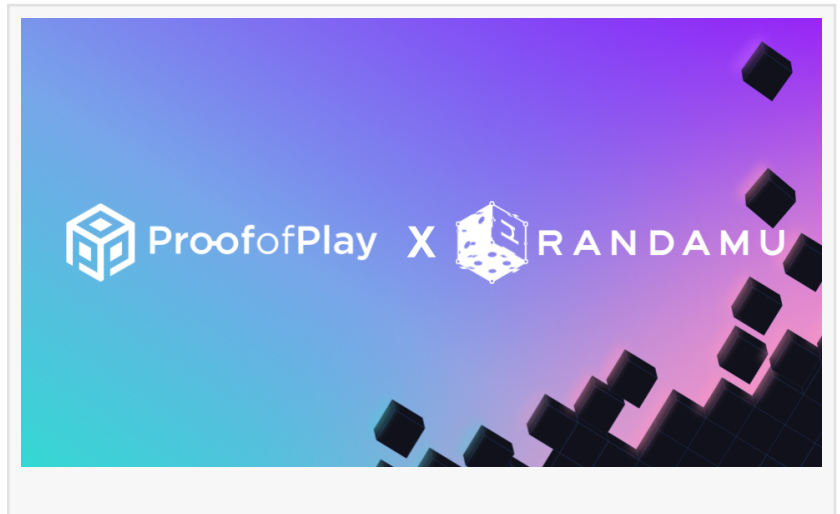


Case Study: Randamu & Proof of Play Collaborate to Revolutionize Verifiable Randomness for Pirate Nation

BANGKOK, THAILAND, December 11, 2024 /EINPresswire.com/ -- The recent DEVCON Southeast Asia Convention in Bangkok, Thailand, sponsored by the Ethereum Foundation, showcased a bevy of new technologies, including cutting-edge innovations in onchain gaming. Among the highlights was a collaboration between Randamu and [Proof of Play](#), underscoring the transformative potential of partnerships in this space. As the onchain gaming industry rapidly evolves, developers grapple with distinct challenges in creating immersive, trustless, and scalable experiences for players.



“

Integrating drand into Pirate Nation has been a game-changer. Randamu's expertise and technology enabled a system that's not only fair and secure but scalable for the demands of web3 gaming.”

*Matt Van, Head of Engineering
at Proof of Play*

Proof of Play, the creative studio behind the web3 gaming sensation [Pirate Nation](#), encountered these challenges first-hand. To address the need for an efficient, secure, and unbiased verifiable randomness function (VRF), Proof of Play partnered with Randamu. Leveraging the capabilities of Randamu's open-source [drand](#) software, this collaboration set a new benchmark for integrating verifiable randomness into blockchain gaming.

THE CHALLENGE: Building Fair & Scalable Randomness
At the heart of Pirate Nation lies a dynamic world filled with treasure hunts, battles, and procedurally generated content. The game's mechanics rely heavily on

randomness to:

- * Determine loot drops: Ensuring fairness and unpredictability in item rewards.
- * Drive in-game events: Enabling unique, time-bound opportunities for players.

* Combat cheating: Providing tamper-proof random outcomes for battles and quests.

However, Proof of Play faced several obstacles when designing their VRF:

* Player Trust: Traditional random number generators in gaming lack transparency, making it difficult for players to verify fairness.

* Excessive Cost: Existing on-chain randomness is expensive and slow, leading to scalability issues.

* Security & Bias Resistance: Ensuring that no single entity could manipulate random outcomes was paramount.

THE SOLUTION: Randamu's drand-Powered Verifiable Randomness
Randamu's expertise in verifiable randomness made drand the ideal solution to meet Proof of Play's requirements. By integrating a customized VRF powered by drand,

Proof of Play addressed their challenges with the following features:

Unbiased & Publicly Verifiable

Drand's randomness beacon provides outputs that are unbiased, cryptographically secure, and publicly verifiable. This ensures players in Pirate Nation can independently verify that game outcomes—such as treasure drops and quest rewards—are genuinely random and fair.

Cost-Effective On-Chain Integration

Using drand, Proof of Play implemented a hybrid model where drand randomness computed off-chain can be referenced on-chain. This approach dramatically reduced gas costs, ensuring scalable gameplay without compromising security or decentralization.

Global Network

drand's randomness is powered by a decentralized network—including nodes from trustworthy organizations such as Cloudflare, Ethereum Foundation, EPFL, University of Chile, Kudelski Security, and Protocol Labs—making it resistant to manipulation and single points of failure.

Custom Features for Gaming

Randamu worked closely with Proof of Play to tailor drand for Pirate Nation. This included:



- * Time-based randomness for synchronized events such as daily world generation.
- * Modular randomness derivation, enabling different levels of precision depending on the gameplay scenario.

IMPACT ON PIRATE NATION

The partnership between Randamu and Proof of Play has significantly enhanced Pirate Nation's gameplay experience by providing:

Enhanced Player Trust

Players now have full confidence in the fairness of loot drops and quest outcomes, leading to increased player retention and positive community sentiment.

Scalability for Millions of Players

With a lifetime total of 75M+ VRF calls, the hybrid randomness model has enabled Pirate Nation to support a growing player base without incurring exorbitant transaction costs, thus paving the way for large-scale events and future expansions.

Innovative Gameplay Mechanics

The availability of trustless randomness has empowered Proof of Play to design novel features, such as dynamic treasure hunts where outcomes adapt in real time based on player participation.

CONCLUSION

The collaboration between Randamu and Proof of Play demonstrates the transformative potential of integrating verifiable randomness into blockchain gaming. By leveraging drand, Pirate Nation has set a new standard for fairness, trust, and scalability in the web3 gaming industry. As the gaming world continues to evolve, Randamu remains committed to empowering developers with cutting-edge randomness solutions.

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