# Monetization capabilities introduced for Release 17

Proximity based services charging (TS 32.277)

Proximity based services support by 5GS introduced in Rel-17, is enhanced by support of the Converged Charging framework , allowing monetization by Operators when used by 5G ProSe-enabled UEs being in proximity to each other using NR. 5G ProSe Direct Discovery charging relies on the 5G Direct Discovery Name Management Function (5G DDNMF) embedded Charging Trigger Function (CTF) using CHF Nchf API during UE 5G ProSe Direct Discovery procedures.

5G ProSe Direct Communication over NR (broadcast mode, groupcast mode, and unicast mode), used for commercial services, can be monetized based on QoS amongst other criteria. The split CTF, between UE CTF-(AMC Accounting Metrics Collection) and 5G DDNMF CTF-(ADF Accounting Data Forwarding) enables usage reporting from UE to CHF categorized per QoS Flow.



ProSe Direct Discovery over PC5 reference point and ProSe UE-to-Network Direct Communication are also covered.

Edge Computing charging (TS 32.257)

While end user charging for accessing edge applications is already covered from earlier releases under the existing 5G data connectivity charging (by using dedicated identifications), new areas of Edge Computing (EC) are extended with Charging capabilities in Rel-17 for:

* edge enabling services exposed by Edge Computing Service Providers (ECSP) to Application Service Providers (ASP) and ECSP edge enabling infrastructure resources usage by ASP
* Edge Application Server (EAS) deployment (instantiation, upgrade, termination) by an ECSP for an ASP.

## Other enhancements as partial conclusion of ongoing studies



Charging for roamers with 5G data connectivity is covered since Rel-15, however only in home routed scenario. Rel-17 introduces a charging solution for roamers in local breakout covering both wholesale between MNOs and UEs retail charging. A new N47 reference point enables per UE quota management from the Home MNO. More solutions are being studied in Rel-18.

As the result of Network Slice (NS) study partial conclusion, a simplified option for NS usage charging based on individual UEs 5G data connectivity charging is enhanced for Rel-17 in a TS 32.255 Annex D. In this option, the Converged Charging System (CCS) serves individual UEs as well as NS Tenants based on internal specific implementation, for the purpose of monetization by Communication Service Providers (CSP) of NS usage by Tenants.