

AutoSwarm: NFT's Second Life

Swarm Backup, boosted by fan contributions

AutoSwarm: NFT's Second Life

NFT are often stored on centralized storage, with no guarantee of availability over time. Even with centralized storage, relying on an eternal sponsor or paying once for eternal storage, is both impractical and meaningless in a timeframe of 5, 10 or more years...

Swarm Backup

The **AutoSwarm ReSave** button provides an easy Backup on Swarm of any NFT, preserving both metadata and content, to ensure NFT availability over time.

Boosted by Fan contributions

With the **AutoSwarm TopUp** button, storage duration extends as long as there are still supportive individuals – be it the creator, owner, a sponsor, or any users – willing to contribute Bzz donations, ensuring the sustained life of your NFTs.

AutoSwarm Dapp

AutoSwarm Dapp is a one-page service, envisioned as a Public Good, supported by the Web3 community

AutoSwarm Dapp allows to **ReSave** and **TopUp** NFTs on Swarm.

Direct access to a specific NFT is possible via the url address (specifying Chain Id, Collection Address and Token Id)

Direct link is available possible via [Kredeum NFTs Factory](#) Share button. That allows to select any of your own NFTs then link to the related AutoSwarm page

AutoSwarm SmartContracts

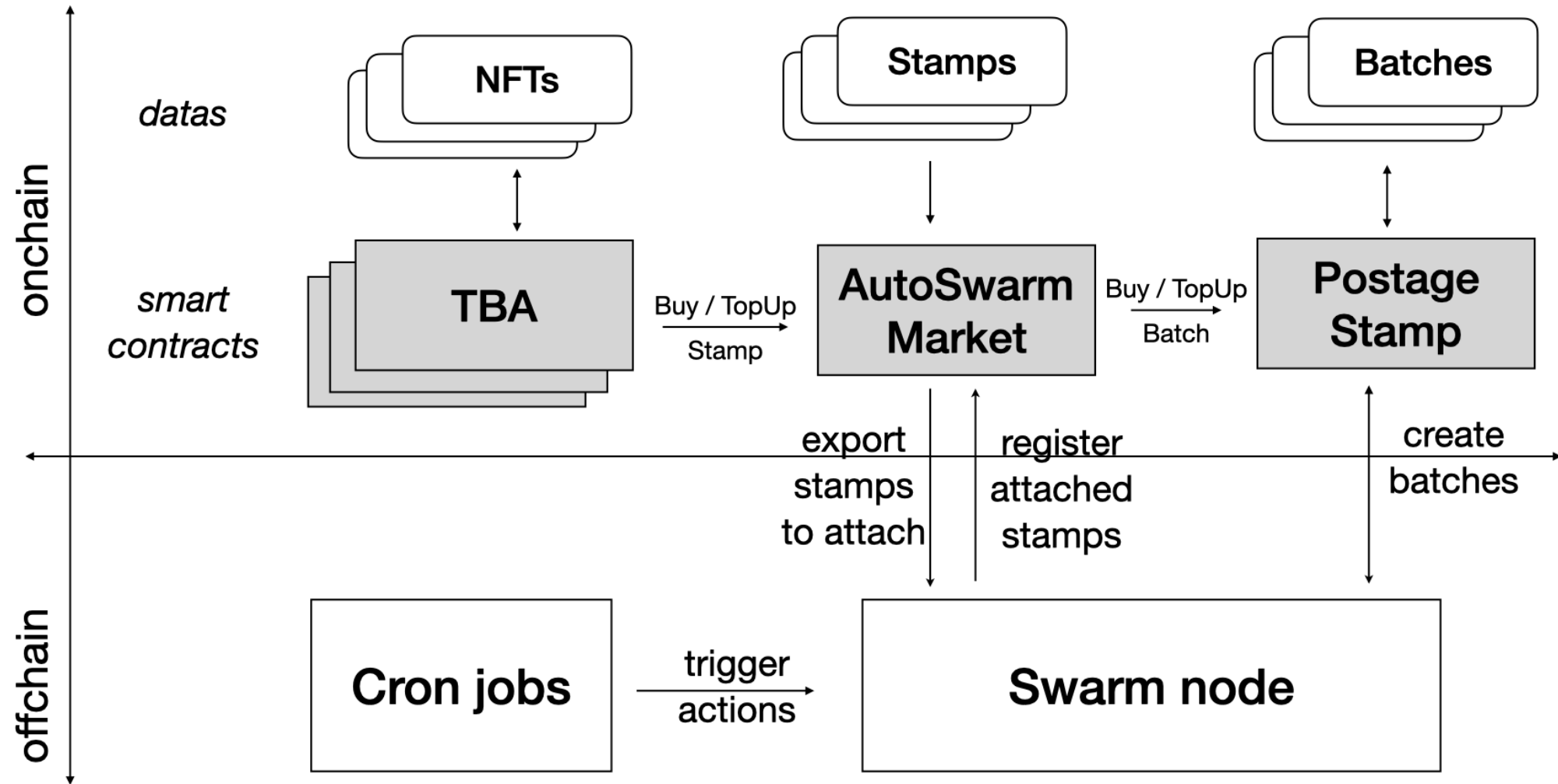
AutoSwarm Account

Thanks to new **ERC6561** proposal, any NFT can own tokens, via a Token Bound Account (**TBA**), a dedicated `AutoSwarmAccount` smartcontract linked to the NFT. After transfer of the NFT, these tokens are still linked to the NFT, at the disposal of the new NFT owner.

AutoSwarm Market

So, anyone can send Bzz tokens to the TBA of the NFT they want to extends lifetime. Then, thanks to AutoSwarm solution, `AutoSwarmMarket` smartcontract can pay Swarm Protocol via `PostageStamp` smartcontract to TopUp NFT storage when needed.

AutoSwarm Architecture



AutoSwarm Market

AutoSwarm Market extends the capabilities of the **Swarm PostageStamp**:

- **PostageStamp** managing Batch of Stamps with Depth and TTL in a wholesale approach
- **AutoSwarm Market** managing Stamps with Size and TTL, in a retail approach, mirroring **PostageStamp** internal mechanisms... at a smaller scale

AutoSwarm Market has been designed to ReSave and TopUp NFTs one by one, that means, most of the time, small amount of data.

Not limited to NFTs, **AutoSwarm Market** can also be used as well, for any kind of data, to Backup and TopUp on Swarm.

Batches & Stamps - Properties

Core **AutoSwarm** architecture is about **Batches** and **Stamps** properties and interactions:

- One Stamp per NFT, including NFT metadata and content (and possibly other assets)
- One Year Stamp by default (365 days precisely),
- One Month Batch by default (30 days precisely)
- One Week overlapping time between two Batches (7 days)
- One Batch exists at a time (or Two Batches during overlapping period)
- Stamps are attached to One Batch (or possibly Two Batches during overlapping time)
- Stamps use same remaining balance mechanism as `PostageStamp` Batches, with size and ttl instead of depth and ttl

Batches & Stamps - BackOffice (1/2)

Stamps and Batch managed by 2 Crons, that may run periodically or triggered when ReSaving or TopUping. These Crons are currently centralized and managed by AutoSwarm Team, but should later evolves as a fully decentralized protocol.

Daily Cron button :

1. list all NFTs to ReSave since last Daily Cron
2. Checks their Size and Swarm Hash with a dedicated Swarm node
3. Transfer payment of the Stamp from the TBA to the Market
4. Attach the Stamp with the current Batch of the market (mapping StampId to BatchId).

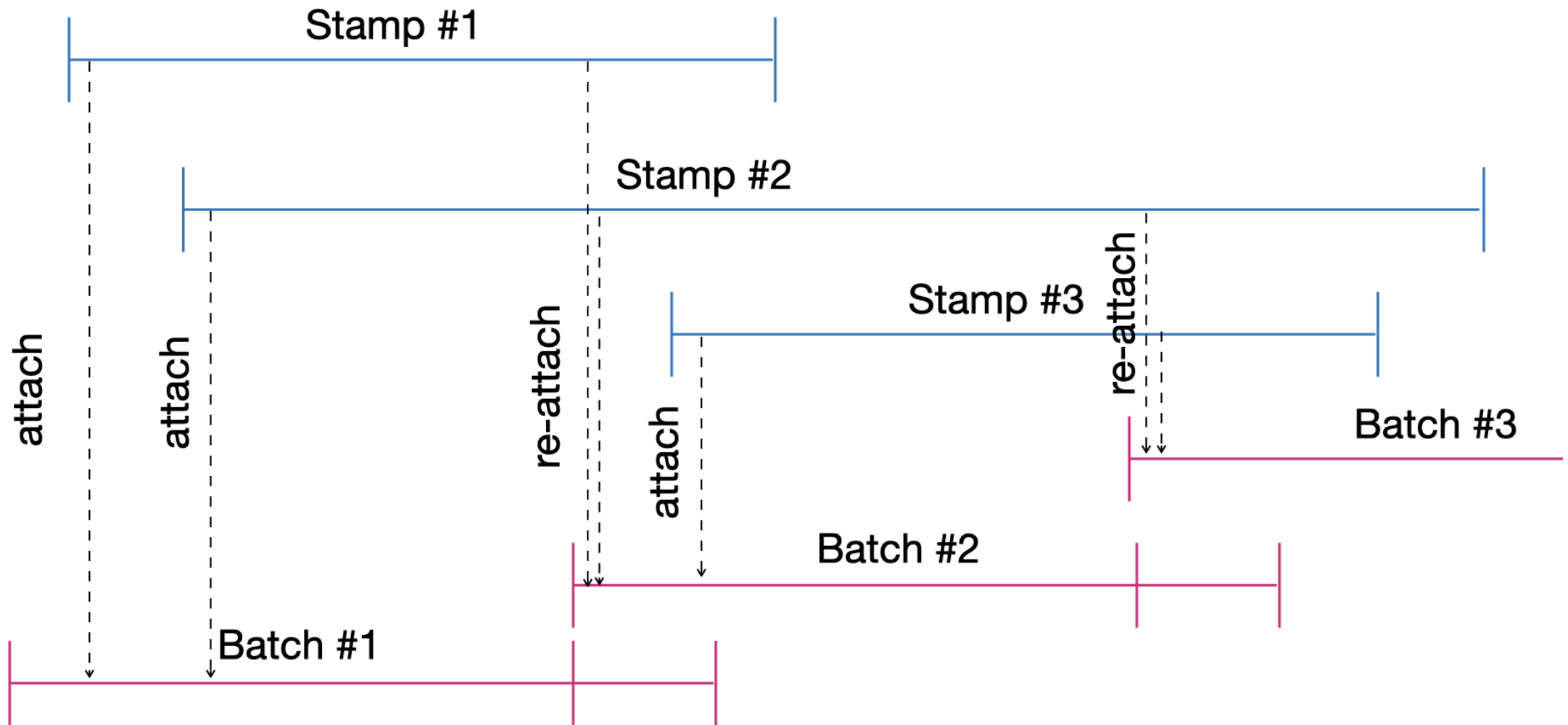
Batches & Stamps - BackOffice (2/2)

Monthly Cron

launch, roughly every month, at the beginning of the overlapping period

1. Buy a new Batch
2. List all active Stamps (that expired after the end of overlapping period)
3. Re-attach selected Stamps to new Batch (both on the Swarm Node and on the AutoSwarm smartcontracts)

Batches & Stamps - Timeline



RoadMap

Q1 2024

- Launch trial with beta users

Q2 2024

- V1 launch on production
- Integration of AutoSwarm with Swarm Desktop

Q2-Q4 2024

- Full Decentralization of AutoSwarm, mainly BackOffice

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