



GUAPCOIN DAO SOFTWARE DEVELOPMENT AGREEMENT

PREPARED FOR

RainTech Inc

PREPARED BY

GUAP Core Dev Team

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GUAP COIN

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Re: Enclosed Software Development Agreement: Requirements and Deliverables

Please find enclosed our detailed software requirements and deliverables for 3rd party developer review.

This document outlines the software development designed specifically for the GUAP Coin Mainnet and Test Net Server Infrastructure. The development & integration environment is vital to the testing and implementation of new features and services. The deployment of such updates will ensure the longevity of GUAP through governance, rewards, superblocks, and treasury funding.

The Guap Core Dev team will provide integration, testing and oversee development of the DAO aka Tulsa Update. Our team is composed of IT professionals with the skills and aptitude to ensure deliverables are met and meet industry standards.

Thank you,

Core Dev Team



EXECUTIVE SUMMARY

Due to the discovery of deactivated features, coin supply software issues and bugs, most of the GUAP infrastructure must be upgraded to ensure longevity and self-sustainment. The information below is a description of the issues we would like Raintech resolve and integrate into the current or new blockchain..

Note: failure to resolve the rewards issue (line item No.1) is predicted to end the project as a whole, as there will be no incentive for masternodes to maintain the GUAP Coin network.

1. Rewards are scheduled to reach 1 GUAP per block in 2 years, meaning there will be less of an incentive for Masternodes to operate since fees are burned. - **Issue resolved in v.2.3.2**
2. Treasury funds are not allocated in the block rewards distribution - **unresolved issue**
3. Superblock and on chain voting is not enabled - **unresolve on mainnet, but enabled on testnet**
4. Transaction mixing currently occurring on chain - may prevent listings on larger exchanges - **unresolved issue** on mainnet
5. Resolve major bugs reported on the GUAP GIT page and Forked Project GitHub Page - **unresolved security bug**
6. Resolve Git compiling tests and validation prechecks - **unresolved**
7. Improve block-explorer - **core team requirement**
8. Improve Wallet GUI - **unresolved issue, include CoreDev Logo**

1. Project Overview

The major software components and focus of development are the following: Masternode and Wallet software. Our aim is to remove coin-mixing, integrate on-chain voting and institute superblock treasury funding. The desktop mobile wallets will be cleared of all major bugs, UI redesigned (core tasking) of all applications, and will support on-chain voting and submitting of proposals.

The intended operation is to improve the rewards system by changing the block rewards from 1 GUAP reward at block 2,000,000 to a new system where MN and stakers will continue to receive at least 80 percent of block distribution while an agreed upon percentage will be allocated to the GUAP treasury - this deliverable was partially completed in v2.3.2. The primary goal of the Tulsa update (v3.0) is to implement masternode governance, rewards treasury, streamline voting and budget payouts.

Due to delayed delivery of the DAO ver 3.0, security vulnerabilities were discovered and major patches have been applied by the forked project, therefore it is vital that the Guapcoin Mainnet is updated accordingly.

Below is a look at the proposed rewards system [64% to MN, 20% to Staking, 16% to Treasury]:

1. 25 Guap block reward will extend to block 1350000

20 guap reward to MN, 5 Guap Proof of Stake delivered as of v.2.3.2

Rewards Structure after Guapcoin v3.0 Tulsa update

Block height 1,350,000 to 2,000,000

Block Reward : 21 Guap

75% for MN (15.75 Guap for MN)

25% for Staker(5.25 Guap for Staker)

Superblock reward: 172,800 GUAP

Block height 2,000,001 to 4,000,000

Block Reward : 17 Guap

75% for MN (12.75 Guap for MN)

25% for Staker(4.25 Guap for Staker)

Superblock reward: 138,240 GUAP

Block height 4,000,001 - 6,000,000

Block Reward : 13 Guap

75% for MN (9.75 Guap for MN)

25% for Staker(3.25 Guap for Staker)""""

Superblock reward: 103,680 GUAP

Block height 6,000,000 to ~

Block Reward : 9 Guap

75% for MN (6.75 Guap for MN)

25% for Staker(2.25 Guap for Staker)""""

Superblock reward: 43,200 GUAP

Note: 16 percent of rewards per block will be allocated to the treasury fund\superblock.

Guap Coin General Rewards Requirements

The Guapcoin masternodes will receive at least 80 percent of block distribution while an agreed upon percentage will be allocated to the GUAP treasury - **partially completed**. The primary goal of the MN update is to implement superblocks to accept rewards and streamline voting and budget payouts.

Security

The operation of blockchains relies on the principles of consensus and governance. The consensus is defined as the method of establishing a single agreed version of a blockchain

ledger that is accepted by all parties that use the blockchain. Governance is defined as the method of maintaining and revising blockchain protocols. If the parties cannot reach an agreement on issues of consensus and governance, then the blockchain will fail.

DAO and Developer Deliverables

The Raintech will be responsible for completing the following deliverables. Deliverables will be grouped in 5 milestones. As each milestone is reached, we will issue a payout of 1000 USD to Raintech. All deliverable must pass the Guap Core teams test objectives located here →

1. Deploy latest forked project via testnet
2. Deliver full DAO functionality and features
3. DAO GUI must be included in desktop wallet
4. Masternode controller can utilize DAO using a vote of yes or no via desktop wallet
5. Masternode controller can utilize DAO using a vote of yes or no via guapcli or debug console
6. DAO vote can be changed from a yes or no
7. Wallet user can submit proposal using desktop wallet DAO option
8. DAO proposal fees are burned without error
9. Proposal rewards are issued per superblock to appropriate address without issue
10. Proposals can be viewed and audited using a blockchain explorer or debug console
11. Proposal winners can be viewed via Desktop DAO UI or debug console
12. Next superblock information is accurate across all nodes
13. Developer will utilize guapcoin devnet internal gitlab for testnet, validation of code, and error reporting
14. Guapcoin src code is updated to latest patches when compared to forked project
15. Weekly meetings to validate progress
16. **Institute a governance and proposal fee of 500-1000 GUAP (paid by the proposer) to submit a proposal for consideration.** This fee is non-reimbursable and must be paid regardless of the proposal passing or not. This fee is used to hopefully filter quality proposals.
17. **On-chain transactions are currently being obfuscated or combined with non genuine transactions as a means of complicating auditing attempts. Although funds can be confidently traced, we would like to remove the coin-mixing feature permanently.**
18. Update Wallet FAQ page
19. Update app outbound website links - some links resolve to unsecure pages or dead links.
20. Provide software Maintenance Service Level Agreement (patching and code updates)

Open for developer discussion - The ability to output all transactions for a given address from block 0 to current is a needed functionality. For tax purposes wallet holders will need transaction information, as the wallet desktop wallet does not provide full capability.

An upgrade to the block-explorer will also provide professional and custom aesthetics while providing detailed graphs and information about the block-chain. - core team deliverable

3. Technical Obstacles and Masternode update rollout

Integrating the new code onto the operational network will require testing and a migration plan to execute in an organized fashion.

Testing of the DAO will be performed on the Guapcoin TestNet

This update will be instituted in the form of a SPORK, where the following process sequence will occur...

1. GUAP will make a public announcement to all MN owners and users about the necessary upgrade
2. Members will upgrade to the latest version but the new features will not be activated until all nodes are verified as updated to version 3.0
3. When at least 80-90 percent of the network is upgraded to the new software version a special wallet address will make a broadcast distribution of the initiating spork key -(need to identify what block height)
4. All nodes with the updated software will activate the new features near instantly

4. Guapcoin v3.0 Hardware requirements

The Guapcoin Testnet will be utilized for testing the DAO prior to implementation on the Main Net. Each server is outlined with system specs and functions in the table below: Additional test net assets(vps) owned by Raintech must be identified during the software update.

1. MN Testnet - code, bug fixes, tests and evaluation is performed here
2. MN Devlab Testnet - zero day and validated fixes from the testnet are applied here after rigorous testing
3. Repository Svr - hosts the database files needed to bring masternode data up to date with the rest of the network
4. App server -- hosts the mobile application services

5. Block Explorer Host - needed to view transactions, balances, etc.
6. Desktop Wallets - personal devices hosting VM's will be used
7. GIT lab internal server - all code will be managed on a internal Git server and deployed to test and devnet
8. DNS Seeder - provides dns services for peers and Masternodes (1)

Server	Specs	Description of system
Mainnet Dev Explorer x1	CPU: 2 x 2.60 GHz RAM: 4096MB Storage: 120 GB Bandwidth: Unlimited	This server will run the developmental lab block explorer https://dev.guapcoinlab.com (Mainnet Block Explorer) The block explorer provides an index of blockchain information such as: transactions, wallet addresses, balances, block rewards, search engine, masternode status, difficulty, api endpoints and more.
Testnet Explorer x1	CPU: 2 x 2.60 GHz RAM: 4096MB Storage: 120 GB Bandwidth: Unlimited	This server will run the developmental lab block explorer https://dev.guapcoinlab.com (Mainnet Block Explorer) The block explorer provides an index of blockchain information such as: transactions, wallet addresses, balances, block rewards, search engine, masternode status, difficulty, api endpoints and more.
Android and IOS lab (ansible or docker) x1	CPU: 2 x 2.60 GHz RAM: 4096 MB Storage: 120 GB Bandwidth: Unlimited	Runs mobile app, allows mobile devices to communicate with the blockchain peers. Allows the sending and receiving of coins, login, password recovery and more.
Master Node Dev x3	CPU: 2 x 2.60 GHz RAM: 4096 MB Storage: 120 GB Bandwidth: Unlimited	Runs the Dev Blockchain masternodes (3 total)

Master Node Test Net x3	CPU: 2 x 2.60 GHz RAM: 4096 MB Storage: 120 GB Bandwidth: Unlimited	Runs the Blockchain masternodes (3 total)
Bootstrap Repository and GIT repository x1	CPU: 2 x 2.60 GHz RAM: 4096 MB Storage: 120 GB Bandwidth: Unlimited	This virtual machine provides the bootstrap database that new masternodes require to data-sync blockchain with currently active and up to date Master Nodes. This server will serve as a central repository for all software code
DNS Seeder x2	CPU: 2 x 2.60 GHz RAM: 4096 MB Storage: 120 GB Bandwidth: Unlimited	This VM actively checks all known nodes for availability and requests lists of active peers from each node. Seeder contains an updated list of active and accessible peers. Increases the quality of the connections.

Other servers not included in this proposal are the DNS Seeders, Android fallback seed nodes, and personal testnet staking nodes.

7. Software Requirements

Ubuntu 20.04 or higher

Windows 10-11+

Operating Systems: CentOS 8, macOS Catalina or Higher

8. Test Requirements and Objectives

Test requirements can be viewed here →

https://docs.google.com/spreadsheets/d/1fGKeDtCbXU49ze9CPNxcAhfCDFgU-OV_poUBPst-vUk/edit?usp=sharing

9. Milestones and Reporting

Total estimation of man hours: 642

Milestone	Tasks	Reporting	Hrs	Status
	Analysis and design stage, gather data and create system mockup	None	8	complete
	Architecture design	None	4	complete
	Design work plan (distribution of tasks to development teams)	3rd party	8	complete
Milestone 1 - Development				
1.1	Review software development and maintenance agreement			
1.2	Create and secure test environments, vps, wallet and block explorer. Validate functionality. Ensure the test environment is decentralized.	weekly	80	Block explorer on testnet is not secure, requires rebuilding.
1.3	Upload latest Pivx Gitlab repo for testnet development . Fork code to Guapcoin in order to compare revisions. clean MN data and implement missing features, voting, rewards, superblock.	weekly	40	Not started
1.4	Test team validate repo exist on Gitlab	weekly	8	Not started
1.5	Raintech Weekly Reporting to coredev team . Resolve open issues tickets reported on Gitlab	weekly	3	Not started
1.6	Validate deliverables and issue first payment	Per milestone reached	1	Not started

Milestone 2 - Alpha Testing and Documentation				
2.1	Complete source code development contact Coredev team for specific Devnet Environment Variables needed to speed testing	weekly	80	Not started
2.2	Ensure source code passes all prechecks and performs preliminary code security auditing. Resolve all Category I, II issues.	weekly	40	Not started
2.3	Test team performs gitlab source code comparison. Validate code changes	weekly	24	Not started
2.4	Compile Source code: MN script, Desktop Wallets and upload software to devnet for test team validation	weekly	40	Not started
2.5	Install v3.0 Software onto test net	weekly	40	Not started
2.6	Test team validate v3.0 is installed across all wallets without error	weekly	16	Not started
2.7	Validate Readme documentation	None	20	Not started
2.8	Raintech Weekly Reporting to coredev team . Resolve open issues tickets reported on Gitlab		3	Not started
2.9	Validate deliverables and issue second payment	Per milestone reached	1	Not started
Milestone 3 - Validation and Security Auditing				
3.1	Perform 3rd party security audit and reporting	weekly	8	Not started
3.2	Review report and present to Raintech	weekly	8	Not started
3.3	Resolve open issues	None	40	Not started
3.4	Perform second security audit		40	Not started
3.5	Validate system passes all audits	daily	40	Not started
3.6	Raintech Weekly Reporting to coredev team . Resolve open issues tickets reported on Gitlab		1	Not started
3.7	Validate deliverables and issue 3rd payment		1	Not started
Milestone 4 - Mainnet Implementation				

4.1	Inspect Guapcoin readme\documentation via src code	weekly	4	Not started
4.2	Training layout of core members	weekly	4	Not started
4.3	Plan v.3.0 community software rollout	weekly	8	Not started
4.4	Ensure DAO tutorials are released, proposal submission, how to vote, etc.	weekly	40	Not started
4.5	Release code on primary Gitlab repo and Opensource Github repo	weekly	8	Not started
4.6	Deployment to MN owners	weekly	—	Not started
4.7	Deployment to desktops	None	—	Not started
4.8	Remove RaininfoTech Masternodes from Testnet and turnover custody to Dev Team	80	8	Not started
4.9	Validate then activate features at block height	daily	8	Not started
4.10	Raintech Weekly Reporting to coredev team . Resolve open issues tickets reported on Gitlab	weekly	2	Not started
4.11	Validate deliverables and issue 4th payment	weekly	1	Not started

5 - Maintenance Updates

5.1	Perform software updates per maintenance agreement (SLA)	Monthly	4	Not started
	Raintech Weekly Reporting to coredev team . Resolve open issues tickets reported on Gitlab			

7 - Other

10. Cost Estimates

1. Cost to perform Milestones 1, 2, 4, 5 are 4625 USD, (Tulsa Update only)
2. Cost to perform Milestone 3, contained in separate service agreement - Pending estimate,

11 Payment agreement and frequency

Rain infotech will receive 10 percent (\$462.5 USD) of initial development costs 4625.00 to initiate the work. Upon completion, delivery, validation of source code, milestones and reporting deliverables, Rain Infotech will be rewarded 20 percent of the total development costs upon the conclusion of each milestone.

- Milestone 1 - 1040.00
- Milestone 2 - 1040.00
- Milestone 4 - 1040.00
- Milestone 5 - 1040.00

Milestone 3 - Security Auditing, Hardening, and Accreditation cost - Pending

Signed as accepted:

[NAME], [TITLE]

[DATE]