Claims

1. A User Plane Function (UPF) for wireless communication, comprising:

at least one memory; and

at least one processor coupled with the at least one memory and configured to cause the UPF to:

receive a configuration comprising a protocol description including one or more media stream components and at least one default protocol data unit (PDU) Set importance value;

receive a PDU in a downlink direction wherein the received PDU is subject to PDU Set processing according to the configuration;

determine whether:

the received PDU does not match all components of the received configuration; or

the received PDU matches the protocol description of the information and is not part of a PDU Set;

determine a PDU Set importance information value that is based on the at least one default PDU Set importance value;

create a header for the received PDU that includes PDU Set information and the determined PDU Set importance information value when:

the received PDU does not match all components of the received configuration; or

the received PDU matches the protocol description of the received configuration and is not part of a PDU Set; and

route the received PDU and the header to a radio access network.

2. The UPF of claim 1, wherein the at least one default PDU Set importance value is configured as

common to each of one or more media streams components of the protocol description; or

configured as individual for each of the one or more media streams components of the protocol description.

3. The UPF of claim 2, wherein the protocol description is indicated to a Policy Control Function (PCF) by an Application Function (AF), and wherein the at least one default PDU Set importance value is requested by the AF for one or more media streams components of an application service data flow.

4. The UPF of claim 3, wherein the PCF verifies the AF requested default PDU Set importance value and determines the default PDU Set importance value corresponding to the received configuration based on:

the AF requested default PDU Set importance value;

the protocol description and corresponding one or more media components; or

a mobile network operator service level agreement and corresponding policies for charging and control of the application service data flow.

5. The UPF of claim 2, wherein the at least one default PDU Set importance value is determined by a Policy Control Function (PCF) based on a mobile network operator service level agreement.

6. The UPF of any of claims 1 to 5, wherein the at least one processor is further configured to cause the UPF to receive a default PDU Set importance value based on Operations, Administration and Management (OAM) procedures.

7. The UPF of any of claims 1 to 5, wherein the at least one processor is further configured to cause the UPF to receive the configuration comprising the at least one default PDU Set importance value from a Session Management Function (SMF).

8. The UPF of any claim 1 to 7, wherein the PDU Set information included in the header comprises:

a PDU Set Sequence Number (PSSN);

an indication of an End PDU (E) of the PDU Set;

a PDU Sequence Number (PSN) within the PDU Set;

a PDU Set Size (PSSize) in bytes;

a PDU Set importance (PSI); or

an End of Data Burst (EDB) indication.

9. The UPF of any of claims 1 to 8, wherein the protocol description further comprises an indication of a protocol or a payload type.

10. A method performed by a User Plane Function (UPF), the method comprising:

receiving a configuration comprising a protocol description including one or more media stream components and at least one default protocol data unit (PDU) Set importance value;

receiving a PDU in a downlink direction, wherein the received PDU is subject to PDU Set processing according to the configuration;

determining whether:

the received PDU does not match all components of the received configuration; or

the received PDU matches the protocol description of the information and the received PDU is not part of a PDU Set;

determining a PDU Set importance information value, wherein the determination is based on the at least one default PDU Set importance value;

creating a header for the received PDU that includes PDU Set information and the determined PDU Set importance information value when:

the received PDU does not match all components of the received configuration; or

the received PDU matches the protocol description of the received configuration and received PDU is not part of a PDU Set; and

routing the received PDU and the header to a radio access network.

11. The method of claim 10, wherein the at least one default PDU Set importance value is configured as

common to each of one or more media streams components of the protocol description; or

configured as individual for each of the one or more media streams components of the protocol description.

12. The method of claim 11, wherein the protocol description is indicated to a Policy Control Function (PCF) by an Application Function (AF), and wherein the at least one

default PDU Set importance value is requested by the AF for one or more media streams components of an application service data flow.

13. The method of claim 12, wherein the PCF verifies the AF requested default PDU Set importance value and determines the default PDU Set importance value corresponding to the received configuration based on:

the AF requested default PDU Set importance value;

the protocol description and corresponding one or more media components; or

a mobile network operator service level agreement and corresponding policies for charging and control of the application service data flow.

14. The method of claim 10 or 11, wherein the at least one default PDU Set importance value is determined by a Policy Control Function (PCF) based on a mobile network operator service level agreement.

15. The method of any of claims 10 to 14, further comprising receiving a default PDU Set importance value based on Operations, Administration and Management (OAM) procedures.

16. The method of any of claims 10 to 14, further comprising: receiving the configuration comprising the at least one default PDU Set importance value from a Session Management Function (SMF).

17. The method of any claim 10 to 16, wherein the PDU Set information included in the header comprises:

a PDU Set Sequence Number (PSSN);

an indication of an End PDU (E) of the PDU Set;

a PDU Sequence Number (PSN) within the PDU Set;

a PDU Set Size (PSSize) in bytes;

a PDU Set importance (PSI); or

an End of Data Burst (EDB) indication.

18. An Application Function (AF) for wireless communication, comprising:

at least one memory; and

at least one processor coupled with the at least one memory and configured to cause the AF to:

determine a configuration for a service data flow session for an application server (AS) with protocol data unit (PDU) Set processing based on at least a protocol description including one or more media streams components and at least one request for a default PDU Set importance value;

set the at least one requested default PDU Set importance value as:

common to each of the one or more media streams components of the protocol description, or

individual for each of the one or more media streams components of the protocol description; and

communicate the determined configuration to a Policy Control Function (PCF) or a Network Exposure Function (NEF) to establish the service data flow session with PDU Set processing over a mobile core network.

19. The AF of claim 18, wherein the protocol description further comprises an indication of a protocol or a payload type.

20. A method performed by an Application Function (AF), the method comprising:

determining a configuration for a service data flow session for an application server (AS) with protocol data (PDU) Set processing based on at least a protocol description including one or more media streams components and at least one request for a default PDU Set importance value;

setting the at least one requested default PDU Set importance value as:

common to each of the one or more media streams components of the protocol description, or

individual for each of the one or more media streams components of the protocol description; and

communicating the determined configuration to a Policy Control Function (PCF) or a Network Exposure Function (NEF) to establish the service data flow session with PDU Set processing over a mobile core network.