Guild Vault Functional Requirements

OVERVIEW

The Blockpal Guild Vault is a Solana multisig wallet with role based access controls (RBAC). The purpose of it is to allow on-chain game assets (NFTs, tokens, etc.) to be owned by a guild and yet still used by allowed players in the respective game. There are three roles that will have access to the wallet (administrator, founder and member). These represent the different personas that will manage and use the wallet and its contents. While the purpose of this wallet is for managed game assets it could be applied to any Solana use case where these roles are applicable. Because of that the roles and permissions will not be defined in strictly game/guild/player terms.

ALLOW LIST

Each game will have a list of Solana accounts and/or programs that are associated with that game. A wallet will be tied to a specific game and therefore inherit that list. Since the allowed list could be potentially very large (100+ addresses?) and might change over time, it will be something that the wallet can lookup without having to modify the wallet itself. The allow list for a game will be managed outside of the scope of this wallet so none of the roles below will be able to modify it.

ROLES

Member

The Member role can only create/approve transactions with the above allowed list. A Member does not require any additional votes to execute a transaction. Outside of the allowed accounts or programs it cannot otherwise transfer assets in or out of the wallet. This includes not being able to sign transactions for unknown programs or burn tokens. Members cannot modify user roles or voting thresholds.

Allowed Member actions:
- Interact with allowed addresses or programs using existing wallet assets

Founder

The Founder role has full access to the wallet and any assets within it. There are no restrictions on the assets, wallets or programs that this role can transact with. So the allow list is not relevant to the Founder role. However the standard multisig voting threshold rules apply. This means if the wallet is configured with a voting threshold of X

that at least X number of founders must approve the transaction before it is executed. The voting threshold (X) can be any number 1 or greater.

Allowed Founder actions, all of which must meet the voting threshold first:
- Add an account to the Member role
- Remove an account from the Member role
- Any actions to add or remove wallet assets

Administrator

The Administrator role has no permissions to create or approve transactions dealing with assets in the wallet. An Administrator does not require any additional votes to execute a transaction.

An Administrator is restricted to only these actions:
- Add an account to the Founder role
- Remove an account from the Founder role
- Modify the Founder voting threshold

PROTOCOL

The Blockpal Guild Vault will be based on a fork of the Squads Protocol v4 multisig wallet (https://github.com/Squads-Protocol/v4). There are some key differences though.

Permissions

The Squads Protocol permissions (Initiate, Approve, Execute) are based on proposing and approving transactions regardless of what assets or wallets are involved. The permissions of the Blockpal roles above are not restricted to these transaction states. The Blockpal permissions instead may be restricted based on the address or program being transacted with as defined above.

Voting Threshold

Since Squads Protocol was originally designed to facilitate DAO voting it has required voting thresholds that must be met to approve any transactions. This is not needed within Blockpal for Member and Administrator actions. Those actions are restricted through other means. Only Founder actions have the voting threshold applied. Administrators can modify the voting threshold.

COMPATIBILITY

Since the goal of the Guild Vault is to be able to interact with existing web3 games and assets in Solana it must be compatible with those items. This means the wallet must support both holding any standard Solana token/NFT. It also must work with web-based browser extensions such as SquadsX (https://squads.so/extension) or Phantom (https://phantom.app/).