

Metaverse Standards Forum

NFT Royalties: Loyalty Catalog

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Status: Approved for Public Distribution

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Reviewer	Due Date	Status	Contact
Digital Asset Management Working Group	June 18, 2024	Complete	digital_asset_management@lists.metaverse-standards.org
MSF Domains (Peer Review)	March 05, 2025	Complete	oversight@lists.metaverse-standards.org
Use Case Taskforce	May 06, 2025	Complete	use_case_task_force@lists.metaverse-standards.org

The purpose of this template is to provide a structured framework for collecting and documenting use cases within the Metaverse Standards Forum (MSF). Use cases are essential for understanding real-world scenarios where metaverse technologies are applied and where interoperability challenges may arise. This template guides MSF members in providing a concise yet comprehensive description of a use case, including its title, identifier, and summary. It also encourages contributors to list the benefits of the use case, identify actors or entities involved, and describe the use case scenario in detail, emphasizing interactions, challenges, and requirements. Additionally, it prompts the inclusion of relevant technical information, such as implementations, success metrics, and challenges faced. This template aims to facilitate the gathering of valuable use-case data to inform standards development and foster collaboration within the MSF community.

MSF members and MSF Domain Groups are invited to submit use cases.

NOTE: Organizations such SDOs who want to submit and add a use case would need a sponsor that is an MSF member. This process is established in order to have a contact person in MSF that can handle discussions and resolve open issues within regular meetings.

Eligible submitters:

- MSF Domain Groups
- MSF Members (Principal and Participant)
- External Organizations with Liaison Agreements (with the support of a MSF member that acts as sponsor)
- Standard Development Organizations (with the support of a MSF member that acts as sponsor)

Minimum Requirements for MSF Member Submissions not part of a Domain Group:

- Minimum required number of proposers: 3
- Minimum required number of supporters: 5

NOTE: Use cases submitted by SDOs and Liaison Organizations would also need to fulfill the same requirements (and would need a sponsor) unless they are submitted by a Domain Group.

MSF: Metaverse Standards Forum

POG: Pre-qualified Organizations and Groups

SPP: Standards Related Publications and Projects

DWG: Domain Working Groups

WG: Working Group

SDO: Standards Development Organization

Use Case Title
NFT Royalties: Loyalty Catalog
Use Case Identifier
MSF2024-NFTLC-001 <ul style="list-style-type: none"> • Version 1.0 • Year of Release: 2025
Summary of Use Case
<p>Description: The "Non-Fungible Token (NFT) Royalties: Loyalty Catalog" use case proposes integrating royalties into a loyalty program using NFTs as rewards. Customers earn NFTs for purchases or activities, redeemable for exclusive products or experiences.</p> <p>Benefits of Loyalty Catalog: This approach enhances customer engagement, utilizing blockchain for secure, transparent transactions. It also fosters brand loyalty and offers a unique rewards system, demonstrating the potential of NFTs in customer relationship management and loyalty programs. Interoperability enhances its value by allowing redeemable NFTs to be used across various platforms and services, broadening customer access and improving user experience. It facilitates data portability and cross-platform customer journey continuity, encouraging innovation and collaborations within the metaverse ecosystem. This integration across diverse platforms enriches the rewards system, making it more appealing and functional for users.</p>



Contributors and Supporters

- Digital Asset Management Working Group
- MSF Domains (Peer Review)
- Use Case Taskforce

Keywords

NFT, Loyalty Program, Blockchain, Customer Engagement, Rewards, Interoperability, Metaverse, User Experience, Digital Assets, Brand Loyalty

Actors/Entities

- **Creator:** entity that originates the NFT, responsible for its initial creation and minting.
- **Secondary Creators/Collaborators:** entities involved in the NFT's creation process or holding contractual rights, such as publishers, distributors, or collection societies.
- **Wallets:** digital wallets facilitating NFT transactions.
- **NFT:** a digital asset governed by an NFT Contract.
- **NFT Contract:** various types of governing smart contracts for NFTs, including those that are immutable, upgradeable, and those representing real-world assets.
- **Blockchain Network:** the foundational technology enabling NFT minting, trading, and royalty distribution.
- **Holders:** includes both Sellers (current NFT owners) and Buyers (collectors, liquidity providers).
- **Retailer:** Marketplace offering the loyalty program and issuing NFTs as rewards.

Detailed Description of Use Case/Scenario

In the NFT Loyalty Catalog Royalties use case, Customers engage with Retailers to earn loyalty points. Customers can redeem these loyalty points for NFTs, which are managed in their Digital Wallets.

Preconditions:

- Holder enrollment in the loyalty program and possession of a Wallet.

Main Flow:

1. **NFTs compatibility:** where loyalty programs are minted by Creator using System.
2. **Earning loyalty points:** engaging in qualifying activities (like purchases), Buyers earn loyalty points.
3. **Reward Catalog Access:** buyer accesses a Retailer catalog detailing available NFTs and their respective redemption values in loyalty points.
4. **Purchase:** buyer purchases NFT with loyalty points.



5. **Transaction:** Retailer reduces Buyer point balance, sends NFT to Buyer Wallet, and disburses royalties to Creator using System.

Postconditions

- Buyer has NFT in Wallet
- Creator has royalties

Implementations and Demonstrations or Technical Feasibility

- The NFT Loyalty Catalog feasibility is exemplified by specific industry implementations of NFT-based loyalty or rewards programs:
 - **Starbucks Odyssey Program:** Starbucks launched an NFT-based loyalty program, where customers earn NFTs as digital collectible stamps, unlocking access to unique experiences and rewards.
 - **Nike and RTFKT:** Nike, through its acquisition of RTFKT, has ventured into offering NFTs that tie physical sneakers with digital assets, enhancing customer engagement through digital collectibles.
 - **Warner Music Group and Genies:** Partnering with Genies, Warner Music Group released NFTs representing digital avatars and wearables, integrating them into their fan engagement strategies.
 - **VISA's NFT Program for Small Businesses:** VISA launched a program to help small businesses understand and utilize NFTs, incorporating them into their customer engagement and loyalty strategies.
 - **Coca-Cola's NFT Collection:** Coca-Cola auctioned branded NFT collectibles for charity, demonstrating the potential of NFTs in loyalty and branding initiatives.

Challenges:

- **Technological Scalability:** as the program grows, ensuring the technology infrastructure can scale effectively to handle an increasing number of NFT transactions and users without compromising performance.
- **Integration with Existing Rewards Systems:** seamlessly integrating NFTs into existing loyalty programs without disrupting current operations or user experiences. This requires careful planning and execution.
- **Point Value:** how to pay royalties when only points are exchanged, not cryptocurrency.

Requirements:

Technical and Functional Requirements:

- **Advanced and Scalable Blockchain Networks:** high-value NFT Loyalty royalty transactions demand blockchain networks that are not only secure but also highly scalable to handle such transactions efficiently.



- **Robust Algorithmic Frameworks:** algorithms used in NFT Loyalty royalty programs platforms must be robust, efficient, and transparent. They should be designed to minimize market manipulation risks and ensure fairness in trading.
- **Transparent and Fair Royalty Distribution:** implementing Smart Contract capabilities, with clear and transparent mechanisms to handle complex NFT Loyalty royalty calculations and distributions involving multiple creators or right holders, is essential to maintain trust among all parties involved.
- **Compliance with Regulatory Standards:** NFT Loyalty Catalog systems must remain adaptable and compliant with existing and new regulations and standards, especially those concerning market integrity and consumer protection.

Interoperability Requirements:

- **Standardized Trading Protocols:** developing and implementing standardized protocols and APIs across different NFT marketplaces to enable earning and redeeming loyalty points is necessary to facilitate interoperability and efficient market operations.

Other Key Considerations:

- **Privacy:** ensure that NFT Loyalty royalty programs respect user privacy, with mechanisms to achieve transparency while protecting personal information from unauthorized access or exposure.
- **Cybersecurity:** apply adequate security measures commensurate with the level of risk, especially related to high-value NFT Loyalty royalty transactions. This includes advanced encryption methods, secure trading protocols, and real-time monitoring systems to prevent cyber threats.
- **Identity Verification:** develop reliable identity verification processes for buyers and Retailers to prevent fraud and ensure trustworthiness within the ecosystem.
- **Networking and Latency:** optimize network performance to handle the transactions and interactions without significant delays or downtime.
- **Ownership:** clearly define and enforce the ownership rights of parties to the NFT Loyalty royalty program, ensuring they retain full control over their earning and redemption activities.
- **Digital Ethics:** address ethical considerations for NFT Loyalty royalty programs, including points earning and redemption, equitable access, and responsible exchange activities.
- **Provenance:** tools and protocols are needed to verify the authenticity of NFTs and track their provenance, especially crucial in high-value NFT Loyalty royalty transactions.
- **Accessibility:** make NFT Loyalty royalty programs accessible to a wide range of users, including those with disabilities, to promote inclusivity within the digital economy.

Relevant Domain Working Group (WGs):

- NA

Relevant Pre-qualified Organizations and Groups (POGs):

- NA



Relevant Specifications, Publications and Projects (SPPs):

- NA

Related Use Cases

- NFT Royalties use cases are related to this use case from a classification perspective; however, they vary in topics covered.

Additional Comments

- This document is a living artifact and may be subject to revisions on a periodic basis to reflect the future state of NFT Royalties, and or based on feedback received from MSF stakeholders that warrants an update in the future.