Livepeer Retro-Active Grant Funding Application - Entry #5

Applicant Information

Name or Nickname Who is the main point of contact for this application?	Ftkuhnsman
Contact Email	hidden
Recipients ETH Address Address to where funds will be delivered if the applicant is awarded funds? NOTE: All LPT funds are on the Arbitrum network	0x4a43B1D7e6227C8b0512e413F406555647ff7bdB
Lens Handle (if applicable)	Empty
Twitter Handle (if applicable)	Empty
Discord Handle (if applicable)	ftkuhnsman

Project Information

Project Title	Community Arbitrum Node
Project Description Please provide a brief overview of your project, its objectives, and how it has benefited the Livepeer ecosystem.	Livepeer Innovators DAO to subsidize the continued operation of the Livepeer Community Arbitrum node service, making it free to use by all Livepeer network participants (orchestrators, broadcasters, and delegators).
Duration of the Completed Project Specify the period during which the project was active or completed.	June 2022 to June 2023
Project Impact Describe the impact your project has had on the Livepeer ecosystem,	The Community Arbitrum Node project was implemented and operated for a full year (spanning 2022/23), subsidized by the Livepeer Grants program. The project provided a robust and fully redundant Arbitrum node RPC service that was free to use by all verified Livepeer Orchestrators. The service was discontinued in June

including any measurable results or outcomes.	2023 as the Livepeer Grants Program no longer wished to provide subsidized funding for service hardware and maintenance components. I am proposing that the Livepeer Innovators DAO subsidize the continued operation of the Livepeer Community Arbitrum node service.

Since moving to arbitrum layer 2, all orchestrators have been dealt with issues at one point or another finding a stable and functional arbitrum node. While many of us tried using Alchemy, Infura, or the public RPCs provided by Ankr and Offchain Labs, it is not uncommon to experience service outages and/or rate limiting. The current alternatives are opting for the paid plans offered by third party providers, or running your own node. Both options are prohibitively expensive given the price of third party services and the cost of renting cloud compute resources.

My solution is to turn the service back on and continue to allow the Livepeer Community to participate for free, with a few key enhancements to further the goal of the Livepeer Innovators DAO - empower builders to contribute to the growth of Livepeer:

1. All Livepeer participants can use the node for free if they are active orchestrators, broadcasters, or delegators. This will allow builders free access as well as long as they either run a node or delegate to an orchestrator, further promoting the growth of the network.

2. Ftkuhnsman will be proposing a new pull request in go-livepeer that adds the Community Node as a default provider, with built-in mechanism to request and obtain authorized access to the node service at runtime. This means that no user would be required to provide a value for the -ethUrl flag; the livepeer process will automatically connect. If Livepeer does not with to merge this pull request ftkuhnsman will publish an open source version of livepeer with these modifications and maintain the repository as new livepeer versions are released. |
| **Team Members**
List the team members involved in the project, including their roles and relevant experience. | Joey Kuhnsman (ftkuhnsman) - Project Lead |

Technical Details

Is the project open source?	No
GitHub Link: (if applicable)	Empty
Technology Stack
List the technologies, languages, and frameworks your project is based on.	The Community Node RPC service is made up of a pool of geo-distributed arbitrum nodes, running on a combination of physical and cloud-hosted servers. Each server runs the latest stable version of the Nitro software from Offchain Labs. Additionally,

	a thin authentication layer is deployed on each server which authenticates requests (i.e., verifying the request comes from an active network participant).
Explanation of Retroactive Funding Use Explain how the retroactive funding will be used, such as to cover past expenses, support ongoing maintenance, or further enhance the project's impact.	All the time/expenses incurred to setup the service have already been provided by the Livepeer Grant Program. As the Community Node incurs ongoing maintenance and hardware costs, continued funding will be required to keep the service operational. I am proposing that this first grant fund operations for a defined period of time (e.g., one year, one quarter, etc), and I will submit future grant requests for continued operations. This will allow the network to decide if the service should continue to operate based on the value it adds.
Community Engagement How have you engaged with the Livepeer community and users during and after the project's completion to promote its benefits and adoption?	Ftkuhnsman has been a long-standing participant in the Livepeer community. I provided and supported this service for a full year and hope to continue with the support of the Livepeer Innovators DAO.
Collaboration Have you collaborated with other Livepeer developers or projects? If so, how?	I am an active member/contributor in the Video Miner Pool project.
Additional Information Any additional information or details you would like to share with the Retroactive Grant DAO regarding your project or retroactive funding request.	I look forward to the opportunity to provide a free RPC service for the Livepeer community.
Supporting Documentation Please attach any relevant documentation, such as project proposals, technical specifications, or mock-ups, that will help us better understand your project.	📄 nan.txt