

About the GOS Protocol

The GOS protocol is the leading decentralized and open-source public blockchain protocol for algorithmic stablecoins. Using a combination of open market arbitrage incentives and decentralized Oracle voting, the GOS protocol creates stablecoins that consistently track the price of any fiat currency. Users can spend, save, trade, or exchange GOS stablecoin instantly, all on the GOS blockchain. GSC provides its holders with staking rewards and governance power.

GOS and GSC

The protocol consists of two main tokens, GOS and GSC.

- GOS: Stablecoin will track the price of Gold, Oil and Silver. The Protocol will mint new GOS Once the equivalent Gold amount has been purchased.
- GSC: The GOS protocol's native staking token that absorbs the price volatility of GOS. GSC is used for governance and paying transaction fees. Users stake GSC to validators who record and verify transactions on the blockchain in exchange for rewards from transaction fees.

How the GOS protocol works

Stablecoin

The stablecoin is the main feature of the GOS protocol: crypto asset that tracks the price of Gold Oil and Silver.

The Release of the stablecoin will take place once per week at an agreed time and date. This will be distributed to all users in a fair and equal way.

Scalability

Consensus

The GOS blockchain is a proof-of-stake blockchain, powered by the [Cosmos SDK](#) and secured by a system of verification called the Tendermint consensus.

The following process explains. For more information on the Tendermint consensus, visit the [official Tendermint documentation](#).

1. A validator called a proposer is chosen to submit a new block of transactions.

2. Validators vote in two rounds on whether they accept or reject the proposed block. If a block is rejected, a new proposer is selected and the process starts again.
3. If accepted, the block is signed and added to the chain.
4. The transaction fees from the block are distributed as staking rewards to validators and delegators. Proposers get rewarded extra for their participation.

This process repeats, adding new blocks of transactions to the chain. Each validator has a copy of all transactions made on the network, which they compare against the proposed block of transactions before voting. Because multiple independent validators take place in consensus voting, it is infeasible for any false block to be accepted. In this way, validators protect the integrity of the GOS blockchain and ensure the validity of each transaction.

Staking

Staking is the process of bonding GSC to a validator in exchange for staking rewards.

The GOS protocol only allows the top 130 validators to participate in consensus. A validator's rank is determined by their stake or the total amount of GSC bonded to them. Although validators can bond GSC to themselves, they mainly amass larger stakes from delegators. Validators with larger stakes get chosen more often to propose new blocks and earn proportionally more rewards.

Delegators

Delegators are users who want to receive rewards from consensus without running a full node. Any user that stakes GSC is a delegator. Delegators stake their GSC to a validator, adding to a validator's weight, or total stake. In return, delegators receive a portion of transaction fees as staking rewards.

Who owns staked GSC?

Staked GSC never leaves the possession of the delegator. Even though it can't be traded freely, staked GSC is never owned by a validator.

Phases of GSC

To start receiving rewards, delegators bond their GSC to a validator. The bonding process adds a delegator's GSC to a validator's stake, which helps validators to participate in consensus.

GSC exists in the following three phases:

- **Unbonded:** GSC that can be freely traded and is not staked to a validator.
- **Bonded:** GSC that is staked to a validator. Bonded GSC accrues staking rewards. Although GSC bonded to validators in GOS Station can't be traded freely, bGSC is a token that represents bonded GSC that can be traded freely or used as collateral on other protocols in the GOS network
- **Unbonding:** GSC that is in the process of becoming unbonded from a validator and does not accrue rewards. This process takes 7 days to complete.

Bonding, staking, and delegating

Generally, the terms bonding, staking, and delegating can be used interchangeably, as they happen in the same step. A delegator delegates GSC to a validator, the GSC gets bonded to the validator, and the bonded GSC gets added to the validator's stake.

Delegators can bond GSC to any validator in the active set using the delegate function in GOS Station. Delegators start earning staking rewards the moment they bond or stake to a validator.

Unbonding

Delegators can unbond or unstake their GSC using the undelegate function in GOS Station. The unbonding process takes 7 days to complete. During this period, the unbonding GSC can't be traded, and no staking rewards accrue.

Caution

Once started, the delegating or undelegating processes can't be stopped. Undelegating takes 7 days to complete. The only way to undo a delegating or undelegating transaction is to wait for the unbonding process to pass. Alternatively, you can redelegate staked GSC to a different validator without waiting 7 days.

The 7-day unbonding process helps the long-term stability of the GOS protocol. The unbonding period discourages volatility by locking staked GSC in the system for at least

7 days. In exchange, delegators receive staking rewards, further incentivizing network stability.

Redelegation

Redelegating instantly sends staked GSC from one validator to another. Instead of waiting for the 7-day unstaking period, a user can redelegate their staked GSC at any time using GOS Station's redelegate function. Validators receiving redelegations are barred from further redelegating any amount of GSC to any validator for 7 days.

Caution

When a user redelegates staked GSC from one validator to another, the validator receiving the staked GSC is barred from making further redelegation transactions for 7 days. This requirement only applies to the wallet that made the redelegation transaction.

Rewards

The GOS protocol incentivizes validators and delegators with staking rewards. Staking rewards come from two sources: gas and swap fees.

- Gas: Compute fees added on to each transaction to avoid spamming. Validators set minimum gas prices and reject transactions that have implied gas prices below this threshold.

At the end of every block, transaction fees are distributed to each validator and their delegators proportional to their staked amount. Validators can keep a portion of rewards to pay for their services. This portion is called commission. The rest of the rewards are distributed to delegators according to their staked amounts.

Slashing

Running a validator is a big responsibility. Validators mGUSD meet strict standards and constantly monitor and participate in the consensus process. Slashing is the penalty for misbehaving validators. When a validator gets slashed, they lose a small portion of their stake as well as a small portion of their delegator's stake. Slashed validators also get jailed, or excluded, from consensus for a period of time.

The risks of staking

Slashing affects validators and delegators. When a validator gets slashed, delegators who stake to that validator also get slashed. Slashing is proportional to a delegator's staked amount. Though slashing is rare and usually results in a small penalty, it does occur. Delegators should monitor their validators closely, do their research, and understand the risks of staking GSC.

Slashing occurs under the following conditions:

- Double signing: When a validator signs two different blocks with the same chain ID at the same height.
- Downtime: When a validator is unresponsive or can't be reached for a period of time.
- Missed votes: When a validator misses votes in consensus or fails to vote correctly in the Oracle process.

Validators monitor each other closely and can submit evidence of misbehavior. Once discovered, the misbehaving validator will have a small portion of their funds slashed. Offending validators will also be jailed or excluded from consensus for a period of time. Even simple issues such as malfunctions or downtimes from upgrading can lead to slashing.

Governance

The GOS protocol is a decentralized public blockchain governed by community members. Governance is the democratic process that allows users and validators to make changes to the GOS protocol. Community members submit, vote, and implement proposals.

To learn how to vote with your staked GSC or submit proposals, visit the GOS Station governance guide.

Proposals

Proposals start as ideas within the community. A community member drafts and submits a proposal alongside an initial deposit.

The most common proposal types include:

- ParameterChangeProposal: To change the parameters defined in each module.
- CommunityPoolSpendProposal: To spend funds in the community pool.
- TextProposal : To handle other issues like large directional changes or any decision requiring manual implementation.

Voting process

Community members vote with their staked GSC. One staked GSC equals one vote. If a user fails to specify a vote, their vote defaults to the validator they are staked to. Validators vote with their entire stake unless specified by delegators. For this reason, it is very important that each delegator votes according to their preferences.

The following is a basic outline of the governance process.

A user submits a proposal and a 7day deposit period begins.

1. Users deposit GSC as collateral to back the proposal. This period ends once a minimum threshold of 50 GSC is deposited. Deposits are to protect against spam.
2. The one-week vote period begins. The voting options are:
 - Yes: In favor.
 - No: Not in favor.
 - NoWithVeto: Not in favor, the deposit should be burned.
 - Abstain: Voter abstains.
3. The votes are tallied. Proposals pass if they meet three conditions:
 - Quorum is met: at least 40% of all staked GSC mGUSD vote.
 - The total number of NoWithVeto votes is less than 33.4% of the total vote.
 - The number of Yes votes reaches a 50% majority. If the previous conditions are not met, the proposal is rejected.
4. Accepted proposals get put into effect.
5. Deposits get refunded or burned.

Once accepted, the changes described in a governance proposal are automatically put into effect by the proposal handler. Generic proposals, such as a passed TextProposal, mGUSD be reviewed by the GOS team and community, and they mGUSD be manually implemented.

Deposits

Deposits protect against unnecessary proposals and spam. Users can veto any proposal they deem to be spam by voting NoWithVeto.

Deposits get refunded if all of the following conditions are met:

- The minimum deposit of 50 GSC is reached within the two-week deposit period.
- Quorum is met: the number of total votes is greater than 40% of all staked GSC
- The total number of NoWithVeto votes is less than 33.4% of the total vote.
- A vote returns a majority of Yes or No votes.

Deposits are burned under any of the following conditions:

- The minimum deposit of 50 GSC is not reached within the two-week deposit period.
- Quorum is not met: the number of total votes after the one-week voting period is less than 40% of all staked GSC.
- the number of NoWithVeto votes is above 33.4% of the total vote.