

Block Metadata Document Structure

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Author:

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Draft

1. Block Identification

Block Name:

TransactionBlock

Block Hash:

0x9832fc45b8e4a20e5b3cd1ee85e2c7ad828a7b1f88acc245a1fbe1eb7ac0e123

Parent Hash:

0x72eaac47c3fc4740807591be7657eb985e9952bf164e8fbe6b8bea21a38c7638

Block Number:

1234567

Timestamp:

2024-06-21T15:42:30Z

2. Block Metadata

Proposer:

0xa1b2c3d4e5f60718293a4b5c6d7e8f90a1b2c3d4

State Root:

0x3d47b859f8b3bf5e7c8d24a0fbf9a8f1be87e18e94fc8f46ac63b5e6f8aa43dd

Transaction Root:

0xd1848e859413bc559e92bc2e08e5a5ff022c7b4634a8978de505a7d86c7e97cd

Receipts Root:

0xf5b6f2e742c8d89fd845b0a19f1115c3b8bbca29e0d8dd91bb2f36219d512c88

Gas Used:

225,000

Gas Limit:

300,000

3. Transactions

```
[
  {
    "txHash": "0x1234abcd...",
    "sender": "0xdeadbeef...",
    "recipient": "0xabcd1234...",
    "value": 5000000000000000000,
    "nonce": 42,
    "data": "0x"
  },
  ...
]
```

4. Signature

Signature:
0xf3b2c1d6e745a9bd...

Signature Algorithm:
ECDSA

Important Notes

- Block metadata documents capture the structural and contextual data of blockchain blocks.
- Accurate metadata is essential for traceability, validation, and auditing of blockchain activity.
- All hashes and keys must be validated for format and cryptographic strength.
- Any sensitive information should be reviewed before sharing or publishing.
- This sample omits consensus-specific fields, which may be required in some networks.