Polkadot RE

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1 Block

In Polkadot RE, a block is made of two main parts, namely the *block header* and the *list of extrinsics*. *The Extrinsics* represent the generalization of the concept of *transaction*, containing any set of data that is external to the system and which the underlying chain wishes to validate and keep track of.

1.1 Block Header

The block header is designed to be minimalistic in order to boost the efficiency of the light clients. It contains the following elements:

- **parent_hash:** is the 32-byte Blake2s hash of the header of the parent of the block, indicated hence forth by H_p.
- **number:** formally indicated as H_i is an integer, which represents the index of the current block in the chain. It is equal to the number of the ancsestor blocks. The genesis block has number 0.
- **state_root:** formally indicated as H_r is the root of the Merkle trie whose leaves implements the storage for the system.
- **extrinsics_root:** is the root of the Merkle trie whose leaves represent individual extrinsic being validated in this block. This element is formally referred to as H_e.
- **digest:** this field is used to store any chain-specific auxiliary data, which could help the light clients interact with the block without the need of accessing the full storage. Polkadot RE does not impose any limitation or specification for this field. It essentially can be a byte array of any length. This field is indicated as H_d

2 Entry into Runtime

3 API