

BLOCKCHAIN CONSENSUS METHOD, NODE, AND SYSTEM BASED ON HONEY BADGER BYZANTINE FAULT TOLERANCE CONSENSUS MECHANISM

ABSTRACT

This document provides a blockchain consensus method, node, and system based on a Honey Badger Byzantine fault tolerance (BFT) consensus mechanism. The method is applicable to a consensus node and includes the following steps: counting consensus votes of N consensus proposals in a current round of consensus; traversing a first set to: migrate consensus proposals that each receive greater than or equal to $f+1$ and less than $2f+1$ identical consensus votes into a second set; and migrate consensus proposals that each receive less than $f+1$ identical consensus votes into a third set to update to opposition opinions, where f is a number of fault tolerant consensus nodes; traversing a fourth set to: migrate consensus proposals that each receive greater than or equal to $2f+1$ identical consensus votes into the second set; for consensus proposals that receive greater than or equal to $f+1$ and less than $2f+1$ identical consensus votes, migrate consensus opinions that cannot be traced into the third set to update to opposition opinions, and migrate consensus opinions that can be traced into the second set to update to agreement opinions; merging the second set into the first set, and merging the third set into the fourth set, to perform a next round of consensus until the first set includes N consensus proposals on which consensus may be reached; and determining a consensus result based on counted consensus votes in the last round of consensus.

[Fig .1]