Mobile Use Cases for Encrypted Traffic

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Mobile Use Cases Effected by Encryption

- Different Services have different QoS and uses different Radio Resource and use different Charging rate

- If there is lack of radio resource, low priority services are released by the network to ensure the high priority services.

- Radio resource status changes suddenly during different RAT/cell Handover procedure

- Detect different Service data Flow , and mapping the different SDF to different Bearers with different QoS;

- Two Type of Services;
  - WebRTC/IMS/SIP: different Service Data flow for different (real-time) media(Voice/Video)/Content type;
  - HTTP: The same Service Data flow for different Content Type;

- 3GPP PCC-QoS mechanism works well with one SDF for one Content type;
- Middle-box function is used for same SDF for different Content type: CDN, Mobile Cache, Mobile Video Optimization(trans-coding/rating, Cache), Gi-LAN/SFC/FMSS

How does Encryption Break the Use Cases

- No matched QoS /Radio Resource/Charging Rate assignment for encrypted service;

- If there is lack of radio resource, maybe high priority services is released and low priority services are not released by the network.

- During different RAT/cell Handover procedure, can't well adapt the QoS /Radio Resource/Charging Rate for encrypted service;

- Hard to detect different Service data Flow , and map the different SDF to different Bearers with different QoS;

- Middle-box function can't work for the encrypted service of the same SDF for different content types.

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