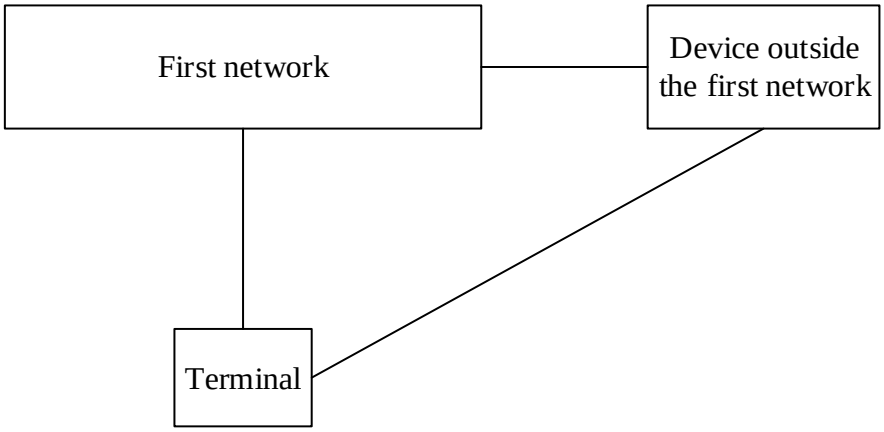


FIG. 1

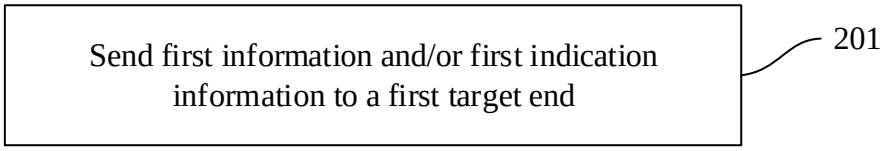


FIG. 2

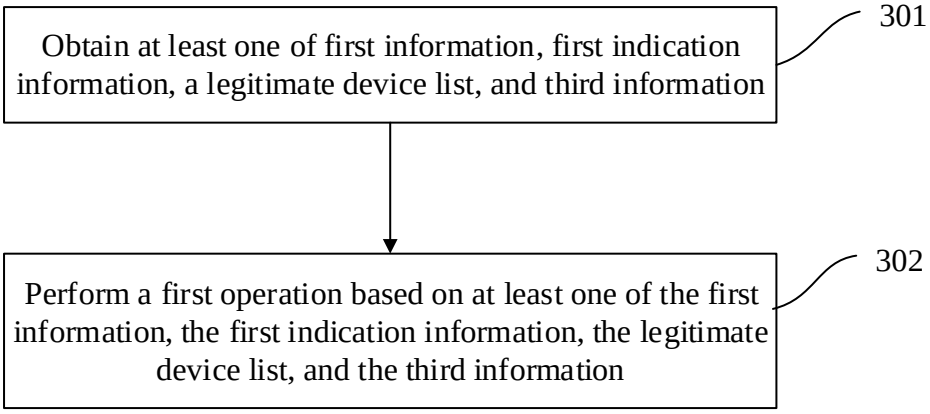


FIG. 3

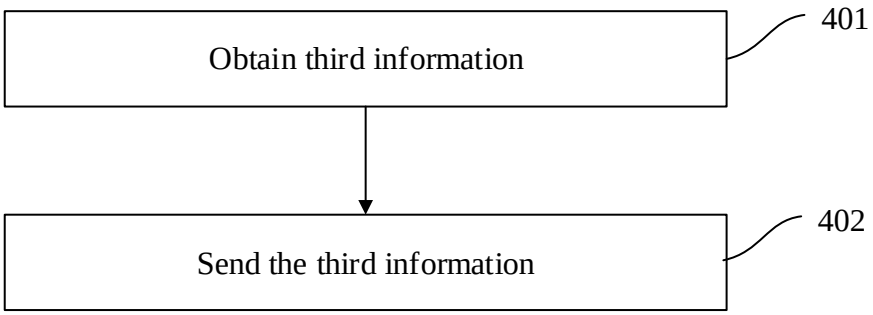


FIG. 4

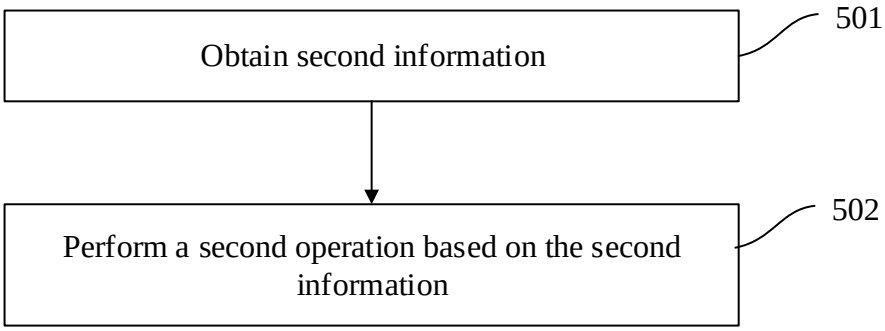


FIG. 5

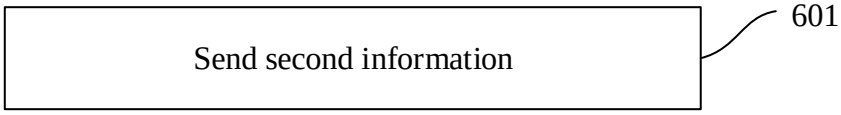


FIG. 6

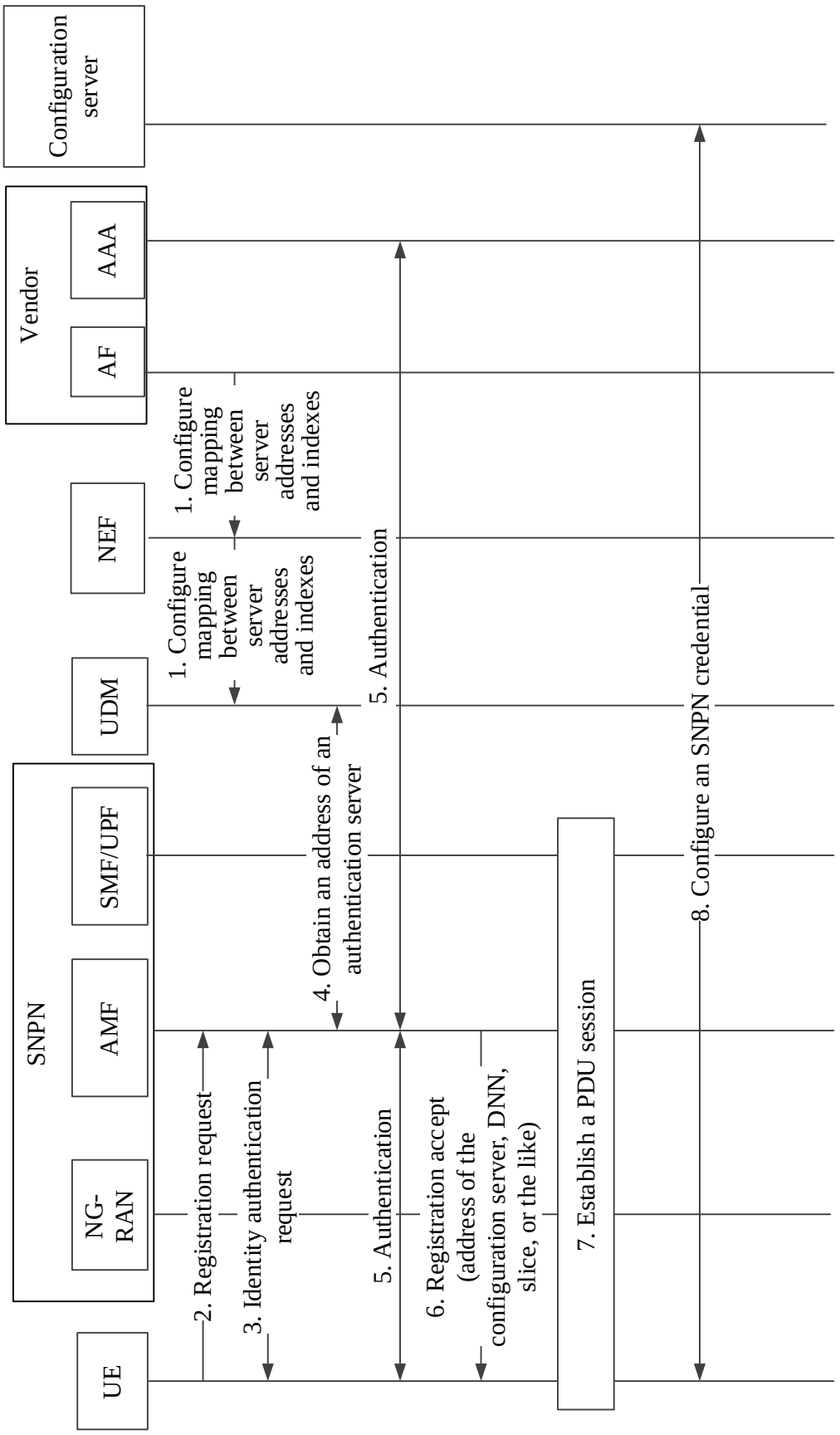

Configuration server
Vendor
AF
AAA
NEF
1. Configure mapping between server addresses and indexes
1. Configure mapping between server addresses and indexes
UDM
5. Authentication
SNPN
SMF/UPF
AMF
NG-RAN
4. Obtain an address of an authentication server
2. Registration request
3. Identity authentication request
5. Authentication
6. Registration accept (address of the configuration server, DNN, slice, or the like)
7. Establish a PDU session
8. Configure an SNPN credential
UE

FIG. 7

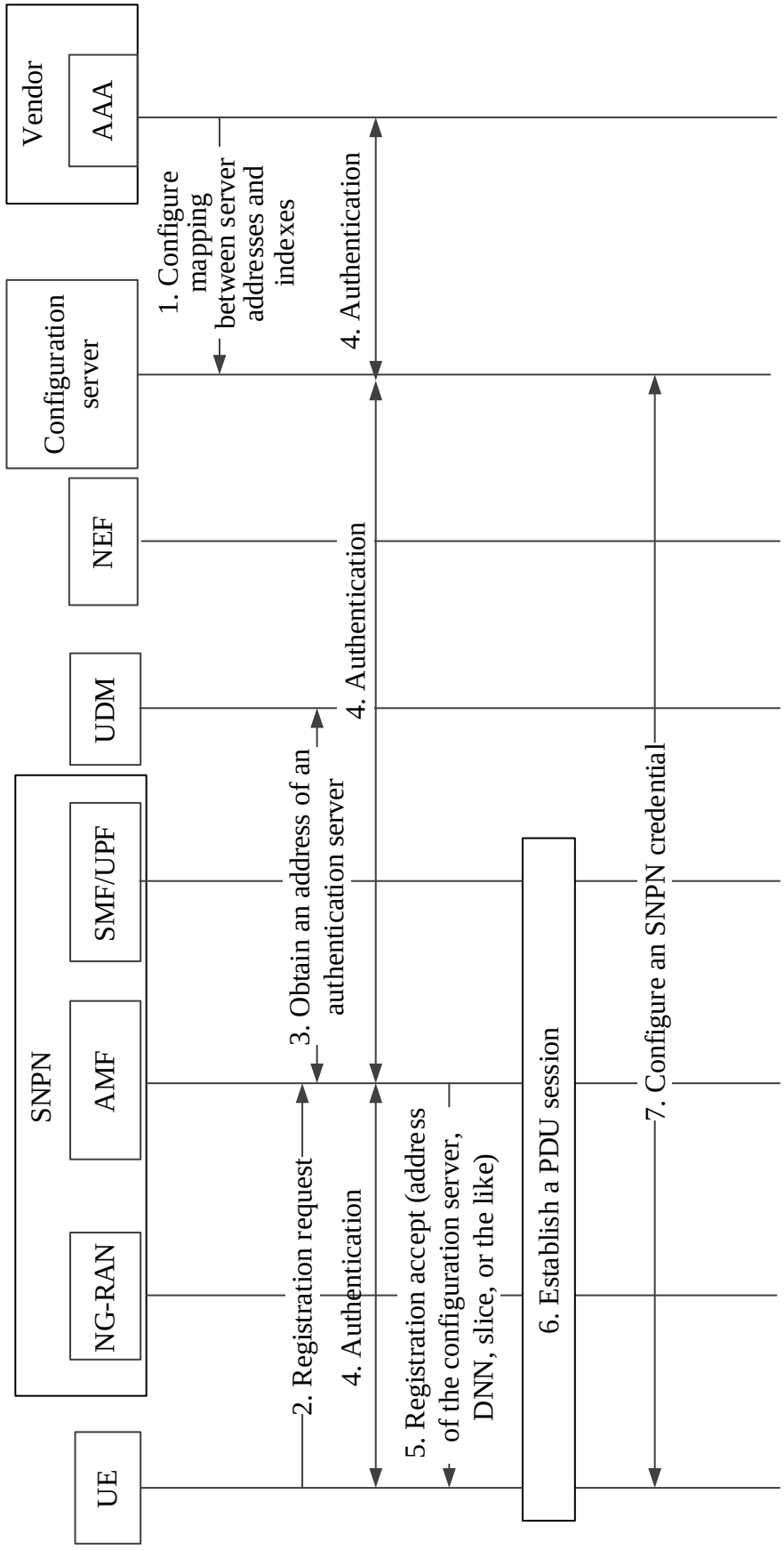

Vendor
AAA
Configuration server
NEF
UDM
SNPN
SMF/UPF
AMF
NG-RAN
UE
1. Configure mapping between server addresses and indexes
4. Authentication
4. Authentication
3. Obtain an address of an authentication server
2. Registration request
4. Authentication
5. Registration accept (address of the configuration server, DNN, slice, or the like)
6. Establish a PDU session
7. Configure an SNPN credential

FIG. 8

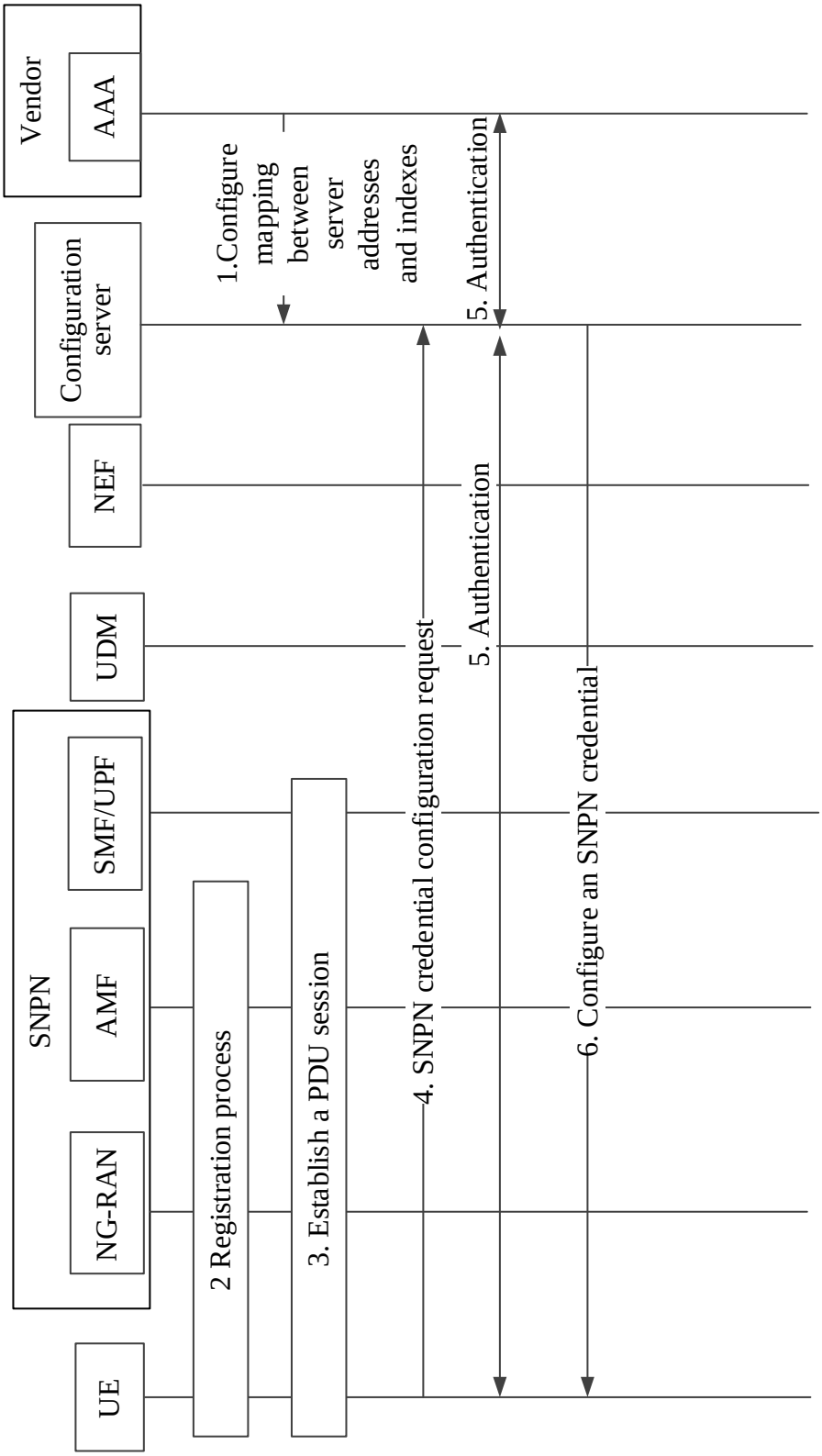

Vendor
AAA
Configuration server
NEF
UDM
SNPN
SMF/UPF
AMF
NG-RAN
UE
1.Configure mapping between server addresses and indexes
5. Authentication
5. Authentication
4. SNPN credential configuration request
6. Configure an SNPN credential
2 Registration process
3. Establish a PDU session

FIG. 9

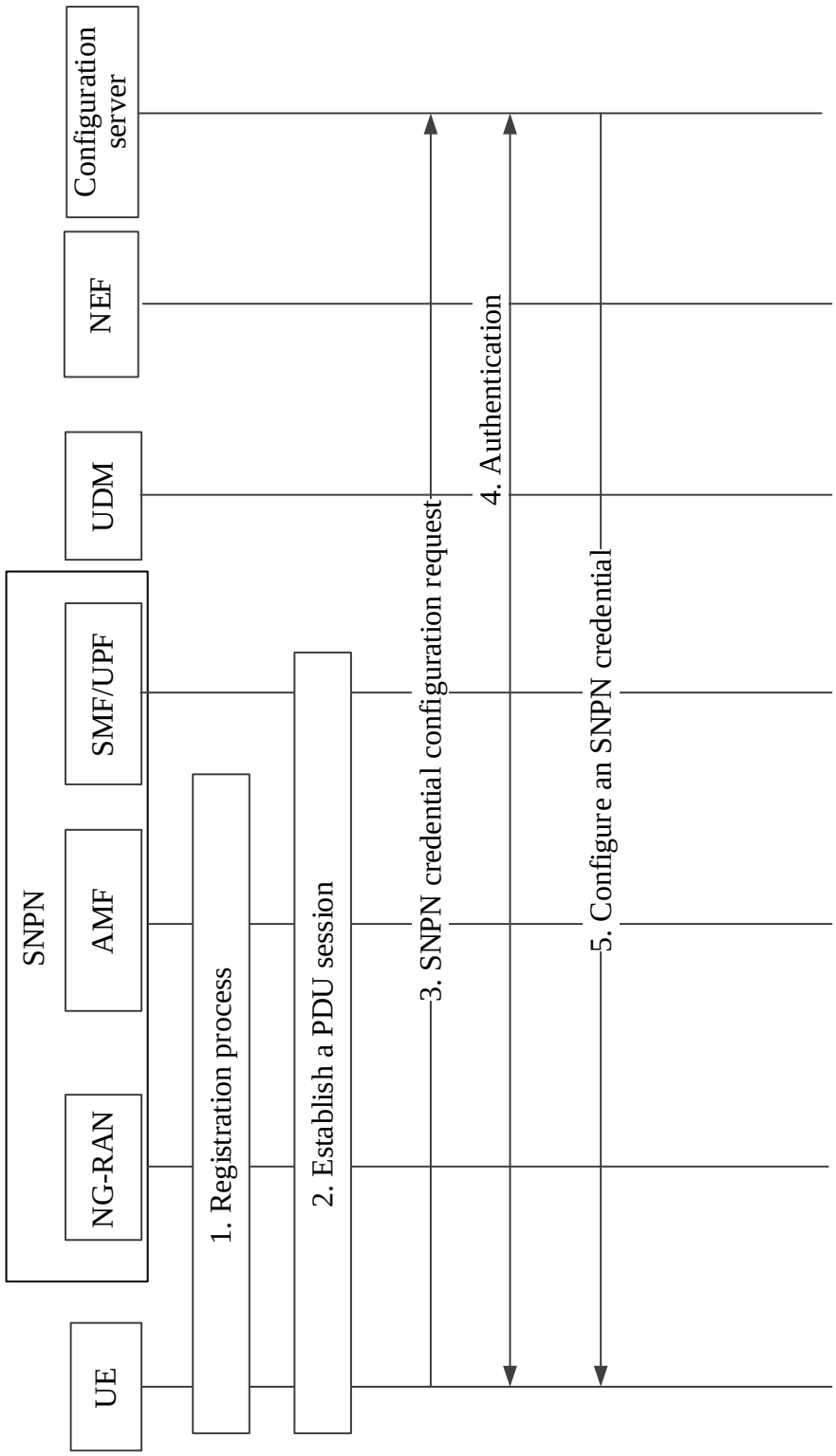

UE
SNPN
NG-RAN
AMF
SMF/UPF
UDM
NEF
Configuration server
1. Registration process
2. Establish a PDU session
3. SNPN credential configuration request
4. Authentication
5. Configure an SNPN credential

FIG. 10

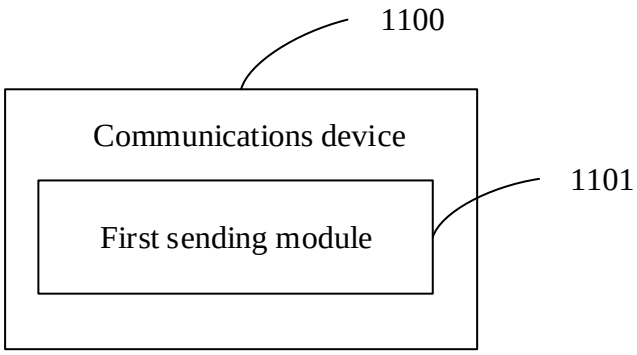

1100
Communications device
1101
First sending module

FIG. 11

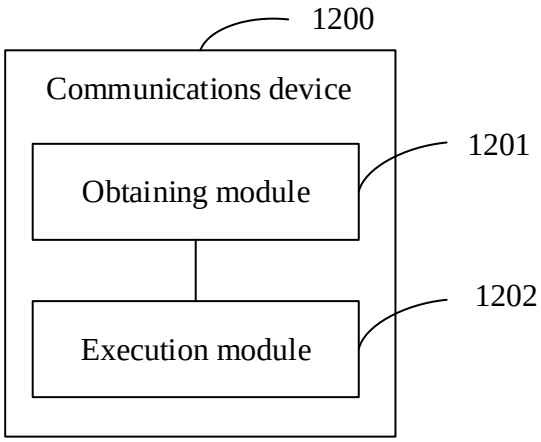

1200
Communications device
1201
Obtaining module
1202
Execution module

FIG. 12

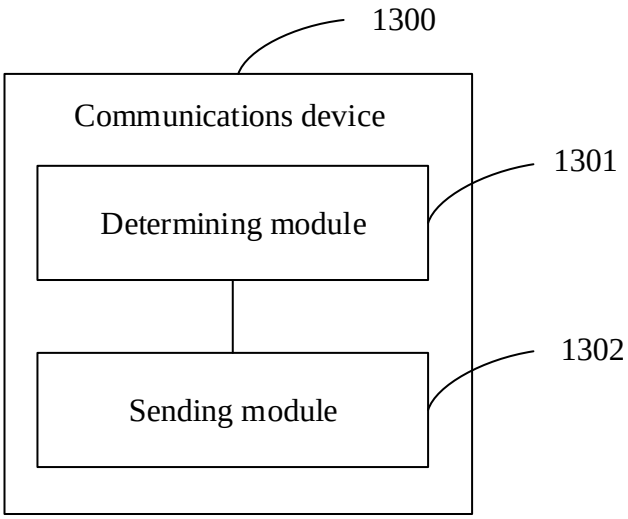

1300
Communications device
1301
Determining module
1302
Sending module

FIG. 13

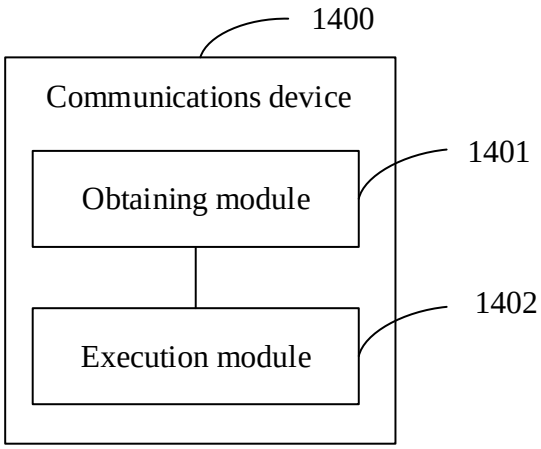

1400
Communications device
1401
Obtaining module
1402
Execution module

FIG. 14

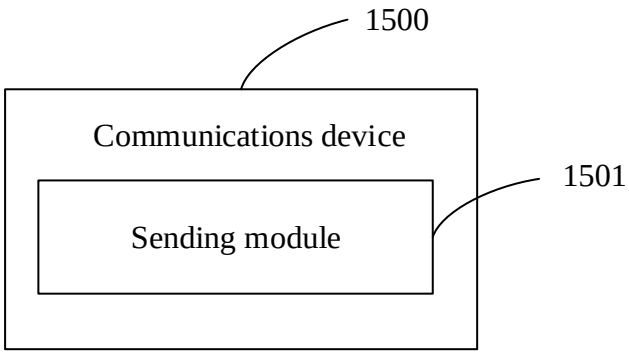

1500
Communications device
1501
Sending module

FIG. 15

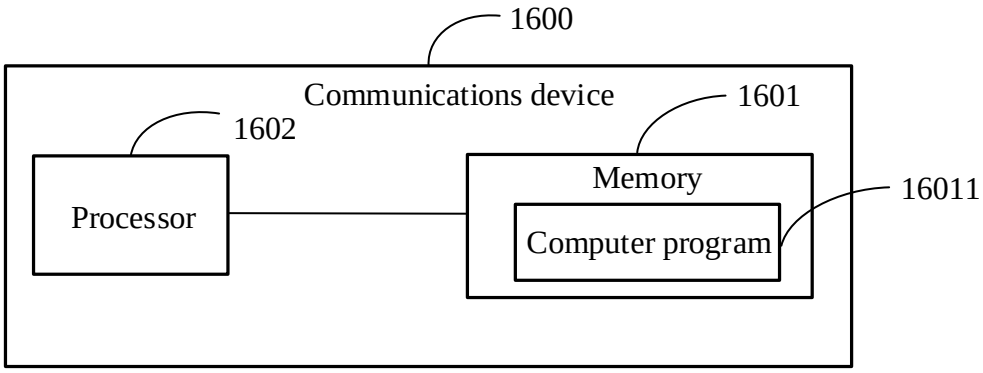

1600
Communications device
1601
1602
Memory
16011
Processor
Computer program

FIG. 16