CLAIMS

1. A method of processing interactive information, being applicable to a proxy server, comprising:

receiving interactive information issued by a first device in a predetermined topic, wherein the first device indicates one of a cloud server and a terminal device;

storing the interactive information to a storage path corresponding to the predetermined topic;

in response to that a second device which subscribes to the predetermined topic is online, wherein the second device indicates other one of the cloud server and the terminal device, reading the interactive information from the storage path corresponding to the predetermined topic, and sending the read interactive information to the second device;

wherein, in a case that the first device indicates a cloud server and the second device indicates a terminal device, the interactive information comprises first expected configuration information issued by the cloud server in a first topic, the first topic comprises an identifier of the terminal device, the first expected configuration information indicates a target expected state for a configuration item of the terminal device;

storing the interactive information to the storage path corresponding to the predetermined topic, comprises:

storing the first expected configuration information to a storage path corresponding to the first topic;

in response to that the second device which subscribes to the predetermined topic is online, reading the interactive information from the storage path corresponding to the predetermined topic, and sending the read interactive information to the second device, comprises:

in response to the terminal device which subscribes to the first topic is online,

reading the first expected configuration information from the storage path corresponding to the first topic, and sending the read first expected configuration information to the terminal device.

2. The method according to claim 1, wherein after storing the first expected configuration information to the storage path corresponding to the first topic, the method further comprises:

sending first response information to the cloud server, wherein the first response information indicates that the first expected configuration information is successfully delivered.

3. The method according to claim 1 or 2, wherein

after storing the first expected configuration information to the storage path corresponding to the first topic, the method further comprises:

marking the first expected configuration information with a reserved information mark to indicate the first expected configuration information is reserved information of the first topic;

in response to that the second device which subscribes to the predetermined topic is online, reading the interactive information from the storage path corresponding to the predetermined topic, and sending the read interactive information to the second device, comprises:

in response to that the terminal device which subscribes to the first topic is online, reading expected configuration information with the reserved information mark from the storage path corresponding to the first topic, and sending the read expected configuration information with the reserved information mark to the terminal device.

4. The method according to claim 3, wherein after storing the first expected configuration information to the storage path corresponding to the first topic, the method further comprises:

in response to that second expected configuration information issued by the cloud server in the first topic is received,

storing the second expected configuration information to the storage path corresponding to the first topic;

marking the second expected configuration information with the reserved information mark to indicate that the second expected configuration information is the reserved information of the first topic, and

deleting the reserved information mark of the first expected configuration information.

5. The method according to any of claims 1 to 4, wherein, in a case that the first device indicates a terminal device and the second device indicates a cloud server, the interactive information comprises second response information issued by the terminal device in a second topic, the second response information indicates a response of the terminal device to received expected configuration information, the second topic comprises an identifier of the terminal device or a wildcarded identifier, the wildcarded identifier indicates two or more terminal devices;

storing the interactive information to the storage path corresponding to the predetermined topic, comprises:

storing the second response information to a storage path corresponding to the second topic;

in response to that the second device which subscribes to the predetermined topic is online, reading the interactive information from the storage path corresponding to the predetermined topic, and sending the read interactive information to the second device, comprises,

in response to the cloud server which subscribes to the second topic is online, reading the second response information from the storage path corresponding to the second topic, and sending the read second response information to the cloud server.

6. The method according to any of claims 1 to 5, wherein, in a case that the first device indicates a terminal device and the second device indicates a cloud server, the interactive information comprises actual configuration state information issued by the terminal device in a third topic, the third topic comprises an identifier of the terminal device or a wildcarded identifier, the wildcarded identifier indicates two or more terminal devices;

storing the interactive information to the storage path corresponding to the predetermined topic comprises:

storing the actual configuration state information to a storage path corresponding to the third topic;

in response to that the second device which subscribes to the predetermined topic is online, reading the interactive information from the storage path corresponding to the predetermined topic, and sending the read interactive information to the second device, comprises:

in response to the cloud server which subscribes to the third topic is online, reading the actual configuration state information from the storage path corresponding to the third topic, and sending the read actual configuration state information to the cloud

server.

7. The method according to any of claims 1 to 6, wherein before, in response to that the second device which subscribes to the predetermined topic is online, reading the interactive information from the storage path corresponding to the predetermined topic, and sending the read interactive information to the second device, the method further comprises:

receiving subscription information to the predetermined topic from the second device.

8. A method of processing interactive information, being applicable to a cloud server, comprising:

issuing expected configuration information in a predetermined topic to a proxy server, wherein the expected configuration information is stored to a storage path corresponding to the predetermined topic by the proxy server and is to be sent by the proxy server to a terminal device which subscribes to the predetermined topic when the terminal device is online; and

receiving first response information which is sent by the proxy server after that the proxy server has stored the expected configuration information to the storage path corresponding to the predetermined topic, wherein the first response information indicates that the expected configuration information is successfully delivered;

wherein issuing the expected configuration information in the predetermined topic to the proxy server comprises:

issuing first expected configuration information in a first topic to the proxy server, wherein the first topic comprises an identifier of a to-be-configured terminal device, and

the first expected configuration information indicates a target expected state for a configuration item of the terminal device.

9. The method according to claim 8, further comprising:

in a case that the cloud server subscribes to a second topic, receiving second response information sent by the proxy server, wherein

the second topic comprises an identifier of the terminal device or a wildcarded identifier, the wildcarded identifier indicates two or more terminal devices,

the second response information indicates a response of the terminal device to received expected configuration information, and

the second response information is issued by the terminal device in the second topic to the proxy server and is stored to a storage path corresponding to the second topic by the proxy server.

10. The method according to claim 8 or 9, further comprising:

in a case that the cloud server subscribes to a third topic, receiving actual configuration state information sent by the proxy server, wherein

the third topic comprises an identifier of the terminal device or a wildcarded identifier, the wildcarded identifier indicates two or more terminal devices,

the actual configuration state information is issued by the terminal device in the third topic to the proxy server and is stored to a storage path corresponding to the third topic by the proxy server;

storing the actual configuration state information to a cloud database.

11. The method according to claim 10, wherein after storing the actual configuration

state information to the cloud database, the method further comprises:

in response to an instruction from a call object to query a configuration state of the terminal device, sending the actual configuration state information of the queried terminal device to the call object.

12. A method of processing interactive information, being applicable to a terminal device, comprising:

in a case that the terminal device subscribes to a first topic, receiving expected configuration information sent by a proxy server, wherein

the first topic comprises an identifier of the terminal device,

the expected configuration information is issued by a cloud server in the first topic, the expected configuration information is stored to a storage path corresponding to the first topic by the proxy server, and the expected configuration information indicates a target expected state for a configuration item of the terminal device;

issuing second response information in a second topic to the proxy server, wherein

the second topic comprises an identifier of the terminal device or a wildcarded identifier, the wildcarded identifier indicates two or more terminal devices,

the second response information indicates a response to the received expected configuration information, and

the second response information is stored to a storage path corresponding to the second topic by the proxy server and is to be sent by the proxy server to a cloud server which subscribes to the second topic when the cloud server is online.

13. The method according to claim 12, further comprises:

issuing actual configuration state information in a third topic to the proxy server,

wherein

the third topic comprises the identifier of the terminal device or the wildcarded identifier,

the actual configuration state information is stored to a storage path corresponding to the third topic by the proxy server and is to be sent by the proxy server to a cloud server which subscribes to the third topic when the cloud server is online.

14. An apparatus for processing interactive information, being applicable to a proxy server, comprising:

a first receiving unit configured to receive interactive information issued by a first device in a predetermined topic, wherein the first device indicates one of a cloud server and a terminal device;

a storing unit configured to store the interactive information to a storage path corresponding to the predetermined topic;

a sending unit configured to, in response to that a second device which subscribes to the predetermined topic is online, wherein the second device indicates other one of the cloud server and the terminal device, reading the interactive information from the storage path corresponding to the predetermined topic, and sending the read interactive information to the second device;

wherein in a case that the first device indicates a cloud server and the second device indicates a terminal device, the interactive information comprises first expected configuration information issued by the cloud server in a first topic, the first topic comprises an identifier of the terminal device, the first expected configuration information indicates a target expected state for a configuration item of the terminal device;

the storing unit, when storing the interactive information to the storage path

corresponding to the predetermined topic, is specifically configured to:

store the first expected configuration information to a storage path corresponding to the first topic;

the sending unit, when in response to that the second device which subscribes to the predetermined topic is online, reading the interactive information from the storage path corresponding to the predetermined topic, and sending the read interactive information to the second device, is specifically configured to:

in response to the terminal device which subscribes to the first topic is online, read the first expected configuration information from the storage path corresponding to the first topic, and send the read first expected configuration information to the terminal device.

15. An apparatus for processing interactive information, being applicable to a cloud server, comprising:

a first issuing unit configured to issue expected configuration information in a predetermined topic to a proxy server, wherein the expected configuration information is stored to a storage path corresponding to the predetermined topic by the proxy server and is to be sent by the proxy server to a terminal device which subscribes to the predetermined topic when the terminal device is online; and

a second receiving unit configured to receive first response information which is sent by the proxy server after that the proxy server has stored the expected configuration information to the storage path corresponding to the predetermined topic, wherein the first response information indicates that the expected configuration information is successfully delivered;

the first issuing unit is specifically configured to: issue, to the proxy server, first

expected configuration information in a first topic, wherein the first topic includes an identifier of a to-be-configured terminal device, and the first expected configuration information indicates a target expected state for a configuration item of the terminal device.

16. An apparatus for processing interactive information, being applicable to a terminal device, comprising:

a third receiving unit configured to, in a case that the terminal device subscribes to a first topic, receive expected configuration information sent by a proxy server, wherein the first topic comprises an identifier of the terminal device, the expected configuration information is issued by a cloud server in the first topic, the expected configuration information is stored to a storage path corresponding to the first topic by the proxy server, and the expected configuration information indicates a target expected state for a configuration item of the terminal device;

a second issuing unit configured to issue second response information in a second topic to the proxy server, wherein the second topic comprises an identifier of the terminal device or a wildcarded identifier, the wildcarded identifier indicates two or more terminal devices, the second response information indicates a response to the received expected configuration information, and the second response information is stored to a storage path corresponding to the second topic by the proxy server and is to be sent by the proxy server to a cloud server which subscribes to the second topic when the cloud server is online.

17. A system for processing interactive information, comprising:

a proxy server configured to receive interactive information issued by a first device in a predetermined topic, store the interactive information to a storage path corresponding

to the predetermined topic, and in response to that a second device which subscribes to the predetermined topic is online, read the interactive information from the storage path corresponding to the predetermined topic, and send the read interactive information to the second device, wherein the first device indicates one of a cloud server and a terminal device, the second device indicates other one of the cloud server and the terminal device;

wherein, in a case that the first device indicates a cloud server and the second device indicates a terminal device, the interactive information comprises first expected configuration information issued by the cloud server in a first topic, the first topic comprises an identifier of the terminal device, the first expected configuration information indicates a target expected state for a configuration item of the terminal device;

storing the interactive information to the storage path corresponding to the predetermined topic, comprises:

storing the first expected configuration information to a storage path corresponding to the first topic;

in response to that the second device which subscribes to the predetermined topic is online, reading the interactive information from the storage path corresponding to the predetermined topic, and sending the read interactive information to the second device, comprises:

in response to the terminal device which subscribes to the first topic is online, reading the first expected configuration information from the storage path corresponding to the first topic, and sending the read first expected configuration information to the terminal device;

the cloud server configured to issue expected configuration information in the predetermined topic to the proxy server, and receive first response information which is sent by the proxy server after that the proxy server has stored the expected configuration

information to the storage path corresponding to the predetermined topic;

the terminal device configured to receive expected configuration information sent by the proxy server, and issue second response information in a second topic to the proxy server, wherein the second response information indicates a response to the received expected configuration information.

18. An electronic device, comprising: a memory; and a processor, wherein the memory is configured to store computer instructions, and the processor is configured to execute the computer instructions to implement a method according to any of claims 1 to 7, 8 to 11, 12 to 13.