



DXD Buyback Technical Explainer

DXdao is exploring a DXD Buyback Program using ETH from its treasury. In order to execute a Buyback trustlessly, DXdao has developed an on-chain proposal process for initiating orders. The information below provides more details on the process.

Once a signal proposal authorizing the DXD Buyback passes, any DXdao community member can take the following steps to initiate the Buyback either on mainnet or xDAI. The process is exactly the same except different proposal boosting periods.

To complete an order, DXdao will interact with a Gnosis Protocol Relay Contract (“GP Relay”) that facilitates the trade and is controlled by DXdao. This relay can place orders on the [Gnosis Protocol](#), a decentralized exchange for batch auction orders. To execute a trade, the order requires DXdao to pass two separate proposals.

1. **Funding Proposal** sends ETH to the GP Relay. This is done through the Funding and Voting Power Scheme. Proposals take 7 days to pass after being boosted if there is no absolute majority.
2. **Trade Proposal** calls the GP Relay to check an on-chain oracle and then places the order within the bounds laid on in the order details below. This proposal is done through the [MulticallScheme](#), where proposals take 7 days to pass after being boosted if there is no absolute majority. The proposal requires the following parameters:
 - `TokenIn`: Address of token to sell
 - `TokenOut`: Address of token to buy

- `TokenInAmount`: Amount of `TokenIn` to sell
- `MinAmountOut`: Minimum amount of `TokenOut` to accept
- `PriceTolerance`: Amount of deviation from trade execution price & price called by Oracle
- `MinReserve`: Minimum amount in liquidity pool that the Oracle checks to determine price of `Tokenin`
- `Startdate`: Earliest order can be executed
- `Deadline`: How long to keep the order open
- `Factory`: On chain oracle to check for price

Once the **Trade Proposal** passes, an on-chain oracle will measure the price of DXD/ETH on the defined `PriceOracle` for two times in a span over 120 seconds. The price will only be recorded if the ETH reserve is higher than the `MinReserve`. As soon as the on-chain observation has been finalised, a trade on Gnosis Protocol will be placed with the `TokenInAmount` at the price determined by the oracle minus `PriceTolerance`. Any address can trigger the oracle calls.

Alternatively, the **Trade Proposal** can place a limit order on Gnosis Protocol using the same contract but using the `PlaceExactTrade` function with the following inputs:

- `TokenIn`: Address of token to sell
- `TokenOut`: Address of token to buy
- `TokenInAmount`: Amount of `TokenIn` to sell
- `TokenOutAmount`: Amount of `Tokenout` to sell
- `startDate`: When order should be placed
- `Deadline`: How long to keep the order open

The limit order price is `TokenInAmount` divided by `TokenOutAmount`.

Once the trade has been placed & matched on Gnosis Protocol, anyone can trigger a transaction to release the DXD from Gnosis Protocol and send them back to the DXdao treasury, there's no need for an additional proposal.

If the deadline is reached, anyone can submit a transaction that will withdraw the ETH from the Gnosis Protocol order and return it to DXdao's treasury. Any ETH that is left over in the Relayer Contract can be sent back to DXdao's treasury with an on-chain proposal.

GP Relayer Info:

- [Codebase](#)
- [Audit & post audit report](#)
- [Forum Discussion](#)

DXdao:

- [Mainnet](#): 0x519b70055af55A007110B4Ff99b0eA33071c720a
- [xDai](#): 0xe716ec63c5673b3a4732d22909b38d779fa47c3f

The Relayer Contract can be found here:

- [Mainnet](#): 0xce0BB1a5e9c723fe189D9Bf5457DEd9b21E40f9E
- [xDai](#): 0xA369a0b81ee984a470EA0acf41EF9DdcDB5f7B46

The Oracle Creator Contract can be found here:

- [Mainnet](#): 0x0E5443a2c6f71E18b9F4F191f52f2d572Ccb5A54
- [xDai](#): 0x9A483a344cdd20F55F5d60998Bb67245d99a951d

