[CLAIMS]

[Claim 1]

A data loading and processing system comprising:

a data server that is included in a resource and is a target from which data is collected;

a big data platform that is included in the resource and is a target into which data is loaded; and

a collection server configured to check states including usage of the resource and a data amount of the data server, determine a data collecting and loading mode for the data server and the big data platform on the basis of the checked states of the resource, transmit a data collection request to the data server, collect data from the data server into a preset collection area of the collection server in the determined data collecting and loading mode, and load the collected data into the big data platform on the basis of the determined data collecting and loading mode,

wherein the collection server checks usage of the data server, the data amount of the data server, and usage of the big data platform, and loads the collected data into at least one of a disk and a memory included in the big data platform on the basis of the determined data collecting and loading mode,

wherein, in a case in which an update function is not supported when the collection server loads the collected data into the big data platform, the collection server joins data in a final loading area of the big data platform and the collected data, generates data in a new partition, and replaces and loads the generated data in the new partition into the big data platform.

[Claim 2]

The data loading and processing system of claim 1, wherein, in a case in which a delete function is not supported when the collection server loads the collected data into the big data platform, the collection server replaces and loads data newly collected by the collection server into a corresponding partition of the big data platform.

[Claim 3]

A data loading and processing method comprising:

checking, by a collection server, states including usage of a resource and a data amount of a data server;

determining, by the collection server, a data collecting and loading mode for the data server and a big data platform on the basis of the checked states of the resource;

transmitting, by the collection server, a data collection request to the data server;

receiving, by the data server, the data collection request transmitted from the collection server and storing the received data collection request;

collecting, by the collection server, data from the data server into a preset collection area of the collection server in the determined data collecting and loading mode; and

loading, by the collection server, the collected data into the big data platform on the basis of the determined data collecting and loading mode,

wherein the checking, by the collection server, the states including the usage of the resource and the data amount of the data server, comprises: checking usage of the data server, the data amount of the data server, and usage of the big data platform,

wherein the loading, by the collection server, the collected data into the big data platform on the basis of the determined data collecting and loading mode, comprises:

loading the collected data into at least one of a disk and a memory included in the big data platform on the basis of the determined data collecting and loading mode;

in a case in which an update function is not supported when the collection server loads the collected data into the big data platform, a process of joining, by the collection server, data in a final loading area of the big data platform and the collected data and generating data in a new partition; and

a process of replacing and loading the generated data in the new partition into the big data platform.

[Claim 4]

The data loading and processing method of claim 3, wherein, in the determining of the data collecting and loading mode for the data server and the big data platform, any one data collecting and loading mode is determined from among a plurality of preset data collecting and loading modes according to the checked data amount and whether the data is allowed to be divided into units of partitions.

[Claim 5]

The data loading and processing method of claim 3, wherein the data collecting and loading mode is any one of a preset type 1, type 2A, type 2B, type 3A, type 3B, type 4, and type 5,

the type 1 is a mode in which all data of the data server is collected in the preset collection area of the collection server, existing data in the final loading area

of the big data platform is deleted, and then the collected data is loaded into the big data platform,

the type 2A is a mode in which only newly appended data of the data server is collected in the collection area of the collection server, and the collected data is appended and loaded into the final loading area of the big data platform,

the type 2B is a mode in which only appended or modified data of the data server is collected in the collection area of the collection server, and the collected data is loaded into the final loading area of the big data platform using a preset primary key so as not to overlap basic data in a completion table included in the resource,

the type 3A is a mode in which a target area is composed of partitions, only data corresponding to a partition, in which appended data is present, among the partitions of the data server, is collected in the collection area of the collection server, and the collected data is appended and loaded into the final loading area of the big data platform,

the type 3B is a mode in which the target area is composed of partitions, only data corresponding to a partition, in which appended or modified data is present, among the partitions of the data server, is collected in the collection area of the collection server, and the collected data is loaded into a partition in the final loading area of the big data platform using the primary key so as not to overlap the existing data in the final loading area of the big data platform,

the type 4 is a mode in which the target area is composed of partitions, data corresponding to a partition, in which append or modification occurs, among the partitions of the data server, or data corresponding to a partition, in which deletion occurs, among the partitions of the data server, is collected in the collection area of

the collection server, an amount of data in the final loading area of the big data platform is checked, and when the checked amount of data in the final loading area of the big data platform is smaller than a preset reference value, the collected data is overwritten and loaded into the existing partition in the final loading area of the big data platform, and

the type 5 is a mode in which data corresponding to a partition, in which append or modification occurs, among the partitions of the data server, or data corresponding to the partition, in which deletion occurs, among the partitions of the data server, is collected in the collection area of the collection server, an amount of data in the final loading area of the big data platform is checked, and when the checked amount of data in the final loading area of the big data platform is greater than or equal to a preset reference value, some pieces of data of the collected data are loaded into the final loading area of the big data platform as the type 3B, and the remaining pieces of data of the collected data are loaded into the final loading area of the big data platform as the type 4.

[Claim 6]

The data loading and processing method of claim 3, wherein the collecting of the data from the data server into the preset collection area of the collection server in the determined data collecting and loading mode includes at least one of:

a process of collecting a plurality of pieces of data stored in a database management system (DBMS) included in the data server using java database connectivity (JDBC) or open database connectivity (ODBC), which is preset, in the determined data collecting and loading mode;

a process of collecting logs and files stored in the data server using at least one of the file transfer protocol (FTP), an open source, and an agent, which are preset, in the determined data collecting and loading mode; and

a process of collecting pieces of web data using web crawling in the determined data collecting and loading mode.