the determining module is configured to determine, a time interval corresponding to a maximum value of the timely-response rate corrected by the correction module as the optimal time period.

11. The device according to claim 10, wherein if there are multiple maximum values of the timely-response rate of the user device, the determining module is further configured to:

separately obtain time intervals corresponding to the multiple maximum values of the timely-response rate, and determine an earliest time interval as the optimal time period for the user device to respond to a message; or determine a time interval with an optimal network status as the optimal time period for the user device to respond to a message.

12. The device according to claim 9, further comprising:

a group division module, configured to randomly divide the user device group into a first user device group and a second user device group based on a predetermined ratio; wherein

the sending module is further configured to, based on an optimal time period determined by the determining module for each user device in the first user device group to respond to the message, separately send, to a corresponding user device in the first user device group, the message to be sent; and

the sending module is further configured to, randomly send, to each user device in the second user device group, the message to be sent.

13. The device according to claim 12, wherein:

the statistics analysis module is further configured to collect statistics on a timely-response rate of each user device in the first user device group in the optimal time period and on a timely-response rate of each user device in the second user device group; and

the device further comprises the following:

a comparison module, configured to use the determining module to re-determine the optimal time period for each user device in the user device group when it is found by comparison that a difference between the timely-response rate of each user device in the first user device group in the optimal time period and the timely-response rate of each user device in the second user device group is less than or equal to a predetermined difference threshold.

14. The device according to claim 9, wherein:

the determining module is further configured to, when determining that the user

device group has a user device whose timely-response rate in the optimal time period is lower than a predetermined timely-response rate threshold, re-determine the optimal time period for the user device to respond to a message.

15. The device according to claim 9, wherein:

the detection module is further configured to detect that the label of the message to be sent is a message label for real-time transmission; and

the sending module is further configured to send, to each user device in the user device group in real time, the message to be sent.

16. An application back-end server, comprising:

the device for pushing an application message according to any one of claims 9 to 15.