

## How to use the MultiSig wallet?

MultiSig wallet can be used for three purposes:

1. Call admin methods on master contracts (LP or seed) of yRace via TimeLock contract
2. Deposit tokens into MultiSigWallet contract and withdraw tokens from the MultiSigWallet contract
3. Add/remove/replace owners of MultiSigWallet

### Call admin methods on master contracts of yRace via TimeLock contract

For the owner to be able to modify the state of contract (like adding a new pool or modifying existing pool), he must submit a transaction to MultiSigWallet contract that queues the required transaction(which will add/set a pool) into TimeLock contract and then the other owners can confirm that transaction. When no. of confirmations reaches the 'required' value, the queueTransaction function of the Time lock contract is executed and the required transaction is queued.

Similarly, a transaction must be submitted to multisig for executing the required transaction. The user must submit a transaction to MultiSigWallet contract that executes the required transaction(which will add/set a pool) from the TimeLock contract and then other owners can confirm that transaction. When no. of confirmations reaches the 'required' value, the executeTransaction function of the Timelock contract is executed and the required transaction will be executed.

But in order to submit a transaction, the owner needs the destination address(which will be the address of the timelock contract) and call data of queueTransaction or executeTransaction, which can be obtained using the "TLscript.js" file.

In order to obtain callData, follow the steps:

1. Open the file "TLscript.js"
2. Move to the bottom of the file and modify the last line =>  
`obj.callDataForModifyingContract(" "," "," ",[" ]," ")`
3. Remove the "//" from the start of line 83
4. Within the first double quotes (" ") of the callDataForModifyingContract, first specify the name of the operation to be performed using the timelock contract :
  - Use "queue" to queue transaction
  - Use "execute" to execute transaction

5. Within the second double quotes (" "), specify the target which is actually the contract on which pool is to be added/modified :
  - Use "Seed" to add pool in seed master contract
  - Use "LP" to add pool in LP master contract
6. Within the third double quotes (" "), specify the function name which specifies if the pool is to be added or modified :
  - Use "add" to add pool
  - Use "set" to modify pool
7. Within the square brackets ([ ]) of the getData, pass the list of arguments with each argument within double quotes, separated with a comma.  
 Example : ["100", "0xEC5dCb5Dbf4B114C9d0F65BcCAb49EC54F6A0867", "200", "true"];
8. Within the fourth double quotes (" "), specify the eta which is the time in epoch form and it specifies when the transaction shall be allowed to execute via timelock. Epoch time can be obtained from <https://www.epochconverter.com/>
9. Save the file, and open the terminal in the file location.
10. Run "node TLscript.js"
11. The output will show callData needed which can be copied and pasted on bscscan.com
12. Put back the "//" in front of the line 83 to avoid wrong output

## **Withdraw tokens/native currency from MultiSigWallet**

For the owner to be able to withdraw tokens/native currency from MultiSigWallet, he must submit a transaction to the MultiSigWallet contract regarding the withdrawNative or withdrawToken functions of MultiSigWallet contract and then the other owners can confirm that transaction. When no. of confirmations reaches the 'required' value, the transaction is executed, and tokens/native currency is transferred to the owner account.

But in order to submit a transaction, the owner needs the destination address(which will be the address of the MultiSigWallet contract) and callData of withdrawNative or withdrawToken, which can be obtained using the "TLscript.js" file.

In order to obtain callData, follow the steps:

1. Open the file "TLscript.js"
2. Move to the bottom of the file and modify the last line =>  
`obj.callDataForWithdraw(" ", " ", " ", " ", " ")`

3. Remove the `//` from the start of line 84
4. Within the first double quotes ( " ") of the `callDataForWithdraw`, first specify the name of the function that specifies if native currency or tokens are to be withdrawn:
  - Use `"native"` for native currency withdraw
  - Use `"token"` for token withdraw
5. Within the second double quotes ( " "), specify the token contract address:
  - Use `"0x0"` if native currency withdraw
  - Use `"token_contract_address"` if tokens withdraw
6. Within the third double quotes ( " "), specify your user address.
7. Within the fourth double quotes ( " "), specify the amount in BNB.
8. Save the file, and open the terminal in the file location.
9. Run `"node TLscript.js"`
10. The output will show `callData` needed which can be copied and pasted on [bscscan.com](https://bscscan.com)
11. Put back the `//` in front of the line 84 to avoid wrong output

## **Add/remove/replace owners of MultiSigWallet**

### **1. Add an owner :**

For any owner to be able to add a new owner of MultiSigWallet, he must submit a transaction to the MultiSigWallet contract regarding the `addOwner` function of MultiSigWallet contract and then the other owners can confirm that transaction. When no. of confirmations reaches the 'required' value, the transaction is executed, and the address will be added as one of the owners of the MultiSigWallet contract.

But in order to submit a transaction, the owner needs the destination address(which will be the address of the MultiSigWallet contract) and `callData` of the `addOwner` function, which can be obtained using the `"TLscript.js"` file.

In order to obtain `callData`, follow the steps:

1. Open the file `"TLscript.js"`
2. Move to the bottom of the file and modify the last line =>  
`obj.callDataForAddOwner(" ")`

3. Remove the `"/"` from the start of line 85
4. Within the double quotes (`" "`) of the `callDataForAddOwner`, specify the user address who we want to add as a new owner.
5. Save the file, and open the terminal in the file location.
6. Run `"node TLscript.js"`
7. The output will show `callData` needed which can be copied and pasted on [bscscan.com](https://bscscan.com)
8. Put back the `"/"` in front of the line 85 to avoid wrong output

## **2. Remove an owner :**

For any owner to be able to remove an existing owner of MultiSigWallet, he must submit a transaction to the MultiSigWallet contract regarding the `removeOwner` function of MultiSigWallet contract and then the other owners can confirm that transaction. When no. of confirmations reaches the 'required' value, the transaction is executed, and the address will be removed as one of the owners of the MultiSigWallet contract.

But in order to submit a transaction, the owner needs the destination address(which will be the address of the MultiSigWallet contract) and `callData` of the `removeOwner` function, which can be obtained using the `"TLscript.js"` file.

In order to obtain `callData`, follow the steps:

1. Open the file `"TLscript.js"`
2. Move to the bottom of the file and modify the last line => `obj.callDataForRemoveOwner(" ")`
3. Remove the `"/"` from the start of line 86
4. Within the double quotes (`" "`) of the `callDataForRemoveOwner`, specify the owner address who we want to remove.
5. Save the file, and open the terminal in the file location.
6. Run `"node TLscript.js"`
7. The output will show `callData` needed which can be copied and pasted on [bscscan.com](https://bscscan.com)
8. Put back the `"/"` in front of the line 86 to avoid wrong output

### **3. Replace an owner with a new owner :**

For any owner to be able to replace an existing owner with a new owner of MultiSigWallet, he must submit a transaction to the MultiSigWallet contract regarding the replaceOwner function of MultiSigWallet contract and then the other owners can confirm that transaction. When no. of confirmations reaches the 'required' value, the transaction is executed, and the old owner will be replaced by a new owner for the MultiSigWallet contract.

But in order to submit a transaction, the owner needs the destination address(which will be the address of the MultiSigWallet contract) and callData of the replaceOwner function, which can be obtained using the "TLscript.js" file.

In order to obtain callData, follow the steps:

1. Open the file "TLscript.js"
2. Move to the bottom of the file and modify the last line =>  
`obj.callDataForReplaceOwner(" "," ")`
3. Remove the `"/"` from the start of line 87
4. Within the first double quotes ( " ") of the callDataForReplaceOwner, specify the old owner address to be replaced.
5. Within the second double quotes ( " ") of the callDataForReplaceOwner, specify the new owner address who will replace the old owner.
6. Save the file, and open the terminal in the file location.
7. Run `"node TLscript.js"`
8. The output will show callData needed which can be copied and pasted on [bscscan.com](https://bscscan.com)
9. Put back the `"/"` in front of the line 87 to avoid wrong output