

## PROPOSAL NAME:

ApeChain: NFT & Gaming Hub built on Gelato powered by ApeCoin

## PROPOSAL CATEGORY:

Brand Decision

## TEAM DESCRIPTION:

Patrick Schabhüttl, Head of Business Development at Gelato

Ella Jonas, Head of Marketing at Gelato

Hilmar Orth, Co-Founder at Gelato

Pedro Cruz, Technical lead - Gelato RaaS

## ABSTRACT:

An introduction to Gelato

Gelato is one of the most widely used web3 infrastructure providers, currently serving over 400 projects including industry-leading teams such as MakerDAO, OP Labs, Balancer, and Pancakeswap. The biggest ecosystem projects such as Astar and Lisk are building their chains on top of Gelato. With many more Web3 native and household names in the pipeline, Gelato continues to expand servicing key projects in the web3 space.

In 2023, at Gelato, we released the industry's first all-in-one Ethereum Rollup-as-a-Service (RaaS) Platform that allows projects and communities like ApeCoin to build chains without limits. Designed to be super-fast, incredibly secure, and infinitely scalable, Gelato rollups allow anyone to build and deploy their fully serviced Arbitrum Orbit, Optimism's OP Stack, and Polygon CDK Layer 2 chains at a pace natively integrated with Web3's favorite tools and services launching a production-ready web3 development environment right from the Genesis block.

Notably, Astar achieved impressive growth in less than 3 months. With all the essential infrastructure, deployed from the genesis block, and the network effect were key factors contributing to triple-digit growth across key performance indicators.

There have been over 16k+ wallets created on Astar's zkEVM with an average 4k+ daily transactions and 370k+ transaction executions since the testnet launch.

The network's cumulative gas usage has surged from 100 billion to 250 billion gwei, indicating surge in dApp deployments, smart contract activity, and growing developer engagement.

The smart contract deployment growth has been steady since Astar's launch, indicating a healthy developer ecosystem with +3k smart contracts deployed on Astar zkEVM testnet with +50% uptake in the number of verified contracts in December.

Projects like Astar and Lisk built on Gelato's RaaS platform due to its unique offering: it not only allows for the deployment and hosting of enterprise-grade, fully managed, and highly scalable Rollups on Ethereum, but also delivers a comprehensive end-to-end web3 infrastructure offering including Oracles, Account Abstraction, Indexing, Bridging and all the other important building blocks for application developers to develop consumer dApps that rival the experience of web2 counterparts and are ready for mass adoption.

With ApeCoin's vision for ApeChain and vibrant community, paired with Gelato's cutting-edge Rollup platform and strategic go-to-market approach, that leverages the power of underlying ecosystems, we're confident that ApeChain will surpass expectations and deliver exceptional results.

[

3

1600×900 147 KB

](https://global.discourse-cdn.com/apecoin/original/2X/2/288140fb374387e3054711d1c6681ca8d78985e0.jpeg)

However, this is just a glimpse of the wide array of web3 services available on Gelato's RaaS platform. Our most recent collection of partners includes:

[

4

1600×900 296 KB

](https://global.discourse-cdn.com/apecoin/original/2X/8/81bef49dcf653558e719a251e1fcebca719b6444.png)

Depending on the specific needs of teams developing on ApeChain, any of these services can be seamlessly integrated on ApeChain with Gelato taking care of all negotiations, deployments and future maintenance.

Considering the extensive experience in infrastructure and wide network of top-class partners, Gelato will be able to offer all the infrastructure needed for ApeChain starting from the first block.

In the proposal that follows, we outline various options for the community to consider, enabling a collective decision on the most effective path forward in bringing ApeChain to fruition.

Consequently, we would like to outline the following options for community consideration:

- Building a rollup as part of Optimism's Superchain
- Building a zk-powered L2 on top of Polygon CDK
- Building a rollup with Arbitrum Orbit

Each option presents unique opportunities for the community in terms of interoperability and onboarding existing Ethereum users as well as new community members.

Support for zkSync Hyperchains will also be available on Gelato RaaS soon.

Since Gelato is framework-agnostic, other technologies can be supported depending on the decision of the ApeCoin DAO.

Together with the ApeCoin DAO and special counsel, we would like to make ApeChain THE place for new and existing community members offering a dynamic space where they can interact, play, and deeply engage with the ApeCoin ecosystem.

After a careful review of existing proposals including proposals from [Arbitrum](#), [Optimism](#), and [Polygon](#) we believe the optimal path forward involves assisting the community in selecting the most suitable solution. This solution should enable anyone on the chain to build high-performance gaming transactions and interactions, with minimal latency and maximum security.

While going through these requirements we identified the following criteria that will become crucial should the DAO decide to move forward with ApeChain:

UX in par with web2

Experience all the benefits of web3 without the stress. With the implementation of native Account Abstraction, dApp developers will be able to abstract away the complexities of web3. Every new user will automatically receive a smart account simply by signing in with email or social media. We offer multiple authentication methods, account recovery, fiat-on-ramps, NFT check-outs, gasless transactions, and much more. These features enable ApeChain developers to build dApps ready for the next wave of mass adoption.

Token utility

More transactions = sequencer revenue used to buy \$APE tokens, increasing their demand and value, increasing volumes, enhancing scarcity, and incentivizing network participation ultimately supporting sustainability, trust, and position in markets.

User costs slashed

By utilizing alternative decentralized application (DA) layers like Celestia, Avail, or EigenDA, all supported on Gelato's RaaS platform, ApeChain can offer its user base substantially lower transaction fees — around 98% cheaper compared to today's leading blockchains. Moreover, ApeChain has the flexibility to charge additional margins, boosting protocol revenue.

## **BENEFIT TO APECOIN ECOSYSTEM:**

Considering the limitations of Ethereum highlighted by the Otherside mint, the logical next step for the ApeCoin community is to transition to a fast, secure, and scalable rollup. This move would not only provide growth opportunities for onboarding web2 users but also enhance the user experience.

The benefits to the ecosystem would include:

Additional revenue streams

ApeChain enables the ApeCoin community to access additional revenue streams through premiums charged via the sequencer. Additionally, it would allow the development of applications on top of ApeChain, effectively combating \$APE inflation through buybacks.

World-class infrastructure

Access to world-class infrastructure providers, facilitating the rapid development of web3 games, NFT marketplaces, and other crucial applications. With Gelato's comprehensive infrastructure package, developers can seamlessly port their existing applications to ApeChain without the need to rebuild any currently unavailable infrastructure services.

#### Increased token exposure

The ApeCoin community will experience growth as increased exposure becomes possible, given that any user of ApeCoin will have touchpoints with \$APE. Expanding ApeCoin's utility through the decentralization of the ApeCoin DAO, creating a self-sustaining DAO with its team. This approach aims to grow the ApeCoin ecosystem at no cost and mirrors the concept of SubDAOs in Maker DAO.

### KEY TERMS:

1. With successful ecosystem partnerships like [Astar](#) or [Lisk](#), Gelato proposes to run ApeChain as the RaaS provider of choice. This includes running ApeChain, coordinating the necessary infrastructure partners, supporting go-to-market efforts, and providing reliable, scalable, and performant RPC endpoints for ApeChain
2. Gelato will run both a mainnet and testnet instance of ApeChain including launching necessary infrastructure like oracles, indexers, and account abstraction services
3. When someone from the ApeCoin community builds on top of ApeChain on a testnet, Gelato will support them with extensive infrastructure knowledge to create the best user experience on ApeChain
4. Gelato will not develop applications on top of ApeChain, this should be subject to future AIPs
5. Gelato will be open for future AIPs and actively support any development studios that will build on top of ApeChain
6. Gelato is open for a token swap between the Gelato DAO and the ApeCoin DAO, to help diversify the treasury and create strategic alignment. The exact amount is subject to a later discussion as part of a separate AIP

### PLATFORMS & TECHNOLOGIES:

Here is a detailed breakdown of the different platforms and technologies that can be used, available as building blocks;

[

1

1600×900 189 KB

](<https://global.discourse-cdn.com/apecoin/original/2X/2/282f6ab3260898f330e526b46c210a88242e8bcd.png>)

Note: In the context of the data presented above we define TPS as how quickly transactions are sequenced on L2/L3 (not how quickly/many transactions are posted/settled to L1) and attempt, whenever possible, to refer to official data or current real-world usage data (i.e tested) rather than estimations.

\*Calculated from an ERC20 transfer on Optimism and deducting the L1 cost (assumes extra DA cost is negligible and only execution cost is relevant, this might depend on the DA layer chosen: e.g DAC or Celestia)

\*\* Assumes around 80% cheaper transactions when compared to rollup on the same stack

Note: For the sake of simplicity we show and link the cost of transferring ERC20 tokens on each chain at the time of writing.

#### Upgradeability & extensibility

ApeChain will be able to take advantage of the latest developments on any stack the community ends up choosing. As each tech stack continues to evolve and add optimizations, Gelato will work closely with the stack developing team and be responsible for maintaining and upgrading the ApeChain to take advantage of new features and optimizations.

On top of that, ApeChain will be able to leverage Gelato expertise and partners to boost development efforts, including, but not limited to, specific chain customizations and innovations. This will allow ApeChain to grow and evolve at a much faster pace than other projects in the space.

#### The path to upgrading ApeChain

Usually, rollups/validiums are composed of two parts: onchain components (contracts) and offchain components (sequencer, rpc, etc). Depending on the stack and on the type upgrade, it might be forkless or require a hardfork.

Gelato will be responsible for running permissioned components, such as the sequencer, as thus be responsible for coordinating upgrades. Given the sequencer is responsible for block production and sequencing transactions, chain liveness is not affected if other participants don't upgrade (i.e if a participant doesn't upgrade, at worst only its node should be affected - i.e might not be able to sync). External node operators, which run permissionless nodes (i.e read only nodes), will

be aware and advised to upgrade when needed and required.

## The path to extending features

Gelato will work closely with ApeCoin DAO and the development team of the stack chosen, proposing and leading efforts on extending the features needed. Not only Gelato will work alongside ApeCoin DAO but would like to also take an active role in advising and suggesting new features to boost chain development and adoption.

## Security & Decentralization

### Consensus model & block validation

At the time of writing most of the mentioned stacks rely on centralised sequencers. Even though there are some efforts to introduce decentralized sequencers in some of the stacks, for this proposal we will only consider permissioned sequencers.

The sequencer will be responsible for ordering and sequencing transactions. In most stack ordering of transactions usually happens either via gas price ordering or FIFO/FCFS

Once a transaction is sequenced by the sequencer, assuming the user trusts the sequencer, the user gets a soft commitment ("fast finality"). At worst a malicious/faulty Sequencer should only be able to reorder (e.g MEV extraction) or temporarily delay transactions (i.e censorship). It cannot forge or fake user transactions, steal funds, or propose invalid state updates. It's also important to notice that there's no benefit for the sequencer operator (i.e Gelato) to misbehave.

Depending on the stack and its configuration, users might also be able to sequence transactions directly on the L1 - bypassing completely the sequencer.

### Data availability

Given the gaming focus of ApeChain, going with an alternative data availability layer will be an important decision for the DAO since this will have a direct impact on the average gas cost of ApeChain.

At the time of this writing the following DA layers are supported:

- Ethereum
- Celestia
- Avail
- DACs

In the future Gelato will add support for more promising DA layers as they become production-ready, such as EigenDA, Near, and others.

Considering the technical readiness and suggested timeline Gelato recommends using alternative DA layers such as Celestia for ApeChain as part of this proposal because compared to using Ethereum it results in a 95%-99%\* decrease in gas cost.

### \$APE use case

\$ETH will be used as the gas token however Gelato suggests implementing an automatic buyback of \$APE based on the fees that are generated by ApeChain.

Another important use case for \$APE will be Account Abstraction since Gelato will offer to pay for \$APE in all gasless transactions through the paymaster.

That would also allow every gaming ecosystem project on ApeChain to sponsor transactions for all their players to eliminate any onboarding hurdles while offering web2-like UX through session keys and gasless transactions.

### Account Abstraction

One of Gelato's core strengths is its focus on user experience, particularly through solutions like Account Abstraction.

To enhance the user experience on ApeChain, Gelato enables Account Abstraction, along with all the necessary infrastructure.

This includes Gelato backend services such as Gelato Relay, which acts as a bundler and paymaster to facilitate Account Abstraction. Additionally, we offer Privy integration as a wallet provider to enable social logins during the onboarding process for web2-native users, thus expanding ApeChain's reach to retail users.

Furthermore, Gelato offers sponsored meta-transactions as part of ApeChain, allowing for custom gasless user experience. This empowers game developers to create gasless applications.

## Gaming Support

Our proposed blockchain architecture is optimized for high-performance gaming transactions and interactions, with minimal latency and maximum security.

## Stack optimization

Each stack can be optimized and used as rollup (maximum security) or validium (maximum efficiency). Gelato recommends using validium mode, which, as mentioned, drastically reduces costs and is more suited and optimized for the ApeChain use case.

## Off-chain component optimization

Most off-chain components have room for optimizations, most teams are actively working on some of them, and Gelato will make sure that those are suitable to meet ApeChain expectations. On top of low-level and code optimizations, there are also infrastructure optimizations that Gelato, as the leader in the space, has in place to make sure we maintain the liveness of the chain, are highly performant, available, and fault-tolerant (e.g distributed strategic geo-located RPCs, dynamically scalable RPCs, adoption of best in class hardware)

## Bridging & interoperability

Cross-platform compatibility and interoperability, allow for a unified gaming experience across games and platforms.

All Gelato deployed rollups benefit from having a native integration with LayerZero NFT bridges which enables NFT holders to bridge in and out their NFTs to ApeChain from any other chain.

Furthermore, all game engines that support EVM, such as MUD, will be supported by Gelato RaaS.

## UX focus for the masses

User-centric design, ensuring ease of use for gamers of all levels, with intuitive interfaces and straightforward navigation. This is not limited to supporting concepts such as account abstraction but also refers to custom mechanisms that lead to faster onboarding or tailored gaming experiences.

# Ecosystem Development

When it comes to launching a chain, at Gelato we understand that success goes beyond technical execution. As a strategic chain development partner, we offer an array of services designed to provide comprehensive support throughout the go-to-market process.

One area where Gelato excels is strategic communication and ecosystem growth support. We understand the importance of crafting clear and impactful messaging tailored specifically for your chain that effectively communicates your value proposition and unique selling points to key stakeholders and target audiences.

In addition, business development plays a crucial role in ensuring smooth chain launches. With extensive experience in forging partnerships and building networks within various verticals of web3, Gelato assists projects in identifying valuable opportunities for growth while establishing partnerships with key web3 organizations or individuals.

Here are some examples of key partnerships Gelato has established:

[

5

1068×610 272 KB

](<https://global.discourse-cdn.com/apecoin/original/2X/e/e31ce70577d4d7ceb9bba58c7f2ea807838c0e6e.png>)

## STEPS TO IMPLEMENT & TIMELINE:

January 11, 2024 - January 31, 2024: Community Feedback Period

February 1, 2024 - February 7, 2024: Voting Period Round 1

After the voting has concluded and if the ApeCoin DAO and community decide to move this proposal forward the following timeline is suggested:

March 2024

Kickoff development of Apechain starting with a private testnet. This will include scoping the technical requirements, and infrastructure that needs to be deployed, and aligning on additional features of Apechain.

Due to Gelato's extensive experience in the space and partners including LayerZero and The Graph, all needed infrastructure can be deployed on ApeChain testnet and mainnet.

The exact list of partners will depend on the choosing of the special counsel after some recommendations from Gelato.

Additionally aligning on ecosystem incentives like offering native yield on Apechain.

April - May 2024

Concluding private testnet and open public testnet to the ApeCoin community as well as starting promotion of Apechain including native yield and onboarding incentives.

Gelato will start deploying infrastructure to the testnet at that point while also already offering developers RPCs so that first dApps can start building on ApeChain.

At the same time to above-mentioned go-to-market campaign will be kicked off together with the support of the chosen ecosystem as well as the Gelato Growth team.

June - July 2024

Production launch of Apechain using \$ETH as a gas token and start generating additional revenue for the DAO treasury as well as starting with \$APE buybacks.

Ongoing actions while developing will occur so Gelato will stay flexible to proposed changes from the DAO, community or special council members.

## **OVERALL COST:**

As part of this proposal launching ApeChain will be a collective effort between the chosen ecosystem (Arbitrum, Optimism or Polygon), Gelato and ApeCoin DAO. Considering this setup the only compensation that Gelato seeks is for running the infrastructure, which will likely be compensated by the given ecosystem depending on the selection of the DAO.

However, when launching ApeChain there will be multiple areas where costs can occur for the DAO in additionally to infrastructure costs for running the chain, this includes:

- Data availability cost and posting data on L1
- Third-party infrastructure (oracles, indexers, block explorers, etc.)
- Ecosystem development (grants, human resources, marketing/branding)

These costs are subject to discussion as soon as a decision is made if ApeChain will be created with the support of the ApeCoin DAO.

We are looking forward to receiving feedback from the ApeCoin DAO and its members.

Should there be any additional requests/remarks don't hesitate to contact us at [partnerships@gelato.digital](mailto:partnerships@gelato.digital).