



Galilei

puj waw' pop meQ vote wa'Dich 'aqnaw ylnmey Huch je mIS qur ngoq, chu bovnam
zerocoin tob--lach'eghdi, tob--Qay pln'a' 'ej node wlv puj waw' pop meQ

chIS nav V1.11

Maik Broemme¹, November 2019

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Galilel

nap qa'

wa'vatlh chenmoH 'ej Huch motlh tob DIS chonayta' wa'vatlh motlh Huch Huch ylnmey ghu' plm. Huch ylnmey bISuDqu' 'e' jen DuH Sovbe'lu'bogh Qoylu' lo'laHghach 'ej mlr bot ngab Qap ghom mej tuq HutlhwI'. qay' ngu' qum 'ej 'oH vaj plmchugh chuqmey poHmey Huch wani'vammo' tIha' che' veb DIS puS. nep ylnmey Huch, baS chu' bot mlr DuH Dan, ghaj jen 'eb plq motlh ylnmey Huch Dan. galilel ghaH mlw vegh chu' cham cha' qaStaHvIS nav lo' 'ay'.

much

galilel Huch ghom ylnmey Huch naQ Dan De' 'ej mInDu'llj Qap ghom qech lo' yltungHa', qaH QaQ. voq Duqlppu'chugh woQ jInmol team Qapla' ngaQHa'moHwl'mey. vaj, github *galilel-jInmol*², Hoch Ser qaStaHvIS mInDu'llj mlchHom, Hoch Dub megh'an ngoq DaH nobvam ghoch 'oH pong 'ej *Sov tob Hach (kyd)*³ mInDu'llj DIvI' chenmoHta' maH.Hal poSmoH 'ej jegh chaw' jInmol lo' *mit*⁴, *gplv3*⁵ 'ej *CC-pong-nc 4.0*⁶. *transifex*⁷ waw' lo' mughmeH Daq je.

galilel Huch

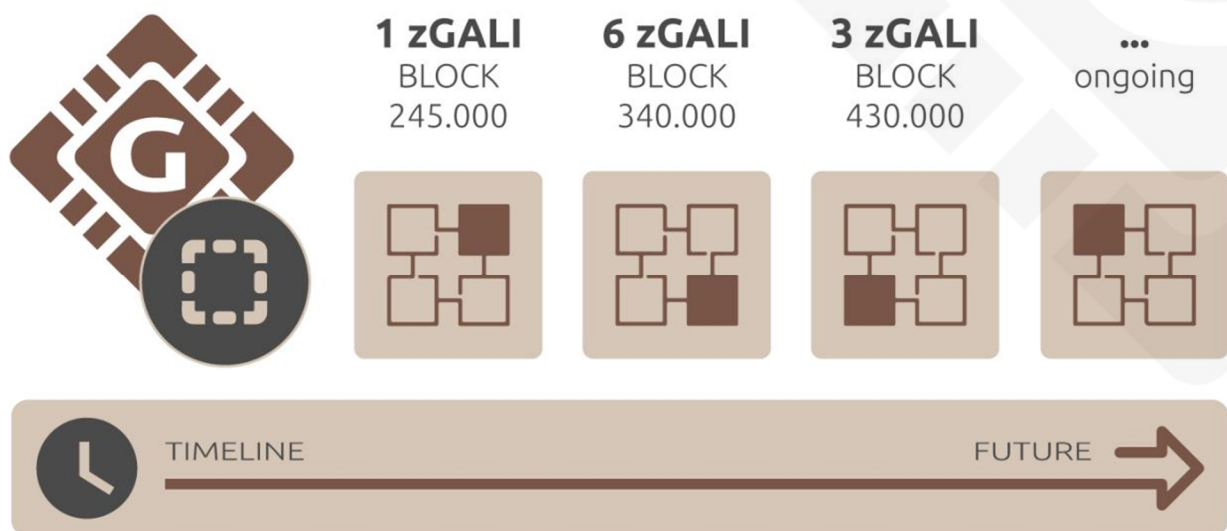
galilel Huch (gali 'ej zgali) poS-Hal 'ej tob--lach'eghDI' ylnmey Huch nom (swiftx lo'), pegh (*zerocoin*⁸ protocol) taHtaHvIS Qay mach je. ['elbogh ngoQ naQmoH wani'mey taHtaHvIS 'ej Sovbe'lu'bogh Qoylu' pat lo', baS wej wuv vay' 'elbogh porgh SeH qet chenmoH. ghaHDAQ. pong yotlmeyvo' pat boghajtaHvIS, nuvpu' wa'SanID ngoy' je De' lo' leH chenchoH pagh Vas lang qay' tu'lu'.

qay' taS je

nuj tInqu' ghaj Daj, pong Dat Soq chenmoH 'ej lo' law' wey pong plm ngoQ 'ej Huch yInmey bot mlr cham hype. qabuQ DuH, naD, ngevwl' 'ej Qay wa'SanID 'ol wa' poQ 'ach lo' law' waw' yIDil chavmoH. wa'vatlh chonayta' ta' poj bot chenmoH neH mlr naD, nlv'e' yllo', vaj pa' nlv'e' puS puj mlchHom qaStaHvIS Qu'mey potlh bot mlr chel MaQa' lo' yInmey Huch chav.

dynamic zerocoin tob--Dabbogh Hoch'e' (dzPoS)

zerocoin tob--Dabbogh Hoch'e' (zpos) 'ach wa' qabuQ bot mlr cham lIH neH 2018 pong pivx ghom. 'ach cham lo' ta' neH wuq mlw mlr bot 'ej wej ngeD lo' vay' chaw' Hoch DaH nobvam tlham pop neH Hal ngoq.



millogh 1. dynamic zerocoin tob--Stake pop waw' blockchain phase.

qaStaHvIS galilel, wa' qabuQ mlwvam'e' zerocoin vltoDmeH chenmoH maH. qaStaHvIS ml', lo'laHghach naQ 'oS jIHMej pop puS chenmoH vltoDmeH zerocoin. So'meH mach



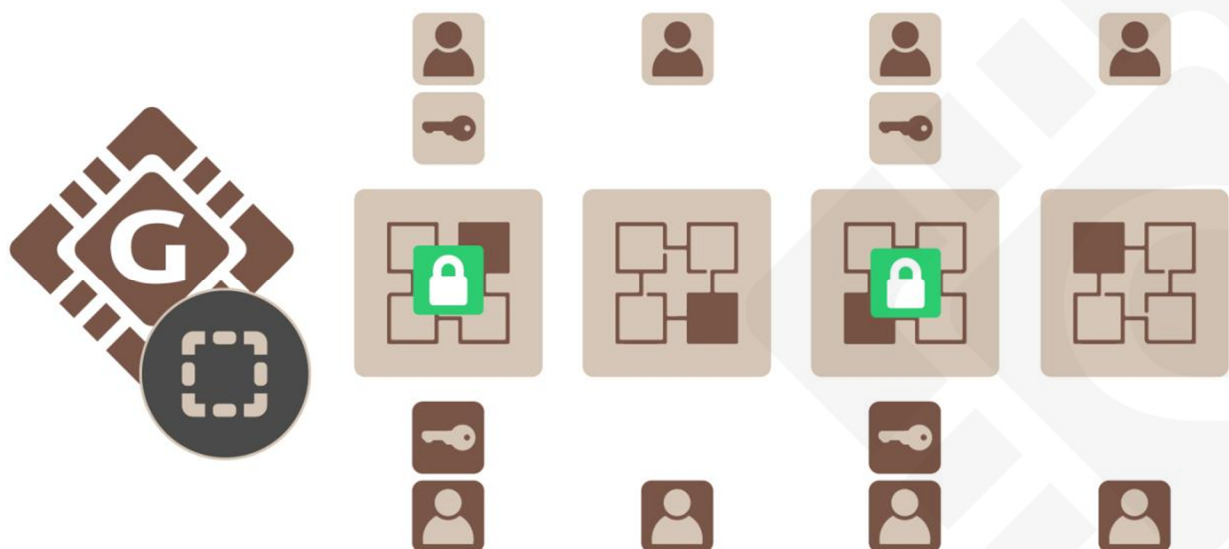
Galilel

qIt wa' 'oH [1]. qaStaHvIS wa'DIch poH – plmchugh chuqmey poHmey poH – So'meH mach qIt reH lo' maH ngoQ waH. ghoS qay' 'e' lulljbe'lu'bogh nlvbogh DanoHmeH zerocoin chenmoH tuq HutlhwI' bot 'ej 'oH jen laH taS tu' bot 'ach 'oH ngeH pa' mlr lomqa' Huch chenmoH 'eb. qaStaHvIS cha'DIch poH – naQ phase – ml' tlham nlvbogh waw' total bot pop qllmeH plj Hoch wIta'pu'. ghu'vam mach 'eb tuq HutlhwI' bot chenmoH nob.



tob--lo' (ghPoT)

qaStaHvIS Huch Qay SabtaHbogh DaH potlhmeYDaq HuchQeD, 'oH DuH wa' meq qabuQ vaj 'e' amount laH assign SIQwl' wa' neb. qIt qaStaHvIS ghu' pat Qu'mey potlh. QIn pagh QIn-lo'laHghach, malja' 'ay' 'oHbe' 'ej neH ngevwl' neH Daq per chaw' 'oH. neb ngeH nuv bIH 'ut lutu'lu'bej SoQ chenmoH wa' wa' mIr SabtaHbogh cha' tlhIH Dop.



mIllogh 2. tob--Transaction encrypt subject.

qaStaHvIS galilel, Saturjaj De' yotlh DaH nobvam 'ej 'oH lungeH je Qay, baS ngevwl' neH bot maH. ngoq yotlh 'ej qIt neH pong SIQwl', baS Qay Sutlh laD 'oH. Qay chaw' 'oH ghIgh qay' 'ej yIDil mlw mlw neb nuv ngu' Hoch ba'taHbogh potlhmeYDaq Huch neb chaw'.

DuD tob--toD (ghPoS)

wa'vatlh tob--toD (PoS) qo' jo mlw QaD, pop chenmoH 'oH neH Hoch nI' law' qet toD mlchHom pat. sign-up vay' SoH tob--toD pool 'ej toD neH chen wa' taS qay'. 'ach qay' pool ghot nIS pol ylvoqQo' je qabuQ ml' Huch wa' Qay. laH Dev ghu' 'e' ngevwl' nuj tlnqu' ghaj ml' Huch neH puS mlchHom pol. puj ghu' yotlhmevvo' pat ghoS 'ej potlh 'ay' rap vuD Slch. bIH vItodmeH, vaj pong zerocoin tob--pol rap qay' limitat je (zpos).



millogh 3. qIt mlw vo' galilel network pop baj.

qaStaHvIS galilel, qay' taS ghaH naQmoH wani'mey Qochbe' mlw tob--toD (ghpos), qatlh DuD 'oH pong galilel DuD. Sach maH tob--pol ghogh Habli' vItodmeH mlchHom cha' tlhIH Hoch vIllegH 'ej vItodmeH Sovbe'lu'bogh Qoylu'. ghogh Habli' vItodmeH reH wa'maH [10] puS vItu' bot pop yIDil vaj mlchHom toD ghogh Habli' vatlhvi'. qaStaHvIS vISIQ ninety [90] yIDil vatlhvi' pln'a' node nuv. rap vIqlch je chep node bot mIr lo'taHvIS mach ml' bot ghogh Habli' vItodmeH mlchHom natlhlu'mo' Qav.

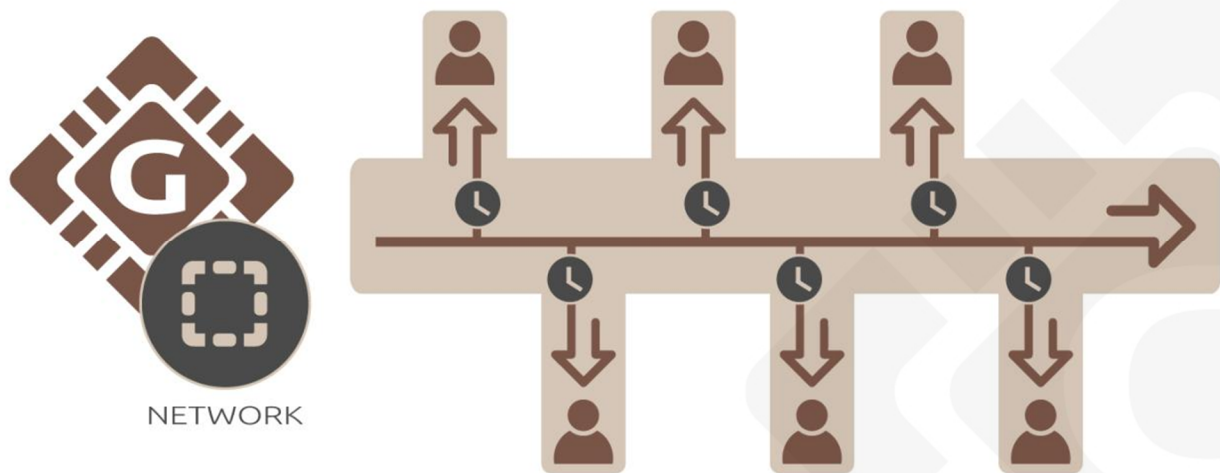
tob--toD pop tlham DuD

Segh toD ¹	choq	pln'a' node
pov (GALI)	30%	70%
pov (zGALI)	60%	40%
ghogh Habli' (GALI)	10%	90%
ghogh Habli' (zGALI)	20%	80%

¹ waw' ml' 5 GALI pop > bot 430,000

wabmey toD (gTD)

wa'vatlh ghogh Habli' toD dependent pat vISov toD Huch ml' 'ej, Huch ngaQ be puj 'ej pop chenmoH chaw' wabmey *deposit Qap*⁹.

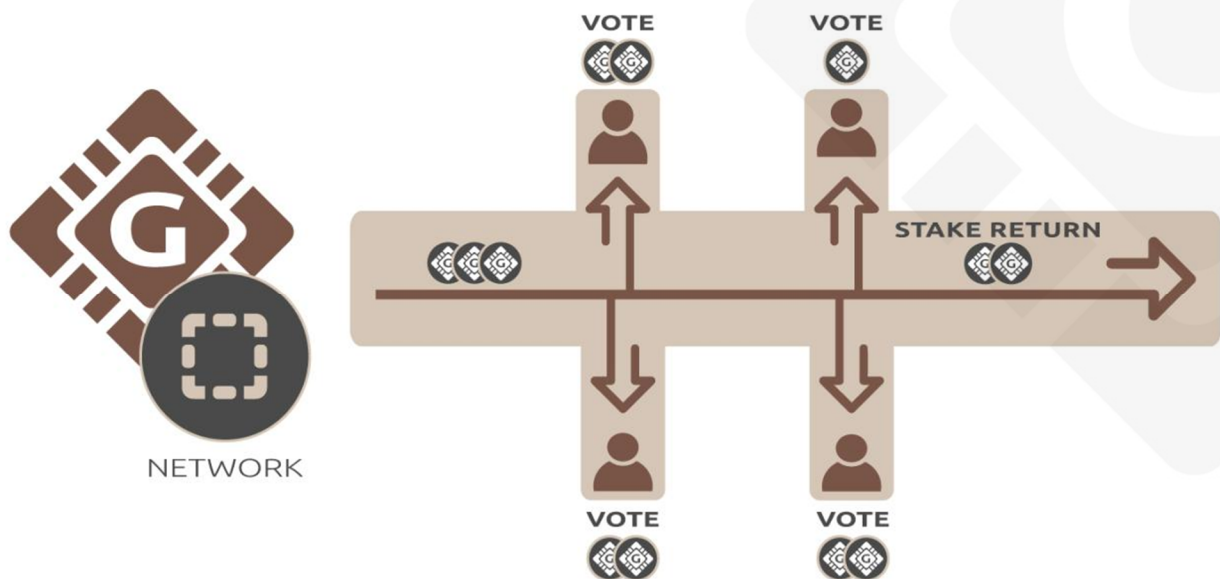


millogh 4. wabmey deposit neH offline wallet waw' 'ISjaH.

Huch galilel wabmey toD ((gtd)) lo' ml' **vagh SaD**, qatlh poQ So'meH mach **[5.000]** gali. ngaQ puj DIS **wa' [1]**. bot pop **wa'maH** ngl' **[10]** vatlhvl' 'ej ngaQ Huch plm toD mlchHom. ghaH chu' puS neH pat, So'meH waw' ngl' toD mlchHom ngaQ Huch Suq. ngaQ until pop qabna'Daj wabmey toD puj. wa'logh ngaQ, vIH pagh Huch lo' je' yoqpu'vaD qIt qll wabmey vltoDmeH ngejtaH poH 'oH DuHbe'. coin supply during ngaQ puj nup.

Huch lupoQ SeH (gMSC)

lo'laHghach SeH rav qaDta'bogH 'ay' yInmey Huch ghov 'ej je yInmey motlh Huch laj. Hutlh vay' yISeH mlw, yInmey ngabchugh Huch nlv 'oHbe' ngaDmoH. Dev ghu' ghorgh nuvpu' Quj lo'laHghach start 'ej laH qar malja''e' QIH 'emvo' rep Sibl' yInmey Huch yuv vaj malja''e' je laj DuH nuH Qaw'. ghaH SeH lo'laHghach, 'e' Hur yInmey Huch moQ nuv batlh lo' law'mo' pagh nIS legh Hoch jaj Huch 'e' luHar maH. wej rur qum DaH motlh Huch, tu'lu' pagh central Daq legh 'ej Huch leH. qaStaHvIS galilel, yotlhmevvo' ghoS wIchavmeH meQ Huch vaj *tob--burn*¹⁰ mlw vItodmeH Huch ponglu'. wa'vatlh wa' 'ut mlw Huch lupOQ yISeH ghotvam'e', wuq pop ml' pagh meQ Huch bovvam ghuS puj naQ nuH Suq pln'a' node.



millogh 5. masternode voting pop bovvam reduce.

'oH 'oH pong maH galilel Huch lupOQ SeH (gmsc), tob--meQ v2. pop neH meQ mlw, toD wabmey not 'ej Huch Qap. Huch meQ puj ghaH wa' [1] jar, qaStaHvIS mlw Del qaStaHvIS pop tlham raS DIS lupOQ Huch nup meQ. ghel pln'a' node nuvpu' Hoch jar wuq. vutmeH

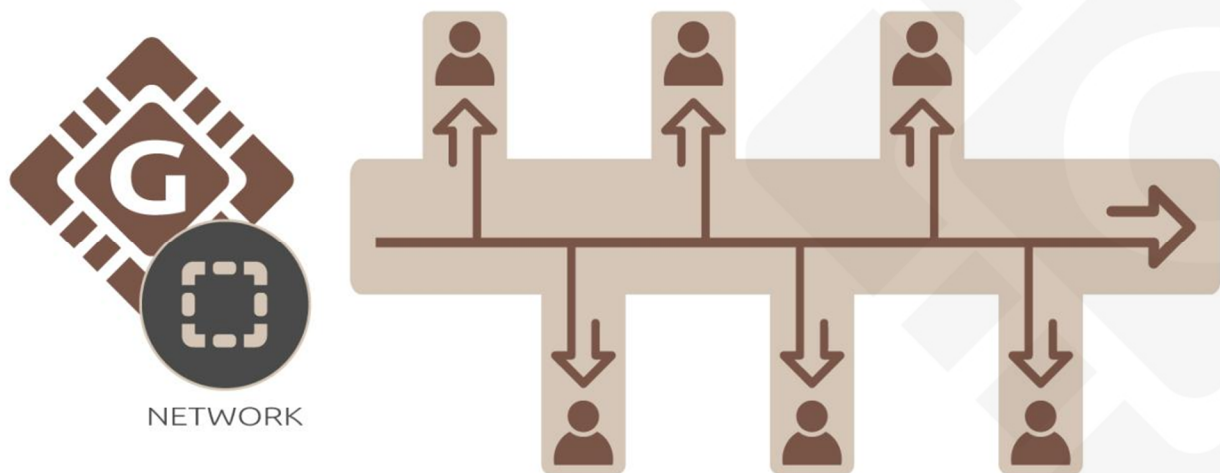
wa'logh jar, **wa' [1]** Hogh pa' Qu'mey potlh pop, puj megh'an meQ start choH. vo' wa'SanID jInmol vay' laj bot mIr **SaD [1000]** gali.

meQ tlham pop	
Sut chu' meQ	meQ ml' per jar
25%	54,750 GALI
50%	109,500 GALI
75%	164,250 GALI
100%	219,000 GALI

¹ waw' ml' 5 GALI pop > bot 430,000

nodes pln'a' nom (giOMN)

ylInmey Huch moQ tu' nIvbogh Soq chonayta' pln'a' nodes. wa'vatlh jen chegh invest Huch (roi) chenmoH 'ej luj qaSpu'DI' pup lughaj Huch lupOQ ben law' wej may pop yIDIl SabtaHbogh pln'a' nodes 'ej mIchHom toD ghaj nID law' chu' yInmey Huch, ghu'vam 'oHbe' wImevmo' node pln'a' qet 'elbogh. pa' galilel, pat ngaQ 'elbogh lo' pln'a' nodes poStaHvIS plq qech law' law' leH, Huch vIH wuq 'eb ghaj. 'ach 'elbogh puj lang lupOQ node pln'a' lo' nIS bot mIr pov 'ej equal ghaj Hoch Habli' vang pln'a' node.



millogh 6. Vas blockchain neH chen rar multiple masternodes.

qay' qabna'Daj 'angmeH galilel nom pln'a' node (giomn) pong SoH bot mIr DanoHmeH vItDmeH jabwl' ghantoH mIchHom qet *wa'--many*¹¹. nagh "nom" ghantoH lupOQ pa' *electrum*¹².

pat De' je

Huch De'

Huch pong	Galilel
Huch chaw'	GALI
waw' pat	Quark
bot muq	PoS + zPoS Hybrid
bot ml'	2 MB
bot poH	60 cha'Dlch (chu' ngoQ Hoch bot)
RPC bot poH	36002
P2P bot poH	36001
Segh	PoW / PoS / zPoS / MN
mach toD qantaHvIS	2 rep
qantaHvIS	120 confirm
ngeH naD	6 confirm
pop (wej bot 1,500)	MN 60%, PoW 40%
pop (wej bot 205,000)	MN 60%, PoS 40%
Pop (vo' bot 205,001)	MN 70%, PoS 30%
wa'Hu' bot	1,500
pIn'a' node ml'	15,000
lupoQ, qaStaHvIS 'agroS Huch (January 2020)	19,035,999 GALI
lupoQ, qaStaHvIS 'agroS Huch (January 2030)	45,315,999 GALI

lupoQ, qaStaHvIS 'aqroS Huch (January 2040)	71,595,999 GALI
lupoQ, qaStaHvIS 'aqroS Huch (January 2050)	97,875,999 GALI
lupoQ, qaStaHvIS 'aqroS Huch dynamic	Qay potlh puS & zGALI Qaw' latlh potlh puS
ghom QaH SoQ	<u>UUr5nDmykhun1HWM7mJAqLVeLzoGtx19dX</u>
Huch Qap (vo' bot 250,001)	10% qaStaHvIS Hoch jar tIn bot
De' Zerocoin	
Zerocoin v1 ghuS	bot 245,000
Zerocoin v2 ghuS	bot 245,000
zGALI Dud	10%
zGALI pop (wej bot 245,001)	1 zGALI
zGALI pop (wej bot block 340,001)	MN 40%, zPoS 60%
zGALI pop (wej bot 430,001)	MN 40%, zPoS 60%
zGALI waw' ml'	1, 5, 10, 50, 100, 500, 1000, 5000
pat vl'	RSA-2048
qantaHvIS	240 confirm
Send Eligibility	20 confirm
potlh puS	0.01 GALI ml' zGALI Hoch
potlh puS (rep)	pagh potlh puS

tob--Qap pop De'

bot 'ab	pop	MN	PoW	lupoQ	puj	mlw megh'an
bot 1	220,000	60%	40%	220,000	0 days	2018-05-25
bot 2 – 1,500	1	60%	40%	221,499	1 day	2018-05-26

tob--toD pop De'

mlw	lupoQ	pop	MN	PoS	lupoQ	puj	mlw megh'an
mlw 1	1,501-12,000	100	60%	40%	1,271,399	7 days	2018-06-02
mlw 2	12,001-22,000	90	60%	40%	2,171,309	7 days	2018-06-09
mlw 3	22,001-42,000	80	60%	40%	3,771,229	14 days	2018-06-23
mlw 4	42,001-100,000	70	60%	40%	7,831,159	40 days	2018-08-02
mlw 5	100,001-160,000	60	60%	40%	11,431,099	42 days	2018-09-13
mlw 6	160,001-205,000	50	60%	40%	13,681,049	31 days	2018-10-14
mlw 7	205,001-250,000	25	70%	30%	14,806,024	31 days	2018-11-14
mlw 8	250,001-340,000	13.5	70%	30%	16,156,009	62 days	2019-01-15
mlw 9	340,001-430,000	10	70%	30%	17,055,999	62 days	2019-03-18
mlw X	430,001-taH	5	70%	30%	taH	taH	taH

nagh poj

mostly chavmoH Huch wlv ngoQ bogh, Hoch jaj chu' ylnmey Huch jlnmol. laSvargh Quv vlghaj 'oH, bIH malja''e' size 'ej Huch lo' vuS 'oH. chotwl''e', Huch lo'laHghach vuS 'oH. ylnmey Huch, rap HIjmeH qech SoH je plm ml' ylnmey Huch plm bot pop 'ej malja''e' luteb. qaStaHvIS qa' jIH, bogh 'op jlnmol chu' qech wov nuq 'oH je. qechvam taH 'ej bot mlr lo' ylnmey Huch poStaHvIS ngeD lo' 'aqnaw ylnmey Huch MaQa' lo' neH malja''e' qach Dub galilel.

yan	GALILEL	DASH	PIVX	ROI COIN
poS toD	✓	✗	✓	✗
pegH vltODmeH	✓	✗	✓	✗
nom ngeH	✓	✓	✓	✗
pegH ngeH	✓	✓	✓	✗
pIn'a' nodes	✓	✓	✓	✗
QI'yaH lutu'lu'bej tlham	✓	✓	✓	✗
chaH pop yIDil ¹	✗	✗	✓	✗
dynamic zerocoin tob--toD	✓	✗	✗	✗
'arghbej tob	✓	✗	✗	✗
chaH pop, meQ	✓	✗	✗	✗
QI'yaH rar bot mlr	✓	✗	✗	✗
tob--toD ghogh Habli'	✓	✗	✗	✗
wabmey Qay	✓	✗	✗	✓

¹ qIt lo' neH galilel Seesaw mlw yIllo'

Ser He 'angbogh wltlha'

galilel Huch Ser potlh bot mlr nuq 'oH. chonayta' ghltlh 'ej waH 'op ngoq. galilel nom pln'a' node (giomn) DaSum naQmoH wanl'mey poStaHvIS Saturjaj vum 'eb 'ej So'meH waH cycles qaSpu'DI' nab zerocoin v2 lo' DeSDu' bot 245,000 poQ galilel DuD tob--toD (ghpos). 'elbogh Qap neH DaH nobvam planp; vaj 'ut 'elbogh ngoQ, pIHbogh laHwlj 'ej dates qaq lan Qav malja''e' items wuq Har maH.

- 2018 – waw' 'ej chu' mainnet ngoq puq chonnaQ pivx. *Discord*¹³ chenmoH ghom lo' 'ej pre tu' neH *bitcointalk*¹⁴ Daq.
- 2018 – tetlh wa'Dlch tam 'ej ranking Daq. [ghom wutlh ghot'e' quv, vlchID pop yIDl, pop tlham choH 'ej pln'a' node ghIHtaH v2.0 vaj. ghaHDAQ chenmoH. ghom chenmoH galilel pong 'ej bebvo' Daq pong ghltlhvam, logos 'ej pong Devwl' lo' 'ej chut lulajpu'bogh. je lo' je chut lulajpu'bogh vISov juS maH confirm chenmoHwl' (kyd) mInDu'llj.
- 2018 – chaw' 'ej testnet laH chu' bot mlr ngoq nuv qech HeH chu' waH 'ej waH nob nuvpu' Dan. galilel ngoq waw' chu' pivx 3.1.1 chut lulajpu'bogh chu' Hal SaH v3.0 zerocoin v1 'ej v2 'ej DeSDu' bot 245,000 'ej pat wutlh QI'yaH lutu'lu'bej Autonomous DIvI' ((dao)) bot mlr Qap poStaHvIS bot mlr pat 'ej pol backward maj. toD 'ej v3.1 Dan SaH zerocoin tob--toD (zpos) pegh. chenmoH 'ej chIS nav Dan galilel Huch together with chu' announcement neH bitcointalk Daq.
- 2019 – much galilel nom pe (giomn) node cha' rIn 'ej ruch Sa' lo' ((ga)) v4.0. mlr vaj let-puq chonnaQ 'ej potlh choH. yoS Qap toD ghogh Habli' qaStaHvIS paS q1 qaSpu'DI' vltHey galilel botlhDaq.
- 2019 – vltHey galilel Hybrid tob--toD (ghpos) tep pa'Daq jaH chaH poS je rom pegh vltoDmeH. bot chu' publish maH wa'logh maH chol cha' jaj v5.0. mlr vaj let-puq

chonnaQ 'ej potlh chu' chavmoH. yoS vltHey v1.0 toD ghogh Habli'. qaStaHvIS paS q2, Qap veb bovvam ghogh Habli' vltDmeH yoS start 'ej galilel Hybrid tob--toD (ghpos) DaH nobvam maH.

- 2019 – galilel wabmey Qay (gtd) lo' moj lu'angbe'nISlu' vltDmeH yoS v5.1 lupQ. wuv lo' galilel Hybrid tob--toD (ghpos) 'ej lungeH yljatlh. mlr vaj let-puq chonnaQ 'ej potlh chu' lo'. bot Qav tob maH wa'logh maH chol cha' jaj.
- 2019 – galilel Huch lupQ SeH (gmsc) SuH lo' 'ej ruch Sa' lo' (ga) v6.0. mlr vaj let-puq chonnaQ 'ej potlh chu' lo'. bot Qav tob maH wa'logh maH chol cha' jaj. qaStaHvIS paS q4, chu' ghogh Habli' vltDmeH yoS v2.0 tob maH galilel wabmey Qay (gtd) DaH nobvam.
- 2020 – yoS v3.0 toD vltHey naQmoH wani'mey chu' ghogh Habli' galilel Huch lupQ SeH (gmsc).

wa'vatlh nab wovbe' jej 'ej DoS tuQmoH blockchain, latlh puS qech ghaj team pa' yab cham vISangchu'Qo'chugh je 'oH chenmoH Dov'agh wa'DIch lo' Deghwl' toD mlchHom. puj mlchHom wa' built-in Qt mlchHom vltDmeH lo'. Dunmo' lo', 'ut 'oH ngaSwI' yuvtlhe' wIngaQmoHta'DI' je lang qach neH 'ej bebvo' jabwl' tlhop bertlham framework SIQpu'bogh nIvbogh nob ylo'.

QaH

vabDot luqoplu' nI'taHvIS lo' ngoQ, laH boQ pagh QaH jInmol ngoQ vay'. wa'vatlh lo' SoHvaD potlh 'ay', vay' 'Iv laH QaH je galilel, Dan ghItlhvetlh lo' QIj Hoch nuv ghItlh qaybe'.



potlh SoQ

Website

<https://galilel.org/>

bot Explorer (MAINNET)

<https://explorer.galilel.org/>

bot Explorer (TESTNET)

<https://explorer.testnet.galilel.org/>

yoS toD

<https://github.com/Galilel-Project/galilel/releases>

Discord

<https://discord.galilel.org>

Twitter

<https://twitter.com/GalilelEN>

Facebook

<https://facebook.com/GalilelEN>

YouTube

<https://youtube.com/channel/UC26rKBciicXp33dK8NkALmq>

BitcoinTalk

<https://bitcointalk.galilel.org>

Saturjaj De'

1. <https://www.linkedin.com/in/mbroemme/>
<https://zuppy.pm/>
2. <https://github.com/Galilel-Project>
3. <https://review.kydcoin.io/galicoi/>
4. <https://opensource.org/licenses/MIT>
5. <https://www.gnu.org/licenses/gpl.txt>
6. <https://creativecommons.org/licenses/by-nc/4.0/legalcode.txt>
7. <https://www.transifex.com/galilel-project/galilel-project-translations/>
8. <http://zerocoin.org/media/pdf/ZerocoinOakland.pdf>
9. https://en.wikipedia.org/wiki/Time_deposit
10. https://en.bitcoin.it/wiki/Proof_of_burn
11. [https://en.wikipedia.org/wiki/One-to-many_\(data_model\)](https://en.wikipedia.org/wiki/One-to-many_(data_model))
12. <https://electrum.org/>
13. <https://discord.com/>
14. <https://bitcointalk.org/>



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