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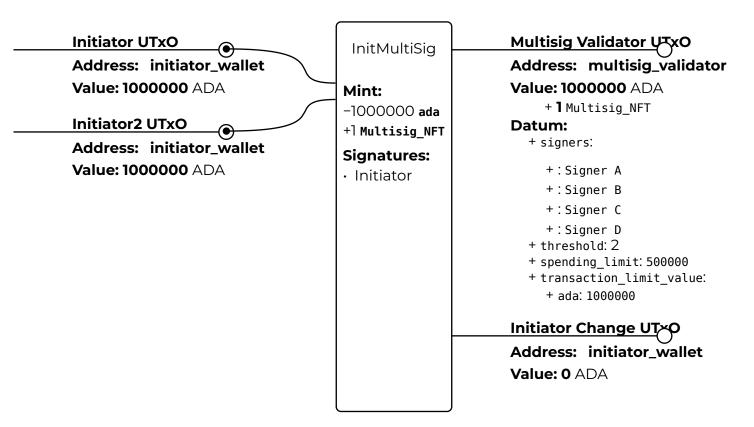


# 1. Transactions

This section outlines the various transactions involved in the Upgradable Multi-Signature Contract on the Cardano blockchain.

# 1.1. Mint :: InitMultiSig

This transaction initializes the multi-sig contract by minting the Multisig NFT and setting up the initial configuration.



Note: Initiate MultiSig Transaction

## **1.1.1. Inputs**

#### 1. Initiator Wallet UTxO

- · Address: Initiator's wallet address
- · Value:



- Minimum ADA required
- Any additional ADA required for the transaction

#### 1.1.2. Mints

## 1. Multi-Sig Validator

- · Redeemer: InitMultiSig
- · Value:
  - +1 Multisig NFT Asset

#### **1.1.3.** Outputs

## 1. Multi-Sig Validator UTxO

- · Address: Multi-Sig Validator script address
- · Datum:
  - signers: 4.
  - ► threshold: 2.
  - ► spending\_limit: 500,000 ADA.
  - ▶ transaction\_limit\_value: Asset class and quantity defining the limit for transactions.
- · Value:
  - Minimum ADA required
  - ▶ 1 Multisig NFT Asset

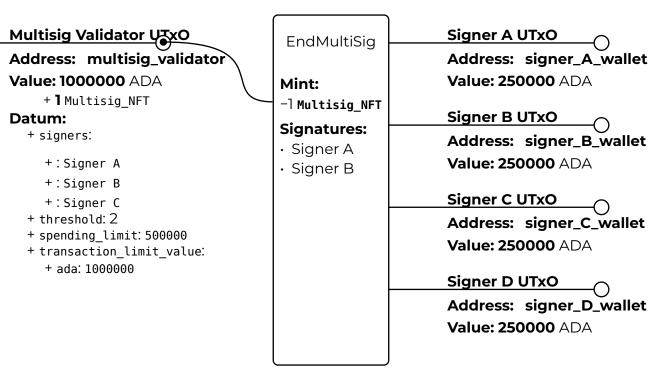
#### 1. Initiator Change UTxO (optional)

- · Address: Initiator's wallet address
- · Value:
  - Remaining ADA after transaction fees



## 1.2. Mint :: EndMultiSig

This transaction terminates the multi-sig contract by burning the Multisig NFT and distributing the remaining funds.



Note: End MultiSig Transaction

#### **1.2.1. Inputs**

#### 1. Multi-Sig Validator UTxO

- · Address: Multi-Sig Validator script address
- · Datum:
  - Current multi-sig configuration
- · Value:
  - Minimum ADA



- ▶ 1 Multisig NFT Asset
- Any remaining funds managed by the contract

## 2. Signers' Signatures

Required number of signers (as per threshold) must sign the transaction.

#### 1.2.2. Mints

## 1. Multi-Sig Validator

· Redeemer: EndMultiSig

· Value:

· -1 Multisig NFT Asset (burning the NFT)

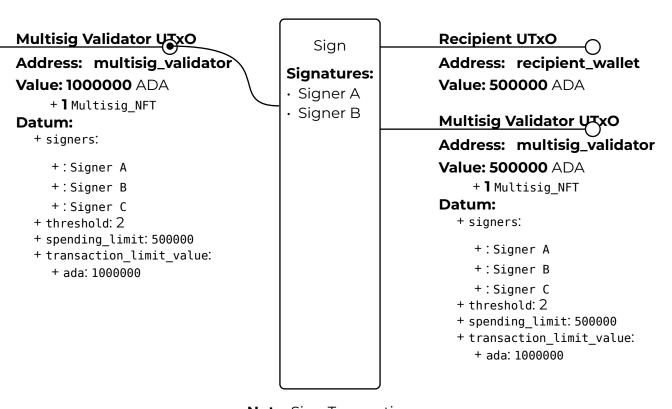
## **1.2.3.** Outputs

- 1. Distribution UTxOs
  - Funds are distributed to the appropriate addresses as per the termination plan.
  - · Value:
    - ADA and other assets as needed



# 1.3. Spend :: Sign

This transaction ensures that the number of signers meets or exceeds the specified threshold and The datum of the Multisig remains the same.



Note: Sign Transaction

#### 1.3.0.1. Inputs

#### Multisig Validator UTxO

- · Address: Multisig validator script address
- · Datum:
  - ▶ signers
  - ▶ threshold
  - ▶ funds



▶ spending\_limit

· Value:

- ► ADA + Any tokens
- Locked Value

## **1.3.0.2. Outputs**

## 1. Recipient Wallet UTxO

- · Address: Recipient wallet address
  - ► Transferred ADA/tokens

## 2. Multisig Validator UTxO:

- · Address: Multisig validator script address
- · Datum:
  - ▶ signers
  - ▶ threshold
  - ▶ funds
  - ▶ spending\_limit
- · Value:
  - Remaining ADA + Remaining tokens



## 1.3.1. Spend :: Update

Allows for the addition or removal of members from the Multisig arrangement, and updates the required signers threshold.

Multisig Validator UXXO **Multisig Validator U** Update Address: multisig\_validator Address: multisig\_validator Signatures: **Value: 1000000** ADA **Value: 1000000** ADA Signer A + 1 Multisig\_NFT + 1 Multisig\_NFT · Signer B Datum: Datum: + signers: + signers: +:Signer A +:Signer A +:Signer B +:Signer B +:Signer C +:Signer D + threshold: 2 + threshold: 3 + spending limit: 500000 + spending limit: 500000 + transaction limit value: + transaction limit value: + ada: 1000000 + ada: 1000000

Note: Update Multisig Configuration

#### 1.3.1.1. Inputs

#### 1. Multisig Validator UTxO

- · Address: Multisig validator script address
- · Datum:
  - ▶ old\_signers
  - ▶ old\_threshold
  - ▶ funds
  - ▶ old\_spending\_limit
- · Value:
  - X ADA + Any tokens



## 1.3.1.2. Outputs

# 1. Multisig Wallet UTxO

- · Address: Merchant wallet address
- · Datum:
  - ▶ new\_signers
  - ▶ new\_threshold
  - ▶ funds
  - ▶ new\_spending\_limit
- · Value:
  - X ADA + Any tokens (unchanged)