CLAIMS

1. A computer-implemented method comprising:

receiving, by a storage system, a processing request of first data generated by a centralized ledger system, wherein the centralized ledger system comprises a central trusted authority node, stores data in blocks of a blockchain data structure, and generates types of data of the centralized ledger system comprising block data and index data, wherein the block data comprise at least one block in a blockchain, and the at least one block comprises a hash value of a previous block of the blockchain data structure;

in response to determining a type of the first data generated by the centralized ledger system to be the block data among the types of data of the centralized ledger system, applying, by the storage system, a corresponding type of a processing engine specified for processing the block data, wherein the corresponding type of the processing engine specified for processing the block data is configured with one or more first functions based on a characteristic of the block data;

receiving, by the storage system, a processing request of second data generated by the centralized ledger system; and

in response to determining a type of the second data generated by the centralized ledger system to be the index data among the types of data of the centralized ledger system, applying, by the storage system, a corresponding type of a processing engine specified for processing the index data, wherein the corresponding type of the processing engine specified for processing the index data is configured with one or more second functions based on a characteristic of the index data, and the one or more first functions are different from the one or more second functions.

2. The computer-implemented method of claim 1, wherein the types of data of the centralized ledger system further comprise transaction data, and the method further comprises:

receiving, by the storage system, a processing request of third data generated by the centralized ledger system; and

in response to determining a type of the third data generated by the centralized ledger system to be the transaction data among the types of the data of the centralized ledger system,

applying, by the storage system, a corresponding type of a processing engine specified for processing the transaction data, wherein the corresponding type of the processing engine specified for processing the transaction data is configured with one or more third functions based on a characteristic of the transaction data.

3. The computer-implemented method of claim 2, further comprising: receiving, by the storage system, configurations of a plurality of processing engines, wherein the configurations configure a respective type of a processing engine for processing each of the types of the data of the centralized ledger system according to a characteristic of the each of the types of the data.

4. The computer-implemented method of claim 1, wherein:

receiving, by the storage system, the processing request of the first data generated by the centralized ledger system comprises receiving, by the storage system, an input/output (I/O) request of the block data generated by the centralized ledger system;

the corresponding type of the processing engine specified for processing the block data of the centralized ledger system comprises a corresponding type of an input/output (I/O) processing engine specified for performing a read or write operation of the block data of the centralized ledger system;

receiving, by the storage system, the processing request of the second data generated by the centralized ledger system comprises receiving, by the storage system, an input/output (I/O) request of the index data generated by the centralized ledger system; and

the corresponding type of the processing engine specified for processing the index data of the centralized ledger system comprises a corresponding type of an input/output (I/O) processing engine specified for performing a read or write operation of the index data of the centralized ledger system.

5. The computer-implemented method of claim 1, wherein:

receiving, by the storage system, the processing request of the first data generated by the centralized ledger system comprises receiving, by the storage system, a data management request of the block data generated by the centralized ledger system;

the corresponding type of the processing engine specified for processing the block data of the centralized ledger system comprises a corresponding type of a data management processing engine specified for performing a first data management operation of the block data of the centralized ledger system based on a characteristic of the block data;

receiving, by the storage system, the processing request of the second data generated by the centralized ledger system comprises receiving, by the storage system, a data management request of the index data generated by the centralized ledger system; and

the corresponding type of the processing engine specified for processing the index data of the centralized ledger system comprises a corresponding type of a data management processing engine specified for performing a second data management operation of the index data of the centralized ledger system based on a characteristic of the index data.

6. The computer-implemented method of claim 1, wherein the one or more first functions comprise tiering, erasure coding and compression of the block data in the storage system.

7. An apparatus for data processing and storage, the apparatus comprising a plurality of modules for performing the computer-implemented method of any one of claims 1 to 6.

8. A system for data processing and storage, comprising:

one or more processors; and

one or more computer-readable memories coupled to the one or more processors and having instructions stored thereon that are executable by the one or more processors to perform the computer-implemented method of any one of claims 1 to 6.