of your Groestlcoin addresses (only public keys required)

Groestlcoin BIP39 Tool update (v0.3.9) was released. It is an open-source web tool for converting BIP39 mnemonic codes to addresses and private keys

An update to Electrum-GRS (v3.2.3) was released for Desktop and Android. It added support for the Archos Safe-T Mini hardware wallet and fixed an issue with spending GRS from SegWit multi-sig wallets involving a Trezor co-signer

Groestlcoin Integration by ivendPay Announced

22 December 2018

Together with the last Groestlcoin Development Release (see left margin) of the year, it was announced that ivendPay had started to integrate GRS (integration occurred on 26th December 2018) into their payment terminal modules. The Groestlcoin Team posted:

> **"IT company ivendPay, the developer of a universal multicurrency payment module for automatic and retail trade, intends to integrate Groestlcoin cryptocurrency—one of the oldest and the most reputable Bitcoin forks into the payment system. Groestlcoin is characterized by instant transactions with almost zero commission and is optimal for mass retail trade where micropayments are mostly used.**
>
> **According to Sergey Danilov, founder and CEO of ivendPay, Groestlcoin will become the 11th cryptocurrency integrated into the payment module. The first working vending machines for the sale of coffee, snacks and souvenirs, equipped with ivendPay modules, served the visitors of the CryptoEvent RIW exhibition at VDNKh in Moscow."**

ivendPay's payment modules for vending machines are designed to accept payments in cash, cryptocurrency or electronic currency. Cryptocurrency payments are made by scanning a QR code with a smartphone device.

OTHER HISTORICAL EVENTS

- On 20th January 2018, the first ever atomic swap between GRS and KMD (Komodo) occurred on the BarterDEX decentralised exchange (see the graphic on page 68).
- On 29th January 2018, "1st to activate SEGWIT [24 Jan 2017] & 1st LN mainnet transaction [26 Apr 2017]" was added to transaction 2da2ef1f87615d25ff20a4ac8dfb003251183df599efd1a48000086728eb33fb as an OP_RETURN message on the Groestlcoin blockchain.
- On 6th April 2018, Groestlcoin network hashrate surpassed 1 TH/s for the first time.
- On 9th April 2018, the Coinomi iOS wallet application added support for GRS.
- On 25th July 2018, Guarda Wallet added support for Groestlcoin to both its desktop and web wallets.
- On 24th August 2018, Melis added support for Groestlcoin to its multi-user, multi-signature wallet service available on desktop. It had already added support for Bitcoin, Bitcoin Cash and Litecoin.
- On 19th October 2018, Groestlcoin was added to Changelly. It is an instant cryptocurrency exchange that allows users to quickly exchange coins or tokens at competitive rates. Changelly supports over 140 cryptocurrencies.
- On 5th November 2018, the Jaxx Liberty multi-crypto wallet service added support for GRS. It directly replaced the deprecated GRS JSWallet which had a similar, but older, codebase. In late 2020, Jaxx Liberty removed support for GRS.

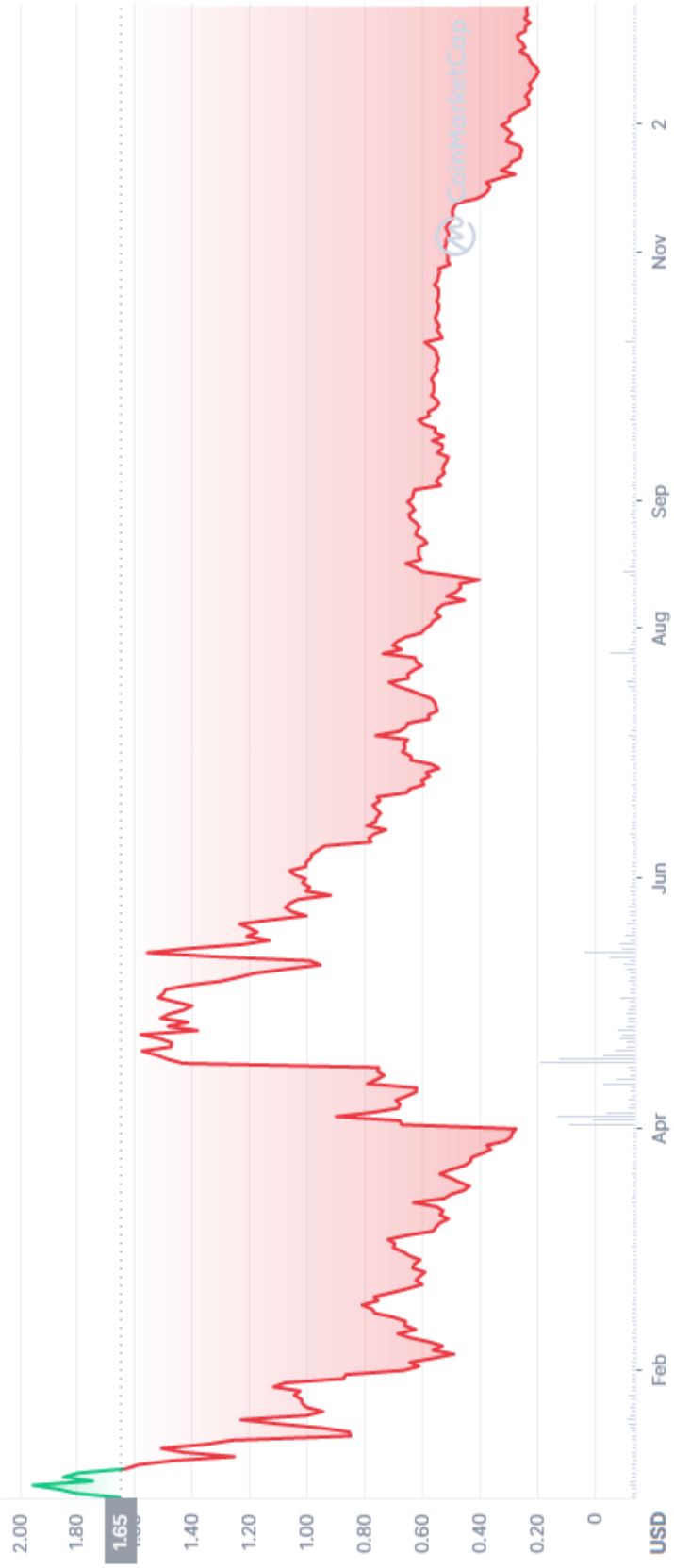
GROESTLCOIN 2018 FIAT PRICE HISTORY

OPEN 2018 GRS Fiat Price	US$1.56	1 January 2018
HIGH 2018 GRS Fiat Price	US$2.49	5 January 2018
LOW 2018 GRS Fiat Price	US$0.192	15 December 2018
CLOSE 2018 GRS Fiat Price	US$0.2338	31 December 2018

Taking into account the opening and closing GRS fiat prices, according to CoinMarketCap, the price decreased 85.01% for the year. Almost all other cryptocurrencies experienced bear market activity during the year, with some falling more than 95% in value.

The Groestlcoin market capitalisation was approximately US$114 million at the beginning of the year. It finished the year at roughly US$16.75 million with each and every GRS priced at US$0.2338.

GROESTLCOIN 2018 FIAT PRICE CHART



ELLIPAL Hardware Wallet Added Support for GRS	28 January 2019
Ledger Hardware Wallets Added Support for GRS	5 February 2019
Bitfi Hardware Wallet Added Support for GRS	14 March 2019
DigiFinex Exchange Added GRS Trading	21 March 2019
Groestlcoin Blockchain Fifth Year Anniversary	22 March 2019
Trust Wallet Added Support for GRS	13 May 2019
Groestlcoin Electrum Wallet (v3.3.6) Released	22 June 2019
Sequoir Exchange Added GRS Trading	8 July 2019
Pionex Exchange Added GRS Trading	5 December 2019
Groestlcoin C-lightning, Eclair & LND Released	22 December 2019

2019

MULTIPLE HARDWARE WALLETS ADDED GRS

SUMMARY

Many blockchain-based projects and endeavours struggled to sustain code development during the 2018 cryptocurrency bear market. A majority of cryptocurrencies had decreased in fiat price by more than 90% following all time highs in December 2017 or January 2018. As a consequence, development funds drastically declined, but the Groestlcoin Team was not deterred from committed development with help from the community.

Groestlcoin code development and testing increased to the next level with numerous Lightning Network (LN) implementations (C-lightning, Eclair and LND) and the initial releases of the Spark, GLW, ZAP GRS and Zeus GRS for desktop and mobile devices.

Besides the aforementioned releases, and other upgrades to existing wallets and application tools, multiple hardware wallets integrated GRS:

- On 28th January 2019, the ELLIPAL Titan hardware wallet device (see page 72).
- On 5th February 2019, the Ledger Nano S & Ledger Blue hardware wallet devices (see page 72).
- On 14th March 2019, the Bitfi hardware wallet (see page 73).
- On 17th April 2019, the ARCHOS Safe-T Mini hardware wallet.
- On 2nd July 2019, the KeepKey hardware wallet.

Members of the community had gained more ways to store and manage GRS. Bitfi became the official hardware wallet for Groestlcoin.

Multiple Hardware Wallets Added GRS

ELLIPAL Hardware Wallet Added Support for GRS

28 January 2019

Another way to securely store GRS on a hardware wallet device became available on 28th January 2019. ELLIPAL had released their latest firmware version upgrade (v1.8) that added support for XZC, GRS, DCR, BCD and all TRC20 & TR10 tokens. The ELLIPAL Titan hardware wallet (air-gapped, anti-disassembly, anti-tamper) can be used to store GRS, but cannot be used to buy or exchange GRS. The ELLIPAL Titan is described as follows:

"ELLIPAL brings a complete and incredibly secure next-generation cold wallet suitable for all cryptocurrency users. ELLIPAL's newest cold wallet, the "ELLIPAL Titan" will be the world's first fully metal sealed and air-gapped cold wallet with mobile support. ELLIPAL's first-generation cold wallet released in 2018 has quickly received great acclaim from users worldwide and shipped to over 70 countries."

https://www.ellipal.com/

ELLIPAL Limited is headquartered in Hong Kong and is a blockchain technology company focused on cryptocurrency safety and blockchain service facilities. In December 2021, ELLIPAL supported 41 blockchains and over 10,000 tokens.

Ledger Hardware Wallets Added Support for GRS

5 February 2019

Again, another way to securely store GRS became available for the community on 5th February 2019. Groestlcoin was integrated into the Ledger Nano S & Ledger Blue Hardware Wallets (besides KIN and NIX) with the option to manage GRS on the Ledger Manager application. Ledger developers had taken it on themselves to independently add support for GRS. Users' private keys are safe from confiscation as they are secured in certified chips. The brief history of Ledger (official statement) is:

"Ledger was launched in 2014 by eight experts with complementary backgrounds in embedded security, cryptocurrencies and entrepreneurship, united around the idea of creating secure solutions for blockchain applications. We now have over 130 employees in Paris, Vierzon and San Francisco."

https://support.ledger.com/hc/en-us/articles/360016827214-Groestlcoin-GRS-?docs=true

Bitfi Hardware Wallet Added Support for GRS

14 March 2019

The Bitfi cryptocurrency hardware wallet (The Official Hardware Wallet for Groestlcoin, GRS) integrated support for Groestlcoin on 14th March 2019. The wireless and secure device allows a user to send and receive GRS, as well as Bitcoin, Ethereum, Dogecoin and Monero, without private keys being stored anywhere.

https://bitfi.com/
https://www.groestlcoin.org/bitfi-grs-wallet/

Bitfi users can also view their transaction activity and balances by logging on to their dashboard, but can only send cryptocurrencies from the Bitfi hardware wallet device. Bitfi launched in 2018 and released the second version of their hardware wallet called 'Bitfi Knox' in March 2019.

DigiFinex Exchange Added GRS Trading

21 March 2019

The DigiFinex cryptocurrency exchange activated both the GRS/BTC and GRS/ETH trading pair markets on 21st March 2019. However, the GRS/ETH trading pair market does not exist anymore. The opening and closing GRS fiat prices on 21st March 2019, according to the CoinMarketCap price metrics website, were US$0.4288 and US$0.466 respectively.

https://www.digifinex.com/en-ww/trade/BTC/GRS (ACTIVE)
https://www.digifinex.com/en-ww/trade/ETH/GRS (CLOSED)

DigiFinex is headquartered in Singapore and was founded in 2017.

At the end of October 2018, according to historical data derived from CoinMarketCap, DigiFinex ranked 9th in terms of daily trading volume.

On 30th July 2019, both GRS/BTC and GRS/ETH trading pair markets went live on DigiFinex Korea (closed down on 1st January 2022).

On 31st March 2021, DigiFinex opened the GRS/USDT trading pair market.

DEVELOPMENT RELEASE 22nd MARCH 2019

Groestlcoin Core v2.17.2 was released as a major upgrade. It added BIP74 PSBT support (an interchange format for GRS transactions that are not fully signed yet, together with relevant metadata to help entities work towards signing it). It is intended to simplify workflows where multiple parties need to co-operate to produce a transaction

Electrum-GRS wallet (v3.3.4) was released for desktop. It included fixes to signing issues with the Archos Safe-T mini hardware wallet and full SegWit support for KeepKey. The network layer had been rewritten using asyncio and aiorpcx

Electrum-GRS wallet (v3.3.4) was released for Android.

An all-new Groestlcoin Broadcast Tool was released giving users the ability to broadcast transactions quicker to several services. By doing this, users can increase the chance of their transaction being included in blocks – leading to faster confirmation times

Groestlcoin Blockchain Fifth Year Anniversary

22 March 2019

Five years had passed since the Groestlcoin blockchain launched on 22nd March 2014. In addition to the anniversary, the first 'Development Release' of the year occurred (see left margin). The Groestlcoin Team posted the following:

"Just being here after 5 years is a massively more major victory than many - probably most - will ever realise. Over the course of the past 5 years, Groestlcoin has had committed development, numerous updates and a very turbulent altcoin market. With an explosion of altcoins in 2017 - many of them wouldn't last more than a week or month - the altcoin market got very heated. But with the great development team and loyal community, we have stayed true to this day. Our sincerest thanks to all of you who have stood with us.

Groestlcoin has maintained its vision and goal clearly throughout, we feel that with every passing day the coin becomes a stronger contender in the cryptocurrency field. While others are forced to promise the moon and other aggressive over-promises - but under-deliver - we will promise nothing and over-deliver. When you expect nothing and get everything; that's destiny. What we can promise is this—Groestlcoin is here for the long-haul!"

5 YEAR ANNIVERSARY

The official Groestlcoin Reddit and Twitter accounts had just over 107,000 subscribers and 38,000 followers respectively on 22nd March 2019.

Trust Wallet Added Support for GRS

13 May 2019

On 13th March 2019, the founder of Trust Wallet (Viktor Radchenko) tweeted the following in response to calls for GRS integration:

"You guys are more than welcome to have a look here https://github.com/TrustWallet/wallet-core and join our Telegram group https://t.me/walletcore - Let's get you on Trust Wallet."

On 13th May 2019, Trust Wallet added support for Groestlcoin. It gave community members another way to easily buy, store and manage their GRS on either an Android or iOS mobile device.

TRUST WALLET

https://trustwallet.com/

Trust Wallet was founded in 2017 and its parent organisation is Binance Holdings Limited.

Groestlcoin Electrum Wallet (v3.3.6) Released

22 June 2019

The lightweight wallet client Electrum-GRS had been updated from v3.3.4 to v3.3.6, then released as part the second Groestlcoin Development Release of the year on 22nd June 2019. Electrum-GRS was updated for desktop (Windows, Mac OSX and Linux) and Android supporting multi-sig wallets without the bloat of downloading the entire blockchain.

Electrum-GRS v3.3.6 primarily added support for the client to recognise both the Ledger Nano X and KeepKey hardware wallets.

Other changes to Electrum-GRS included:

- The default currency rate provider was changed to CoinGecko.
- It fixed a crash issue during 2FA wallet creation.
- The logging system was overhauled. Logs can now be optionally written to disk, or disabled by default.

DEVELOPMENT RELEASE 22nd JUNE 2019

Groestlcoin Samourai wallet (v0.98.86.3) upgrade was released with the added ability to sweep BIP84 (Bech32) and BIP49 (P2SH-P2WPKH) private keys

Groestlcoin Core Config Generator was launched as a simple GUI to configure the groestlcoin.conf file

The trivial 'Dumb Block Explorer' was launched written in a single PHP file. Everyone is able to run their own block explorer

Groestlcoin Simple Push TX was launched as a server to push GRS transactions via SMS. It provides a method to send transactions via SMS if the Internet is not usable

Sequoir Exchange Added GRS Trading

8 July 2019

A US based cryptocurrency exchange for instantly and easily swapping digital assets called Vertbase, now known as Sequoir, activated support for GRS to its platform on 8th July 2019. Sequoir is a simple and secure way to buy or sell GRS with USD, GBP and EUR fiat currencies in under 5 seconds.

https://app.sequoir.com/assets/grs

Sequoir is a blockchain-built exchange for instantly and easily buying, selling and swapping digital assets. It is also described as a non-custodial exchange where users have complete control of their assets/private keys. Sequoir was founded by CEO Justin Seidl on 1st August 2018, initially as Vertbase, with the primary aim to provide a simple US Dollar to Vertcoin (VTC) instant buy and sell platform.

CRYPTO EXCHANGES WHICH ADDED GRS TRADING IN 2019

Exrates (14/01/2019)
SideShift.AI (28/01/2019)
Coinroom (29/01/2019)
Bit-Z (27/02/2019)
Changeangel (01/03/2019)
OnepageX (04/03/2019)
XBTS DEX (08/03/2019)
Equicex (18/03/2019)
ChangeHero (20/03/2019)
DigiFinex (21/03/2019)
BC Bitcoin (27/03/2019)
SatoWallet (02/04/2019)
CoinAll (10/04/2019)
MrCoin (19/04/2019)
CryptoFacilEX (19/04/2019)
Boost X (03/05/2019)
Suworld (03/05/2019)
CoinDCX (03/05/2019)
Bitinka (28/05/2019)
Sequoir (08/07/2019)

CRYPTO EXCHANGES WHICH ADDED GRS TRADING IN 2019

NebliDex (10/07/2019)
DynX (12/07/2019)
Switchain (22/07/2019)
c-Patex (23/07/2019)
DigiFinex Korea (30/07/2019)
Lbank (30/09/2019)
InstaEx (01/10/2019)
Cripto Intercambio (02/10/2019)
Dove Wallet (08/10/2019)
Biteeu (11/10/2019)
VCC Exchange (28/10/2019)
Nlexch (11/11/2019)
Abra (12/11/2019)
P2PB2B (13/11/2019)
ZG.com (18/11/2019)

DEVELOPMENT RELEASE 22nd DECEMBER 2019

Groestlcoin Lightning Wallet (GLW) was released for Android (+testnet). It features a standalone SPV Groestlcoin wallet with a fully functional built-in Lightning node

Groestlcoin Spark was released (v0.2.9) for desktop and Android. It is a minimalistic wallet GUI for C-lightning through desktop/Android applications (initially orientated for technical users)

ZAP GRS was released for desktop and Android as a free cross-platform Lightning Network wallet focused on user experience and ease-of-use

Zeus GRS was released (v0.1.2) for Android as a Groestlcoin mobile application for Lightning Network Daemon (LND) node operators

KWH-GRS was released as a companion browser extension for C-lightning and Eclair

(see page 77 for other releases)

Pionex Exchange Added GRS Trading

5 December 2019

Throughout the year, there had been an explosion of cryptocurrency exchanges adding GRS trading pair markets. Pionex was the last exchange to add GRS trading for the year on 5th December 2019. A single GRS/BTC trading pair market went live. The closing GRS/BTC price on 5th December 2019 was 0.00002383 (or 2,383 Bitcoin Satoshi per GRS) on Pionex.

Pionex

https://www.pionex.com/en-US/trade/GRS_BTC/pionex.v2 (ACTIVE)

Pionex launched on 24th June 2019 and is based in Singapore. It is an exchange that aggregates liquidity from Binance and Huobi Global to allow greater liquidity, and better trading experience, for its users. It also provides 16 free in-built trading bots for users to auto trade.

Groestlcoin C-lightning, Eclair & LND Released

22 December 2019

The Groestlcoin developers had been very busy porting all the major implementations of the Lightning Network (LN). On 22nd December 2019, the final Groestlcoin Development Release of the year was unveiled and described as the greatest ever ("Let there be lightning") release in terms of technological advancements and choice. In particular, C-lightning, Eclair (French for lightning) and LND (Lightning Network Daemon) were released:

- C-lightning was released (v0.8.0) as a specification-compliant LN implementation built in C. It is a lightweight, highly customisable and standard compliant implementation of the LN protocol (only released for Mac OSX and Linux).
- Groestlcoin Eclair was released for desktop (v0.3.2.1) and Android (v0.4.8) (+testnet) as a scala implementation of the LN with the ability to run with or without a GUI. It requires a synchronised, SegWit-ready, zeromq-enabled and wallet-enabled GRS Core node.
- LND was released as a complete implementation of a LN Node. It has several pluggable back-end chain services including GRSD (a full-node), groestlcoind, and neutrino (a new experimental light client).

OTHER HISTORICAL EVENTS

- On 9th January 2019, the Coinomi Desktop multi-coin wallet added support for GRS.
- On 31st January 2019, the non-custodial cryptocurrency wallet service called Magnum Wallet added support for GRS. It closed on 30th November 2020, but users can still access their funds via private keys and mnemonic phrases using other wallets.
- On 11th March 2019, the first GRS debit card (issued by Mastercard) was released (provided through PolisPay).
- On 2nd April 2019, SatoWallet added support for GRS. It is a multi-asset cryptocurrency and exchange application for securely storing, mining, trading and transacting coins.
- On 17th April 2019, Groestlcoin was integrated into the ARCHOS Safe-T Mini hardware wallet device. It generates and stores private keys offline, preventing hackers from accessing them.
- On 31st May 2019, Groestlcoin was added to Atomic Wallet. It is a decentralized crypto wallet that supports more than 500 cryptos.
- On 19th June 2019, the Blockchair blockchain analytics service added support for GRS. It allows users to filter and sort blocks, transactions, and their content by a variety of different criteria, as well as perform full-text search over different blockchains.
- On 2nd July 2019, KeepKey hardware wallet added support for GRS.
- On 31st July 2019, AcceptCryptoz added Groestlcoin. It is a crypto directory to uncover the best places accepting cryptocurrencies nearby. On 7th August 2019, AcceptCryptoz Stickers for cars or windows were unveiled (the first batch is shown on page 78).
- On 14th November 2019, Groestlcoin was added to the HebeBlock Wallet. It is a decentralized multi-chain wallet.
- On 22nd December 2019, the GRSPay upgrade (v1.0.3.146) was released for both the Groestlcoin mainnet and testnet.
- On 22nd December 2019, the Groestlcoin Lightning Network (LN) Explorer (+testnet) was released as a simple LN explorer using LND or C-lightning as a source of network graph.
- On 22nd December 2019, an alternative full-node Groestlcoin implementation written in Go (GOLang) was released called Grsd.

DEVELOPMENT RELEASE 22nd SEPTEMBER 2019

Groestl Nodes was launched at https://nodes.groestlcoin.org/ mapping out and comparing the status of the Groestlcoin mainnet and testnet networks

The Groestlcoin Transaction Tool was released for creating unsigned raw GRS transactions and also to verify existing transactions by entering in the transaction hex and converting this to a human-readable format to verify that a transaction is correct before it is signed

Groestlcoin AGCore was released for Android. It is designed to make it easier to run a GRS Core node on active Android appliances

Electrum-GRS wallet (v3.3.8) was released for desktop and Android. It implemented a new fee-bump strategy (RBF) that can add new inputs, so any transaction can be fee-bumped

Groestlcoin Wallet (v7.11.1) upgrade was released (BIP-0032 compatible HD wallet). It added support for SegWit

Groestlwallet for iOS upgrade (v0.7.3) was released. It included fixes to BIP70 payments and potential crashes upon starting the application

Groestlwallet for Android upgrade (v89) was released

Groestlcoinomi wallet upgrade for desktop (v1.1) and Android (v1.6) was released. It updated the wallet to use the ElectrumX 1.4 protocol

The Groestlcoin BIP39 Tool was upgraded to fix BIP38 support for mainnet and testnet. It also updated the Samourai Path on BIP32 tab

Multiple Hardware Wallets Added GRS

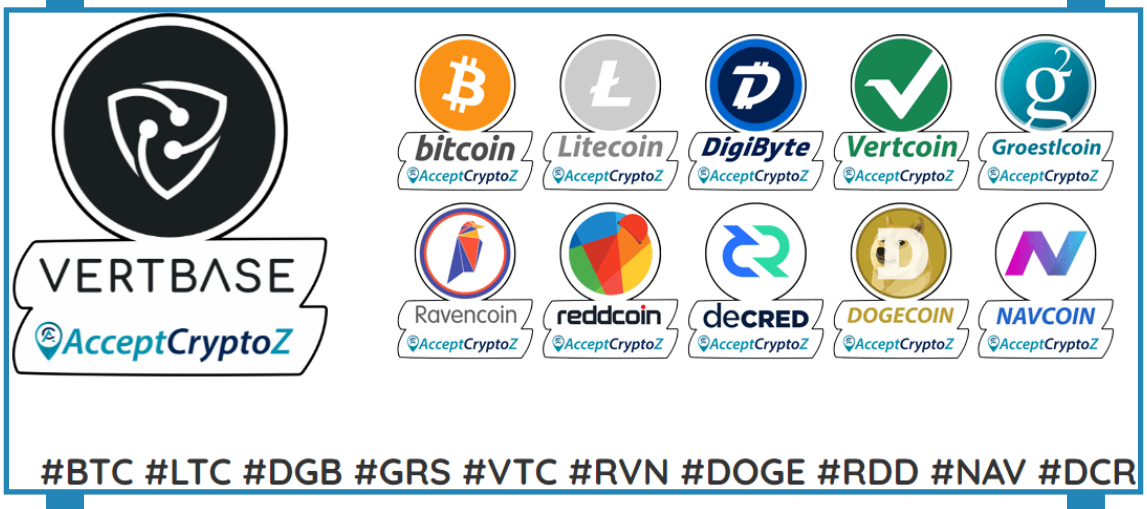
GROESTLCOIN 2019 FIAT PRICE HISTORY

OPEN 2019 GRS Fiat Price	1 January 2019
US$0.2336	
HIGH 2019 GRS Fiat Price	11 March 2019
US$0.7491	
LOW 2019 GRS Fiat Price	31 December 2019
US$0.1514	
CLOSE 2019 GRS Fiat Price	31 December 2019
US$0.1569	

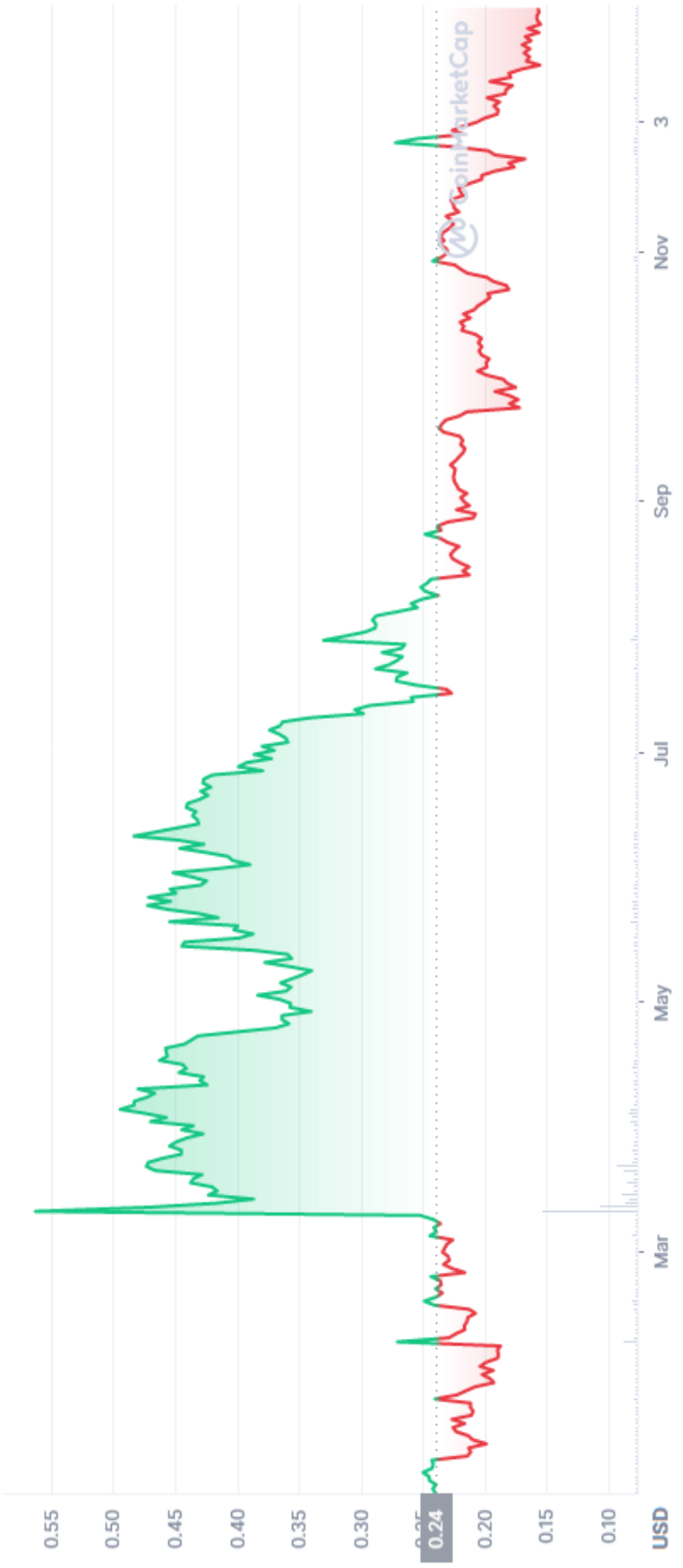
Taking into account the opening and closing GRS fiat prices, according to CoinMarketCap, the price decreased 32.83% for the year.

On 11th March 2019, the GRS fiat price more or less tripled from just over US$0.25 to US$0.7491.

The Groestlcoin market capitalisation finished the year at approximately US$11,630,000 with a corresponding GRS fiat price at US$0.1569.



GROESTLCOIN 2019 FIAT PRICE CHART



Hotbit Exchange Added GRS Trading	20 February 2020
Groestlcoin Block Number 3,000,000	11 March 2020
Groestlcoin Blockchain Sixth Year Anniversary	22 March 2020
OPOLO Hardware Wallet Added Support for GRS	4 June 2020
Groestlcoin BlueWallet Released	22 June 2020
WazirX Exchange Added GRS Trading	8 July 2020
BitGlobal Exchange Added GRS Trading	7 August 2020
Groestlcoin Electrum Wallet (v4.0.2) Released	22 September 2020
1st GRS Taproot Transaction Performed on Testnet	20 December 2020
Groestlcoin Core v2.21.0 Upgrade Released	22 December 2020

2020

GRS BLUEWALLET & EXCHANGE ADDITIONS

SUMMARY

Groestlcoin core code protocol development and testing, and quarterly development releases, continued to occur in 2020. The worldwide restrictions due to the Coronavirus pandemic were hindering people's ability to travel and go about their daily lives with normality. In March 2020, the Groestlcoin Team posted:

"Dear Groestlers, it goes without saying that 2020 has been a difficult time for millions of people worldwide. The Groestlcoin Team would like to take this opportunity to wish everyone our best to everyone coping with the direct and indirect effects of COVID-19. Let it bring out the best in us all and show that collectively, we can conquer anything."

In addition to new development releases and upgrades to existing wallet applications and tools, more exchanges (2020 high GRS fiat price recorded at US$0.735 on 19th December 2020) added GRS including:

- On 20th February 2020, the Hotbit exchange opened the GRS/BTC and GRS/USDT trading pair markets (see page 82).
- On 8th July 2020, the WazirX exchange opened the GRS/USDT trading pair market (see page 84).
- On 7th August 2020, the BitGlobal exchange opened the GRS/USDT trading pair market (see page 85).

The most notable wallet application for the year was the initial release of the Groestlcoin BlueWallet on 22nd June 2020. It is a simple application used to easily create multiple Groestlcoin simple or lightning wallets. It is built with React Native and Electrum-GRS.

Hotbit Exchange Added GRS Trading

20 February 2020

Hotbit was the first cryptocurrency exchange to open GRS trading market pairs in 2020. Both GRS/BTC and GRS/USDT went live on 20th February 2020 (only GRS/BTC is currently active). The opening GRS fiat price on the same day was US$0.2284 according to historical data derived from the CoinMarketCap price metrics website.

HOTBIT

https://www.hotbit.io/exchange?symbol=GRS_BTC (ACTIVE)
https://www.hotbit.io/exchange?symbol=GRS_USDT (CLOSED)

Hotbit is currently based in Shanghai and Taipei. It was founded in January 2018 and is registered in both Hong Kong and Estonia. Over 1,000 coins are currently listed on the exchange.

On 23rd March 2021, BitClover (formerly known as Hotbit Korea) opened three GRS trading pair markets:

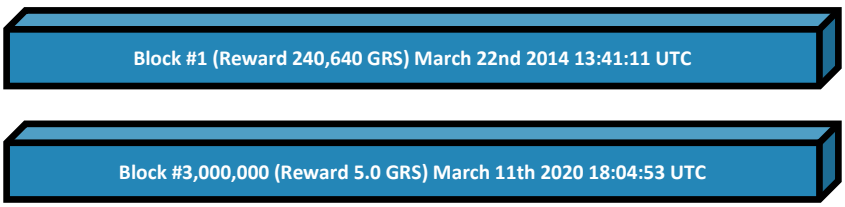
https://www.bitclover.io/exchange?symbol=GRS_USDT (ACTIVE)
https://www.bitclover.io/exchange?symbol=GRS_KRW (CLOSED)
https://www.bitclover.io/exchange?symbol=GRS_BTC (CLOSED)

Groestlcoin Block Number 3,000,000

11 March 2020

Since the launch of the Groestlcoin blockchain on 22nd March 2014, or 2,181 days to be exact, the 3,000,000th GRS block was mined and extracted by the Zergpool mining pool on 11th March 2020. When the block timestamped:

- A total of 74,607,888.8873662 GRS had been mined to date.
- A total of 188,454,222 seconds (2,181 days, 4 hours, 23 minutes and 42 seconds) had passed from block number 1 to block number 3,000,000. Therefore, the average time between GRS blocks had been 62.818074 seconds.



Groestlcoin Blockchain Sixth Year Anniversary

22 March 2020

On the sixth anniversary of the Groestlcoin blockchain, there were seven new development releases (see right margin for upgrades):

- **BIP39 Key Tool:** used offline to generate GRS public and private keys.
- **Hodl GRS:** an Android wallet application utilising AES hardware encryption, app sandboxing, and security features to protect users from malware, browser security holes, and even physical theft.
- **Seed Savior:** used to recover a slightly wrong GRS mnemonic phrase.
- **Electrum Personal Server:** aims to make using Electrum-GRS more secure and more private.
- **GRS Moonshine:** a Groestlcoin wallet for Android and iOS mobile devices (built with React Native) utilising Electrum-GRS's JSON-RPC methods to interact with the Groestlcoin blockchain network.
- **VanitySearch:** a Groestlcoin address prefix finder.
- **Groestlcoin EasyVanity 2020:** a tool used to create a more personalized bech32 addresses.

DEVELOPMENT RELEASE 22nd MARCH 2020

Groestlcoin Core (v2.18.2) was released with many protocol code level improvements and code optimisations. A new 'groestlcoin-wallet' tool was distributed alongside the core client's other executables

Groestlcoin Testnet P2pool was updated to be compatible with Groestlcoin Core v2.18.2

Groestlcoin-wpf alternative full node client (v2.19.0.18) was updated including Bech32, P2sh and testnet support

Groestlcoin Wallet (v7.38.1) was released for Android. It fixed the send and receive buttons with long text and re-aligned the 'scan button'

Sentinel Android application was upgraded (v3.5.06) with added adaptive icons for Android 8 and above. It also removed Cryptopia and added the Blockbook block explorer

OPOLO Hardware Wallet Added Support for GRS

4 June 2020

The OPOLO Hardware Wallet added support for Groestlcoin on 4th June 2020. It became another way to securely hold cryptocurrencies rather than on exchanges or in hot wallets.

In November 2021, OPOLO hardware wallet support existed for 126 coins and over 250,000 tokens. OPOLO officially describes what cryptocurrency hardware wallets are:

> **"Financial transactions are a daily part of life and the internet has made it easier and more secure to do financial transactions in the form of cryptocurrency. Cryptocurrency is the internet-based medium of exchange which uses different cryptographic functions to handle financial transactions. To make financial transactions easier and secure, hardware wallets are used to hold the user's private keys in a secure hardware device.**
>
> **With the OPOLO wallet, we are offering the best cryptocurrency hardware wallet on the market today. We gauge cryptocurrency wallets using EAL Certifications. These certifications can range from 1 or 7, with most of the best cryptocurrency hardware wallets in the market falling between 1-5.**
>
> **Our OPOLO Cosmos best cryptocurrency hardware wallet uses an EAL 6+ secure element. If you are looking for a secure Bitcoin hardware wallet, you are in the right place. Our secure Bitcoin hardware wallet is easy to backup and recover, simple to use, and comes with an EAL6+ level of security."**

GRS BlueWallet & Exchange Additions

DEVELOPMENT RELEASE 22nd JUNE 2020

Groestlcoin Core upgrade (v2.19.1) was released as a major release with many protocol level improvements and code optimisations

Hodl GRS wallet for iOS was released allowing users to utilise AES hardware encryption, app sandboxing, and protection from malware, browser security holes and physical theft

Unstoppable GRS wallet for Android was released as an application radically driven by libertarian principles

Groestlcoin Webwallet upgrade (v1.5) was released with added custom HD key derivation and added support for Esplora

Groestlcoin Esplora was released. It provides users with a convenient, powerful ad simple way to read data from the Groestlcoin blockchain and build services using it

Zeus iOS GRS was released

GRS Lightning was released for desktop and Android. It leverages Neutrino to give users a lightweight option to control their own funds

GRS LND for WP was released (v0.1.2) as a WordPress plugin that allows you to manage and use your GRS LND node

Groestlcoin Eclair upgrade (v0.3.3) was released

C-lightning v0.8.2 was released for Mac OSX and Linux

Lightning Network Daemon (LND) upgrade (v0.10.0) was released for desktop

Groestlcoin Spark upgrade (v0.2.14) was released for desktop and Android

Groestlcoin BlueWallet Released — 22 June 2020

A brand new Groestlcoin wallet application for both Android and iOS mobile devices was launched on 22nd June 2020. Groestlcoin BlueWallet (v5.3.8) was created as a simple mobile application to easily create multiple Groestlcoin simple or lightning (for spending GRS with instant transactions) wallets. It is built with React Native and Electrum-GRS.

Groestlcoin BlueWallet includes the following features:

- Supports over 30 fiat currencies.
- Supports over 30 languages.
- Supports BIP44 (HD), BIP49 (HD, SegWit), BIP84 (HD bech32, native SegWit) and BIP39 Groestlwallet-compatible (m/0'/0/0).
- Full encryption with added password security.
- Supports watch-only wallets.

WazirX Exchange Added GRS Trading — 8 July 2020

GRS trading went live on the Indian based WazirX cryptocurrency exchange on 8th July 2020. The GRS/USDT trading pair market opened with an initial US$0.2040 GRS fiat price. GRS/USDT trading volume on the first day was about 771,000 USDT.

https://wazirx.com/exchange/GRS-USDT (ACTIVE)

WazirX launched on 8th March 2018. It was founded by Indian coder and entrepreneur Nischal Shetty who wished to make it easier for Indian residents to purchase cryptocurrency. It quickly became the largest crypto exchange in India.

In November 2019, WazirX was acquired by Binance for an estimated cost of US$5-10 million.

BitGlobal Exchange Added GRS Trading

7 August 2020

Formerly known as Bithumb Global, BitGlobal announced the addition of Groestlcoin trading to their exchange platform on 6th August 2020. It was the day on which registered users were able to begin depositing GRS.

On 7th August 2020, the GRS/USDT trading pair went live on BitGlobal with the opening US$0.20 GRS fiat price.

https://www.bitglobal.com/en-us/exchange/professional?q=GRS-USDT (ACTIVE)

BitGlobal is the international branch of Bithumb. As was the case in 2021, BitGlobal is only allowed to operate in certain countries which follow AML regulations.

Groestlcoin Electrum Wallet (v4.0.2) Released

22 September 2020

The lightweight wallet client Electrum-GRS had been updated from v3.0.8 to v4.0.2, then released as part the third Groestlcoin Development Release of the year on 22nd September 2020. Electrum-GRS was updated for Desktop (Windows, Mac OSX and Linux) and Android.

Electrum-GRS v4.0.2 primarily implemented Lightning Network support (experimental).

https://github.com/Groestlcoin/electrum-grs

DEVELOPMENT RELEASE 22nd SEPTEMBER 2020

Groestlcoin Core upgrade (v2.20.1) was released as a major release with many protocol level improvements and code optimisations

The GRSPay crypto payment processor was upgraded (v1.0.5.5) including support for Payjoin, new GUI themes, a refund feature and more (+testnet)

C-lightning v0.9.0 was released for Mac OSX and Linux

Groestlcoin Spark was upgraded (v0.2.16) for desktop and Android. It added support for multi-part payments and fixed multiple code bugs

Groestlcoin Extended Public Key Converter was released

WHAT IS TAPROOT?

Sourced from the official Groestlcoin Development Release Notes on 22nd December 2020:

"Taproot, Schnorr and MAST are complementary innovations that bring fascinating and complex transactional capabilities into Groestlcoin. While Schnorr helps protect the privacy and partly increases scalability and privacy, Taproot focuses on making outputs and expenses within the network indistinguishable."

DEVELOPMENT RELEASE 22nd DECEMBER 2020

Electrum-GRS wallet (v4.0.7) was released for desktop. It added a new feature called 'Automated BIP39 Recovery'

Electrum-GRS wallet (v4.0.7) was released for Android

C-lightning v0.9.2 was released for Mac OSX and Linux

GroestlSeed was initially released as a tool to encrypt recovery seeds with AES256. It also encodes the encrypted data into a QR code which the user can print out

Emoji Seed was released as a tool used to generate a private key and then represent it as a sequence of emojis

StegoSeed was released as a tool that uses a Markov model of a text corpus to generate sentences

GroestlDice was released as tool to generate GRS BIP39 mnemonic words

(see page 87 for other releases)

1st GRS Taproot Transaction Performed on Testnet

20 December 2020

On 18th December 2020, the Groestlcoin Team announced the future implementation and activation of Taproot.

On the following day, the Groestlcoin testnet blockchain successfully activated Taproot via softfork at block number 1,933,344 (see below). It was the case that the upgraded code protocol locked in changes 2,016 blocks before the softfork occurred.


```
"taproot": {
  "type": "bip9",
  "bip9": {
    "status": "active",
    "start_time": 1607990401,
    "timeout": 1640908799,
    "since": 1933344
  },
  "height": 1933344,
  "active": true
}
```


At block number 1,936,010 on the Groestlcoin testnet blockchain, the first GRS Taproot (segwit v1) transaction was performed (see bottom of page 87). Groestlcoin had officially become the first cryptocurrency to activate and complete a Taproot transaction on testnet.

Groestlcoin Core v2.21.0 Upgrade Released

22 December 2020

Following the successful activation of Taproot on the Groestlcoin testnet blockchain on 19th December 2020, Groestlcoin Core version 2.21.0 was released as a major release. It introduced the second version bits BIP9 softfork deployment, the Schnorr Signatures for secp256k1, Taproot: SegWit version 1 spending rules and validation of Taproot Scripts.

The backwards compatibility of the Taproot softfork with all GRS wallets was also emphasised (users were going to be able to send and receive GRS whether or not Taproot had been activated). Other details given were:

- **Lock-in**: Once 75% of GRS blocks within a 2,016 block period have signalled that miners are ready to enforce the new rules.
- **Activation**: As soon as another 2,016 blocks are mined after the block at which Taproot is locked in. When Taproot becomes active, transaction-producing software will then be able to enforce a new SegWit version 1 output type, with spending rules based on Taproot, Schnorr signatures and Merkle branches.

Unfortunately, the code protocol changes did not achieve Taproot activation via softfork (see page 94 for the second attempt).

OTHER HISTORICAL EVENTS

- On 27th January 2020, a GRS Epay Card (powered by Mastercard) became available to purchase through Coinpayments.net (recharge it with GRS through PolisPayApp giftcards).
- On 14th September 2020, the 2014-2021 high Groestlcoin network hashrate was recorded at 227.78 TH/s at block number 3,256,240.
- On 6th November 2020, BoxWallet (a multi-coin CLI tool for quickly and easily installing and running a wallet or node of your choice using just a two commands) added support for Groestlcoin and Vertcoin.
- On 22nd December 2020, the Groestlcoin Seed Guardian tool was released allowing users to split and reconstruct their GRS BIP39 seeds (using Shamir's Secret Sharing Scheme).
- On 22nd December 2020, the Groestlcoin BIP39 Builder tool was released allowing users to generate and customise BIP39 mnemonic seed phrases used for creating and/or recovering a Groestlcoin hierarchical deterministic wallet.


```
{
  "txid": "dce4f38b71e8b9e6715aba939d8eabf5a9c9d70bd983e3cfeaf8bd164937fc19",
  "hash": "ecc3f7c8635ebd3ee0607a97608b5a8b13c019377991aa893f2e23b68382e6a7",
  "version": 2,
  "size": 203,
  "vsize": 122,
  "weight": 485,
  "locktime": 0,
  "vin": [
    {
      "txid": "b9ef3f31be6a5576ed278f4c7a9102fb9efe3a3f97eb2c9b8808b0519c49c8c3",
      "vout": 0,
      "scriptSig": {
        "asm": "",
        "hex": ""
      },
      "txinwitness": [
        "3044022020da22d3eca3a2a1512e515659885e788f208722f08823ba05de9ddfbf450ac4022053c8c86684e09d53adf06436a2439dd82fc6008ddafb226e23e126db6f94fe0301",
        "02bd520b850fd18a081fe395768436b102c14739b2b0cd8c3ce9d00e429b564027"
      ],
      "sequence": 4294967295
    }
  ],
  "vout": [
    {
      "value": 0.133,
      "n": 0,
      "scriptPubKey": {
        "asm": "1 3a106e7bd097ae8ccc71c6f032fa03c05c7ecd80208a4ee4dd63e69e04a90f64",
        "hex": "51203a106e7bd097ae8ccc71c6f032fa03c05c7ecd80208a4ee4dd63e69e04a90f64",
        "address": "tgrs1p8ggxu77sj7hgenr3cmcr97srcpw8anvqyz9yaexav0nfup9fpajqqtcpet",
        "type": "witness_v1_taproot"
      }
    }
  ],
  "blockhash": "0000001d26d73677d74993601468a7997c32deb5170a87be3d88fbde179f3a34",
  "confirmations": 439822,
  "time": 1608498505,
  "blocktime": 1608498505
}
```

GRS BlueWallet & Exchange Additions

GROESTLCOIN 2020 FIAT PRICE HISTORY

OPEN 2020 GRS Fiat Price	1 January 2020
US$0.1564	
HIGH 2020 GRS Fiat Price	19 December 2020
US$0.735	
LOW 2020 GRS Fiat Price	13 March 2020
US$0.08311	
CLOSE 2020 GRS Fiat Price	31 December 2020
US$0.3648	

Taking into account the opening and closing GRS fiat prices, according to CoinMarketCap, the price increased 133.3% for the year.

On 12th and 13th March 2020, the GRS fiat price decreased more than 50% (the Bitcoin fiat price fell from about US$8,000 to US$4,000).

GROESTLCOIN 2020 FIAT PRICE CHART

GRS Wallet for Android (v4.4.3.4) Released	22 March 2021
Sparrow-GRS Wallet (v1.0.0) Released	22 March 2021
2014-2021 High GRS Fiat Price Recorded	9 April 2021
GRS Fully Integrated into Travala and Binance Pay	26 April 2021
Groestlcoin & KnitFinance Collaboration Announced	4 May 2021
Groestlcoin Blockchain Activated Taproot	25 June 2021
CoinEx Exchange Added GRS Trading	17 September 2021
Groestlcoin Core v22.0 Upgrade Released	22 September 2021
NGRAVE Zero HW Ready to Ship with GRS Support	2 November 2021
Groestlcoin Christmas 2021 Development Release	22 December 2021

2021

TAPROOT ACTIVATION VIA SOFTFORK

SUMMARY

Despite the pandemic and Coronavirus restrictions, the Groestlcoin Team continued to develop and test code. Numerous updates to existing wallets and application tools were released on quarterly development release dates in March, June, September and December 2021. Besides upgrades to wallet applications, payment processors, LN implementations and other Groestlcoin application tools, brand new releases included:

- On 22nd March 2021, the wallet application called 'GRS Wallet' for Android mobile devices (see page 92).
- On 22nd March 2021, the Sparrow-GRS desktop wallet application supporting most hardware wallets (see page 92).
- On 22nd September 2021, a new tool making it easier to verify signatures online/offline called VerifySignature (see page 95).
- On 22nd December 2021, Audio2bip39 application used to generate BIP39 mnemonic phrases from audio recordings (see page 96).
- On 22nd December 2021, Blockbook Signet as an open-source Groestlcoin block explorer with complete REST and websocket APIs (see page 96).

A major Groestlcoin blockchain milestone occurred on 25th June 2021. It was the day on which the Groestlcoin blockchain was the first code protocol to successfully activate Taproot via softfork (at block number 3,644,928). The first GRS Taproot transaction was broadcast and sent four blocks later (also on 25th June 2021).

GRS for Android (open-source and free software) features include:

No registration is required

All GRS stored in the wallet is protected utilising industry-leading hardware encryption

The application uses SPV to directly connect with the Groestlcoin blockchain. This feature enhances performance

If a user loses and brakes their device, a simple backup phrase is all that is required to restore the wallet on another one

GRS Wallet for Android (v4.4.3.4) Released

22 March 2021

On the 7th anniversary of the Groestlcoin blockchain, the Groestlcoin Team announced nine upgrades or releases. Code development had been largely unaffected by the pandemic and Coronavirus restrictions.

It was the day on which the first release of 'GRS Wallet' for Android (v4.4.3.4) became available for the community to download from the Google Play Store. It became the latest secure and reliable standalone client (no server at risk of going down or being hacked) to store GRS on a mobile device. It is described as user-friendly with no user registration required.

GRS WALLET GRS FOR ANDROID

https://github.com/Groestlcoin/groestlwallet-android/

DEVELOPMENT RELEASE 22nd MARCH 2021

Electrum-GRS wallet (v4.0.9) was released for desktop and Android. It fixed a regression introduced in v4.0.8 that was preventing users from paying BIP70 invoices

C-lightning v0.9.3 was released for Mac OSX and Linux

Groestlcoin Hardware Wallet Interface (HWI) (V1.2.1) was released for desktop. It provides a standard way for software to work with hardware wallets without needing to implement specific device drivers

The GRSPay crypto payment processor was upgraded (v1.0.7.0) with new setup UI

GRSPay Vault (v1.0.7) was released. It allows web applications to access your hardware wallet and enables a better integrated user experience

GRS RPC Explorer was launched as a simple, self-hosted GRS explorer, driven by RPC calls to Groestlcoin nodes

Sparrow-GRS Wallet (v1.0.0) Released

22 March 2021

The first release of Sparrow-GRS (v1.0.0) was made available as a brand new Groestlcoin wallet for Windows, Mac OSX and Linux. It provides users with as much detail as possible about wallet setups, transactions and UTXOs in a manageable way. It can function in both online (connects to public Electrum-GRS servers) and offline (useful as a transaction editor) modes. The official Groestlcoin website describes it succinctly as follows:

"Sparrow-GRS is a modern desktop Groestlcoin wallet application supporting most hardware wallets and built on common standards such as PSBT, with an emphasis on transparency and usability."

GROESTLCOIN SPARROW WALLET

https://github.com/Groestlcoin/sparrow/releases/tag/v1.0.0

Sparrow-GRS supports the Ledger, Trezor and KeepKey third-party hardware wallets. It also has full support for single or multiple signature wallets on common script types.

2014-2021 High GRS Fiat Price Recorded

9 April 2021

Since 13th March 2020, when almost all cryptocurrencies drastically descended to yearly lows, the overall cryptocurrency market had been extremely bullish. The GRS fiat price had increased from US$0.08311 on 13th March 2020 to its 2014-2021 high price at US$2.79 on 9th April 2021 (a 3,257% return).

What follows is a table of historical data derived from the CoinMarketCap price metrics website showing the fiat prices and market capitalisation of the top 6 cryptocurrencies and Groestlcoin on 9th April 2021:

	Open (US$)	High (US$)	Low (US$)	Close (US$)	Market Cap (US$)
Bitcoin	58,327	58,937	57,807	58,245	1,087,911,057,870
Ethereum	2,089	2,103	2,055	2,072	239,127,946,688
Binance Coin	418.05	453.70	405.44	453.18	70,030,932,980
Ripple	1.05	1.08	0.9866	1.02	46,350,091,394
Cardano	1.22	1.23	1.19	1.20	38,451,053,585
Polkadot	41.35	42.05	40.16	40.85	37,897,731,571
Groestlcoin	1.04	2.79	1.01	2.30	177,500,262

On 9th April 2021, according to historical data sourced from CoinMarketCap, the top 10 cryptocurrencies were:

Bitcoin, BTC = US$58,245.00
US$1,087,911,057,869.80

Ethereum, ETH = US$2,072.11
US$239,127,946,688.05

Binance Coin, BNB = US$453.18
US$70,030,932,980.39

XRP, XRP = US$1.02
US$46,350,091,393.64

Tether, USDT = US$1.00
US$43,841,876,424.83

Cardano, ADA = US$1.20
US$38,451,053,584.69

Polkadot, DOT = US$40.85
US$37,897,731,570.58

Uniswap, UNI = US$29.56
US$15,469,952,724.16

Litecoin, LTC = US$221.86
US$14,809,848,423.42

Chainlink, LINK = US$31.63
US$13,254,306,166.43

On the same day, Groestlcoin was ranked 313 on CoinMarketCap with a market capitalisation of US$177,500,262.02 and US$2.30 GRS fiat price

GRS Fully Integrated into Travala and Binance Pay

26 April 2021

On 9th April 2021, it was announced that Groestlcoin was being integrated into Travala (an online travel agency) backed by Binance. Groestlcoin was also being integrated into Binance Pay (see right). The community looked forward to being able to book over 3 million travel products in over 230 countries either directly, or using the balance in their Binance account via Binance Pay. Groestlcoin Lead Developer jackielove4u posted:

"We are very pleased to be bringing this amazing real-world use case for GRS and opening opportunities for our community to be able to take advantage of Travala.com's reputable offerings which include receiving preferential pricing and discounts when booking trips when paying with GRS. Be on the lookout for travel incentives including GRSBacks and GRSDiscounts exclusively for GRS holders upon launch!"

On 26th April 2021, Groestlcoin was officially fully integrated into Travala and Binance Pay. The first discount offered to people paying with GRS was 10% back for hotel and activity booking until 31st May 2021 (to celebrate the launch of the service).

Binance Pay is a contactless, borderless and secure cryptocurrency payment technology designed by Binance

Binance also has a merchant program where businesses can register and receive cryptocurrency payments

BINANCE PAY

Taproot Activation via Softfork

DEVELOPMENT RELEASE 22nd JUNE 2021

Groestlcoin Core v2.21.1 was released with Taproot softfork code protocol changes

Electrum-GRS wallet (v4.1.2) was released for desktop. It was the second major release with support for the Lightning Network. It brought in features specifically aimed at keeping the wallet lightweight and trustless

Electrum-GRS wallet (v4.1.2) was released for Android

C-lightning v0.10.0 was released for Mac OSX and Linux. It added multiple technical improvements

Groestlcoin Eclair (v0.6.0) was released with improved start-up performance and other enhanced features

Groestlcoin HWI (v2.0.1) was released with multiple technical fixes

GRS Vault (v2.0.1) was released as an update to the HWI

The GRSPay crypto payment processor was upgraded (v1.1.2.0) including Shopify support and support for WebAuthN/FIDO2 as second factor

GroestlTip was relaunched utilising the power of Streamlabs to provide a standalone web application

Electrum Personal Server (v0.2.2) was released with massive speedup to startup time and initial import of addresses

Groestlcoin Core RPC Auth Generator was launched as a tool for users unfamiliar with running CL scripts to create salted, hashed password value

Groestlcoin & KnitFinance Collaboration Announced

4 May 2021

Collaboration between Groestlcoin and KnitFinance was announced on 4th May 2021. Work had begun to bridge the Groestlcoin blockchain with wrapped tokens on chains including Ethereum, the Binance Smart Chain and Matic. Groestlcoin plan to use the multi-chain solution provided by KnitFinance for getting GRS on multiple chains. KnitFinance is described as:

"Knit Finance is a unique decentralized protocol that integrates its wrapped protocol across multiple chains, bridges, and real-world markets with yield, lend, trade, and margin services through smart contracts. KnitFinance bridges multiple non-Ethereum chains with wrapped tokens. Any asset can be leveraged within Ethereum DeFi and implemented into liquid lending and trading."

https://knit.finance/

It is a great opportunity for owners of the native GRS coin to leverage their holdings in the DeFi space. The tokenised kGRS will be 100% verifiably backed 1:1 with the native GRS coin. The Groestlcoin team are extremely excited to explore the avenues that this new concept opens up to the community including DeFi applications and further smart-contract capabilities.

Groestlcoin Blockchain Activated Taproot

25 June 2021

On 22nd December 2020, Groestlcoin Core version 2.21.0 was the first release attempting to initiate Taproot signalling, but unfortunately, six months later, Taproot activation failed. An upgraded Groestlcoin Core (v2.21.1) was released as part of the second quarterly development release on 22nd June 2021. It included a modified signalling method called Speedy Trials (a variation of BIP9 versionbits described in BIP134).

On 24th June 2021, the Groestlcoin blockchain locked in (at least 95% of GRS blocks had signalled as support by miners) Taproot at block number 3,642,912 (extracted by Suprnova.cc). The Bitcoin blockchain locked in Taproot at block number 687,284 on 12th June 2021.

On 25th June 2021, Groestlcoin became the first blockchain to successfully activate Taproot via softfork (see block below extracted by MiningPoolHub). Syscoin was the first blockchain to activate Taproot via hardfork on 1st May 2021. Furthermore, the first GRS Taproot transaction on the Groestlcoin mainnet occurred at block number 3,644,932 with OP_RETURN message "Hello_TAPROOT_Hello_dflate_;-)".

Block #3,644,928 (Reward 5.0 GRS) June 25th 2021 12:17:40 UTC

CoinEx Exchange Added GRS Trading

17 September 2021

Two GRS trading pair markets (GRS/BTC and GRS/USDT) opened on the CoinEx global cryptocurrency exchange on 17th September 2021. The opening Bitcoin Satoshi (1 BTC Sat = 0.00000001 BTC) and USDT prices per GRS on the exchange were 2,127 and 1.0271 respectively.

https://www.coinex.com/exchange?currency=usdt&dest=grs&tab=limit (ACTIVE)
https://www.coinex.com/exchange?currency=btc&dest=grs&tab=limit (ACTIVE)

CoinEx was founded in December 2017 with its headquarters located in Hong Kong, China. It provides spot trading, perpetual contracts, margin trading, mining, AMM and other trading functions.

Groestlcoin Core v22.0 Upgrade Released

22 September 2021

The final upgrade to the Groestlcoin Core (v22.0) wallet in 2021 was released (featuring the technical equivalent of Bitcoin Core v22.0, but with Groestlcoin specific patches) on 22nd September 2021. As a reminder, the full Groestlcoin Core wallet client is the backbone of the network. It offers a high level of security, privacy and stability. However, it has fewer features and requires a lot of hard drive space and memory.

Also on 22nd September 2021, a new tool to make it easier for users to verify signatures online/offline was released called VerifySignature:

"GRS VerifySignature is an implementation that can accept 'get parameters', so it is linkable externally, and users could easily copy and paste one link to their counterparties to verify. This should be useful for people who do OTC and regularly do proof-of-funds before the transaction.

This tool makes it easier for users to verify signatures online/offline."

DEVELOPMENT RELEASE 22nd SEPTEMBER 2021

Electrum-GRS wallet (v4.1.5) was released for desktop. It enabled smarter Lightning Network (LN) pathfinding (if trampoline is disabled) and other technical fixes and improvements

Electrum-GRS wallet (v4.1.5) was released for Android

The GRSPay crypto payment processor was upgraded (v1.2.3.0) (+testnet) with support to spending to Taproot. It also enabled users to mark GRS payouts as manually paid, show immature GRS balances on the walletsend page and several other changes

C-lightning v0.10.1 was released for Mac OSX and Linux. It added multiple technical improvements

GRS RPC Explorer was upgraded (v3.2.0) (+testnet)

Groestlcoin BIP-0032 HD wallet upgrade (v8.14) (+testnet) was released for Android. It improved the graphics and other functionalities

NGRAVE Zero HW Ready to Ship with GRS Support

2 November 2021

A digital asset security company named NGRAVE announced the launch of their flagship NGRAVE ZERO hardware wallet on 27th April 2020.

On 26th May 2020, pre-orders of the fully offline wallet device went live on Indiegogo (an American crowdfunding website founded in 2008). It was the time at which Groestlcoin support on NGRAVE ZERO was announced besides 40 other cryptocurrencies. NGRAVE ZERO is described as:

"NGRAVE ZERO has a built-in fingerprint sensor and camera with built-in light sensor. Supports mnemonic phrases and NGRAVE Perfect Key: the 64 character hexadecimal equivalent of the 256 bit master seed."

NGRAVE

https://www.ngrave.io/

On 2nd November 2021, the first batch of NGRAVE ZERO hardware wallets were ready to ship. The first shipment occurred the following week based on chronological pre-order numbers.

Groestlcoin Christmas 2021 Development Release

22 December 2021

As part of the final Groestlcoin Development Release in 2021, 5 upgrades (see left) and two releases were made freely available. The Audio2bip39 application and Groestlcoin Blockbook Signet were released:

- Audio2bip39 is an application used to generate BIP39 mnemonic phrases from audio recordings. It only supports 24 word phrases.
- Blockbook Signet is an open-source Groestlcoin signet blockchain explorer with complete REST and websocket APIs that can be used for writing web wallets and other apps that need more advanced blockchain queries than provided by groestlcoind signet RPC.

The Groestlcoin Team had been hard at work developing new projects as well as building upon and maintaining existing ones in 2021:

"This year has possibly been the strangest year in many of our lifetime, but with several booster campaigns starting up, hopefully 2022 will see the resuming of post-virus normality. 2021 wasn't all that bad though. Groestlcoin is once again leading the charge as being a blockchain pioneer, being known as the first to activate and complete a SegWit transaction, and now for being the first cryptocurrency to activate and complete a Taproot transaction on Mainnet on 25-06-2021."

DEVELOPMENT RELEASE 22nd DECEMBER 2021

C-lightning v0.10.2 was released for Mac OSX and Linux. It included technical improvements such as allowing payments to be retired without effecting the status of prior attempts

The GRSPay crypto payment processor was upgraded (v1.3.6.0) with multiple features and Taproot support

Groestlcoin Spark was upgraded (v0.3.1) for desktop and Android with multiple technical and UI improvements

Groestlcoin BlueWallet was upgraded (v6.1.9) with additional features including new languages, dark mode and Tor support

GRS RPC Explorer was upgraded (v3.3.0)

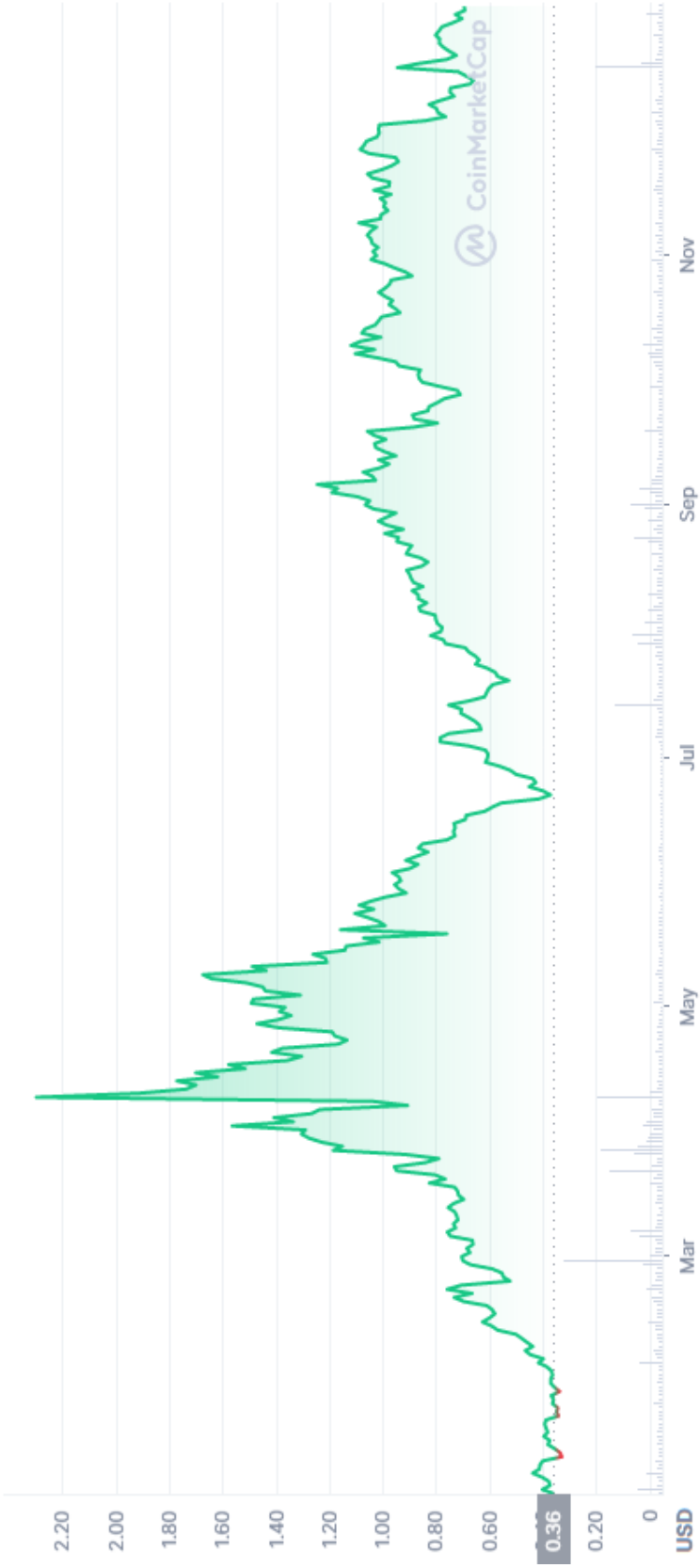
OTHER HISTORICAL EVENTS

- On 26th February 2021, AtomicDEX v0.4.0 (formerly BarterDEX) added support for GRS. AtomicDEX is a decentralised exchange using atomic swaps where users' funds can't be frozen and orders can't be stopped.
- On 23rd March 2021, the Hotbit Korea cryptocurrency exchange opened the GRS/KRW, GRS/BTC and GRS/USDT trading pairs.
- On 10th May 2021, Microsoft integrated Groestlcoin into the Azure Blockchain Template.
- On 20th May 2021, Groestlcoin partnered with Simplex. Simplex empowers hundreds of parties to enable millions of people to buy billions of dollars of cryptocurrencies.
- On 28th May 2021, the Groestlcoin Telegram news channel was created where Groestlcoin news alerts are regularly posted.
- On 31st May 2021, Swyftx Exchange (AUS) added GRS trading.
- On 3rd June 2021, Block Monitor added support for GRS. It is a service that allows users to monitor GRS address balances without the requirement for passwords.
- On 10th July 2021, Coinzark added support for GRS (Coinzark relaunched). When it relaunched, CoinZark initially supported Bitcoin (BTC), Litecoin (LTC), Monero (XMR), Groestlcoin (GRS), Dogecoin (DOGE) and DigiByte (DGB).
- On 4th September 2021, Infinity Wallet added support (v1.0.77 beta) for Groestlcoin (GRS), Shiba Inu (SHIB), B2X, Polygon (MATIC) and The Graph (GRT). Groestlcoin was only added to the secure Infinity Wallet desktop application.
- On 6th November 2021, Uquid added support for Groestlcoin (2nd Binance integration). It is a hub where customers can not only buy digital products like gaming software, popular brand vouchers, or giftcards, but can also make payments for top ups or bills.
- On 10th December 2021, Bitrefill added support for Groestlcoin (3rd Binance integration) providing a catalogue of giftcards, prepaid mobile refills and Lightning Network (LN) services.
- On 19th December 2021, Coinsbee added support for Groestlcoin (4th Binance integration) allowing people to easily and securely buy giftcards, payment cards and mobile phone top-up cards with cryptocurrency.

GROESTLCOIN 2021 FIAT PRICE HISTORY

OPEN 2021 GRS Fiat Price	1 January 2021
US$0.3663	
HIGH 2021 GRS Fiat Price	9 April 2021
US$2.79	
LOW 2021 GRS Fiat Price	11 January 2021
US$0.2893	
CLOSE 2021 GRS Fiat Price	31 December 2021
US$0.6916	

Taking into account the opening and closing GRS fiat prices, according to CoinMarketCap, the price increased 88.81% for the year. Other price milestones during 2021 were:

- On 22nd March 2021, the GRS fiat price surpassed US$1 for the first time since June 2018.
- On 9th April 2021, the GRS market capitalisation reached a 2014-2021 high at approximately US$215 million.

GROESTLCOIN 2021 FIAT PRICE CHART