

OLAP server according to the type of the first statement; the OLTP server is configured to: receive a first-type statement of the first transaction sent by the transaction management and execution server; generate an execution plan corresponding to the first-type statement according to the first-type statement; and send the execution plan corresponding to the first-type statement to the transaction management and execution server; the OLAP server is configured to: receive a second-type statement of the first transaction sent by the transaction management and execution server; generate an execution plan corresponding to the second-type statement according to the second-type statement; and send the execution plan corresponding to the second-type statement to the transaction management and execution server; and the transaction management and execution server is further configured to: receive an execution plan corresponding to the at least one statement of the first transaction sent by the OLTP server and the OLAP server, and process the first transaction according to the execution plan corresponding to the at least one statement of the first transaction.

[0035] In a twelfth aspect, embodiments of the invention provide a transaction processing system, which includes: an OLTP server and an OLAP server; where the OLTP server is configured to: obtain at least one statement of a first transaction; determine a type of a first statement, wherein the first statement is any one of the at least one statement; generate an execution plan corresponding to a first-type statement when the first statement is determined as the first-type statement, and send a second-type statement to the OLAP server when the first statement is determined as the second-type statement; wherein the first statement is any one of the at least one statement; the OLAP server is configured to: receive the second-type statement sent by the OLTP server; generate an initial execution plan corresponding to the second-type statement; and send the initial execution plan corresponding to the second-type statement to the OLTP server; and the OLTP server is further configured to: receive the initial execution plan corresponding to the second-type statement sent by the OLAP server; generate an execution plan corresponding to the second-type statement according to the initial execution plan corresponding to the second-type statement; and process the first transaction according to the execution plan corresponding to the first-type statement and the execution plan corresponding to the second-type statement.

[0036] In a thirteenth aspect, embodiments of the present application provide a non-transitory

transaction sent by the OLTP node, wherein the execution plan corresponding to the at least one statement of the first transaction includes an execution plan corresponding to a first-type statement of the first transaction and an execution plan corresponding to a second-type statement of the first transaction;

wherein the execution plan corresponding to the first-type statement is generated by the OLTP node according to the first-type statement; and the execution plan corresponding to the second-type statement is generated by the OLTP node according to a received initial execution plan of the second-type statement sent by the OLAP node;

the initial execution plan of the second-type statement includes execution content corresponding to the second-type statement, and the execution plan corresponding to the second-type statement includes the execution content and a storage node corresponding to the second-type statement.

[00106] Second embodiment

[00107] Fig. 7 exemplarily shows a schematic diagram of another system architecture applicable to an embodiment of the invention. As shown in Fig. 7, the system architecture 700 applicable to the embodiment of the invention includes a first-type node 701, a second-type node 702 and third-type nodes, such as a third-type node 7031, a third-type node 7032 and a third-type node 7033 as shown in Fig. 7, wherein the third-type node may be a database for storing data.

[00108] In a specific implementation process, the first-type node 701 may obtain at least one statement of a certain transaction and classify each statement of the transaction, and then send at least one statement to itself (i.e., the first-type node 701) and the second-type node 702 respectively according to the type of each statement; further, after receiving the statement, the second-type node 702 may generate an initial execution plan corresponding to the statement according to the received statement and send the initial execution plan corresponding to the statement to the first-type node 701; and further, the first-type node 701 may generate the execution plan corresponding to the statement according to the received initial execution plan corresponding to the statement sent by the second-type node 702, and process the transaction according to the execution plan corresponding to the statement.

[00109] It should be noted that: (1) the number of second-type nodes is not specifically limited in the embodiments of the invention, the second-type node 702 shown in Fig. 7 is just an example,

and those skilled in the art can increase/decrease the number of second-type nodes according to the experience and actual condition; and (2) the number of third-type nodes is not specifically limited in the embodiments of the invention, the third-type node 7031, the third-type node 7032 and the third-type node 7033 shown in Fig. 7 are just an example, and those skilled in the art can increase/decrease the number of third-type nodes according to the experience and actual condition.

[00110] In order to describe the system architecture shown in Fig. 7 more clearly, the system architecture described in Fig. 7 will be exemplified below in combination with Fig. 8. As shown in Fig. 8, it is a structural schematic diagram of another transaction processing system provided by an embodiment of the invention. The transaction processing system 800 includes an OLTP server 801 and an OLAP server 802.

[00111] The OLTP server 801 is configured to: obtain at least one statement of a first transaction, determine a type of a first statement, generate an execution plan corresponding to a first-type statement if the first statement is determined as the first-type statement, and send a second-type statement to the OLAP server 802 if the first statement is determined as the second-type statement. The first statement is any one of the at least one statement.

[00112] The OLAP server 802 is configured to: receive the second-type statement sent by the OLTP server, generate an initial execution plan corresponding to the second-type statement, and send the initial execution plan corresponding to the second-type statement to the OLTP server 801.

[00113] The OLTP server 801 is further configured to: receive the initial execution plan corresponding to the second-type statement sent by the OLAP server 802, generate an execution plan corresponding to the second-type statement according to the initial execution plan corresponding to the second-type statement, and process the first transaction according to the execution plan corresponding to the first-type statement and the execution plan corresponding to the second-type statement.

[00114] It should be noted that, in the transaction processing system shown in Fig. 8, the OLTP server 801 may be the first-type node 701 shown in Fig. 7, and the OLAP server 802 may be the second-type node 702 shown in Fig. 7.

[00115] Based on the system architecture shown in Fig. 7, Fig. 9 exemplarily shows a flow schematic diagram corresponding to another transaction processing method provided by an

an Online Analytical Processing, OLAP, server;

wherein,

the transaction management and execution server is configured to:

obtain at least one statement of a first transaction;

determine a type of a first statement, wherein the first statement is any one of the at least one statement; and

send the first statement to the OLTP server or the OLAP server according to the type of the first statement;

the OLTP server is configured to:

receive a first-type statement of the first transaction sent by the transaction management and execution server;

generate an execution plan corresponding to the first-type statement according to the first-type statement; and

send the execution plan corresponding to the first-type statement to the transaction management and execution server;

the OLAP server is configured to:

receive a second-type statement of the first transaction sent by the transaction management and execution server;

generate an execution plan corresponding to the second-type statement according to the second-type statement; and

send the execution plan corresponding to the second-type statement to the transaction management and execution server; and

the transaction management and execution server is further configured to:

receive an execution plan corresponding to the at least one statement of the first transaction sent by the OLTP server and the OLAP server, and process the first transaction according to the execution plan corresponding to the at least one statement of the first transaction.

10. A transaction processing system, comprising:

an Online Transaction Processing, OLTP, server; and

an Online Analytical Processing, OLAP, server;

wherein,

the OLTP server is configured to:

obtain at least one statement of a first transaction;

determine a type of a first statement, wherein the first statement is any one of the at least one statement;

generate an execution plan corresponding to a first-type statement when the first statement is determined as the first-type statement; and

send a second-type statement to the OLAP server when the first statement is determined as the second-type statement;

the OLAP server is configured to:

receive the second-type statement sent by the OLTP server;

generate an initial execution plan corresponding to the second-type statement; and

send the initial execution plan corresponding to the second-type statement to the OLTP server; and

the OLTP server is further configured to:

receive the initial execution plan corresponding to the second-type statement sent by the OLAP server;

generate an execution plan corresponding to the second-type statement according to the initial execution plan corresponding to the second-type statement; and

process the first transaction according to the execution plan corresponding to the first-type statement and the execution plan corresponding to the second-type statement.

11. An electronic device, comprising a processor, a memory, a transceiver and a bus interface, wherein the processor, the memory, the transceiver, and the bus interface are connected through buses;

the processor is configured to read a program in the memory to perform following operations:

obtaining at least one statement of a first transaction;

determining a type of a first statement, wherein the first statement is any one of the at least one statement; and

sending the first statement to a second node corresponding to the type of the first statement among at least one second node according to the type of the first statement, so