CLAIMS

1. A method for configuring an evolved packet system, EPS, non-access stratum, NAS, security algorithm, wherein the method comprises:

receiving, by an access and mobility management function entity, a first registration request message from a terminal device;

determining, in response to the first registration request message by the access and mobility management function entity, whether a selected EPS NAS security algorithm has been successfully provided to the terminal device when a valid 5th mobile communication 5G NAS security context indicated by the terminal device exists on the access and mobility management function entity; and

providing, by the access and mobility management function entity, the selected EPS NAS security algorithm for the terminal device when the access and mobility management function entity determines that the selected EPS NAS security algorithm has not been successfully provided to the terminal device.

2. The method according to claim 1, wherein before the determining, by the access and mobility management function entity, whether a selected EPS NAS security algorithm has been successfully provided to the terminal device, the method further comprises:

sending, by the access and mobility management function entity, a first message to the terminal device, wherein the first message comprises an information element of the selected EPS NAS security algorithm; and

the determining, by an access and mobility management function entity, that a selected EPS NAS security algorithm has not been successfully provided to a terminal device comprises: determining, by the access and mobility management function entity, that a first completion message has not been received, wherein the first completion message indicates that the terminal device has received the first message.

3. The method according to claim 2, wherein the determining, by the access and mobility management function entity, that a first completion message has not been received comprises:

determining, by the access and mobility management function entity, that the first completion

message has not been received within a preset time.

4. The method according to claim 2 or 3, wherein the first message is a security mode command SMC message, and the first completion message is an SMC completion message.

5. The method according to any one of claims 2 to 4, wherein before the sending, by the access and mobility management function entity, a first message to the terminal device, the method further comprises:

receiving, by the access and mobility management function entity, a second registration request message from the terminal device, wherein the second registration request message comprises a first key set identifier for next generation radio access network ngKSI, and the first ngKSI indicates that no 5G NAS security context exists on the terminal device.

6. The method according to claim 5, wherein the providing, by the access and mobility management function entity, the selected EPS NAS security algorithm for the terminal device comprises:

sending, by the access and mobility management function entity, the first message to the terminal device, wherein the first message comprises the information element of the selected EPS NAS security algorithm, and the first message is the SMC message.

7. The method according to any one of claims 1 to 6, wherein the method further comprises:

marking, by the access and mobility management function entity, the selected EPS NAS security algorithm as invalid when the selected EPS NAS security algorithm has not been successfully provided to the terminal device.

8. The method according to claim 1, wherein the method further comprises:

determining, by the access and mobility management function entity, to update the selected EPS NAS security algorithm; and

providing, by the access and mobility management function entity, an updated selected EPS NAS security algorithm for the terminal device.

9. The method according to claim 8, wherein the method further comprises:

determining, by the access and mobility management function entity, that the updated selected EPS NAS security algorithm has not been successfully provided to the terminal device; and

providing, by the access and mobility management function entity, the updated selected EPS NAS security algorithm for the terminal device.

10. The method according to any one of claims 1 to 9, wherein the access and mobility

management function entity supports an N26 interface, and the terminal device supports an S1 mode.

11. A method for configuring an evolved packet system, EPS, non-access stratum, NAS, security algorithm, wherein the method comprises:

determining, by a terminal device, that a selected EPS NAS security algorithm corresponding to a 5th generation mobile communication 5G NAS security context does not exist;

deleting, by the terminal device, the 5G NAS security context;

sending, by the terminal device, a second message to an access and mobility management function entity, wherein the second message is used to request the 5G NAS security context; and

receiving, by the terminal device, an information element of the selected EPS NAS security algorithm from the access and mobility management function entity.

12. The method according to claim 11, wherein the determining, by a terminal device, that a selected EPS NAS security algorithm corresponding to a 5G NAS security context does not exist comprises:

determining, by the terminal device, that the information element of the selected EPS NAS security algorithm from the access and mobility management function entity has not been received.

13. The method according to claim 12, wherein the determining, by the terminal device, that the information element of the selected EPS NAS security algorithm from the access and mobility management function entity has not been received comprises:

skipping, by the terminal device, receiving the information element of the selected EPS NAS security algorithm from the access and mobility management function entity within a preset time.

14. The method according to any one of claims 11 to 13, wherein before the determining, by a terminal device, that a selected EPS NAS security algorithm corresponding to a 5G NAS security context does not exist, the method further comprises:

receiving, by the terminal device, a third message sent by the access and mobility management function entity, wherein the third message comprises the 5G NAS security context; and

sending, by the terminal device, a third completion message to the access and mobility management function entity, wherein the third completion message indicates that the terminal device has received the third message.

15. The method according to any one of claims 11 to 14, wherein the determining, by a

terminal device, that a selected EPS NAS security algorithm corresponding to a 5G NAS security context does not exist comprises:

determining that a next generation radio access network key set identifier ngKSI does not correspond to the selected EPS NAS security algorithm.

16. The method according to claim 15, wherein the method further comprises:

setting, by the terminal device, the ngKSI to an invalid value.

17. The method according to claim 15 or 16, wherein the terminal device is disconnected from a long term evolution LTE system, and the second message is used to request to register with a new radio NR system.

18. The method according to claim 17, wherein the terminal device determines that the access and mobility management function entity supports an N26 interface.

19. The method according to any one of claims 13 to 18, wherein the access and mobility management function entity supports the N26 interface, and the terminal device supports an S1 mode.

20. An apparatus for configuring an evolved packet system, EPS, non-access stratum, NAS, security algorithm, comprising functional modules configured to implement the method according to any one of claims 1 to 10.

21. An apparatus for configuring an evolved packet system, EPS, non-access stratum, NAS, security algorithm, comprising functional modules configured to implement the method according to any one of claims 11 to 19.

22. An apparatus for configuring an evolved packet system, EPS, non-access stratum, NAS, security algorithm, comprising: a memory and a processor, wherein

the memory is configured to store program instructions; and

the processor is configured to invoke the program instructions in the memory to perform the method according to any one of claims 1 to 10 or the method according to any one of claims 11 to 19.

23. A chip, comprising at least one processor and a communication interface, wherein the communication interface and the at least one processor are interconnected through a line, and the at least one processor is configured to run a computer program or instructions, to perform the method according to any one of claims 1 to 10 or the method according to any one of claims 11 to 19.

24. A computer-readable medium, wherein the computer-readable medium stores program code executed by a computer, and the program code comprises instructions used to perform the method according to any one of claims 1 to 10 or the method according to any one of claims 11 to 19.

25. A computer program product, wherein the computer program product comprises instructions, and when the instruction is executed, a computer is enabled to perform the method according to any one of claims 1 to 10 or the method according to any one of claims 11 to 19.