EIP-11252019AF: Conditional Accelerated Vesting

The mandate of the Economic Advisory Committee (EAC) is to provide advice to the Algorand Foundation and its community with the goal of maintaining an open and efficient borderless economy based on the Algorand blockchain and the Algo market. The EAC has considered the Algo vesting schedule and various proposals offered by the Node Runners with the shared goal of promoting market stability and the long-term interests of the community, and supports the idea of accelerated vesting under periods of price increase and guaranteed base rate vesting under opposite market conditions.

The Foundation supports the EAC's advice, and is distributing the following EIP proposal on behalf of the EAC to facilitate discussion among members of the community, and to be voted on by the Node Runners. This proposal offers considerable advantages to the Node Runners under good market conditions, while giving room for the Algo to grow when conditions are poor. It is designed to minimize the sacrifices of the Node Runners while remaining consistent with the interests of the community at large. While the Foundation and the EAC support the proposal, they also acknowledge the importance of having the Node Runners make the final decision on this matter.

Objective

Addresses the long-term supply/demand economics in the Algorand ecosystem by updating the node runner vesting schedule. The proposal seeks to delay vesting compared to the current schedule, giving the project room to grow. The proposal also incorporates accelerated vesting under positive market conditions.

Summary of the Proposal

1. The vesting freeze continues until 12/31/2019 to allow orderly implementation of the new schedule;
2. Node Runners receive an additional 25% of their original allocation;
3. Unvested Algos (125% minus 14% which already vested in 2019) are vested according to the following guaranteed base vesting schedule:
   a. In Year 1 (2020), 3% (for a total of 17%)
   b. In Year 2 (2021), 8% (for a total of 25%)
   c. In Year 3 (2022), 25% (for a total of 50%)
   d. In Year 4 (2023), 35% (for a total of 85%)
   e. In Year 5 (2024), 40% (for a total of 125%)
4. Vesting is significantly accelerated as the Algo price increases. Node Runners capture "awards" (additional Algos) as the price goes up, potentially much faster than the base rate, so that full (125%) vesting may be reached much earlier (e.g., by Year 3).

Three Examples

The table below presents the base vesting schedule and three examples of the accelerated vesting dependent on price trajectory. Points to note:

1. The totals include the vesting from 2019 of 14%.
2. Any mention of price reflects a 30-day moving average. We will use an independent price oracle to set the moving average.
3. For ease of calculations the price increase of the Algo is assumed to be linear over the entire vesting schedule.
4. The 30-day moving average price of the Algo in these examples is assumed to be $0.25 on the first day of the program.
5. If in reality prices rise even faster, this will be reflected in the total vesting ending earlier.

Year	Guaranteed Base*	Total of guaranteed base	Price of the Algo at the end of Year 4 is $0.65 ($0.55 at the end of Year 3)		Price of the Algo at the end of Year 4 is $1.00 ($0.80 at the end of Year 3)		Price of the Algo at the end of Year 3 is $1.20	
			Additional vesting	Total	Additional vesting	Total	Additional vesting	Total
Year 1 - 2020	3%	17%	2%	19%	4%	21%	8%	25%
Year 2 - 2021	8%	25%	8%	35%	16%	45%	26%	59%
Year 3 - 2022	25%	50%	14%	74%	25%	95%	41%	**125%**
Year 4 - 2023	35%	85%	16%	**125%**	**	**125%**		
Year 5 - 2024	40%	**125%**						

* Base guaranteed no matter what happens to the price of the Algo.
** In this example, the additional vesting is not needed to reach 125%, and therefore this square is left blank. Full vesting will be reached at some point in the middle of the 4th year.

Detailed Proposed Changes

This proposal would provide the Node Runners 125% of their original Algo allocation. The rate at which this unvested portion (111%) of the 125% is distributed depends on the price trajectory of the Algo.

Vesting in 2019

The Node Runners already received 14% of their restricted Algos before the current vesting freeze; the freeze will be extended through the end of December 2019 to allow orderly implementation of the new schedule.

Base rate distribution for years 2020-2024

The Node Runners are guaranteed a certain base rate schedule for the vesting of their Algos, regardless of the price of the Algo. This base schedule is back loaded and completes the vesting of the entire 125% of the original distribution plan by the end of 2024. The base rate postulates that the Node Runners receive no less than (as long as the node runner complies with the requirements of the original contract) :

- Annual rate of 3% of the original total in 2020, for a cumulative distribution of 17% by December 31, 2020;
- Annual rate of 8% of the original total in 2021, for a cumulative distribution of 25% by December 31, 2021;
- Annual rate of 25% of the original total in 2022, for a cumulative distribution of 50% by December 31, 2022;
- Annual rate of 35% of the original total in 2023, for a cumulative distribution of 85% by December 31, 2023;
- Annual rate of 40% of the original total in 2024, for a cumulative distribution of 125% by December 31, 2024.

Note that two years are leap years (2020 and 2024). To simplify description you may get a bit of a bonus in 2020 of 0.008%, and in 2024 of 0.109%.

Accelerated Distribution

As the Algo price rises, this plan unlocks larger portions of the total for earlier distribution. These accelerated distribution rates will be unlocked only if the price rises. The vesting and accelerated vesting will happen as follows:

0. Variables:
    a. A: a fixed award amount, set to 0.0015 (0.15%) of the Node Runner's original total vesting amount
    b. DAB ("daily acceleration base"): a moving parameter, initially set to $0.30.
    c. MA_d: 30-day moving average of the Algo price in US dollars on day d
1. Each day, Algos vest, in an amount that is 1/365 of the yearly amount specified in the base rate.
2. On day d, if the moving average MA_d is larger than DAB:

a. The Node Runner receives additional Algos in an amount proportional to the difference between MA_d and DAB, and the number of days d that have elapsed since the start of the program.

Specifically, on day d, with moving average MA_d and daily acceleration base DAB, the additional amount of Algos will be $A*(MA_d - DAB)*d$.

b. The parameter DAB is updated to MA_d.

3. The distribution terminates when the Node Runner has received 125% of its original allocation.