

# Incentivized Testnet Proposal: Casper Network Testnet Rewards Program (Nov 11 - Dec 31, 2024)

## Initial goals

1. A Testnet that more closely resembles an aspirational version of Mainnet, with a healthy mix of TTL and Genesis nodes, validating and non-validating.
2. No more "black box" performance tracking - the only performance metric that will be used is entirely on-chain, and verifiable
3. Fair and predictable compensation
4. No more Sybil's
5. Fair access to participation
6. Better enable one of the primary use cases of Testnet: allowing mainnet validators to test their set-ups, get access to releases prior to mainnet activation and optimize their mainnet service in a "risk-free" environment

## Constraints

1. The budget is set.
2. The quarterly cadence is set
3. While the protocol is permissionless, the Testnet Program is not. This proposal provides for equal opportunity of access to anyone, but doesn't guarantee access as an inalienable right to anyone. The number of quarterly participants will be capped at 100 validators and 10 backup validators (full nodes).

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# The Proposal

## Overview:

The Casper Network is introducing a Testnet Rewards Program for the two-month period from November 11, 2024, to December 31, 2024. This program rewards validators for their contributions to maintaining and improving the Testnet.

# Program Structure:

## 1. Application Process:

Application Deadline: November 03, 2024

Application Platform: Validators must apply via an online form, collecting the following:

- Name and Surname
- Email Address
- Cryptographic Signature (used for email verification)
- Up to 3 Public Keys for the validator
- Type of Validator Preference:
  - TTL Node (Time to Live)
  - Full Archival Node
  - Any (if the applicant is open to either type)
- Mainnet Validator Status:
  - Are you a mainnet validator? (Yes/No)
  - If yes, provide your Mainnet Validator Public Key.
- Are you a Top-30 Mainnet Validator? (Yes/No)
  - If yes, would you like to opt into one of the 15 reserved slots for Top-30 Mainnet Validators?
  - If yes, do you want to receive up to EUR 50 per month, or do you prefer to participate without any incentives? (Yes/No)
- Basic Questions testing knowledge of official validator documentation.
- Telegram Username
- Twitter Profile Link

### **Lottery Selection:**

- The lottery will take place on November 04, 2024, using an online tool or on-chain contract for transparency.
- Up to a total of 100 validators and 10 backup validators (full nodes) will be selected (after filling up-to 15 slots with the top-30 Mainnet validators).
- If the number of applications is insufficient, an additional lottery will be hold among the same applicants to fill the vacant slots.
- If the number of the applicants are more than 100, 20 additional public keys will be selected through lottery, to fill the vacant spots in case of KYC failures during the onboarding of the originally selected validators and the full node operators.

### **KYC Verification with Video-Based Liveness Check:**

- Selected validators will undergo KYC verification, including a video-based liveness check, from November 04 to November 07, 2024.

- Incorporated parties may be offered the KYB option as well, based on the feasibility and availability of the operational tooling. Please indicate your status and wish to go through KYB immediately after the lottery, by sending an email to [casper-testnet@make.services](mailto:casper-testnet@make.services), no later than 24 hours after the announcement.

## 2. Incentives and Validator Categories:

### **Validators will be divided into the following categories:**

- 10 Full History Nodes (Archival Nodes): Node operators maintaining historical data are eligible for EUR 200 per month, provided they give proper responses to automated (daily) checks through the RPC and or the SSE ports for existence and availability of historical data. These nodes will serve as data keepers of the network, and will not be in the active validator set, but will have an active bid to be able to step up as a validator in case of need.
- 100 TTL (Time to Live) Validators: Validators maintaining standard nodes are eligible for EUR 100 per month with 99% or higher on-chain monthly performance.
- 15 Slots for Top 30 Mainnet Validators:
  - Reserved for high-performing mainnet validators, eligible for up to EUR 50 per month, subject to the same criteria as the other TTL validators and the full history nodes.
  - Top-30 Mainnet validators list will be based on a snapshot of the Casper Mainnet, taken at the last day of the previous quarter, where only the validators with 99% and higher monthly average performance are included.
  - Optional Incentives: Top-30 Mainnet Validators can opt out of receiving rewards and participate purely for the Testnet experience, in order to test and improve their mainnet validator activities.
  - These 15 slots are not in addition to the 110 (100 TTL validators and 10 full nodes) slots above, but included in that. So the total number of participating nodes will not exceed 110 in any case.

### **Reward Distribution:**

- Rewards will be distributed quarterly. Node operators maintaining required performance throughout the quarter can earn up to EUR 600 (Full History Nodes), EUR 300 (TTL Validators), or EUR 150 (Top-30 Mainnet Validators).
- Partial Rewards: Validators who lose eligibility due to low performance, or full archival node operators due to lacking data availability requirements, may still receive partial rewards at the end of the quarter, based on their time in the eligible set. (Examples: 1 month of participation will result in 100 EUR of rewards for a TTL validator, 2 months of participation will result in 200 EUR of rewards for a TTL validator, and so on...)
- Nodes which lose eligibility due to low performance will be removed from that quarters active set, without losing their partial rewards, which will be paid at the end of the quarter.
- There will be at least a 24-hour grace time for nodes which suffer from unexpected issues, provided that they ideally spot the issue on their own, actively work to fix the issue, keep the community informed, and share their experience with the other node operators transparently. Failures due to poor operation or lack of attention are not included in this case.
- No Rewards for Disqualification: Validators disqualified for violating the Testnet Community Code of Conduct or engaging in malicious behavior will receive no partial rewards.
- Every participant must monitor the health and performance of their nodes at all times, intervene in a timely manner when needed, report issues along with relevant logs to Casper Association, and follow the official

announcements in the Casper Testnet Participants group. The participants are expected to be active and responsive.

## 3. Validator Requirements:

- Validators must meet specific technical standards, including open ports and servicing random historical blocks (for Full History Nodes). These requirements will be verified by an automated bot. Performance will be measured entirely on-chain, ensuring fairness and transparency.
- TTL nodes assigned as validators must keep their gossip ports open, and others closed to the public (with an exception for the Casper monitoring tool). Archival nodes must keep all of their ports open in a limited fashion.
- The recommended hardware specifications (<https://docs.casper.network/operators/setup/hardware/>), can be found on the official documentation.
- Validators will be invited to a private Telegram group for instant communication and collaboration through the quarter, which will be deleted at the end of the quarter.

## 4. Program Budget:

The total budget for the quarter is EUR ~34,000, designed to support high-quality participation while managing costs.

## Public Key Submission Limits:

Validators must meet the following requirements for public key submission:

- Minimum 3 non-transfer deploys on the Mainnet.
- At least CSPR 1,000 total balance (staked or liquid) on the Mainnet.

## Anti-DoS Measures:

To prevent abuse of the application process, the following anti-DoS measures will be in place:

1. Cryptographic Signature: Validators will provide a cryptographic signature for email verification to ensure authenticity.
2. One submission per email on the form with a sign-in requirement.
3. Knowledge-Based Filtering: Applicants will answer basic questions from the official validator documentation (<https://docs.casper.network/operators/>) and the Testnet Installation Instructions (<https://docs.casper.network/operators/testnet-installation-instructions/>), along with basic Linux commands, to ensure they have the necessary knowledge to operate a node.
4. KYC and Liveness Check: All selected validators will undergo KYC verification with a video-based liveness check to confirm their identity. Applicants who fail the KYC process will lose eligibility, and will be removed from the program.

# Program Feedback Period

At the end of every quarter, there will be a feedback period of at least 1 week where the participants of that ending quarter can share their opinions and make improvement suggestions about the program. This may include polls, and open discussion topics on the Casper governance and community forum. The feedback collected through this period will be input to the next proposal of Testnet incentives.

## Timeline:

- Application Deadline: November 03, 2024
- Lottery Selection and Announcement: November 04 to November 05, 2024
- KYC Verification (with liveness check): November 04 to November 07, 2024
- Incentivised Testnet Operation Period: November 11 to December 31, 2024
- Reward Distribution: Rewards will be distributed quarterly, starting in January 2025.

## Proposal Lifecycle

- **Stage:** Voting
- **Voting Options**
  - **For:** Support the proposal.
    - 011de3a86cd71d98a83bddf57384e1a0c3b4ea5be696fcbd6fa9a80b3cdcf396de
  - **Against:** Oppose the proposal.
    - 0118c145c88386f6cf0dd12c30702742013ab23260253e8748f620dd31c27ccadb
  - **Abstain:** No opinion.
    - 015dc16c2072eaf747f559385ee0ac277fbf91ab87b536da8c5bb6177940e833ac
- **Deadline:** 23:59 UTC, October 30, 2024

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### How to vote:

- A voting token, with a total supply of 100.00, for the proposal has been created, and distributed to Mainnet validators based on their network weights as of era 15617
- Make your decision and send all (recommended) or some of the voting tokens to one of the corresponding addresses below.
  - For: 011de3a86cd71d98a83bddf57384e1a0c3b4ea5be696fcbd6fa9a80b3cdcf396de
  - Against: 0118c145c88386f6cf0dd12c30702742013ab23260253e8748f620dd31c27ccadb
  - Abstain: 015dc16c2072eaf747f559385ee0ac277fbf91ab87b536da8c5bb6177940e833ac

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### Evaluation of the results:

- Quorum ratio: +50% network weight (>50.00 tokens, including the abstains)
- Decision threshold: Simple majority (+50% of participating weight, excluding the abstains)
- Example:

- For:35.00, Against: 25.00, Abstain: 15.00
  - Quorum reached with 75.00%, proposal accepted with ~58.33%
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- The discussion topic: <https://forum.casper.network/t/incentivized-testnet-proposal-casper-network-testnet-rewards-program-oct-1-dec-31-2024/111> (<https://forum.casper.network/t/incentivized-testnet-proposal-casper-network-testnet-rewards-program-oct-1-dec-31-2024/111>)
- The final proposal topic: <https://forum.casper.network/t/cgv-001-incentivized-testnet-proposal-casper-network-testnet-rewards-program-nov-11-dec-31-2024/778> (<https://forum.casper.network/t/cgv-001-incentivized-testnet-proposal-casper-network-testnet-rewards-program-nov-11-dec-31-2024/778>)
- Proposal on IPFS for reference: TBD