The Core Concepts

A policy ID is a unique code that identifies a group of related NFTs on the Cardano blockchain. You can think of it as the unique collection identifier*. All tokens on Cardano must be minted under a policy ID, consequently a new policy ID must be created before any new token can be minted. Because all policy IDs are unique and only the holder of the policy keys can mint new tokens under the same policy, it'a also the perfect way to ensure your collection's authenticity. An NFT might be identical in content and metadata but the policy ID will always be different in the case of an attempted copy. The ability for anyone to quickly and effortlessly verify authenticity and provenance on their own is one of the key advantages NFTs bring to the table. In short, on Cardano you can very quickly tell which one of two seemingly identical NFTs is the authentic one: just look at their policy IDs and see which one matches the official one. Wallets, marketplaces and blockchain explorers all display policy IDs preeminently when showing data about an NFT.

Organising Collections with Policy IDs

Policy IDs are also the most common way that works are grouped into collections. But, policy IDs are just technical identifiers and ultimately it's up to you as a creator to decide how you want to use them and group your collection. For instance, if you have loosely defined collections or you want all your work to be under the same identifier you can group all your NFT releases and collections under the same policy ID, which, in a way will become your on-chain digital signature as an artist. On the opposite end of the spectrum, you can also choose to mint each new NFT you release under a different policy ID. However, keeping collection organised by policy IDs is the ecosystem standard - blockchain explorers, wallets, marketplaces and other services all use policy IDs to identify collections and group NFTs, so keep this in mind.

Policy Keys

Upon creating a Policy ID, it is essential to secure and manage the corresponding policy keys. These keys enable the burning and minting of new tokens under the Policy ID and must be kept safe to prevent unauthorised access. After first creating your policy ID you will be responsible for safely storing and managing your policy keys. If you are using a third party minting service make sure you ask for your policy keys, if the service doesn't provide them by default. Of course, this applies to open policies or policies that close a considerable time after mint - in the case of policies that close shortly after mint, having the policy keys won't make much of a practical difference, as once a policy is closed it can no longer be modified regardless of having or not having the keys. If you're unsure, err on the side of caution and always ask for your policy keys.

Conclusion

Understanding and making use of Policy IDs effectively enables creators to maintain control over their digital creations, ensuring that authenticity and provenance are easily verifiable. By managing policy keys securely and making informed decisions about how to organise collections, creators can make the most of Cardano to support their digital works.

* This is true when speaking about policy IDs in non-technical terms. In technical terms, a minting policy is the set of rules that dictate how tokens under a specific policy can be minted and burned. A policy ID is the hash of that script used to identify that particular script (hence ID). You can find out more by exploring the Native Tokens section of the Cardano Docs - link in the Additional Resources section.

Additional Resources:
[Cardano Doc > Native Tokens > Minting Policy](#)
[Hashes (Wikipedia)](#)

Closed Policies

Time-locked mint policy, a.k.a. a closed policy, is a policy which allows for minting and burning of tokens only until a specified time. This predetermined expiration is set during the creation of the policy, and once reached, no further alterations can be made to the tokens under this policy. After the policy closes all its content becomes immutable. This creates a fixed, unchangeable supply for your collection.

Why Use Closed Policies

Closed policies are particularly useful in contexts where the scarcity and originality of tokens are important. By ensuring that no additional tokens can be created beyond the deadline, closed policies provide collectors with assurance regarding the total supply of the asset. This can be crucial for artworks, limited edition collectibles, or any digital asset where value is derived from its rarity.

Managing and Trading with Closed Policies

While closed policies restrict the minting and burning of tokens, they do not limit the trading and transfer of these tokens. Owners can buy, sell, or trade their assets on marketplaces that support Cardano assets.

Potential Use Cases for Closed Policies

- **Limited Art Collections**: Artists can release a limited series of digital artworks, ensuring that only a fixed number of pieces will ever exist.
- **Limited Edition Collectible Drops**: Closed policies are perfect for strictly limited collections.
- **Special Commemorations**: Create NFTs tied to a specific event or time period, with a limited supply preserving their uniqueness.
- **One-Of-a-Kind Creations**: Use a closed policy to prove that an NFT is truly the only one of its kind.
- **Experimental Art Projects**: Where the final form of the project depends on a set, unchangeable supply.
- **Event Tickets**: Event organizers can use closed policies to issue a set number of tickets, guaranteeing exclusivity.
- **Gaming Items**: For digital games, items like special weapons or costumes can be minted using a closed policy to maintain item rarity.

Technical Implementation

Minting services and tools offer options for creating closed policies. Implementing a closed policy involves defining a timestamp in the native minting script, which acts as the cut-off point for minting activities. Any transactions that attempt to mint or burn tokens after this timestamp will be automatically rejected by the Cardano blockchain. Be aware that there's no way to undo this process later.

Key Points:

- Closed policies offer the strongest possible guarantee of rarity. Buyers know the exact maximum supply, making the NFTs more collectible.
- Choosing a closed policy means giving up control over your collection's supply. Make sure it aligns with your vision and goals before committing.
- Closing the policy can happen right after the initial sale, after a set time for additional flexibility, or even be tied to a specific event.
- Once closed, the number of tokens in the collection is permanently fixed.

Conclusion

Closed policies are an essential feature within the Cardano ecosystem, offering creators and collectors a dependable way to manage the authenticity and exclusivity of assets. By making use of time-locked mint policies, creators can ensure that their works remain secure and limited in distribution. Closed policies offer powerful advantages but require creators to think carefully about their long-term goals. If you have any doubts about potentially needing to add or remove NFTs from your collection in the future, an open policy may be a better choice.
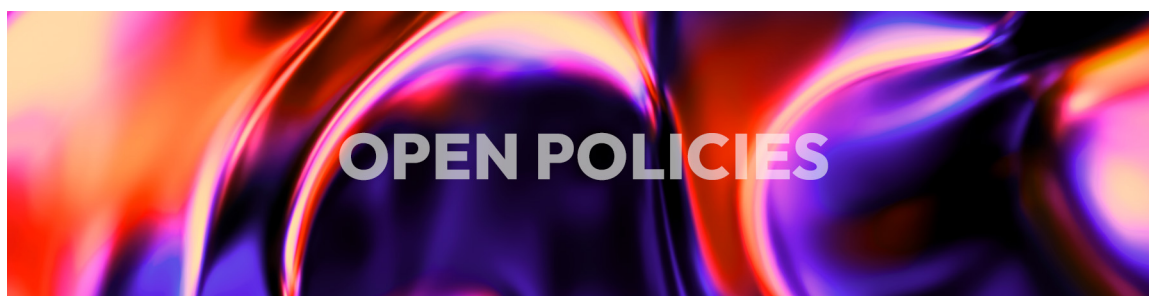
Open Policies

An open policy is a minting policy that remains open indefinitely. This means you can continue to mint additional NFTs under the same policy even after the initial sale or release, as well as burn tokens if needed. Open policies offer creators a high degree of control, making them ideal for dynamic and evolving NFT projects.

Tokens can be added or retired from circulation as needed, which is ideal for collections that are intended to grow or change over time.

Why Use Open Policies

With the ability to issue new tokens whenever needed, creators can keep their communities engaged by releasing new items, updates, or variations. This continuous innovation can help maintain interest and relevance. Creators can respond to market demands or shifts in community interests by introducing new tokens or modifying existing ones. This adaptability can be crucial for projects that rely on community feedback and interaction.

Considerations for Open Policies

One potential downside of an open policy is the risk of over-saturating the market. Without a fixed limit on the number of tokens, there is a possibility that too many tokens could dilute the value of individual items, potentially harming the collection's perceived rarity and value. Collectors must trust that the creator will not abuse the open-ended nature of the policy by minting an excessive number of tokens. Clear communication about the intended use and governance of the policy will help maintain this trust.

Potential Use Cases for Open Policies

- **Growing Collections**: Expand an art series, a line of collectibles, or a set of digital trading cards.
- **Artistic Projects with Phases**: Artists can release different phases or series of their work over time without needing to create a new policy for each release.
- **Rewards and Incentives**: Issue loyalty tokens, unlockable content, or experience-based upgrades for holders, adding value and incentivizing collector engagement.
- **Community-Driven Projects**: Engage your audience by allowing them to influence the collection's development through voting mechanisms, contests, or special events.
- **Subscription-Based Models**: Explore recurring revenue models by offering tokens that unlock perks or access for a limited duration.
- **Upgradeable Assets**: Create NFTs that can change over time through gameplay, rewards, or even the burning of other NFTs as power-ups.

- **Gaming Items**: Developers can use open policies to issue new game items, characters, or rewards as the game expands or updates.

Technical Implementation

Most minting services and development tools support the creation of open policies. Implementing an open policy involves setting up a minting script without a time lock condition. This ensures that the script remains valid indefinitely, allowing for the minting and burning of tokens at any point in the future. While there's no way to close an open policy later, you can always opt to stop minting further NFTs under it – the choice remains yours.

Key Points:

- Open policies allow you to evolve your NFT projects over time. Add new artworks to an existing series, expand a set of collectible characters, or experiment with new content formats.
- Adapt an open policy collection in response to community feedback or your own evolving artistic vision.
- Retain the ability to shape the size, theme, and direction of your collection well into the future.
- While open policies might reduce the 'classic' rarity of individual NFTs within a collection, they can create new value propositions, such as unique benefits for early adopters or special rewards tied to long-term participation.

Conclusion

Open policies offer a versatile and dynamic approach to managing digital assets on Cardano. They are particularly well-suited for projects that require ongoing development and interaction with their audience. However, the decision to use an open policy should be made with careful consideration of the project's goals, community trust, and market implications. By choosing open policies, creators embrace flexibility and continuous innovation, prioritising trust and long-term value for their communities.

Open vs Closed

When launching a project on Cardano, one of the first decisions you'll face is whether to implement an open or closed minting policy. This choice impacts how your tokens or NFTs are managed over time, influencing everything from market dynamics to community perception. Understanding the tradeoffs between open and closed policies will help you align your project goals with the right technical foundation.

Choosing a closed policy might be seen as a definitive statement about your project - it establishes something that cannot be altered once the policy closes. But, it also means that once the policy closes, no corrections, additions, or pivots in the project direction are possible (at least not without creating a new policy for the project - something that creates its own complications). Conversely, an open policy offers considerable flexibility, allowing you to evolve your project over time. This can be particularly desirable in projects where future phases or elements might be anticipated but not fully planned out at inception.

Key Differences

- **Supply**: Closed policies guarantee a fixed supply, while open policies allow for ongoing minting and burning.
- **Flexibility**: Open policies give you the freedom to evolve a project, while closed policies lock in its structure.
- **Rarity**: Traditionally, closed policies offer maximum scarcity, but open policies can introduce new forms of value and utility.

When to Choose Open

Consider an open policy if you envision:

- Expanding a collection over time with new releases or content drops.

- Allowing assets to evolve through gameplay, rewards, or other mechanisms.
- Adapting your NFT project based on community feedback and participation.
- Exploring subscription services or recurring content tied to token ownership.

When to Choose Closed

A closed policy may be the right fit if:

- You want to guarantee a fixed supply for collectors seeking limited editions.
- You have a very specific vision for the collection's size and scope.
- You want to avoid ongoing management decisions about minting/burning.

Additional Considerations

- Some NFT genres have established norms. For example highly limited art drops often use closed policies.
- A closed policy can be a good fit for a one-time event commemoration or a tightly controlled, single-themed release.
- Even with an open policy, responsible minting and innovative utility can sustain the value of individual NFTs.

Conclusion

Whichever policy you choose, transparent communication about your plans is essential for building trust with your audience.

The decision between an open and closed policy often boils down to your vision for the project's lifecycle and how you intend to interact (or not) with your community. You may even want to consider a combination of approaches for your project overall (e.g., a limited closed-policy series within a larger open-policy project).

Both open and closed policies have benefits depending on the nature of the project. For collections meant to be finite and collectible, a closed policy reinforces their exclusivity. For evolving projects that grow with their community, an open policy offers the flexibility needed to adapt and flourish. Choosing the right policy involves a deep understanding of your project's long-term goals and

how you wish to engage with your audience over its lifecycle.

Ultimately, the best policy supports your artistic goals, desired market dynamics, and intended community interaction.