

# Free TON DevOps SubGovernance

## General description

This document suggests an implementation of on-chain governance for FreeTON DevOps as a separate interface with all the functions that the main Free TON governance has, based on <https://freeton.org/contests> as an additional bookmark.

The mission of the FreeTON DevOps governance is to improve the Free TON infrastructure, including FreeTON services, tools, and software with the goal of enhancing the Free TON ecosystem. Create a group of qualified juries to provide professional feedback and support in a DevOps field.

Build the FreeTON Application platform based on TON OS DApp Server to make Free TON more attractive for end users and ensure End-to-end Decentralization.

## Governance proposal specification

It is proposed to create on-chain governance integration for Free TON DevOps within which the following will be available:

1. **Free TON DevOps Governance Initial Members** are to form the initial **Free TON DevOps Governance** for the next 4 months (until 1 of April 2021)
2. Further members of **FreeTON DevOps Governance** will be based on DevOps Governance contests and everyone who took places from 1st to 3rd may propose themselves to the government member
3. The max number of members of the **Free TON DevOps Governance Org** is 15, the min number is 10. The decisions within the **Free TON DevOps Governance Org** are to be taken by 50% + 1 vote. If the quantity of members will hit a limit, candidates can be able to join in the next cycle (equals 4 months)
4. The **Free TON DevOps Governance Org** has to ensure:
  - smooth running of Free TON DevOps Governance;
  - running of **Contests**;
  - development and review of **Contest Proposals (CP)**;
  - distribution of funds to contest winners
  - administrative work such as announcing **Contests**, inviting developers to apply for **Contests**, consulting developers, announcing results of **Contests**, consulting jurors, etc
5. The **Contests** that are to be run by **Free TON DevOps** governance have the following characteristics:
  - to be on the topics mentioned below;
  - could be multistaged with the limited access to the 2, 3, N stage for the winners from earlier stages;

- to be launched by accepting CPs by Free TON DevOps Governance members;
- could be run in parallel;

## Free TON DevOps Initial Members

The **Free TON DevOps Initial Members** are the following:

| Name               | Telegram                 | Background                                                                                                                                                                                                       | Public Key                                                       |
|--------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Renat Skitsan      | <a href="#">Telegram</a> | DevOps with 5+ years of experience, Validator                                                                                                                                                                    | dbab2a32120be106f1eb9dbd80ca7c87742f574f31a5d7f188f695efa47e5e6d |
| Senya Ostrovsky    | <a href="#">Telegram</a> | DevOps with 5+ years of experience, winner of previous DevOps contest, top 50 of DePool game                                                                                                                     | 9b5bcf6ccdb180da143fa9fa784abb8917efabda1dde9fddede28e392e4c1b43 |
| Artem Ryabov       | <a href="#">Telegram</a> | TON Labs                                                                                                                                                                                                         | 498849b2c8881cb7ece1e92f965933d0780c2852eb8760d97c0eb7ce828dd02f |
| Mitya Goroshevskiy | <a href="#">Telegram</a> | TON Labs                                                                                                                                                                                                         | 6ff322ad669dfad2f396b98bdc8690cc49926f6a10cd7f10d07f031841cf09ef |
| Anatoly Ustinov    | <a href="#">Telegram</a> | DevOps with 20+ years of experience.<br>Enterprise infrastructure architect.<br>Enterprise storage senior engineer.<br>Enterprise virtualization arch\engineer<br>Top 10 of DePool game on a low cost server ^_^ | 865a7eb0e94d2623135dc00f3c060efdc3211309e93b279ff7d4422c5f21195d |
| Serge Medvedev     | <a href="#">Telegram</a> | Software engineer, winner of the 1st DevOps contest, author of TONOS SDK bindings for Lua and Clojure, creator and maintainer of the freeton-staking-manager                                                     | 2aedb672fa9944bafca2a9517bd96b255e9e0da2ca8da4668b356320f34eb91e |

|                   |                          |                                                                                                                                                                                                                    |                                                                  |
|-------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Sergey Tyurin     | <a href="#">Telegram</a> | Engineer; C, C++, ... programmer; DevOps; admin of FLD network                                                                                                                                                     | 2c0ec55a109eb466d9db5ee7c3adb075e77627ade83ae17cea847671ab8f0a85 |
| Itakura           | <a href="#">Telegram</a> | Active community member                                                                                                                                                                                            | 9176985c03dd3aaaa8ba4952b775af86776412fe6ed99fe9ff366768967b92da |
| Vladimir Simonov  | <a href="#">Telegram</a> | Validator for Freeton and different current blockchain projects, Magister Ludi and Depool game winner, Devops as a hobby, E-commerce and retail projects CEO, International logistics and supply chain management. | 47280bcd8ec7f71dd189a374ba7fc0e8837eafbb61f073a1d12954232a4c0f10 |
| Anton Zavodovskyi | <a href="#">Telegram</a> | DevOps with 5+ years of experience.                                                                                                                                                                                | 7c560a506bfc0df38ac9f70bcecb21e70cdab72b0284c331f19099965aaa68b1 |
| Stanislav         | <a href="#">Telegram</a> | DevOps 5+ years. Free TON Validator. Python developer. 2nd place in Game0 of Magister Ludi contest, in top 10 of DePools Game.                                                                                     | a4ee077ead36bed587e9afbc44fb1d652dc8d11e892a40c6374f129241c19f2  |
| Artem Moiseenko   | <a href="#">Telegram</a> | SRE, DevSecOps, AWS solution architect ~15 year working with linux system                                                                                                                                          | dfd9209078f2a72fc1cfac5591fc70caa121d831d4ac4306a026bd914abffc98 |
| Anton Chudakov    | <a href="#">Telegram</a> | DevOps with 20+ years of experience. Go developer. 1st place in Game0 of Magister Ludi contest, in top 10 of DePools Game.                                                                                         | bb1f2e4671ecccfaefc5e07437d32f08da1aa23fdcdd909a1dfe41fb23e2943  |
| Dmitry Summit     | <a href="#">Telegram</a> | Validator in Free TON and different current blockchain projects,                                                                                                                                                   | ef060a52434c315ea4f32e75d524c6634ebe10478fb09db5c667d22ce5e9912e |

|                  |                          |                                                                                            |                                                                  |
|------------------|--------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------|
|                  |                          | Magister Ludi and Depool game winner, Devops, system analyst, CTO w/programmer background. |                                                                  |
| Ekaterina Pantaz | <a href="#">Telegram</a> | TON Labs                                                                                   | c9ae3b1c6aca828864702999e7bf1bd6f760f62988e056a4ba3a6104cde5fc17 |

## Free TON DevOps Governance multisig wallet

0:f92be05a0ff2aab349a0681c8f08d92e1d6dbd0ab791aa53b877c020c9c07202

## Summary table

| Stage | TONs amount | When                            | Contests                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------|-------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | 673 120     | Upfront                         | <ol style="list-style-type: none"> <li>1. Free TON DevOps Jury Contest</li> <li>2. Packaging and releasing to public repositories (for any OS) tools like TONOS-CLI, ton-node(c++,rust), tvmlinker, etc.</li> <li>3. Scripts to create local environment for developers for Linux/OSX, Windows, compiler scripts for smart contracts, etc</li> <li>4. Validator Failover Solution - Validator Redundancy and Network Availability + TON Node (Rust)</li> <li>5. DevOps Rust node contest (tooling, automation scripts, validator monitoring)</li> </ol> |
| 2     | 560 000*    | After completing previous stage | <ol style="list-style-type: none"> <li>1. Rust node debug contest</li> <li>2. Rust node validator contest (MLudi game for Rust validators)</li> <li>3. Developing non-docker TON OS Startup Edition deployment (Linux, OSX, Windows)</li> <li>4. Design economical model for L1 E2ED Application Platform (rewarding of running</li> </ol>                                                                                                                                                                                                              |

|   |          |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---|----------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |          |                                 | TON OS DApp servers based on FreeTON network fees).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3 | 448 000* | After completing previous stage | <ol style="list-style-type: none"> <li>1. Common practices for configuring systems with C++ Node, Rust Node and TON OS DApp Server for better performance and lower latency. Kernel parameters, network parameters, tuning OS, filesystems, optimizing hardware configuration and C++ Node/Rust node/DApp Server settings.</li> <li>2. Design documents for security best practices (including OS system configuration, hardware and requirements for providers, signing transactions)</li> <li>3. Design economical model for L1 E2ED Application Platform (rewarding of running TON OS DApp servers based on FreeTON network fees).</li> </ol> |
| 4 | 448 000* | After completing previous stage | <ol style="list-style-type: none"> <li>1. Backups and disaster recovery solutions TON OS DApp</li> <li>2. Documenting Rust Node and TON OS DApp Server logging subsystems, categories of events and events severity. Identifying log patterns, corresponding to the most common anomalies, requiring attention</li> <li>3. TON OS DApp server reliability game (needs economical model first)</li> </ol>                                                                                                                                                                                                                                         |

\* the list of contests and required budget can change depending on results of previous stages

## Free TON DevOps Costs Estimate

This estimate is based on a forecast of the total Tons required to run all **Free TON DevOps Contests** within the 4 months (until 1st of April 2021) after the **Free TON DevOps SubGovernance** is launched.

| Contests Funds                                              | Tons per Contest | Possible Contests per month | Subtotal Tons per month | Total Tons per 4 months |
|-------------------------------------------------------------|------------------|-----------------------------|-------------------------|-------------------------|
| Contests Remuneration Fund:<br>- remuneration for the teams | 200 000          | 3                           | 600 000                 | 2 400 000               |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |   |                                |                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---|--------------------------------|--------------------------------|
| <ul style="list-style-type: none"> <li>- participating in the contests</li> <li>- up to 5 winners per Contest</li> <li>- unlimited participants</li> <li>- up to 100 000 Tons per winner</li> <li>- remuneration is to be KPI-based, including KPIs like bug fixing and code support</li> </ul>                                                                                                                                                                                                                                                                          |                         |   |                                |                                |
| <p>Jury Remuneration Fund:</p> <ul style="list-style-type: none"> <li>- remuneration for jurors for review of CPs, assessment of submissions for Contests, including code review</li> <li>- up to 20 000 Tons</li> <li>- Tons to be distributed to those jurors who participate in both - review of CPs and assessment of submissions for the same Contests</li> <li>- Tons to be distributed after assessment, including code review of submissions</li> </ul>                                                                                                          | 20 000                  | 3 | 60 000                         | 240 000                        |
| <b>Org Funds</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Tons per Contest</b> |   | <b>Subtotal Tons per month</b> | <b>Total Tons per 4 months</b> |
| <p>Administrative Fund:</p> <ul style="list-style-type: none"> <li>- remuneration for development of CP</li> <li>- remuneration for administrative work, such as running of Contests, including announcing Contests, inviting developers to apply for Contests, consulting developers, announcing results of Contests, reminding winners about submission deadlines, consulting jurors, ensuring the timely payouts to the winners, jurors, etc.</li> <li>- Tons to be distributed when Free TON DevOps Members accepts CP by launching corresponding Contest</li> </ul> | 4000                    |   | 12 000                         | 48 000                         |
| <b>Total</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |   | <b>672 000</b>                 | <b>2 688 000</b>               |

# Topics of the Contests

The topics of the nearest Contests mentioned according to their priority

## 1) Free TON DevOps Jury Contest

*Goal:* attract professionals which will be motivated to grow and enhance the Free TON ecosystem by participation in the FreeTON DevOps SubGovernance structure. This will help achieve the goal of decentralized Governance 2.0. This is the first contest to be run by the FreeTON DevOps Initial Members.

## 2) FreeTON infrastructure development and support

*Goal:* build and support all the tools/services required for development and reliable operation of FreeTON infrastructure

### *Subtopics*

- Deployment (using docker images as well as bare-metal) and release workflow for Rust/C++ fullnode, TON OS CLI and other tools/services/libraries.
- High Availability & Disaster recovery for the FreeTON services, backups and restores
- Performance and latency optimization for the FreeTON services. Performance tests
- Logging (collecting, parsing, anomaly detection and alerting). Logs specification
- Monitoring (availability metrics, performance metrics, High Availability, Disaster Recovery statuses)
- RTDB deploying/managing/support tools/scripts/instructions and etc
- Develop security best practices for FreeTON services. Node security standards (settings to mitigate the impact of DDoS attacks, complex system security settings, best practice of node install)
- Ton validators pool - a resource which will publicity in real-time information about validators - name, id, stack, total balance, staking tools, transaction confirmations tools
- Collecting technical wiki about commands, tricks, hacks for a node like manual sending stack, manual checking voting, etc.

### *Contests*

1. Packaging and releasing to public repositories (for any OS) the following tools (TONOS-CLI, tonnode(c++,rust), tvmlinker, etc)
2. Scripts to create local environment for developers for Linux/OSX/Windows, compiler scripts for smart contracts, etc
3. Developing non-docker TON OS Startup Edition deployment (Linux, OSX, Windows)
4. [Validator Failover Solution - Validator Redundancy and Network Availability](#)
5. Backups and disaster recovery solutions for TON Node (C++), TON Node (Rust) and TON OS DApp
6. Design documents for security best practices (including OS system configuration, hardware and requirements for providers, signing transactions)
7. Common practices for configuring systems with C++ Node, Rust Node and TON OS DApp Server for better performance and lower latency. Kernel parameters, network parameters, tuning OS, filesystems, optimizing hardware configuration and C++

- Node/Rust node/DApp Server settings.
8. Documenting Rust Node and TON OS DApp Server logging subsystems, categories of events and events severity. Identifying log patterns, corresponding to the most common anomalies, requiring attention. Collecting logs from Rust Nodes and TON OS DApp Servers. In-depth analysis of logs collected. Real-time monitoring of logs, detecting anomalies and alerting
  9. DePool monitoring (proxy, multisig, depool balance, staking status)

### 3) Free TON E2ED Application platform

*Goal:* build a decentralized platform for developers and businesses to make it really easy to develop, deploy, monitor and access their DApps based on the FreeTON network, ensuring end-to-end decentralization for each user

#### *Subtopics*

- TON OS DApp server endpoints information availability on-chain. Implement TON OS DApp server reliability metrics (clients should use the most reliable ones)
- Mechanism for clients to discover and access TON OS DApp server endpoints in an anonymous and decentralized way.
- Specification/Design of technical requirements/characteristics for FreeTON E2ED Application platform (e.g. acceptable latency/delay for user experience, throughput/performance)
- Develop an easy to use tooling for creating and deploying TON OS DApps
- TON OS DApp server reliability contest (needs economical model first)

#### *Contests*

1. Design reliability metrics for TON OS DApp server endpoints
2. TON OS DApp server reliability game (needs economical model first)

### 4) Economics & monetization/rewarding

*Goal:* find a way to make it attractive to join and become a provider of TON OS DApp Servers / Oracles / Databases. Build a monetization and rewards model for supporting TON OS DApp server infrastructure / Oracles / Databases

#### *Subtopics*

- Design economical model for L1 E2ED Application Platform (rewarding of running TON OS DApp servers based on FreeTON network fees)
- Design fees price in terms of estimated complexity of the query, size of the query response, latency or any other parameters
- Design reliability metrics for TON OS DApp servers and slashing conditions based on them (e.g. big latency, response an error, malicious responses)

### Contests

1. Design economical model for L1 E2ED Application Platform (rewarding of running TON OS DApp servers based on FreeTON network fees)

## 5) Validators contests

**Goal:** to build and debug Rust node validator infrastructure. Run contests to compete in validation cycles

### Contests

1. DevOps Rust node contest
2. Rust node debug contest
3. Rust node validators contest

## Costs estimates per stage

(1 stage ~ 1 month)

| Stage | Contest                                                                                                               | Participants reward | Jury reward | Org reward | Total per contest | Total per stage |
|-------|-----------------------------------------------------------------------------------------------------------------------|---------------------|-------------|------------|-------------------|-----------------|
| 1     | Free TON DevOps Jury Contest                                                                                          | 1000                | 100         | 20         | <b>1120</b>       | <b>673 120</b>  |
|       | Packaging and releasing to public repositories (for any OS) tools like TONOS-CLI, ton-node(c++,rust), tvmlinker, etc. | 100 000             | 10 000      | 2 000      | <b>112 000</b>    |                 |
|       | Scripts to create local environment for developers for Linux/OSX, Windows, compiler scripts for smart contracts, etc  | 100 000             | 10 000      | 2 000      | <b>112 000</b>    |                 |
|       | <a href="#">Validator Failover Solution - Validator Redundancy and Network Availability</a> + TON Node (Rust)         | 200 000             | 20 000      | 4000       | <b>224 000</b>    |                 |

|   |                                                                                                                                                                                                                                                                                                          |                                |        |       |                |           |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------|-------|----------------|-----------|
|   | DevOps Rust node contest<br>(tooling, automation scripts,<br>validator monitoring)                                                                                                                                                                                                                       | 200 000                        | 20 000 | 4000  | <b>224 000</b> |           |
| 2 | Rust node debug contest                                                                                                                                                                                                                                                                                  | 200 000                        | 20 000 | 4000  | <b>224 000</b> | ~ 560 000 |
|   | Rust node validator contest<br>(MLudi game for Rust validators)                                                                                                                                                                                                                                          | will be requested additionally |        |       |                |           |
|   | Developing non-docker TON OS<br>Startup Edition deployment<br>(Linux, OSX, Windows)                                                                                                                                                                                                                      | 100 000                        | 10 000 | 2 000 | <b>112 000</b> |           |
|   | Design economical model for L1<br>E2ED Application Platform<br>(rewarding of running TON OS<br>DApp servers based on FreeTON<br>network fees).                                                                                                                                                           | 200 000                        | 20 000 | 4000  | <b>224 000</b> |           |
| 3 | Design documents for security<br>best practices (including OS<br>system configuration, hardware<br>and requirements for providers,<br>signing transactions)                                                                                                                                              | 100 000                        | 10 000 | 2 000 | <b>112 000</b> | ~ 448 000 |
|   | Common practices for configuring<br>systems with C++ Node, Rust<br>Node and TON OS DApp Server<br>for better performance and lower<br>latency. Kernel parameters,<br>network parameters, tuning OS,<br>filesystems, optimizing hardware<br>configuration and C++ Node/Rust<br>node/DApp Server settings. | 100 000                        | 10 000 | 2 000 | <b>112 000</b> |           |
|   | Design reliability metrics for TON<br>OS DApp Server                                                                                                                                                                                                                                                     | 200 000                        | 20 000 | 4000  | <b>224 000</b> |           |
| 4 | Backups and disaster recovery<br>solutions TON OS DApp                                                                                                                                                                                                                                                   | 200 000                        | 20 000 | 4000  | <b>224 000</b> |           |
|   | Documenting Rust Node and<br>TON OS DApp Server logging<br>subsystems, categories of events                                                                                                                                                                                                              | 200 000                        | 20 000 | 4000  | <b>224 000</b> |           |

|  |                                                                                                                |                                |  |  |  |           |
|--|----------------------------------------------------------------------------------------------------------------|--------------------------------|--|--|--|-----------|
|  | and events severity. Identifying log patterns, corresponding to the most common anomalies, requiring attention |                                |  |  |  | ~ 448 000 |
|  | TON OS DApp server reliability game (needs economical model first)                                             | will be requested additionally |  |  |  |           |

Disclaimer

Anyone can participate, but Free TON does not distribute Tons to US citizens or entities.