Remix | RMX-SPL-TP2 Rev 0

Supplemental Documentation, Technical Preview 2

Contents

1. REVISION HISTORY

1. **Revision 0 - 2018.08.17** - Initial revision of Supplemental Documentation, Technical Preview 2

2. INTRODUCTION

Welcome to Remix Technical Preview 2.

Remix is an open source cryptocurrency, with roots in existing Monero technology, created with an ultimate goal of privacy and decentralization. The core objective of Remix development centers on continued research to further privacy coin technology and establish itself as a leader in cryptocurrency innovation while soliciting community feedback during the process through an approachable development team.

Remix Technical Preview 2 (TP2) is the second instance of the publicly available **testnet** software distributed for the Remix network. The purpose of this TP2 release is for any interested party to run the technical preview Remix software on the Remix testnet environment and report any findings or recommended enhancements to Remix developers. Please note that TP2 may not contain all of the features planned for the initial mainnet release.

Submitting bugs and feedback is critical to the success of open source software projects. We highly recommend opening new issues for any comments and concerns you have, or uncover, during the pre-release testing phase of this software.

3. RELEASE NOTES

The Remix software is currently under active development and all specifications herein should **not** be considered final. Bugs will occur and issues will be found. All references and listings to software nomenclature, features, specifications, etc. should be considered in flux until the official launch of the v1 Remix mainnet.

Remix TP2 is released with the following software and features. If you would like to suggest a feature for the official release or a later version, please join us in one of several available discussion forums listed on the official website www.remixcoin.io.

Remix Technical Preview 2 was issued on August 16, 2018 to lower the block emission of the Remix Testnet while also including enhancements and bug fixes from upstream.

3.1 REMIX TP2 SOFTWARE

- remixd: Remix blockchain daemon
- remix-wallet-cli: Remix command line wallet
- remix-wallet-rpc: Remix command line wallet for connecting to remote nodes
- remix-blockchain-export: Exports the existing blockchain to `REMIX_DATA_DIR/export/blockchain.raw`
- remix-blockchain-import: Imports a blockchain *.raw file
- remix-gen-trusted-multisig

3.2 REMIX TP2 PREBUILT BINARIES

- Linux64
- Windows64

3.3 REMIX TP2 FEATURES

- Target Time: 120 [seconds]
- Hashing Algorithm: Cryptonight-Heavy
- Difficulty Adjustment: LWMA-2

4. GETTING STARTED

Remix uses separate software applications to handle the remix block chain and a users funds; remixd and remix-wallet-cli. Remixd is the daemon software to manage the blockchain while Remix-wallet-cli is the component supplied with the remix software suite which stores the information necessary to privately send, receive, and document transaction history on the remix network.

While many aplications in the Remix suite are provided in TP2, only two are needed to make a RMX transaction. The focus of this supplement is to guide the use of remixd and remix-wallet-cli applications provided by TP2 of the Remix software suite, running on the Remix **testnet** environment. This document does not detail the steps required for compiling the software from source and assumes the end user is interested in downloading a pre-compiled binary for their environment. Information for compiling Remix is available and controlled under the README.md file provided with the source code. This document does not detail all applications provided by Remix TP2.

4.1 ACQUIRING REMIX SOFTWARE

Remix software, in pre-built binary form, is officially available for download at download.remixcoin.io. Additionally, Remix source code is available for download at www.gitlab.com/a3rk/remix.

4.2 NOTICE TO TP1 USERS

Before launching the TP2 daemon, remixd, **ENSURE** you have deleted the previous Remix TP2 database files located in the following directories:

```
Linux testnet database directory location
$ /home/$USER/.remix/testnet/
Windows Testnet database directory location
$ C:\ProgramData\remix\testnet
```

This is a one time action, only for individuals who ran the previous TP1 Remix daemon.

4.3 REMIX SOFTWARE INSTALLATION

1. Create a new folder (for this document, the folder name is assumed to be ”Remix-TP2”)
2. Move the file downloaded in section 4.1 to the Remix-TP2 folder
3. Extract/Un-archive the contents (three executable files) to the Remix-TP2 folder
   (a) Linux file nomenclature:
      i. remixd
      ii. remix-wallet-cli
      iii. remix-wallet-rpc
   (b) Windows file nomenclature:
      i. remixd.exe
      ii. remix-wallet-cli.exe
      iii. remix-wallet-rpc.exe

NOTE: The Remix-TP2 folder will be your working directory for the remainder of this document.

5. REMIX TESTNET SOFTWARE

The Remix test network is comprised of a collection of computers all over the world running the Remix software. Running a node is the optimal configuration to ensure the highest level of privacy and security when connecting to the Remix network. Running a Remix node is as simple as running the remixd daemon which verifies transactions and blocks. The distribution of nodes, each holding an entire copy of the Remix testnet blockchain, is what enables the Remix test network to be decentralized.

5.1 STARTING A TESTNET NODE

1. Open a new terminal (Linux) or start a command prompt (Windows) to be used for the remixd software
2. Change the working directory to Remix root file location:

```
# Linux Command:
$ cd ~/Remix-TP2/
# Windows Command:
$ cd Remix-TP2
```

3. Start the Remix daemon (remixd):

   NOTE: The following process will connect you to the Remix testnet.

```
# Linux Command:
$ ./remixd --testnet
# Windows Command:
$ remixd.exe --testnet
```

   NOTE: The Remix daemon will now begin to sync with the network. After the following message is displayed, continue to the next step:

```
"You are now synchronized with the network. You may now start remix-wallet-cli"
```

5.2 CREATING A TESTNET WALLET

1. Open a new terminal (Linux) or start a new command prompt (Windows) for the wallet software
   NOTE: Remixd must remain running (started in the previous step) to utilize remix-wallet-cli
2. Start the Remix wallet software:

```
# Linux Command:
$ ./remix-wallet-cli --testnet
# Windows Command:
$ remix-wallet-cli.exe --testnet
```

3. Follow the onscreen instructions to create a new wallet (example provided below)

```
No wallet found with that name. Confirm creation of new wallet named: RemixTest (Name you choose)
(Y/Yes/N/No): Y
Generating new wallet...
Enter new wallet password: *******
Confirm password: *******
List of available languages for your wallet's seed:
```

```
0 : Deutsch
1 : English
2 : EspaÃśol
3 : FranÃğais
4 : Italiano
5 : Nederlands
Enter the number corresponding to the language of your choice: 1
Generated new wallet: a3rkxobSnUeRCZnLbXDrJBbHA4anvQQZhV7HB9p9D46ASTRaBfxt
gDGiNkqE1wGrBFYCm9iqrfdxoNtcXvA4nWUALg4Uxs6pm86
View key: 63e4746a710878b646e3b95876331b1d10a15954c5c8e648446bc42e97aeab0f
**********************************************************************
Your wallet has been generated!
To start synchronizing with the daemon, use "refresh" command.
Use "help" command to see the list of available commands.
Use "help <command>" to see a command's documentation.
Always use "exit" command when closing remix-wallet-cli to save your
current session's state. Otherwise, you might need to synchronize
your wallet again (your wallet keys are NOT at risk in any case).

NOTE: the following 24 words can be used to recover access to your wallet.
Write them down and store them somewhere safe and secure.
Please do not store them in your email or on file storage services outside
of your immediate control.

bids intended cousin shackles lectures cactus zippers major
owls jolted faulty fuselage soapy aquarium furnished igloo
reinvest wrap jaunt ankle oozed daytime bugs dawn
**********************************************************************
```

6. NEXT STEPS

Using the previous guidance, you are now able to run a Remix testnet node, fully synchronized to the Remix testnet, and have created your first anonymous Remix wallet. In this section, you will learn how to mine Remix and, in future sections, perform transactions with it.

6.1 MINING REMIX

In the cryptocurrency sense, Mining is the nomenclature given to a computer programs ability to verify and processes the cryptocurrency transactions that other people announce to the Remix network. Remix mining on TP2 is based on a proof-of-work algorithm called CryptoNight-Heavy.

Mining can be performed individually or as a group effort

- Solo mining is when a miner performs the mining operations alone without joining a pool. All mined blocks are generated to the miner's credit.
- Pooled mining "pools" all of the resources of the clients in that pool to generate the solution to a given block. When the pool solves a block, the RMX generated by that block's solution is split and distributed between the pools participants.

6.1.1 SOLO MINING

Solo mining RMX can be started via the daemon (remixd) or the Remix wallet (remix-wallet-cli)

1. If using the daemon application, the following command will instruct the application to solo mine Remix:

```
start_mining <wallet address>
Command usage:
  start_mining <addr> [<threads>] [do_background_mining] [ignore_battery]

Command description:
  Start mining for specified address. Defaults to 1 thread and no background mining.
```

2. If using the Remix wallet application, the following command (with a daemon running on the same system) will instruct the application to solo mine Remix:

```
start_mining
Command usage:
  start_mining [<number_of_threads>] [bg_mining] [ignore_battery]

Command description:
  Start mining in the daemon (bg_mining and ignore_battery are optional booleans).
```

6.1.2 POOLED MINING

Different software, for CPU and/or GPU mining, are available for the purpose of pool mining and the setup of such software will not be covered by this TP2 supplement. When setting up any software, be sure to select cryptonight-heavy as the PoW algorithm for compatibility.

The official Remix developer testnet pool, open to all, is located at the following:

- https://pool.testnet.remixcoin.io

7. TRANSACTIONS

During an instance of making a transaction using Remix, as in any currency, it is important to first be sure of how much one has to start with. The following instructions provide the guidance to display the amount the RMX in a users wallet, and how to send available RMX to another, anonymously.

7.1 BALANCE

Using remix-wallet-cli, the **balance** command is used to show the current wallets balance.

```
[wallet a3rkxU]: balance
Currently selected account: [0] Primary account
Balance: 560.913203390553, unlocked balance: 560.913203390553
```

Using the above example, Balance lists the wallets total amount of RMX. The unlocked balance is the amount of RMX currently available to spend. Newly received transactions require 10 confirmations on the blockchain before being unlocked.

7.2 SENDING REMIX

RMX is sent to another wallet using the **transfer** command. The **transfer** command, and options, are as follows:

```
transfer [<priority>] [<ring_size>] <address> <amount> [<payment_id>] - Transfer <amount> to <address>
```

The most basic form of the transfer command to send RMX is as follows:

```
transfer <address> <amount> - Transfer <amount> to <address>
```

The available options for the **transfer** command are listed below:

- <priority> is the priority of the transaction. The higher the priority, the higher the fee of the transaction.
  - Valid values in priority order (from lowest to highest) are: unimportant, normal, elevated, priority. If omitted, the default value (see the command "set priority") is used.
- <ring_size> is the number of inputs to include for untraceability.
- <payment_id> is an arbitrary and optional transaction attachment usually used to identify transactions to merchants and exchanges
- Multiple payments can be made at once by adding <address_2> <amount_2> etc. (before the payment ID, if it's included