CLAIMS

1. A method for processing a service call chain, the method comprising:

retrieving, with at least one processor, one or more service call chains in a distributed service system, wherein each service call chain comprises a plurality of service nodes that are sequentially called (S1);

generating, with the at least one processor, a corresponding service call model according to a service call chain of the one or more service call chains (S2), the corresponding service call model comprising a same topology structure and a same node call sequence as the service call chain, and comprising call rules associated with the plurality of service nodes; and

processing, with the at least one processor, the service call chain according to the service call model to detect call errors when a behaviour of the plurality of service nodes of the service call chain deviate from the call rules (S3).

2. The method of claim 1, wherein retrieving the one or more service call chains comprises:

retrieving a service call log information from a distributed system (S11); and

extracting the one or more service call chains from the service call log information, wherein each service call chain comprises the plurality of service nodes that are sequentially called (S12).

3. The method of claim 1 or 2, wherein generating the corresponding service call model comprises generating the corresponding service call model by performing aggregation processing on the service call chain, wherein the service call model comprises one or more service call topologies, and each service call topology is acquired by performing aggregation processing on one or more service call chains.

4. The method of claim 3,wherein processing the service call chain comprises processing the corresponding service call chain according to a service call topology of the one or more topologies.

5. The method of claim 4, further comprising:

performing a cleaning operation on the service call topology.

6. The method of claim 5, wherein processing the service call chain comprises processing the corresponding service call chain according to a cleaned service call topology.

7. The method of claim 5, wherein the cleaning operation comprises at least one of:

deleting a predetermined service node in the service call topology;

deleting a service node that is in the service call topology and that does not return a call result information;

deleting an occasionally used service node in the service call topology, wherein the number of accumulated appearance times of the occasionally used service node in the service call chain corresponding to the service call topology is less than or equal to a predetermined occasionally used threshold; and

deleting an occasionally used service node in the service call topology, wherein the number of accumulated appearance times of the occasionally used service node in the service call chain corresponding to the service call topology is less than or equal to the predetermined occasionally used threshold, and the number of accumulated appearance times of another service node, other than the occasionally used service node, in the service call chain corresponding to the service call topology is greater than or equal to a predetermined frequently used threshold.

8. The method of any one of claims 3 to 7, wherein generating the corresponding service call model comprises:

performing aggregation processing on the service call chain with reference to call feedback information of the service node in the service call chain to construct a corresponding service call model, wherein the service call model comprises one or more service call topologies, and each service call topology is acquired by performing aggregation processing on one or more service call chains.

9. The method of claim 8, processing the service call chain comprises:

collecting, according to the call feedback information of a service node in each service call chain, statistics for the one or more service call chains corresponding to the service call topology

(S31); and

monitoring, according to a corresponding statistical result, the service call chain corresponding to the service call topology (S32).

10. The method of claim 9, wherein monitoring, according to a corresponding statistical result, the service call chain corresponding to the service call topology comprises:

based on a predetermined duration comparison rule, determining a difference between the corresponding statistical result and the call feedback information of each service node in the service call chain corresponding to the service call topology (S321);

determining whether the difference exceeds a predetermined fluctuation threshold; and

in response to determining that the difference exceeds the predetermined fluctuation threshold, generating an alert information about the service call chain corresponding to the difference, wherein the alert information locates a service node corresponding to the difference (S322).

11. The method of any one of claims 1 to 10, wherein the distributed service system comprises a system configured to provide a service that is distributed to a plurality of components of the system.

12. The method of any one of claims 1 to 11, wherein the plurality of service nodes comprise a service or a function associated to a service that is called in the distributed service system.

13. An apparatus for processing a service call chain, the apparatus comprising a plurality of modules configured to perform the method of any one of claims 1 to 10.