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<https://docs.google.com/document/d/1MI44ranu5gv6bdLyfwcj-m1KUgaARuUpzdXyg5rRtvk/edit#>

Factom Milestone 3 (M3) has 3 distinct objectives that will happen in 3 different overlapping phases.

* Phase 1 - New code deployment
* Phase 2 - Distribution of control
* Phase 3 - New Factoids are created

These have different requirements and timelines.

**Phase 1 Description**

The Factom network is going through a non-reverse compatible software change after a year of maintaining backwards compatibility. This is similar to a hard fork. Phase 1 is scheduled for Monday April 30, 2018.

Follow progress at <https://status.factom.com/>

Non-upgraded nodes will not see new blocks. There are no groups that will maintain the older software. This is not an airdrop, spinoff, coin swap, or contentious fork. It uses the same genesis block and chain history as before.

**Wallets will continue to operate without upgrading.**  After the upgrade, both *Enterprise Wallet* and the API wallet *factom-walletd* will continue to operate normally against updated factomd nodes. There will be an upgrade window for the courtesy node, which powers the *Enterprise Wallet* by default. After the upgrade window Monday, Enterprise Wallet resume normal operation. No existing FCT balances will decrease without user action. Only wallet users who run a full node will have to take action. See the Upgrade Procedure below.

**Phase 2 Description**

Replacing the control of the network with disparate parties.

A) Get Selectees nodes running as followers

B) Test Portainer network reset

C) Promote Selectees to leaders

A) Leaders can begin downloading the M2 blockchain to prepare for installing m3 docker code. The m2 database can be installed in a M3 docker to speed up the bringup process.

B)Timeline:

Monday April 30 - convert some of the testnet followers to connect into the Portainer system and test bringing the followers up and down.

Tuesday May 1 - Convert the Testnet Leaders over to Portainer based docker images. Test the start/stop/remote control abilities of the Portainer system on testnet.

https://github.com/portainer/portainer

http://demo.portainer.io/

Wednesday May 2 - the 10 (or however many are ready) non-factominc leaders will install the docker based M3 code and connect into the Portainer system. The ability to reboot the nodes (while acting as followers) will be tested.

Alternate nodes (i.e. for brain swap) should be tested if available.

C)Thursday May 3 - The first of the Selectees will be promoted to a Federated server ( total number for promotion TBD). This will give some time to ensure that a poor connection will result in the leader being faulted out if it goes poorly.

This step will be informed by the progress of phase 3 for the various Selectees. They should have an identity with a factoid address and efficiency before promotion.

Friday May 4 - More leaders brought into Authority set.

**Phase 3 Description**

Coinbase transactions will be non-zero.

A) guides decide on reward activation height

B) Create software for adding FCT address and efficiency

C) Selectees should make identities and populate to the blockchain

A)

Before M3 launches Monday, a block height to turn on inflation needs to be baked into the software. Options include:

* Very shortly after M3 starts
  + Teams that are promoted earlier will get more tokens, which might be arbitrary
* Midway through the expected promotion process
* After the promotion process is expected to finish
  + There is a lot of uncertainty about when the promotion process will finish

B)

There exists software for the testnet to add efficiency and a FCT address, but it was quickly spun up as a server side crypto library. It should not be trusted for determining production payouts. Only offline or locally run software should deal with identity key operations.

C)

This is tested on the testnet. Leaders should make secure paper copies of their identity keys, ideally using offline computers with ephemeral CD bootable linux machines. This may not be possible for many Selectees, so avoiding saving the key to the HDD might be the best that they can do. Note, if enough of the leaders identity keys get compromised, it can result in a systemic risk for factom. It is not merely their own factoids that these leaders are protecting. Please be careful with identity keys. They are arranged in a hierarchy, so higher numbered keys can replace lower level keys (note, this key replacement is not implemented in factom yet, so only key 1 is viable at this point)

The existing factom inc identities do not have items in their identity which specify efficiency or a factoid address. This means that they are considered 100% efficient, and no coinbase payouts will happen for them.

Upgrade Procedure

**These instructions are for normal users of factomd, like businesses writing to the blockchain, exchanges, wallet users with a full node. Authority Node operators have a different procedure documented elsewhere.**

After v5.0.0 is pushed to the Master branch, upgrades should be made. Watch <https://status.factom.com/> for Phase 1 upgrade progress.

https://github.com/FactomProject/factomd

Built from Source.

These instructions will guide a user through the compilation steps for factomd. Golang v10 or above is recommended for factomd.

<https://github.com/FactomProject/FactomDocs/blob/master/installFromSourceDirections.md#install-factom>

To check you golang version, in a terminal run **go version**. Some OS distributions supply out of date golang versions.

Prebuilt Binary Installers.

Installers for Debian (ubuntu) and Windows will be available within a day or two after release.

<https://github.com/FactomProject/distribution>