

Execution Client

The **Execution Client** functions as a full node for the **BPX Execution Chain**. It listens for new transactions broadcast on the network, maintains the mempool, executes transactions within the EVM, creates and validates execution blocks, and holds the latest state and database of the Execution Chain.

The Execution Chain lacks an internal consensus algorithm. Instead, it exposes the **Engine API** on **TCP port 8551**, allowing the Beacon Client to connect and provide consensus updates, including new block candidates, chain head updates, and requests to generate new blocks.

Execution Clients communicate with each other over a listener **TCP port** and a discovery **UDP port**, both defaulting to **30303**. Each Execution Client also provides access to the **Web3 RPC API** on **TCP port 8545**, which supports interaction with wallets, developer tools, and dApps.

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