



RunNode Litepaper

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In this paper, we propose RunNode; a scaling solution for the Solana blockchain that leverages a combination of non-custodial user staking to build validator nodes in combination with a developer API that has an autoscaling node design to enable higher transactions and throughput for solana developers to build their applications on.

1. Background

The Solana blockchain is currently experiencing exponential growth in users and application development. In order to continue to grow, Solana needs to be able to compete with other blockchains such as Ethereum. In order to do that, it needs similar tools and infrastructure that are not currently available on Solana.

2. Current Gaps

1. Developers on Solana and teams have to build and maintain their own validator nodes and infrastructures.
2. Current node access does not scale with traffic usage.
3. Applications that are using the publicly hosted nodes from Solana and Serum are only allowed for 10 transactions per second, far less than the potential speed of the Solana blockchain.
4. Developers and applications have to estimate traffic usage and activate more nodes to meet estimated requirements that create inefficiencies and unnecessary overhead.
5. Current RPC Node providers are very costly for projects. (estimated \$1,000-\$2,000 per month based on available quotes.)
6. There is no developer library for smart contracts to allow developers to write, compile or smart contracts easily.
7. There are no boilerplate code templates for easy web based dApp creation.
8. The current staking process for Solana is cumbersome and difficult and requires a command line interface with complicated documentation for normal users and holders of Solana to be able to easily become validators on the Solana blockchain.

3. RunNode Developer API and Platform

RunNode is a scaling solution for Solana using a nodes-as-a-service developer API that allows for automatic node scaling to handle increased traffic. The RunNode developer platform will have the following features:

3.1 RunNode Developer API

An Infura equivalent API for developers and applications to connect into Solana RPC Nodes. Developers can utilize solana-web3.js to create apps that interact with our API layer. They will simply have to change the HTTP endpoint from their own local node (**http://localhost:8899**, **http://192.168.1.88:8899**) to our HTTP(S) endpoints (**https://runnode.com/api/v1/**) and all the rest of their code will work the same way as normal.

3.2 Automatic Node Scaling

Automatic node scaling to handle localized and permanent traffic increases. Our API will activate or deactivate nodes automatically to handle increases and decreases in traffic for your application.

3.3 RunAnalytics

Developers can view analytics and create/maintain API keys in a web interface on runnode.com to analyze traffic and transactional volume.

3.4 RunDeploy

A smart contract deployer that will allow developers to write, compile and deploy smart contracts on the Solana blockchain easier.

3.5 RunBox

Developers will be able to create web based dApps with one command that automatically creates boilerplate code in a testnet Sandbox environment to quickly iterate, deploy and debug smart contracts on the Solana blockchain

before launching them publicly. smart contract deployer that will allow developers to write, compile and deploy smart contracts on the Solana blockchain easier.

4. RunNode User Staking Platform

RunNode will also be a staking-as-a-service platform. Our staking-as-a-service platform will enable simple and easy staking for users that are holding Solana tokens to help power the RunNode validator node network.

4.1 RunStake

To create enough validator nodes for solana to scale, we will enable Solana holders a simple and easy to use interface to stake their Solana tokens to our validator nodes and earn more solana through the fee incentive that Solana provides for.

5. Run Token

5.1 Run Token Utility

The Run Token is expected to have the following utility:

1. *Run Buy And Burn* - It is expected that both our node service and our staking service will generate significant revenue if we are able to capture significant market share. Run token holders will benefit from 1% revenue from both services in the form of buy and burn.
 - a. 1% of the revenue will be used to buy Run from the markets and then sent to a burn address that will decrease supply off the market over time.
2. *Run Staking* - Holders will be able to stake the Run on the RunNode platform to generate additional yield.
3. *RunDAO Governance* - After 1 year of staking, the Run Token stakers will start to generate the Sprint token that will serve as a governance token for the RunDAO.
4. *Run Airdrops* - Holders of the Run token will benefit from airdrops from developers that build on the Run platform that want to distribute their token to our large community of holders. Run will have discount incentives for projects to want to do so.

5.2 Run Token Distribution

Unlike many projects launching, we do not plan on taking on many institutional investors that get in on early rounds that can adversely impact token price for public sale participants. Our goal is to bring on one or two seed investors that will become strong strategic partners in our future.

Total Supply		1,000,000,000
Mining Pool	20%	200,000,000.00
Partnerships & Ecosystem	41%	410,000,000.00
Founders and Team	22%	220,000,000.00
Liquidity Reserve	8%	80,000,000.00
Seed Sale	6%	60,000,000.00
Public Sale	2%	20,000,000.00
Airdrop	1%	10,000,000.00