Composable is extending the Inter-Blockchain Communication (IBC) Protocol to Ethereum

Composable Foundation

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This article offers readers new insight into Composable's ongoing initiative to extend the Inter-Blockchain Communication (IBC) protocol to Ethereum. Produced by Composable's core contributors to highlight our pioneering efforts in establishing the first trust-minimized interoperability hub among the Ethereum, Cosmos, and Polkadot ecosystems.

Setting the stage

Navigating the intricate structures of multiple blockchain ecosystems can sometimes feel like speaking different languages. As we extend our reach and forge new connections, we recognize that the jargon and concepts we are comfortable with may be foreign terrain to newcomers or those from different blockchain ecosystems.

If you're already well-versed in the hurdles of blockchain interoperability and the capabilities of the Cosmos-native Inter-Blockchain Communication (IBC) Protocol, feel free to skip ahead to the later sections of this article where we introduce how we, at Composable, are pioneering the expansion of IBC into the Ethereum world!

On the other hand, if you just read that and thought, "What is IBC?" because you are either new to our, or the greater Polkadot and Cosmos communities, or hailing from the Ethereum ecosystem, we've compiled a short but handy list of resources on IBC. Furthermore, we start off with a brief history of our work at Composable to showcase our relentless efforts in leading the charge to extend IBC's reach to all ecosystems. To us, this is a crucial initiative that we see as a cornerstone to overcoming one of the greatest challenges to blockchain mass adoption.

IBC 101: a simple introduction to the Inter-Blockchain Communication (IBC) protocol

Simply put, the Inter-Blockchain Communication (IBC) protocol is a cross-chain messaging framework designed to enable different blockchains to securely interact with each other. Initially developed for the Cosmos ecosystem, the IBC protocol facilitates direct, trust-minimized communication between chains. Unlike centralized bridges, IBC does not require intermediaries, thereby providing a secure, efficient, and decentralized approach to blockchain interoperability.

It is important, for those unfamiliar, to note that IBC's light client-based interoperability has flawlessly secured tens of billions in annual value transfers, maintaining an impeccable record completely free of exploits since its launch!

Here is a short list of useful resources for interested readers to research and learn more about the power of IBC

1️⃣

https://tutorials.cosmos.network/academy/3-ibc/1-what-is-ibc.html

2️⃣https://ibcprotocol.dev/

3️⃣https://github.com/cosmos/ibc/tree/main/spec

The current state of cross-ecosystem interoperability

Today's prevailing solutions for achieving blockchain interoperability across different ecosystems predominantly hinge on the use of Multi-Signature Wallets, Oracles, or a hybrid of both. This methodology has shown significant vulnerabilities, a fact starkly highlighted by Chainalysis' 2022 report. The research indicates that about 70% of all blockchain-related cyberattacks are directly attributable to flaws in crypto bridge technologies. According to Chainalysis, these vulnerabilities have led to the theft of approximately $2 billion in cryptocurrency, spread across 13 cross-chain bridge hacks.

These vulnerabilities have, unfortunately, cast the industry in a negative light, painting it as a playground for hackers eager to seize users' assets. Such a reputation has sown seeds of apprehension among everyday users, hindering the widespread

adoption of crypto technologies.

Furthermore, the subsequent list, curated by cwhinfrey, illustrates recent hacks and exploits attributed to prominent, yet centralized blockchain solutions. The compromises inherent in the design of these ‘solutions’ betray the foundational principles of blockchain technology — decentralization and security

. Unfortunately, such lapses often occur, and continue to occur, as protocols prioritize short-term objectives over the well-being and values of end-users. Furthermore, many teams forgo the extensive research and development required to implement more secure alternatives.

Continue reading to discover how Composable is fundamentally redefining the interoperability landscape, specifically by being the first team to expand the IBC protocol to a range of ecosystems such as Polkadot, Kusama, and now Ethereum.

A brief history of how Composable has successfully expanded the reach of IBC to securely connect Polkadot, Kusama, and Cosmos

While IBC offers a powerful framework for secure and efficient cross-chain transactions, its adoption was constrained between Cosmos SDK chains. Numerous teams and investment firms, such as Paradigm, have recognized the aforementioned potential that IBC offers for achieving secure cross-ecosystem interoperability. Driven by this realization, several teams are actively working on developing the requisite tools and infrastructure to broaden IBC’s reach beyond its initial confines within the Cosmos ecosystem.

In this regard, we are extremely proud that Composable, with the support of our incredible partners and collaborators, was the first team to extend IBC outside of Cosmos. We successfully connected the Polkadot, Kusama, and Cosmos ecosystems, but we are not at the end of our efforts to extend IBC. Thus, we are excited to announce, “We’re going Home

”.

We’re going home: Ethereum IBC

As we discussed earlier, most blockchain enthusiasts, users, and builders entered the realm of digital assets and decentralized technologies via Ethereum — a realm that to many signifies the ‘home’

that continues to serve as the beating heart of the blockchain universe.

At Composable, we are currently undertaking our biggest transformative initiative to date. We are extending the capabilities ofIBC to Ethereum.

Thus, our current objective is to forge a secure and seamless connection between Ethereum and the presently interconnected blockchain ecosystems of Polkadot and Cosmos. We believe this development will significantly amplify the reach and functionality of IBC, while providing a myriad of value propositions for chains and stakeholders of all the ecosystems involved. This includes enhanced liquidity resulting from the free flow of blue-chip assets like DOT, ETH, and ATOM, an expanded user base by connecting to and from leading Ethereum protocols, and the potential for new and innovative cross-ecosystem financial products and services. These new products and services will be able to leverage assets native to various ecosystems, utilize the broader availability of liquidity, and deploy smart contracts that can securely and seamlessly execute users intentions across these diverse platforms.

Ultimately, this will set the stage for an unprecedented era of cross-ecosystem interoperability and collaboration.

Get involved

IBC is coming to Ethereum, brought to you by Composable and our global network of contributors. We invite all interested Ethereum protocols to join our community and to contact our team to learn how your protocol can be integrated for secure cross-ecosystem interoperability. Remember, if you are currently operating and marketing your protocol as a cross-ecosystem solution, chances are you have integrated with a vulnerable centralized solution; and it’s now time for an upgrade. Don’t take a gamble with the assets of your users, don’t wait until it’s too late, instead be one of the first teams to migrate your cross-ecosystem functionalities and assets to a more decentralized and secure environment via Composable.

Ultimately, we are ALL

responsible for providing our users and their assets with the most secure and efficient solutions available.

Why Ethereum?

Ethereum has become and maintained its reputation as one of the industry’s most dominant and innovative forces in the

decade since it was founded. As of today, its native token, $ETH, ranks second only to Bitcoin in terms of market capitalization. While many other unique and impactful blockchains have been introduced over the years, Ethereum has continued to dominate the market. Over the past three years, Ethereum's market share was less than 10%, with its value rising to around 20% at present (source). Importantly, Ethereum is popular for good reason: it continues to strive to stay on the cutting edge, encouraging community development and supporting advancements through the Ethereum Foundation and various grants and initiatives.

Therefore, it is incredibly important for Composable to integrate a secure connection to Ethereum via the expansion of IBC; and as a result, Composable and its ecosystem of contributors, partners, and supporters aims to provide compelling and valuable use cases for users across all connected ecosystems.

Why should the Ethereum ecosystem care about Composable's effort to introduce IBC interoperability?

Mutually beneficial convergence:

Despite Ethereum's towering presence as an epicenter of liquidity and groundbreaking innovation, burgeoning blockchain ecosystems do exist outside of its sphere that possess novel value propositions for users, developers, and stakeholders. These value propositions have been largely untapped by the masses, as these ecosystems have remained isolated fortresses. For instance, Polkadot and Cosmos have become bastions of inventive functionalities, stringent security measures, and diverse DeFi opportunities. However, Composable believes their true potential has been curtailed by limited exposure to the broader liquidity and adoption that Ethereum has attracted.

Proven interest, hindered by complexities:

Ethereum is often the first homebase of both users and developers who embark on their journey into decentralization. Yet, in the quest to unlock the full scope of opportunities in this expanding industry, many have begun to explore alternative blockchain ecosystems. These 'explorers' often encounter a labyrinth of new user interfaces, different wallet requirements, and major differences in chain architectures, complicating their experience and discouraging them to continue exploring.

Turning user demand into builder production, resulting in secure on-chain execution of user intentions across any connected chain:

It is precisely this gap between user demand and production ready solutions that underscores our urgency, at Composable, to tether these promising but siloed ecosystems to the Ethereum mothership

. Doing so not only amplifies the potential market of Polkadot and Cosmos, but also enriches the entire blockchain landscape by allowing for a harmonious blend of security and innovation. Furthermore, through the actualization of our vision at Composable, we aim to enable a future of seamless and secure on-chain execution of users' intentions across any ecosystem or chain.

Let's explore and consider some additional benefits that Composable's Ethereum IBC connection will provide to a number of stakeholders

For End-Users and DeFi Enthusiasts:

Asset Diversification:

Broaden your portfolio by accessing a range of assets across Ethereum, Cosmos, and Polkadot.

Enhanced Yield Opportunities:

Leverage high APR opportunities across multiple chains from a single user-interface.

Security:

Transact with the confidence that your assets are secure, thanks to the trust-minimized, non-custodial benefits of the IBC protocol.

⚡ Speed & Cost-Effectiveness:

Experience seamless cross-ecosystem transactions, optimized for high-speed execution of user intentions at minimized costs.

For Developers:

⚒ Cross-Ecosystem Development:

Build applications that can natively and securely interact with Ethereum, Cosmos, and Polkadot, with advanced tooling and support.

✓ Resource Optimization:

Utilize the unique value and strengths of various chains and frameworks for a more efficient, holistic, and effective development and execution process.

For Institutions & Investors:

Enhanced Market Exposure:

Diversify your asset portfolio by accessing a broader asset base without having to worry about vulnerabilities in executing complex cross-ecosystem strategies.

Revenue Streams:

Unlock new avenues for transactional volume and revenue generation across a variety of ecosystems.

For Existing Protocols across Ethereum, Cosmos, and Polkadot:

User Base Expansion:

Attract Ethereum users to explore Cosmos & Polkadot-based solutions and vice-versa, or collaborate and converge with synergistic protocols from different ecosystems to grow together.

Cross-Chain Capabilities & Benefits:

Increase liquidity, initiate joint initiatives via open governance proposals, and provide your users with novel opportunities by creating a market that is more liquid, interconnected, and diverse.

If you are interested in learning more about our efforts, have any questions, or are a project in any of these ecosystems that wants to be involved, reach out to our business development team on discord, telegram, or via email.

How is Composable's approach different from the already established interoperability solutions, such as Axelar and LayerZero?

TL;DR

Current bridging solutions, such as those deployed by Axelar and LayerZero, have helped us clearly identify the immense user demand for cross-ecosystem interoperability. BUT, these solutions pose grave security risks for user assets. Composable's upcoming launch of Ethereum IBC is poised to usher in a new, more secure era of cross-ecosystem interoperability for Ethereum. Composable believes trust-minimized technology such as IBC must be adopted as the standard and should be promoted and implemented by any protocol and chain operating and enabling their users to transact across ecosystems.

Demand for Interoperability:

The user demand for interoperability has been clearly demonstrated, especially within Ethereum based communities. This user demand in conjunction with the recurring shortcomings of centralized bridging mechanisms, has amplified the necessity for more secure and trust-minimized options such as the IBC protocol. IBC transcends beyond merely improving interoperability; it empowers users with self-custody of their assets, bolsters permissionless access, and fortifies the ecosystem with heightened on-chain security measures.

Meeting demand, the right way:

Upon the launch of Composable's Ethereum IBC connection, Ethereum-based protocols will be able to satisfy this immense and underserved user demand for interoperability, all while steering clear of the vulnerabilities STILL

embedded in solutions offered by current infrastructure providers such as Axelar and Layer0.

“At the end of the day, why would we, as a collective community of builders, users, and stakeholders, continue to rely on and promote bridging solutions with known security flaws and vulnerabilities? Especially once a more secure alternative, such as our Ethereum IBC connection, is live in production?

” — Omar Zaki, Founder & Core Contributor, Composable

Composable’s proven track record and approach to connecting blockchain ecosystems:

Composable and our team of core contributors has set a precedent of secure cross-ecosystem connections by being the first to deploy IBC outside of Cosmos to connect the Polkadot, Kusama and Cosmos ecosystems. Although still in their infancy, these connections have already unlocked a variety of use-cases, from cross-ecosystem liquid staking tokens via platforms like Stride and Bifrost, to cross-ecosystem liquidity pools on DEXs likePablo, Osmosis, Crescent, ShadeSwap, and Astroport.

Thus, we have proven our capabilities, and we have showcased that cross-ecosystem connections that adhere to blockchains’ key principles of decentralization and security can be deployed by conducting thorough research and intense development. We have successfully ignited the first instance of ecosystem convergence, and we are thrilled to repeat the process by bringing the vibrant Ethereum ecosystem into the collaborative ecosystem of IBC connected chains.

The bottom line

The expansion of the IBC protocol to Ethereum, by Composable, marks a pioneering advancement in the realm of blockchain interoperability. By leveraging a proven and trust-minimized framework, Composable is setting the stage for a more cohesive, secure, and efficient digital economy.

This is not merely an upgrade, but a fundamental shift in how blockchains can and will interact in the future. This article serves as an invitation for all stakeholders, across all ecosystems, to participate in this transformative journey and promote the move to a more decentralized and secure environment for our collective community of users.

TESTNET IS COMING

We’re excited to share that we’re nearing the release of our testnet for Ethereum IBC, a critical milestone before our Ethereum Mainnet launch. This testnet will allow us to validate the stability and security of the entire system, and involve our community and collaborators in ensuring a robust and secure cross-ecosystem connection. We’re particularly looking forward to community involvement and feedback during this testing phase. Keep your eyes peeled — there may be some exciting testnet incentives, programs, and opportunities on the horizon that you won’t want to miss!

Stay tuned for more updates on this groundbreaking initiative. The future of blockchain interoperability is about to take a significant leap forward.

Follow us on

[Twitter

](https://twitter.com/ComposableFin)to stay up to date as we unlock the next evolution of Composable IBC, connecting Polkadot and Cosmos to Ethereum.