

CLAIMS

1. A computer-implemented method comprising:
maintaining, by a storage system, a plurality of storage devices, the plurality of storage devices comprising at least a first tier storage device and a second tier storage device;
receiving a write request of a ledger data;
determining whether a type of the ledger data is block data; and
in response to determining that the type of the ledger data is block data, writing the data into the second tier storage device.
2. The computer-implemented method of claim 1, wherein the first tier storage device has a performance characteristic that is superior to the performance characteristic of the second tier storage device, wherein the performance characteristic comprises one or more of an access speed, an access bandwidth, or an access latency.
3. The computer-implemented method of claim 1, further comprising:
in response to determining that the type of the ledger data is not block data, determining a usage level of the first tier storage device;
determining whether the usage level of the first storage device reaches or exceeds a predetermined threshold; and
in response to determining that the usage level of the first storage device reaches or exceeds the predetermined threshold, writing the data into the second tier storage device.
4. The computer-implemented method of claim 3, further comprising:
in response to determining that the usage level of the first storage device is below the predetermined threshold, writing the data into the first tier storage device.
5. The computer-implemented method of claim 1, further comprising:
determining a usage level of the first tier storage device; and
in response to determining that the usage level of the first tier storage device reaches or exceeds a first predetermined threshold, decreasing a speed of writing data into the first tier storage device based on the usage level of the first tier storage device.

6. The computer-implemented method of claim 5, wherein decreasing a speed of writing data into the first tier storage device based on the usage level of the first tier storage device comprises:

decreasing the speed of writing data into the first tier storage device to a first rate when the usage level of the first tier storage device is a first value, and

decreasing the speed of writing data into the first tier storage device to a second rate when the usage level of the first tier storage device is a second value;

wherein the second rate is lower than the first rate and the second value is larger than the first value.

7. The computer-implemented method of claim 5, further comprising:

in response to determining that the usage level of the first tier storage device is below a second predetermined threshold, increasing a speed of writing data into the first tier storage device based on the usage level of the first tier storage device, wherein the second predetermined threshold is lower than the first predetermined threshold.

8. The computer-implemented method of claim 7, wherein increasing a speed of writing data into the first tier storage device based on the usage level of the first tier storage device comprises:

increasing the speed of writing data into the first tier storage device to a third rate when the usage level of the first tier storage device is a third value, and

increasing the speed of writing data into the first tier storage device to a fourth rate when the usage level of the first tier storage device is a fourth value;

wherein the fourth rate is higher than the third rate and the fourth value is smaller than the third value.

9. An apparatus for data processing, the apparatus comprising a plurality of modules for performing the computer-implemented method of any one of claims 1 to 8.

10. A system for data processing, 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 8.