

CLAIMS

What is claimed is:

1. A node control method in a distributed system, comprising:

obtaining, by a forwarding platform through a secure link, a request packet transmitted by a user terminal, the secure link being established between the user terminal and the forwarding platform through a domain name of the forwarding platform, and the request packet comprising an address identifier of a target node in the distributed system ~~and~~, a request content of the user terminal for the target node and a user identifier of the user terminal;

when determining that the user identifier has permission to access the target node based on a determination that a correspondence between the user identifier and the address identifier that are included in the request packet matches a correspondence recorded in the forwarding platform,
encrypting, by the forwarding platform, the request content to obtain a first encrypted packet; and

transmitting, by the forwarding platform, the first encrypted packet to the target node according to the address identifier.

2. The method according to claim 1, wherein after the transmitting, by the forwarding platform, the first encrypted packet to the target node according to the address identifier, the method further comprises:

obtaining, by the forwarding platform, a second encrypted packet returned by the target node, wherein the second encrypted packet is obtained by encrypting a request result by the target node in response to the request content;

decrypting, by the forwarding platform, the second encrypted packet to obtain the request result; and

returning, by the forwarding platform, the request result to the user terminal through the secure link.

~~3. The method according to claim 1, wherein the request packet further comprises a user identifier of the user terminal, and the method further comprises:~~

~~performing, by the forwarding platform when determining that the user identifier has permission to access the target node, the operation of encrypting the request content to obtain a first encrypted packet.~~

43. The method according to claim 1, wherein the address identifier comprises a network

address of the target node and an interface identifier, of the target node, used for responding to the request content, and the transmitting, by the forwarding platform, the first encrypted packet to the target node according to the address identifier comprises:

determining, by the forwarding platform according to the network address, the target node receiving the first encrypted packet;

determining, by the forwarding platform according to the interface identifier, a processing unit, in the target node, used for responding to the request content; and

transmitting, by the forwarding platform, the first encrypted packet to the processing unit.

54. The method according to any one of claims 1 to 43, wherein the address identifier is carried in a uniform resource locator (URL) comprising the domain name.

65. A node control apparatus in a distributed system, comprising a first obtaining unit, an encryption unit, and a transmission unit,

the first obtaining unit being configured to obtain, through a secure link, a request packet transmitted by a user terminal, the secure link being established between the user terminal and the apparatus through a domain name of the apparatus, and the request packet comprising an address identifier of a target node in the distributed system ~~and~~, a request content of the user terminal for the target node and a user identifier of the user terminal;

the encryption unit being configured to, when determining that the user identifier has permission to access the target node based on a determination that a correspondence between the user identifier and the address identifier that are included in the request packet matches a correspondence recorded in the forwarding platform, encrypt the request content to obtain a first encrypted packet; and

the transmission unit being configured to transmit the first encrypted packet to the target node according to the address identifier.

76. The apparatus according to claim 65, further comprising:

a second obtaining unit, configured to obtain a second encrypted packet returned by the target node, wherein the second encrypted packet is obtained by encrypting a request result by the target node in response to the request content;

a decryption unit, configured to decrypt the second encrypted packet to obtain the request result; and

a returning unit, configured to return the request result to the user terminal through the secure

link.

~~8. The apparatus according to claim 6, wherein the request packet further comprises a user identifier of the user terminal, and the encryption unit is configured to perform, when determining that the user identifier has permission to access the target node, the operation of encrypting the request content to obtain a first encrypted packet.~~

97. The apparatus according to claim 65, wherein the address identifier comprises a network address of the target node and an interface identifier, of the target node, used for responding to the request content, and the transmission unit is configured to determine, according to the network address, the target node receiving the first encrypted packet, determine, according to the interface identifier, a processing unit, in the target node, used for responding to the request content, and transmit the first encrypted packet to the processing unit.

108. A node control method in a distributed system, comprising:

transmitting, by a user terminal, a request packet to a forwarding platform through a secure link, the secure link being established between the user terminal and the forwarding platform through a domain name of the forwarding platform, and the request packet comprising an address identifier of a target node in the distributed system ~~and~~, a request content of the user terminal for the target node and a user identifier of the user terminal; and

obtaining, by the user terminal through the secure link, a request result returned by the forwarding platform when the forwarding platform determines that the user identifier has permission to access the target node based on a determination that a correspondence between the user identifier and the address identifier that are included in the request packet matches a correspondence recorded in the forwarding platform, the request result being obtained by the target node in response to the request content.

~~119. The method according to claim 108, wherein the request packet further comprises a user identifier of the user terminal, and the user identifier is used for identifying a permission relationship between the user terminal and the target node.~~

1210. A node control apparatus in a distributed system, comprising a first transmission unit and an obtaining unit,

the first transmission unit being configured to transmit a request packet to a forwarding platform through a secure link, the secure link being established between the apparatus and the forwarding platform through a domain name of the forwarding platform, and the request packet comprising an address identifier of a target node in the distributed system ~~and~~, a request content of

the apparatus for the target node and a user identifier of the user terminal; and

the obtaining unit being configured to obtain, through the secure link, a request result returned by the forwarding platform when the forwarding platform determines that the user identifier has permission to access the target node based on a determination that a correspondence between the user identifier and the address identifier that are included in the request packet matches a correspondence recorded in the forwarding platform, the request result being obtained by the target node in response to the request content.

~~13~~11. A node control method in a distributed system, applied to a target node in the distributed system, the method comprising:

obtaining, by the target node, a first encrypted packet transmitted by a forwarding platform, the first encrypted packet being obtained by encrypting a request content by the forwarding platform when the forwarding platform determines that a user identifier of the user terminal has permission to access the target node based on a determination that a correspondence between the user identifier and an address identifier of the target node that are included in a request packet matches a correspondence recorded in the forwarding platform, and the request content being carried in ~~a~~the request packet transmitted by a user terminal through a secure link between the user terminal and the forwarding platform; and

decrypting, by the target node, the first encrypted packet to obtain the request content.

~~14~~12. The method according to claim ~~13~~11, further comprising:

obtaining, by the target node, a request result in response to the request content; and

returning, by the target node, a second encrypted packet obtained by encrypting the request result to the forwarding platform.

~~15~~13. The method according to claim ~~13~~11 or ~~14~~12, wherein the target node exchanges the first encrypted packet and the second encrypted packet with the forwarding platform through an agent deployed on the target node.

~~16~~14. A node control apparatus in a distributed system, comprising a first obtaining unit and a decryption unit,

the first obtaining unit being configured to obtain a first encrypted packet transmitted by a forwarding platform, the first encrypted packet being obtained by encrypting a request content by the forwarding platform when the forwarding platform determines that a user identifier of the user terminal has permission to access the target node based on a determination that a correspondence

between the user identifier and an address identifier of the target node that are included in a request packet matches a correspondence recorded in the forwarding platform, and the request content being carried in ~~a~~the request packet transmitted by a user terminal through a secure link between the user terminal and the forwarding platform; and

the decryption unit being configured to decrypt the first encrypted packet to obtain the request content.

~~17~~15. A node control device used in a distributed system, comprising a processor and a memory,

the memory being configured to store program code and transmit the program code to the processor; and

the processor being configured to perform the node control method in a distributed system according to any one of claims 1 to ~~54~~, ~~10-8~~ and ~~119~~, or ~~13-11~~ to ~~15-13~~ according to instructions in the program code.

~~18~~16. A computer-readable storage medium, configured to store program code, the program code implementing, when executed by one or more processors, the node control method in a distributed system according to any one of claims 1 to ~~54~~, ~~10-8~~ and ~~119~~, or ~~13-11~~ to ~~15~~13.