NODES

WHAT IS CORNUCOPIAS?

Cornucopias is a cutting edge MMORPG set in a world where humanity has ascended from the Earth's surface and created a breathtaking new world in the sky. This fantastical realm is a system of floating islands, carved from the land we once called home, now encased in radically advanced dome-shaped structures suspended high above the clouds. Each one is a futuristic marvel with its own unique environment, identity, and thriving communities.

It is within these Domes that the epic journey begins. Here, players take control of their own personal avatar, which gives them the freedom to choose their destiny! Be immersed in vast landscapes, explore vibrant settlements, and engage in a myriad of activities such as crafting, commerce, combat, racing, and more.

Welcome to a world where the sky is no longer the limit.

NODES

What are Nodes?

In a decentralized ecosystem, a node is an individual machine or server that is part of a larger system. This system often works on tasks collaboratively, with each node playing a role in processing, storing, or transmitting data.

File Nodes

Cornucopias' first node release is called a **File Node**. These are nodes that break up our large game file into "chunks" which allows for a much faster download time for the end user. Please see the next page for more details.

Future Node Releases

Different nodes will be released in the future for a variety of infrastructure use cases. To qualify for future node releases, you must own the original **File Node** NFT.

Node Compatability

Where possible, Cornucopias Nodes will be compatible with Windows, Linux, and the Mac. In the short-term it is likely the Windows Nodes will be prioritized and then ported to other operating systems once the Node is operating as planned

Node operation service

Through our strategic partners, we will be offering a node operation service for a fee. This service allows operators to earn rewards without the headache of maintaining their nodes.

What are the perks of owning a File Node?

As a node operator, you provide a valuable infrastructure service to Cornucopias. COPI will be rewarded to those that operate nodes under the defined requirements. File Node participants will share the greatest amount of the rewards pool as future nodes will pull rewards from the same rewards pool.

» Each **File Node** guarantees a whitelist to future node sales
» Node holders are eligible to claim free NFTs (vehicle skins, avatar accessories)
» Access to exclusive NFT sales
» Node holder badge in player account
» Early access to special game releases

What are the minimum device specifications needed to operate nodes?

Minimum specs required will depend on the node type and use case. For every node released, there will be thorough instructions on how to operate. Depending on the infrastructure the node provides, difficulty can range from easy to difficult.

How many File Nodes can I operate on one computer?

File Node software is not labor intensive for the average home computer. We have a working prototype that handled over 100 nodes on one PC, this will be developed further in 2024.

DECENTRALIZED

FILE NODE

What is a COPI File Node?

With each new release of Cornucopias, the game files will continue to grow in size. Currently, all game downloads initiated through the game launcher are from a centralized server and in some cases full game downloads can take up to an hour or more (depending on the player's internet connection and hardware). These are common issues with a lot of popular games today.

With File Nodes, the distributed infrastructure will not only speed up download speeds for many players, it will also remove the single point of failure from centralized servers. With a distributed network that the nodes make up, you can lose a large percentage of the nodes and still continue to serve files from the remaining nodes, making this an extremely reliable solution.

Essentially, the desktop launcher will download small game chunks from the many nodes at once using the decentralized COPI Node Network. The player-owned and run peer-to-peer COPI Node Network transfers the game files in small encrypted chunks and verifies when they arrive that they have not been tampered with or are corrupt. Once all the chunked files have been downloaded, the game files are reassembled and verified again. This process is much more reliable and scalable compared to the current centralized delivery method.
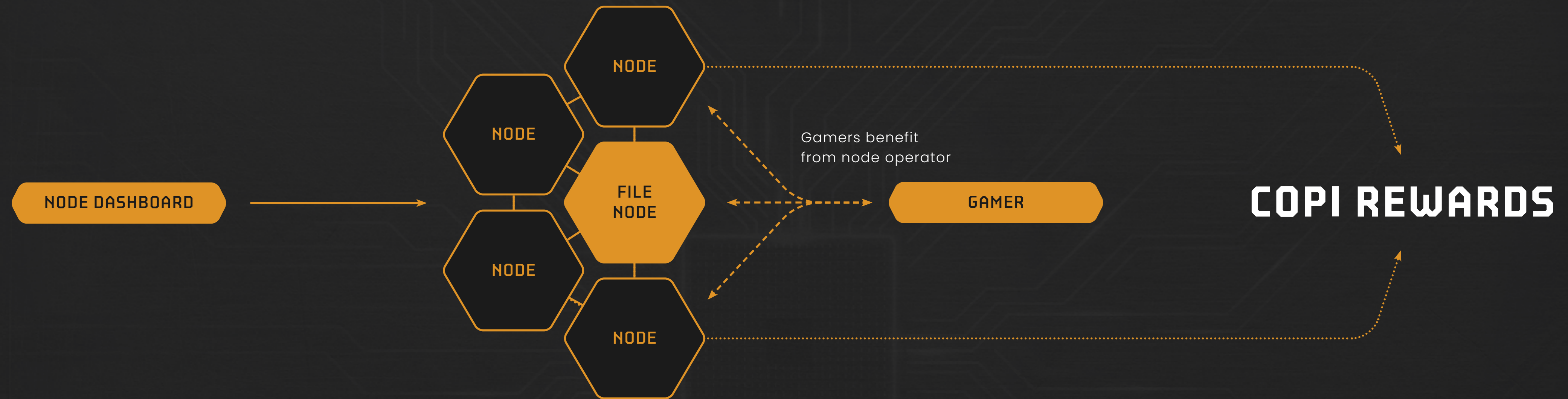
[WATCH NODE DEMO]

CENTRALIZED

ECOSYSTEM OVERVIEW

Node owners will utilize the dashboard to run and maintain all nodes. The first node to go live will be our **File Node**.

Over time, **Node** holders have the option to add more nodes that will support the Cornucopias infrastructure.

As Nodes are running, the end user (gamer) will benefit from this service. As a result, node operators will earn a reward (COPI) for their service in supporting the Cornucopias infrastructure.

CARDANO SALE DETAILS

We are introducing a dynamic pricing model for our nodes, anchored by a baseline price of $400 per node, calculated as the total node value divided by the total number of nodes. Recognizing the importance of adapting to market conditions and our target launch date in the future, we've structured the pricing into 15 distinct tiers. This approach allows us to offer most nodes at a price lower than the baseline, while a select few are priced at a premium. Importantly, this model accommodates varying user needs: depending on the specifications of your computer, you have the flexibility to operate multiple nodes on a single machine.

Accepted Currency: ADA
Cardano Supply: 10,000
Total Supply: 20,000
Tier 1 Whitelist: 6,000 Corn Points - remainder will be raffled to NFT holder roles (Flying Vehicles, Custom Domes, Land Plot)
Tiers 2-15: Open to all
Price: ADA price will be adjusted as needed to reflect tier USD price structure. This includes adjustments while a tier is still open.
Target Sale Date: Monday, December 18th (time to be announced)

TIER	PRICE	SUPPLY	Discount/Premium	Max Per User
1	$ 270	1,500	33% DISCOUNT	1
2	$ 285	1,250	29% DISCOUNT	10
3	$ 300	1,000	25% DISCOUNT	10
4	$ 315	875	21% DISCOUNT	10
5	$ 330	750	18% DISCOUNT	10
6	$ 345	625	14% DISCOUNT	10
7	$ 360	575	10% DISCOUNT	10
8	$ 375	550	6% DISCOUNT	10
9	$ 390	525	3% DISCOUNT	10
10	$ 400	500	0% BASELINE	10
11	$ 500	450	25% PREMIUM	10
12	$ 625	425	56% PREMIUM	10
13	$ 750	350	88% PREMIUM	10
14	$ 975	325	144% PREMIUM	10
15	$ 1,025	300	156% PREMIUM	10

ETHEREUM SALE DETAILS

We are introducing a dynamic pricing model for our nodes, anchored by a baseline price of $400 per node, calculated as the total node value divided by the total number of nodes. Recognizing the importance of adapting to market conditions and our target launch date in the future, we've structured the pricing into 15 distinct tiers. This approach allows us to offer most nodes at a price lower than the baseline, while a select few are priced at a premium. Importantly, this model accommodates varying user needs: depending on the specifications of your computer, you have the flexibility to operate multiple nodes on a single machine.

Accepted Currency: USDC (ERC-20) on BASE L2

Ethereum Supply: 10,000

Total Supply: 20,000

Tier 1 Whitelist: Private sale

Tiers 2-15: Open to all

Price: Node price is set in USDC

Target Sale Date: Tuesday, February 13

TIER	PRICE	SUPPLY	Discount/Premium	Max Per User
1	$ 270	1,500	33% DISCOUNT	N/A
2	$ 285	1,250	29% DISCOUNT	10
3	$ 300	1,000	25% DISCOUNT	10
4	$ 315	875	21% DISCOUNT	10
5	$ 330	750	18% DISCOUNT	10
6	$ 345	625	14% DISCOUNT	10
7	$ 360	575	10% DISCOUNT	10
8	$ 375	550	6% DISCOUNT	10
9	$ 390	525	3% DISCOUNT	10
10	$ 400	500	0% BASELINE	10
11	$ 500	450	25% PREMIUM	10
12	$ 625	425	56% PREMIUM	10
13	$ 750	350	88% PREMIUM	10
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15	$ 1,025	300	156% PREMIUM	10

NFT MINTING AND REWARDS

Cornucopias will mint and send NFTs to owners once all node NFT licenses have been sold.

July 1 Deadline

In the event we have not sold all 20,000 node licenses by July 1, 2024, we will pause the sale indefinitely. At this point in time, we will mint and send all owners their NFTs and reward distribution will commence regardless of node operation.

Once the sale is closed, tier pricing for unsold nodes is no longer applicable and will be subject to market price once reopened.

Why Node NFTs?

We want operators to provide as much infrastructure to Cornucopias as possible. By utilizing NFTs, we can easily allow node operators to transfer ownership when they no longer wish to run a node. This allows a new, interested node operator to purchase the activation key and continue to provide infrastructure services to Cornucopias.

Why do I not get my Node License NFT right away?
Allowing secondary trading prior to selling out or pausing the sale would counter our efforts in the node sale. Once we meet either of the sale conditions mentioned, NFTs will ship and secondary trading will open.

NODE REWARDS

The Cornucopias Rewards Program is an integrated system crafted to incentivize user participation in various activities integral to Cornucopias. This system primarily aims to foster a sustainable game economy.

To maintain a healthy game economy, we can adjust key game and reward system variables. A key mechanism is the Daily Rewards Index (or Multiplier, in %). According to our tokenomics, the initial total allocation for diverse rewards programs — such as hosting nodes and gameplay rewards — is set at 1,178,880,000 COPI. Daily, this index multiplies the rewards pool balance, determining the distributable rewards across all programs. Each program receives a fixed percentage of the total, cumulatively amounting to 100%. However, not all programs are simultaneously active; for example, gameplay rewards are currently in development. Further details about the overall economic flow and rewards will be provided in the near future.

Initially, nodes will receive 17% of the daily rewards pool. The Daily Rewards Index is calibrated to ensure that node rewards in the first year approximate **26 million COPI.** As the game evolves and other rewards programs activate, we will adjust these percentages and daily payouts to optimize node efficiency and engagement.

In general, a user's rewards correlate with their contribution relative to the total contribution. Contributions are assessed using a points system, designed to incentivize node performance.

Points in the Cornucopias Rewards Program will be accrued based on specific node actions. This will include items such as each hour your node remains online, the quantity of data your node successfully distributes, and the number of successfully completed distributions. However, points may be deducted for each failed distribution, attributed to limitations or bandwidth constraints of your node. These point-earning activities are subject to multipliers, which may be adjusted to guide node performance in the desired direction.

Your total points earned in a day are used to calculate your COPI rewards. Each time you claim rewards, a claim fee will be deducted from your rewards to help replenish the reward pool and the bonus pool.

Claim fee < 30 days vested = 100 COPI
Claim fee ≥ 30 days vested = 10 COPI
fees subject to adjustment based on market conditions

$$\text{Individual COPI Rewards} = \frac{\text{Node's Total Points}}{\text{Total Points by All Nodes}} \times \text{Daily Rewards Pool}$$

NODE REWARDS

Requirements for Daily Reward Eligibility

» To be eligible for daily rewards, each wallet must hold a minimum of **3,000 COPI per node**. In the case where you own **more than 5 nodes** in the same wallet, you will only be required to hold a minimum of **15,000 COPI** to receive daily rewards.

» You must have an active player account

» You must have an active node

» The Active Node License must be in the same Web3 Wallet that is connected to the registered player account

Bonus Pool

In addition to the point system, you also have a chance to win COPI through a bonus pool. Eligibility for the bonus rewards can be based on points earned, various milestones, or achievements and will be communicated prior to the start date.
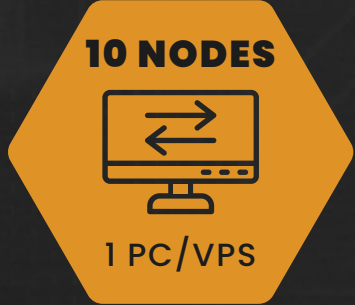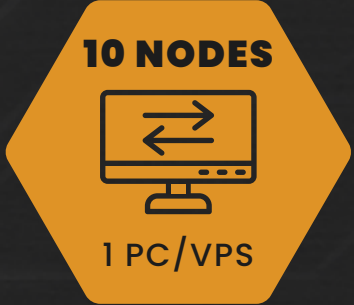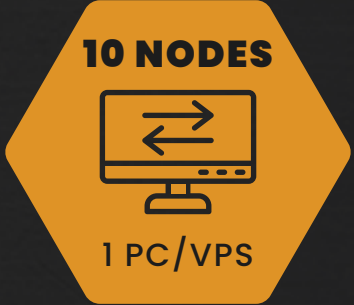
Disclaimer: *If the percentage of inactive nodes exceeds our activity threshold, we reserve the right to open an additional supply of nodes to meet the demand required by our infrastructure.*

Disclaimer: *Owning a Node does not automatically guarantee rewards. Rewards are only provided to operators that meet the rewards distribution requirements. See requirements for daily reward eligibility.*

REWARDS TL;DR

DISCLAIMER

The information provided herein is intended solely to offer clarity on the nodes reward program. It is important to note that all scenarios, examples, and calculations presented are purely hypothetical and should not be interpreted as promises or guarantees of specific rewards. The approach to reward distribution is based on a model considering active nodes and a flat distribution mechanism, and may include distributions from the Cornucopias DAO in the form of COPI tokens for node holders providing server space. This representation is simplified and may not accurately reflect the actual program structure or outcomes. Actual rewards, including COPI tokens, may vary based on factors like changes in program parameters, node performance, DAO policies, and market conditions. This information is for illustrative purposes only and should not be the sole basis for decision-making. Participants are advised to conduct their own analysis and consult with professionals as needed.

NODES SOLD/ACTIVE	4,000 (20%)	12,000 (60%)	20,000 (100%)
NODES PURCHASED Assumes 10 nodes are operating on a single computer	10 NODES / 1 PC/VPS	10 NODES / 1 PC/VPS	10 NODES / 1 PC/VPS
REWARDS EARNED / DAY	178.08 COPI	59.36 COPI	35.62 COPI
REWARDS EARNED / YEAR	65,000 COPI	21,667 COPI	13,000 COPI
UPFRONT COST (Tier 2)	$2,850	$2,850	$2,850
REWARD VALUE AT $0.10 PRICE	$6,500	$2,167	$1,300
REWARD VALUE PER $ SPENT	$2.28	$0.76	$0.46

APPLICATION & GAMIFICATION

Node Dashboard

The Node Dashboard is where operators will access all the critical information they need to operate nodes, see performance analytics, claim rewards, and more. Only node license holders will have access to this dashboard.

Node Operator Leaderboard

Operators will be ranked for node performance on a public leaderboard. In certain cases, leaderboard rank can influence reward multipliers, NFTs, and whitelisting for other nodes. This will also allow operators to view the variables that they need to improve on in order to climb the ladder.

RECOMMENDED SPECS

Disclaimer: these minimum requirements are based from tests run on a proof of concept and are subject to change as the product is further developed.

Based on early tests from our Proof of Concept, it is suggested the following requirements would work:

RAM - each node requires a range of 2 gb to 4 gb of shared ram and allowing for 4 gb to 8 gb for the operating system the following is suggested:

- » 1 to 2 nodes - 8 gb or higher
- » Up to 5 nodes - 16 gb or higher
- » Up to 15 nodes - 32 gb or higher
- » Up to 30 nodes - 48 gb or higher
- » Up to 50 nodes - 64 gb or higher

OPERATING SYSTEM - the current file nodes run on

- » Windows 10
- » Windows 11 (recommended)
- » Linux & Mac (slotted for later development)

As the nodes run independently (but can communicate with each other locally) a 64-bit operating system is highly recommended.

INTERNET CONNECTION - a stable internet connection is required to run the File Node with little disruption. The following upload speeds are suggested to provide good to excellent performance:

- » 1 to 2 nodes - 20 mb upload speed or higher
- » Up to 5 nodes - 50 mb upload speed or higher
- » Up to 15 nodes - 100 mb or higher
- » Up to 30 nodes - 250 mb or higher
- » Up to 50 nodes - 500 mb or higher

CPU - the initial tests showed a relatively low powered Intel processor would be sufficient for up to 50 nodes

- » Up to 30 nodes - Intel i3 or above
- » Up to 50 nodes - Intel i5 or above

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