



Network initiated slice selection

KDDI, CKH, NEC



Outline

Definition

Procedures for NW initiated slice selection should be studied in addition to existing slice selection solution which assumes the use of URSP.

Justification

Existing 3GPP system allows: 1) a UE can select a network slice based on the URSP rule; 2) a 3rd party can provide input for URSP determination to 5GS via NEF “Application guidance for URSP determination” API; 3) PDU session modification with Alternative S-NSSAI triggered by the specific slice condition i.e., service unavailability or congestion. All these features assume the usage of URSP for the network slice selection. This situation causes a restriction for operators to provide optimal network connection through the network slice.

Usage scenario

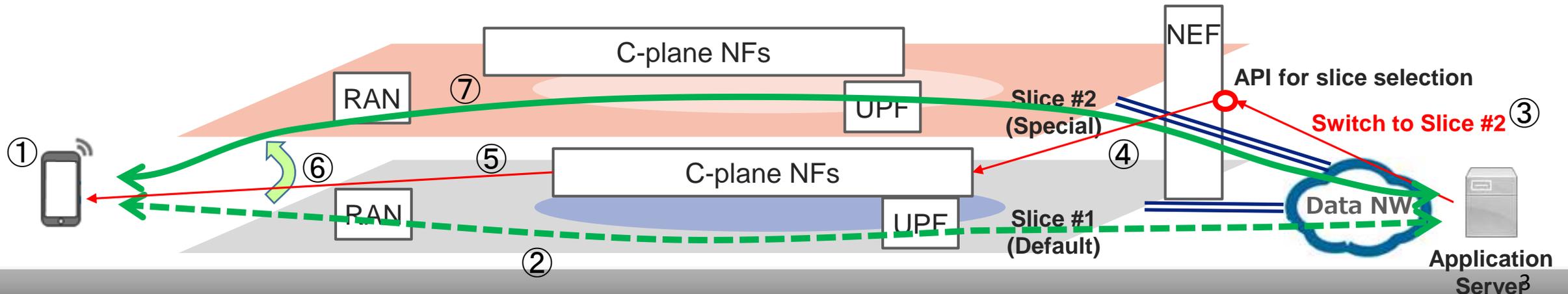
The user can enjoy the application on their device via the network connection which is optimally tailored using the network slice. Based on the user’s choice of application, the application client and server work together to request the 3GPP system to provide the optimal network connection.

Possible scenario – Flow assumption

- ① The user activates the application on the UE. The user subscribes a bundle service provided by the operator. The application under the bundle service is allowed to use the special slice (i.e., slice #2 in this scenario).
- ② The application negotiates with the application server via the default slice.
- ③ The application server requests to switch the specific session from the default slice to the other slice (special slice in this example) via NEF, based on the bundle service agreement with the operator.
- ④ NEF requests 5GC to switch the session.
- ⑤ 5GC executes a PDU session modification procedure.
- ⑥ A PDU session is established on the other slice (in this example, slice#2).
- ⑦ UL/DL data is transferred via the PDU session.

Preconditions;

- The UE has subscribed both slices.
- The application provider and the operator have agreed to provide the bundle service.
- In this scenario, a number of slice and PDU session which the UE simultaneously connects is one (1).





Thank you!