ETC Cooperative

2023
Goals

Apr 30, 2023

etccooperative.org

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Overview

We enter 2023 in a very strong position financially, technologically, and operationally. The ETC Cooperative currently holds large cash reserves from the final year of Grayscale funding and a large purchase of ETC during the current bear market.

After years with minimal staffing, we now have three core developers and a fully-fledged communications team. This allows us to improve the ecosystem while communicating the benefits more efficiently to the community

The long-awaited grants program was launched in January in collaboration with our new partners at Bitmain and Antpool. This collaboration has led to another partnership with the Litecoin Foundation for a joint *Proof of Work* conference in the fall.

With Ethereum's "The Merge" hard fork and their switch to Proof of Stake, there is now more than ever a clear differentiation between Ethereum and Ethereum Classic. ETC has a majority hash within the Ethash mining ecosystem and has more security than at any point in the history of the ETC project.

Grants Program

The ETC Grants DAO program was launched in January 2023 after months of coordination with Bitmain and Antpool. The first round has a total of $1M USD equivalent worth of ETC available across the successful applicants. The current round is open until the end of April, with decision-making happening in May; and the payouts starting in June. The second round will likely occur later in 2023.

With Core-Geth and Hyperledger Besu development in-house, it makes sense to focus on the higher layers of the ecosystem and to incentivize dapp developers to bring their projects to ETC and for infrastructure providers to bring missing building blocks (DEXs, stablecoins, oracle solutions, bridges) to ETC.

The full process is detailed at the https://etcgrantsdao.io website, where the application form can be accessed, and all the existing applications can be seen. At the time of writing - the end of March 2023 - there are around 40 applications, some in English and some in Chinese.

During much of 2023, the ETC Team will be kept busy with the development, delivery, and maintenance of the Grants program. Bob will be spending his time working on grant assessment and support. Alison will be spending time on operations and administration of the program. The comms team will have ongoing work related to development, delivery and maintenance of the program as well. All of this work is being done through an ongoing collaboration with our partners at Bitmain and Antpool.

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POW Summit

Due to a mixture of funding limitations and Covid-19 restrictions, the most recent ETC Summit took place in October 2019. Unfortunately, we have not been able to gather as a community since that event.

Following our successful partnership with Antpool, we reached out to the Litecoin Foundation and have been working towards a joint event. The theme of the event will be Proof of Work and will be bringing together various POW communities around our common cause, with a distinct cypherpunk OG attitude.

We originally targeted June in Prague in order to co-locate with MoneroKon but lost the venue and had to reboot. We are now targeting late September, co-locating, and cooperating with [Hackers Congress Paralelní Polis (HCPP)](#), a flagship hacker event which has been running for 10 years.

Emma Todd of MMH is organizing this event under contract to the ETC Cooperative.

Development

Continuing development and maintenance of Core-Geth

ETC Cooperative's primary responsibility in 2023 is centered around the Core-Geth client, with a particular focus on improving its reliability, performance, and security. We will work closely with the ETC community to identify areas for improvement and to address any issues that arise.

A key goal in this area is to prepare for the next hard-fork, which we expect will bring support for the EVM Object Format (EOF) on chain. This will enable Ethereum Classic to maintain operational parity with its sister-chain Ethereum and the general EVM standard.

Additionally, we will be adding new JSON-RPC APIs to help developers build more advanced applications on the Ethereum Classic blockchain. These APIs will be well documented and thoroughly tested to ensure their quality and reliability.

ETC Cooperative is committed to the ongoing development and maintenance of the Core-Geth client for Ethereum Classic, the current super-majority implementation on the network. This client is critical for the functioning of the Ethereum Classic blockchain and plays a key role in supporting the ETC community.

Dropping support of the Hyperledger Besu client

ETC Cooperative's contribution to the Hyperledger Besu project will move to a lower effort maintenance mode. With this shift, we expect to abstain from proposing new features and day-

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to-day user support; but expect to maintain ETC consensus compatibility, if only for cross-client testing purposes (which is very useful).

We will no longer be recommending Hyperledger Besu to ETC end-users.
With only a tiny fringe (roughly 1%) of the clients running Hyperledger Besu on the ETC network, ETC Cooperative has decided to shift resources from Besu to Core-Geth. Diego, who was previously focusing all his efforts on Besu, will move to prioritize Core-Geth. Chris and Isaac are thrilled to be working more closely with Diego.

BlockScout support

BlockScout by POA Network is the most popular ETC block explorer available and has a pleasant user experience. POA ran an ETC mainnet instance as a public service during 2018 and early 2019, before the ETC Cooperative took on that responsibility. The Cooperative then also added instances for the Kotti and Mordor testnets. The Cooperative is committed to operate BlockScout through 2023.

Publish official DAppNode packages for ETC chains

DAppNode is an open-source platform that simplifies the process of running a node for various blockchain networks, including Ethereum, Bitcoin, and more.

Our goal is to make it easier for developers and users to interact with ETC chains by providing four new DAppNode packages that enable them to run an ETC node effortlessly. Those packages include both chains (Classic and Mordor) as well as both clients (Core-Geth and Hyperledger Besu).

Decommissioning the Ethereum Classic Kotti (PoA) testnet

We are proposing to decommission the Kotti testnet. This proposal is being made after careful consideration and analysis of the usage and adoption of the Kotti chain. We believe that deprecating Kotti will allow us to better allocate our resources to other projects that have greater impact and potential.   If others in the community wish to continue with Kotti they are welcome to do so, but we will not be participating in any such effort.

Our communications team will communicate the deprecation process through various channels to ensure that users are aware of the timeline and have sufficient time to prepare for the transition.

Retiring the Kotti testnet will allow us to decommission our BlockScout Kotti instance and RPC endpoints, leaving just mainnet and Mordor testnet support.

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Remove "Modified Exponential Subjective Scoring" (MESS) from Core-Geth client

MESS is a mechanism used in Core-Geth to determine the canonical chain on the ETC network, but it is not part of the consensus algorithm itself. It was introduced after the 51% attacks of 2020.

After the transition of Ethereum to Proof of Stake (PoS), the hash rate of the Ethereum Classic (ETC) network increased, and, as a result, there is less need to maintain MESS in the Core-Geth client.

But is ETC still at risk for a 51% attack? On the one hand, ETC now apparently occupies a dominant role in its PoW consensus-algorithm peerset. This suggests incurring less risk than comparable, hash-algo compatible networks like *EthereumPOW*. On the other hand, to date, ETC sees a regular 125 Th/s, while Ethereum (ETH) in its PoW era saw nearly 7 times this hashrate.

Aggregated hashrates for hash-algo-comparable networks fall short of the high-water mark established by ETH, suggesting latent, but invisible, hashpower utilities that cast some doubt on assumptions of hashpower dominance and, thus, consensus finality resilience. Despite this "known-unknown," the risk-cost of keeping MESS seems outweighed by the benefit.

Refactoring Core-Geth

To date, Core-Geth has merged upstream Geth source changes through version v1.11.3 (March 7, 2023). However, Core-Geth's divergence from Geth is causing headaches in these merges; a myriad of conflicts cause developer tedium and shift inherited risk exposures in the wrong direction.

Core-Geth began with an intention to abstract protocol specification properly and articulately in its implemented form, the client. This intention was achieved with what the source code defines as a `ChainConfigurator` interface; a way for arbitrary configuration data types to express arbitrary combinations of EIP and ECIP specifications. Forked with Ethereum, the need for (and the expression of) the utility of this kind of tool is in the DNA of Ethereum Classic.

`ChainConfigurator` interface implementations for Parity-Ethereum, Aleth, Geth, Multi-Geth, and Core-Geth chain configuration data have been supported at Core-Geth, however with burdensome verbosity and brittleness. Parity-Ethereum was deprecated, and so its data structures for EIPs developed afterwards were undefined. Multi-Geth too was abandoned. 2023 will be the year where Core-Geth drops (poor) support for these data structures, reducing maintenance tech debt.

But `ChainConfigurator` was not the last of Core-Geth's design decisions about data types and defaults. Other design and definition changes include extracting the genesis data type to a dedicated package, common variables (`vars`) likewise, and self-documenting data types for RPC APIs.

Some of these decisions were prescient; for example, removing `puppeth.` Some have been at little cost and with great benefit, for example, a self-documenting API using OpenRPC. Some

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have proven less beneficial; `genesisT` consistently causes merge conflicts but provides little useful abstraction for the cost; `vars` too.

Core-Geth finds itself burdened by efforts for conceptual clarity and consistency in its code, at odds with prodigious and often contradicting changes at its code mother. The pendulum has fallen too far toward abstraction and should swing toward practical utility and inter-code compliance.

Experimental Investigation and Review of Other Clients

Client diversity creates value for developers and consumers alike; by validating cross-client protocols and their tests (and their reciprocal code), offering new code-paths for review, analysis, and testing in case of emergent on-chain incidents, and, most generally, by being the stones on which the community's investment can be built.

The `etc-lite-patch` applied to Ethereum Foundation's `geth` has been developed with considered contrast to some of Core-Geth's most fundamental design decisions (Core-Geth being also a Geth progeny). Where Core-Geth ambitiously rearchitects widespread configuration and API data types and accessors in its effort to align and express specification in code, the `etc-lite-patch` prefers instead a minimal-touch implementation intended to trivialize recurrent merges with upstream, a non-trivial maintenance task at Core-Geth.

At Ledgerwatch's Erigon, a `devel+classic` patch has been developed based on the latest (bleeding edge) of Erigon's main development and release branch, introducing support for `$ erigon --classic`. Compared to Geth, Erigon makes drastic changes to client footprint, sync protocol(s), RPC API systems, and data management. While the client describes an intention toward a technology-driven "efficiency frontier," the market has yet to validate the effort beyond a small minority share (< 10%) of the ETH network.

Although the development of Ethereum Classic for both client remains in an experimental phase, these represent open and optimistic doors in the alliance for a diverse and robust Ethereum Classic network.

In late 2022, ETC Cooperative developed patches establishing Ethereum Classic support for the Geth (Ethereum Foundation) and Erigon (Ledgerwatch) clients on their respective mainstream version control branches. We have been experimentally running instances of each in development, so far with encouraging success.

Hyperledger Besu will be kept as another testing environment but losing its officially supported status.

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Exporting a shared library from Core-Geth for improved modularity

We are committed to improving the modularity and flexibility of the clients. We want to check if it's possible to export a shared library in Go from Core-Geth to make it easier for developers to use this library as a building block for their own custom Ethereum clients.

Exporting a shared library will allow developers to easily access the functionality of Geth-like clients without having to build the entire client from scratch. This will make it easier for developers to create custom Ethereum clients with the specific functionality that they require.

Our team is currently working on exporting a shared library that includes the most commonly used components of Core-Geth. This shared library will be well documented, thoroughly tested, and maintained by our team of developers to ensure its quality and reliability.

Continuing our efforts for the inclusion of EVM Object Format (EOF) into Ethereum

EOF is a binary format for Ethereum Virtual Machine (EVM) code that allows for more efficient and secure storage and transmission of smart contract code. We believe that the adoption of EOF will significantly improve the overall performance of the Ethereum network.

Our team will continue to work closely with the Ethereum community to promote the benefits of EOF and advocate for its inclusion.

In 2022, we contributed to the development and testing of EOF and collaborated with other developers to ensure its seamless integration into Ethereum.

In 2023, we will continue our efforts towards the inclusion of EOF into the Cancun hard fork and look forward to the positive impact it will have on the network.

After the inclusion on the Ethereum network, we will plan hard forks for the Ethereum Classic chains.

Handing over our RPC endpoints to Rivet

Over the past year the development team decided to hand over our RPC endpoints to Rivet, a leading provider of blockchain infrastructure solutions. Our decision to transfer our RPC endpoints is based on our belief that Rivet is better equipped to provide the necessary support and infrastructure for our users.

Rivet offers a comprehensive suite of blockchain infrastructure tools, including node management, analytics, and monitoring. By transferring our RPC endpoints to Rivet, we will enable our users to benefit from Rivet's expertise and cutting-edge technology, while also **freeing up resources to focus on other projects**.

Additionally our communications team will communicate the transfer process through various channels to ensure that our users are aware of the timeline and have sufficient time to prepare for the transition.

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Upgrade multisig wallet (Safe) to their new frontend (web-core)

In 2022 we deployed multisig wallet (Safe) on ETC. Safe is a popular multi-signature wallet solution that allows users to manage their digital assets securely. At Safe they implemented a new UI to the multisig wallet and deprecated the old one. This year, we will be upgrading Safe to this new frontend. The new frontend has been designed to improve the user experience by providing a more intuitive interface and additional functionality.The upgrade to the new frontend will provide a more streamlined and user-friendly experience for our users.

Advantages of using Ethereum Classic ETL for adding chain data to Google BigQuery

ETC Cooperative is pleased to announce that we will be using Ethereum Classic ETL to add chain data to Google BigQuery. Ethereum Classic ETL is a set of tools that enable the extraction, transformation, and loading of data from the Ethereum Classic blockchain into Google BigQuery.

By using Ethereum Classic ETL, we will be able to easily access and analyze Ethereum Classic blockchain data in Google BigQuery. This will provide the community with a powerful tool for performing complex data analysis and building data-driven applications.

It's a powerful and important tool for understanding the network and its data, both in calm waters and in case of emergency.

One of the key advantages of using Ethereum Classic ETL is that it simplifies the process of adding Ethereum Classic blockchain data to Google BigQuery. This eliminates the need for complex data integration and allows us to focus on analyzing the data and building applications that add value to our users.

ETC data has existed before at Google BigQuery via ETC Cooperative (thanks Yaz), but hasn't been up and/or working for a long time. We are excited to be able to bring this data back to the community and make it available for everyone to use.

Ongoing Chain and Network Monitoring

Our development team runs several nodes continuously on the main- and test-networks for the purposes of metrics-based monitoring and potential incident analysis. Development client versions are compared against stable ones; nodes run MESS vs. No-MESS; and around 40 automated alerts are configured to raise concerning situations to attention.

We intend to further develop these in response to raised issues or concerns; for example, in response to a buggy (too much CPU) v1.12.9 release, we intend to add additional assertions on metrics that would flag the issue if it were to recur.

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Communications and Marketing

The purpose of the ETC Cooperative communications team is to support and promote Ethereum Classic and to keep the ecosystem and the world informed about the ETC Cooperative's projects, finances, and governance.

In the next sections we will explain what the team's plan is to help achieve these objectives for 2023.

Mission

The mission of the ETC Cooperative is to steward the development of the Ethereum Classic protocol and to support the growth of a mature ecosystem around that protocol.

There are three pillars to this mission:

Accelerate adoption of ETC technology by individuals and enterprises through effective branding, marketing, and education.

Foster collaboration between ecosystem participants including developers, miners, investors, enterprises, and end-users.

Mature governance and transparency – an efficient and transparent governance framework, including use of funds.

Goals

Effective measures of the long-term success of the marketing and communications team's efforts have been determined to be an increased hash rate and usership growth as our main quantifiable goals. ETC hash rate growth:

This goal is measured by hash rate and is a strong indication of security of the network. As security is the primary goal of proof of work blockchains, we infer that from this base, all the other positive metrics will emerge.

ETC usership growth:

If Ethereum Classic is secure through its hash rate, then we assume that usership will follow, and that usership is a function of utility. This goal will be measured by metrics such as transactions per day, fees paid to miners, and node count.

Targets and Calls to Action

As stated previously, our two major goals are increasing hash rate and increasing usership of Ethereum Classic. To accomplish this, we have defined three target segments to direct our communications efforts; Users, developers, and miners.

The calls to action to our targets will be simple and straightforward:

Users: "Use ETC for immutable payments, dapps, and storage of value."

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Developers: "Build highly secure solutions and unstoppable dapps on ETC."

Miners: "Mine on ETC to take advantage of its long-term profitability."

Brand Story

Because Ethereum Classic (not ETC Coop) is the main focus of our communications work, the ETC Cooperative's messaging will be kept on a lower key, more administrative, and operational.

ETC's messaging will be promotional, selling the attributes of Ethereum Classic, while inviting the world to use it, developers to build on it, and miners to mine on it.

The messaging around ETC will concentrate on the following pillars:

ETC Pillars

The marketing and communications team will focus on the three fundamental pillars of Ethereum Classic's design:

Proof of Work: ETC uses Proof of Work Nakamoto consensus, which is the most secure consensus mechanism, therefore the only system that delivers the true benefits of trust minimization.

Smart Contracts: ETC supports smart contracts, therefore is programmable, making it much more useful than other top proof of work blockchains in the industry.

Fixed Monetary Policy: ETC has a capped and predictable coin supply schedule. Coins are only issued upon proof of work block creation, trending in the long term to a zero rate of inflation, making it analogous to gold in the real world, therefore programmable digital gold.

ETC Values

We will focus on the following values of ETC's philosophy that are summarized in the motto Code Is Law.

Decentralization: Proof of Work enables all miners and node operators to participate in the blockchain network and reach consensus in their complete isolation, without central control, direction, or supervision.

Immutability: Users, developers, and miners can be confident that their accounts, balances, property, agreements, dapps, blocks, and transactions on ETC will remain final, unmodified, and untampered forever.

Censorship Resistance: Users, developers, and miners can be confident that their dealings and activity on the ETC network will be free from censorship and arbitrary controls.

Permissionlessness: Users, developers, and miners can be confident that their participation, exit, and entry into the ETC network will be free from permissions, supervision, barriers, or central controls.

We communicate the above values separately, together, or as a single concept in the motto Code Is Law when appropriate.

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Proof of Work vs Proof of Stake

The differences between proof of work and proof of stake are key to understanding why ETC is superior, making it the largest proof of work smart contracts blockchain in the world.

To communicate this we will continue to explain the principles and attributes of decentralization and proof of work and how proof of stake is a centralized and censorable mechanism that benefits those with the most resources.

The Bitcoin and Ethereum Analogy

One of the most successful taglines and drivers of growth in the Ethereum Classic ecosystem has been: ETC is BTC philosophy with ETH technology.

This means that Ethereum Classic shares the same deep values of security, decentralization, and immutability as Bitcoin, but has the same programmability, functionality, and utility as Ethereum. As such we can appeal to a wide and diverse of group of crypto users and evangelists.

Functions

Our team will divide its activities in the following five functions:

Marketing

The marketing team will continue to tell the story of the Ethereum Classic brand, history, and its bright future. After the launch of the ETC website, the POW website, and the Grants DAO, the marketing team will turn its efforts toward building out its marketing plan and creating growth of the groups detailed above. The marketing plan will help define the channels, personas, platforms, tools, and social media and editorial workflows.

Editorial

The editorial plan will focus on the production of the following content units:

Videos: Videos will be produced covering ETC key topics with independent video units or accompanying related articles. Some videos will also be produced to communicate ETC Cooperative specific messages.

Articles: Articles will be produced covering ETC key topics, sometimes with accompanying video units. Some articles will also be produced to communicate ETC Cooperative specific messages.

Live Streams (Twitter Spaces) and ETC Community Calls: We will participate in all ETC Community calls organized by the ecosystem and will conduct A Twitter Spaces show called "ETC Weekly Review" touching on ETC and ETC Cooperative key editorial topics for the week.

Community Tweets: We will contribute original tweets to the Twitter Together GitHub flow for the @eth_classic and @etc_network twitter accounts.

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Social Media

Our social Media accounts are directed to support Ethereum Classic or to communicate the activities of the ETC Cooperative and its partners and community members. These platforms include:

- Twitter
- Telegram
- LinkedIn
- Reddit
- Instagram
- Discord
- Newsletters
- Wechat

In 2023, we will also seek opportunities to expand other social media channels while maintaining and boosting the community engagement within our existing channels.

Events

After a pause since 2019 due to COVID-19 and other issues, the ETC Cooperative will restart the events calendar in 2023 with summits and conferences dedicated to Ethereum Classic and related key topics.

The first of these will be the POW Summit 2023, which will be held in Prague, Czech Republic, on September 25-27.

The focus of the event will be:

• Bridging the POW chains

• Back to cypherpunk basics

Website

The ETC Cooperative website will be completely overhauled with a new platform, new imagery, style, and messaging.

Channels

Channels are the online platforms that we will use to communicate and deliver our messaging to our target audience. These may be divided into two entities: The community shared channels and the ETC Cooperative controlled ones.

We will actively participate in the community channels contributing content and participation while we will use the ETC Cooperative channels for Cooperative specific communications.

Following is a description of each channel by entity:

ETC Community Channels

Community Website Blog: The community website is ethereumclassic.org and we will be contributing videos, articles, ideas, and static content when necessary.

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Community YouTube Channel: As there was no canonical YouTube channel for the ETC community, we created a new one called "Ethereum Classic Updates" where we will post all our independent video units and videos that accompany written articles.

Community Twitter Accounts: As stated above, we will contribute original messages to the two community Twitter accounts @eth_classic and @etc_network.

Community Discord Server: We will post all our social media messages on the ETC community Discord server and continue participating as community members.

ETC Cooperative Channels

ETC Cooperative Blog: All communications pertaining to the ETC Cooperative's announcements, activity, governance, and finances will be posted on its blog.

ETC Cooperative YouTube Channel: Videos with explanations, reports, interviews, or other ETC Cooperative specific content will be posted on its YouTube channel.

ETC Cooperative Twitter Account: The ETC Cooperative Twitter account will continue promoting ETC and posting its articles and videos.

ETC Cooperative Discord Server: The ETC Cooperative Discord server will continue posting its articles and videos and interacting with server members as usual.

Corporate changes

Non-profit status

During the 2023 calendar year we will begin the process of converting the ETC Cooperative from a public charity into a private operating foundation or a private foundation, due to the lack of diversity of funding sources, which is required to maintain 501(c)3 status. This is called the public support test. The test states that at least 1/3 (33.3%) of donations must be given by donors who give less than 2% of the nonprofit's overall receipts.

There will still be a tax deduction for any donations received from other parties. However, a foundation must pay a nominal excise tax of 1.39% on their net investment income.

Although foundations typically make grants to public charities, they can also run programs, provide services, and conduct direct charitable activities. Ripple Foundation is an example of a crypto foundation.

We will be working with our tax advisors to flesh out the requirements for the transition and what effect that will have on the Coop. However, it does not appear that these requirements will result in many operational changes if the status of a private operating foundation can be achieved.

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