

# VITAL for Decentralised Verification

Vital acts as an enshrined verification layer for rollups. It consists of a network of AVS-registered operators that verify all new states proposed across by SQUAD operators. Vital operators detect invalid state roots and can challenge SQUAD operators in a bisection protocol. Vital can also operate with [optimistic ZK proofs](#) whereby Vital operators demand SQUAD operators to create a ZK proof for a disputed state root instead of engaging in a bisection protocol. Another operation mode would be to verify intermediate proofs that do not need to go to an L1. Vital is crucial as the Mach AVS leverages it to provide a fast finality layer.

VITAL consists of a network of operators that verify a new state. Unlike the pre-confirmation offered by a rollup sequencer, the confirmation provided by the VITAL is much stronger than usual due to the underlying economic backing. This allows assets to be instantly withdrawn. [Welcome -Previous Overview Next Tier-1 Finality](#) Last modified 2mo ago