What is claimed is:

1. A method for detecting abnormal behavior of an user, comprising:

acquiring time series data, wherein the time series data are configured to describe at least one network behavior;

performing a stationarity test on the time series data and calculating a stationarity parameter; and

determining that the user corresponding to the at least one network behavior has an abnormal behavior, when the stationarity parameter is more than a preset value;

wherein the time series data comprise a login frequency, data flow and a transaction frequency, and the calculating a stationarity parameter comprises:

respectively calculating a first stationarity parameter corresponding the login frequency, a second stationarity parameter corresponding to the data flow and a third stationarity parameter corresponding to the transaction frequency; and

calculating the stationarity parameter according to the first stationarity parameter, the second stationarity parameter and the third stationarity parameter.

2. The method of claim 1, wherein the at least one network behavior comprises one or more of the followings: a login request, a data transmission request and a transaction request.

3. The method of claim 1 or claim 2, wherein the acquiring the time series data comprises: periodically acquiring the time series data, or acquiring the time series data when the time series data satisfy a preset condition.

4. The method of claim 3, wherein the time series data are determined according to an execution frequency of the at least one network behavior in a plurality of preset time periods, and the preset condition comprises: a sum of the execution frequency of the at least one network behavior corresponding to the time series data being more than a preset frequency within a set time.

5. The method of claim 1 or claim 2, wherein after the determining that the user

corresponding to the at least one network behavior has an abnormal behavior, the method further comprises:

acquiring a network address of a login apparatus of the user that has the abnormal behavior; and

determining whether the user corresponding to the network address and the user corresponding to a relevant network address of the network address have the abnormal behavior.

6. The method of claim 5, wherein the relevant network address comprises: a network address that belongs to a same routing apparatus with the network address that initiates a current network behavior; or a network address within a preset regional range of a location of the network address that initiates the current network behavior.

7. The method of any one of claims 1 to 6, further comprising:

pre-processing the acquired time series data;

wherein the determining that the user corresponding to the at least one network behavior has an abnormal behavior when the acquired time series data are not stable comprises:

determining that the user corresponding to the at least one network behavior has the abnormal behavior when the pre-processed the time series data are not stable.

8. The method of claim 7, wherein the preprocessing comprises anyone or any combination of the following processing methods: converting a data format of the time series data, setting a default value in the time series data and deleting a limit value in the time series data.

9 The method of claim 8, the setting the default value in the time series data comprises one of the followings: setting the default value as the system default value and setting the default value according to an adjacent data value of the default value in the time series data.

10. The method of any one of claims 1 to 9, further comprising:

acquiring the time series data in a plurality of time periods; and

averaging the time series data of the plurality of time periods to obtain average time series data;

wherein the determining that the user corresponding to the at least one network behavior has an abnormal behavior when the acquired time series data are not stable comprises:

determining that the user corresponding to the at least one network behavior has the abnormal behavior when the average time series data are not stable.

11. An apparatus for detecting abnormal behavior of an user, comprising:

an acquiring module, configured to acquire time series data, wherein the time series data are configured to describe at least one network behavior;

a calculating module, configured to calculate a stationarity parameter corresponding to the time series data; and

an processing module, configured to determine that the user corresponding to the at least one network behavior has an abnormal behavior, when the stationarity parameter is more than a preset value;

wherein the time series data comprise a login frequency, data flow and a transaction frequency, and the calculating module is further configured to calculate respectively a first stationarity parameter corresponding the login frequency, a second stationarity parameter corresponding to the data flow and a third stationarity parameter corresponding to the transaction frequency; and calculate the stationarity parameter according to the first stationarity parameter, the second stationarity parameter and the third stationarity parameter.

12. The apparatus of claim 11, wherein the detecting apparatus is deployed that

the at least one network behavior comprises one or more of the following: a login request, a data transmission request and a transaction request.

13. The apparatus of claim 11 or claim 12, wherein the acquiring module is deployed that periodically acquiring the time series data, or acquiring the time series data when the time series data satisfy a preset condition.

14. The apparatus of claim 13, wherein the acquiring module is deployed that

the preset condition comprises a sum of the execution frequency of corresponding to the time series data being more than a preset frequency within a set time.

15. The apparatus of claim 11 or claim 12, wherein the acquiring module is deployed that

acquiring the time series data corresponding to the current network behavior, when a relevant the network address of the network address initiates a current network behavior has the abnormal behavior.

16. The apparatus of claim 15, wherein the acquiring module is deployed that

the relevant network comprises a network address that belongs to a same routing apparatus with the network address that initiates the current network behavior or a network address within a preset regional range of a location of the network address that initiates the current network behavior.

17. The apparatus of any one of claims 11 to 16, wherein the detecting apparatus is further configured that pre-processing the acquired time series data, wherein determining that the user corresponding to the at least one network behavior has the abnormal behavior when the pre-processed the time series data are not stable.

18. The apparatus of claim 17, wherein the detecting apparatus is deployed that the preprocessing comprises anyone or any combination of the following processing methods:

converting a data format of the time series data, setting a default value in the time series data and deleting a limit value in the time series data.

19. The apparatus of claim 18, wherein the detecting apparatus is deployed that the setting a default value in the time series data comprises one of the following:

setting the default value as the system default value and setting the default value according to the adjacent data value of the default value in the time series data.

20. The apparatus of any one of claims 11 to 19, wherein the detecting apparatus is deployed that acquiring the time series data in a plurality of time periods, averaging the

time series data of the plurality of time periods to obtain average time series data and determining that the user corresponding to the at least one network behavior has the abnormal behavior when the average time series data are not stable.

21. A computer apparatus, comprising a memory, a processor, and a computer program stored on the memory and performed by the processor, wherein the processor performs the computer program to implement the method of any one of claims 1 to 10.

22. A computer readable storage medium where a program is stored in, wherein the program processor performs the computer program to implement the method of any one of claims 1 to 10.

23. A system for detecting abnormal behavior of an user, the system comprising a plurality of servers and a plurality of clients communicating with the plurality of servers, wherein the client is configured to implement the at least one network behavior and generate the time series data, and the server comprises the detecting apparatus according to any one of claims 11 to 20.