In addition, 5G wireless networks may support network slicing, wherein a single physical network may be sliced into multiple virtual networks. Each network slice may include a set of logical network functions that may support the requirements of a particular use case.

SUMMARY

In a first aspect, the present disclosure provides a method comprising: detecting, by a user device, a network slice or an application with an access attempt by the user device to access a wireless network; determining, by the user device, an access category based on the detected network slice or detected application; and making by the user device, a barring decision for the access attempt based on the determined access category.

According to an example implementation, a method includes: detecting, by a user device, a network slice associated with an access attempt by the user device to access a wireless network; and, making, by the user device, a barring decision for the access attempt based on the network slice associated with the access attempt.

According to an example implementation, an apparatus includes at least one processor and at least one memory including computer instructions that, when executed by the at least one processor, cause the apparatus to: detect, by a user device, a network slice associated with an access attempt by the user device to access a wireless network; and, make, by the user device, a barring decision for the access attempt based on the network slice associated with the access attempt.

According to an example implementation, a computer program product includes a computer-readable storage medium and storing executable code that, when executed by at least one data processing apparatus, is configured to cause the at least one data processing apparatus to perform a method including: detecting, by a user device, a network slice associated with an access attempt by the user device to access a wireless network; and, making, by the user device, a barring decision for the access attempt based on the network slice associated with the access attempt.

In a second aspect, the present disclosure provides a method comprising: receiving, by a base station from one or more core network entities within a wireless network, network slice-specific load information that indicates a load for each of one or more network slices; determining, by the base station based on the received

network slice-specific load information, a barring configuration that indicates a set of barring parameters for one or more access categories; and sending, by the base station to a user device, the barring configuration to reduce a load on the wireless network.

According to an example implementation, an apparatus includes at least one processor and at

least one memory including computer instructions that, when executed by the at least one processor, cause the apparatus to: receive, by a base station from one or more core network entities within a wireless network, network slice-specific load information that indicates a load for each of one or more network slices; determine, by the base station based on the received network slice-specific load information, a barring configuration that indicates a set of barring parameters for one or more access categories; and send, by the base station to a user device, the barring configuration to reduce a load on the wireless network.

According to an example implementation, a computer program product includes a computer-readable storage medium and storing executable code that, when executed by at least one data processing apparatus, is configured to cause the at least one data processing apparatus to perform a method including: receiving, by a base station from one or more core network entities within a wireless network, network slice-specific load information that indicates a load for each of one or more network slices; determining, by the base station based on the received network slice-specific load information, a barring configuration that indicates a set of barring parameters for one or more access categories; and sending, by the base station to a user device, the barring configuration to reduce a load on the wireless network.

In a third aspect, the present disclosure provides a method comprising: determining, by a core network entity, network slice-specific load information that indicates a load for each of one or more network slices; and sending, by the core network entity to a base station, the network-slice specific load information.

According to an example implementation, an apparatus includes at least one processor and at least one memory including computer instructions that, when executed by the at least one processor, cause the apparatus to: determine, by a core network entity, network slice-specific load information that indicates a load for each of one or more network slices; and send, by the core network entity to a base station, the network-slice specific load information.

According to an example implementation, a computer program product includes a computer-readable storage medium and storing executable code that, when executed by at least one data processing apparatus, is configured to cause the at least one data processing apparatus to perform a method including: determining, by a core network entity, network slice-specific load information that indicates a load for each of one or more network slices; and sending, by the core network entity to a base station, the network-slice specific load information.

In a fourth aspect, the present disclosure provides a user device, comprising: means for detecting a network slice or an application associated with an access attempt by the user device to access a wireless network; means for determining an access category based on the detected network slice or detected application; and means for making a barring decision for the access attempt based on the determined access category.

In a fifth aspect, the present disclosure provides a base station, comprising: means for receiving from one or more core network entities within a wireless network, network slice-specific load information that indicates a load for each of one or more network slices; means for determining based on the received network slice-specific load information, a barring configuration that indicates a set of barring parameters for one or more access categories; and means for sending to a user device, the barring configuration to reduce a load on the wireless network.

In a sixth aspect, the present disclosure provides a core network entity, comprising: means for determining network slice-specific load information that indicates a load for each of one or more network slices; and means for sending the network-slice specific load information to a base station.

In a seventh aspect, the present disclosure provides an apparatus comprising at least one processor and at least one memory including computer instructions that, when executed by the at least one processor, cause the apparatus to perform a method according to one of the first, second and third aspects.

In an eighth aspect, the present disclosure provides an apparatus comprising a computer program product including a non-transitory computer-readable storage medium and storing executable code that, when executed by at least one data processing apparatus, is configured to cause the at least one data processing apparatus to perform a method according to one of the first, second and third aspects.