What is claimed is:

1. A method of handling a packet data unit (PDU) session establishment procedure, the method performed by an access and mobility management function (AMF) node and comprising:

receiving a PDU session establishment request;

based on the PDU session establishment request including an identifier of an existing PDU session, determining an identifier of a session management function (SMF) node;

determining whether to reject the PDU session establishment request based on the identifier of the SMF node; and

transmitting a message comprising a rejection cause, based on a determination to reject the PDU session establishment request,

wherein determining whether to reject the PDU session establishment request based on the identifier of the SMF node comprises:

determining not to reject the PDU session establishment request based on a determination that (i) the identifier of the SMF node and the AMF node belong to a same Public Land Mobile Network (PLMN), or (ii) the identifier of the SMF node belongs to a Home Public Land Mobile Network (HPLMN).

2. The method of claim 1, wherein the PDU session establishment request message further comprises a request type, and

wherein the request type indicates (i) an “initial request” to configure a new PDU session, or (ii) an “existing PDU session”.

3. The method of claim 2, further comprising:

based on the request type indicating the “existing PDU session”, requesting a movement of the existing PDU session between a 3rd Generation Partnership Project (3GPP) based access network and a non-3GPP based access network.

4. The method of claim 1, further comprising:

storing the identifier of the existing PDU session and the identifier of the SMF node in association with each other.

5. The method of claim 1, wherein the identifier of the SMF node comprises an identifier of a PLMN.

6. The method of claim 1, further comprising:

determining to reject the PDU session establishment request based on a determination that (i) the identifier of the SMF node and the AMF node do not belong to the same PLMN, and (ii) the identifier of the SMF node does not belong to the HPLMN.

7. An access and mobility management function (AMF) node configured to handle a packet data unit (PDU) session establishment procedure, the AMF node comprising:

a transceiver;

at least one processor; and

at least one computer memory operably connectable to the at least one processor and storing instructions that, when executed, cause the at least one processor to perform operations comprising:

receiving a PDU session establishment request;

based on the PDU session establishment request including an identifier of an existing PDU session, determining an identifier of a session management function (SMF) node;

determining whether to reject the PDU session establishment request based on the identifier of the SMF node; and

transmitting a message comprising a rejection cause, based on a determination to reject the PDU session establishment request,

wherein determining whether to reject the PDU session establishment request based on the identifier of the SMF mode comprises:

determining not to reject the PDU session establishment request based on a determination that (i) the identifier of the SMF node and the AMF node belong to a same Public Land Mobile Network (PLMN)[[PLMN]], or (ii)

the identifier of the SMF node belongs to a Home Public Land Mobile Network (HPLMN).

8. The AMF node of claim 7, wherein the PDU session establishment request message further comprises a request type, and

wherein the request type indicates (i) an “initial request” to configure a new PDU session, or (ii) an “existing PDU session”.

9. The AMF node of claim 8, wherein the operations further comprise:

based on the request type indicating the “existing PDU session”, requesting a movement of the existing PDU session between a 3rd Generation Partnership Project (3GPP) based access network and a non-3GPP based access network.

10. The AMF node of claim 7, wherein the operations further comprise:

storing the identifier of the existing PDU session and the identifier of the SMF node in association with each other.

11 The AMF node of claim 7, wherein the identifier of the SMF node comprises an identifier of a PLMN.

12. The AMF node of claim 7, wherein the operations further comprise:

determining to reject the PDU session establishment request based on a determination that (i) the identifier of the SMF node and the AMF node do not belong to the same PLMN, and (ii) the identifier of the SMF node does not belong to the HPLMN.

13. The method of claim 1, wherein determining the identifier of the SMF node comprises:

determining the identifier of the SMF node based on the identifier of the existing PDU session that is included in the PDU session establishment request.

14. The AMF node of claim 7, wherein determining the identifier of the SMF node comprises:

determining the identifier of the SMF node based on the identifier of the existing PDU session that is included in the PDU session establishment request.