



3GPP 5G Security

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Phase 1

Enhanced Mobile
Broadband (eMBB)

Phase 2

massive Machine Type
Communication (mMTC)

Ultra Reliable Low
Latency Communication
(URLLC)

3GPP phase based 5G specification

Time-line: 3GPP 5G security

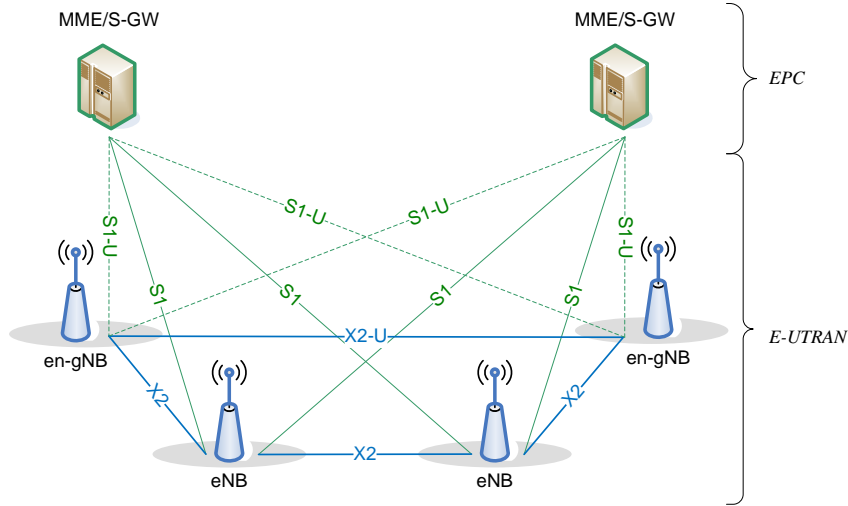
Option-3
TS 33.401, December
2017

5G Phase-2
June 2019

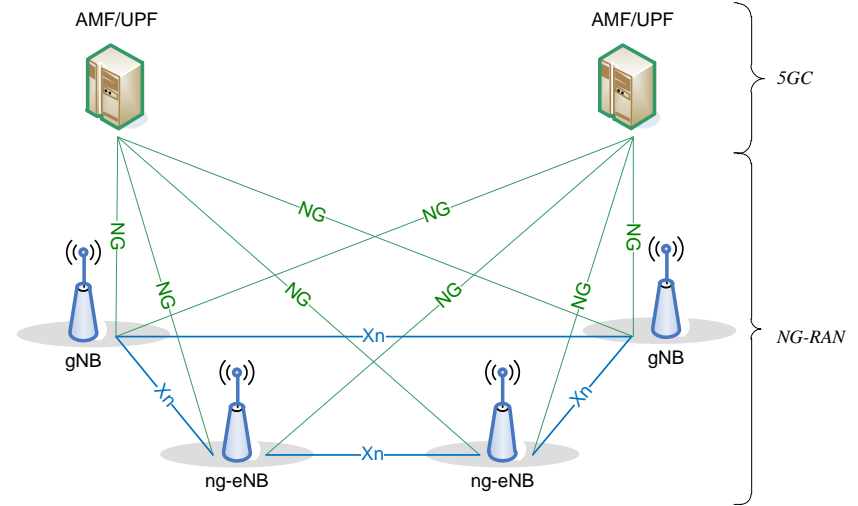


Study
TR 33.899
Closed

5G Phase-1
TS 33.501, March
2018

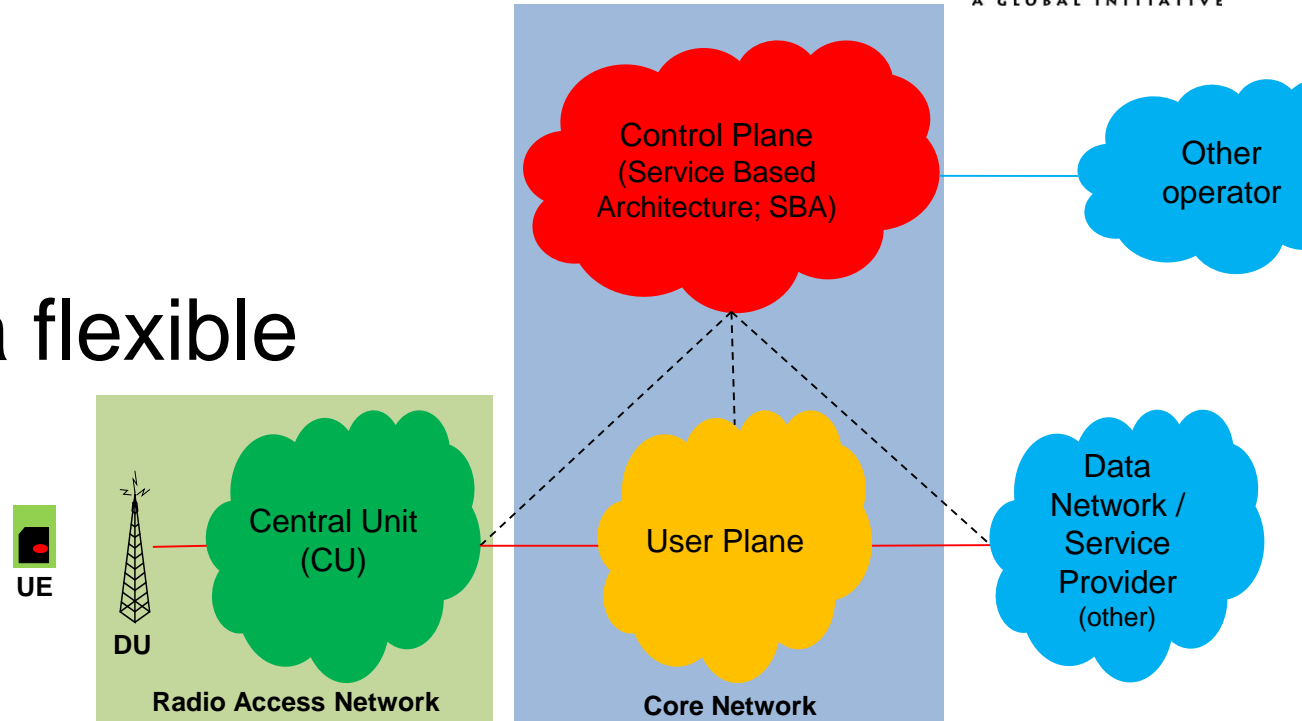


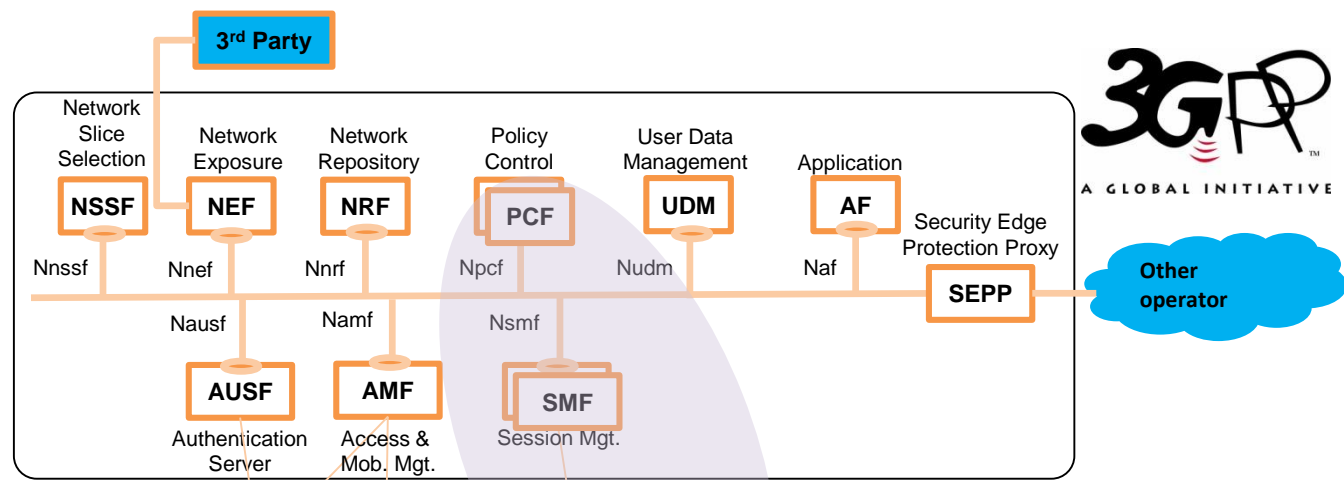
Option-3



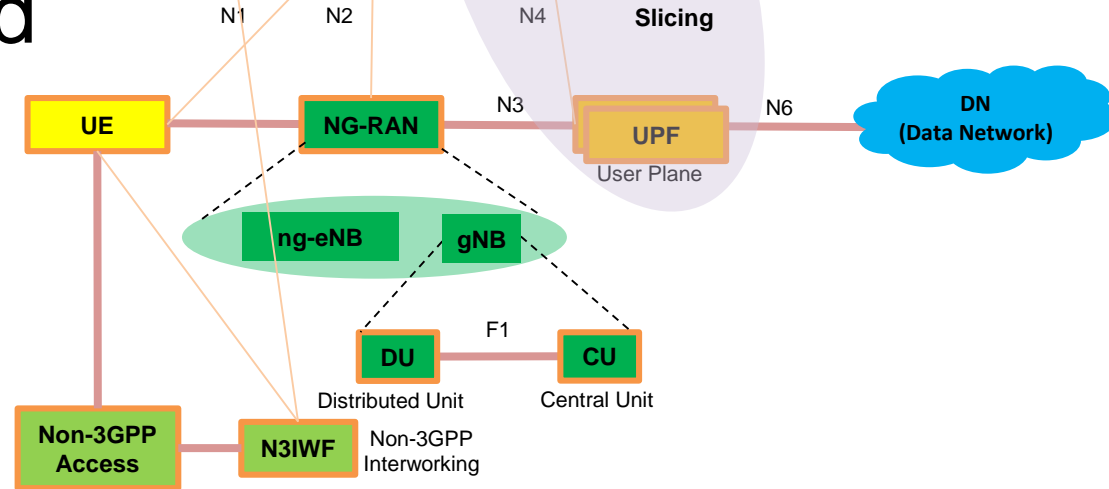
Other options

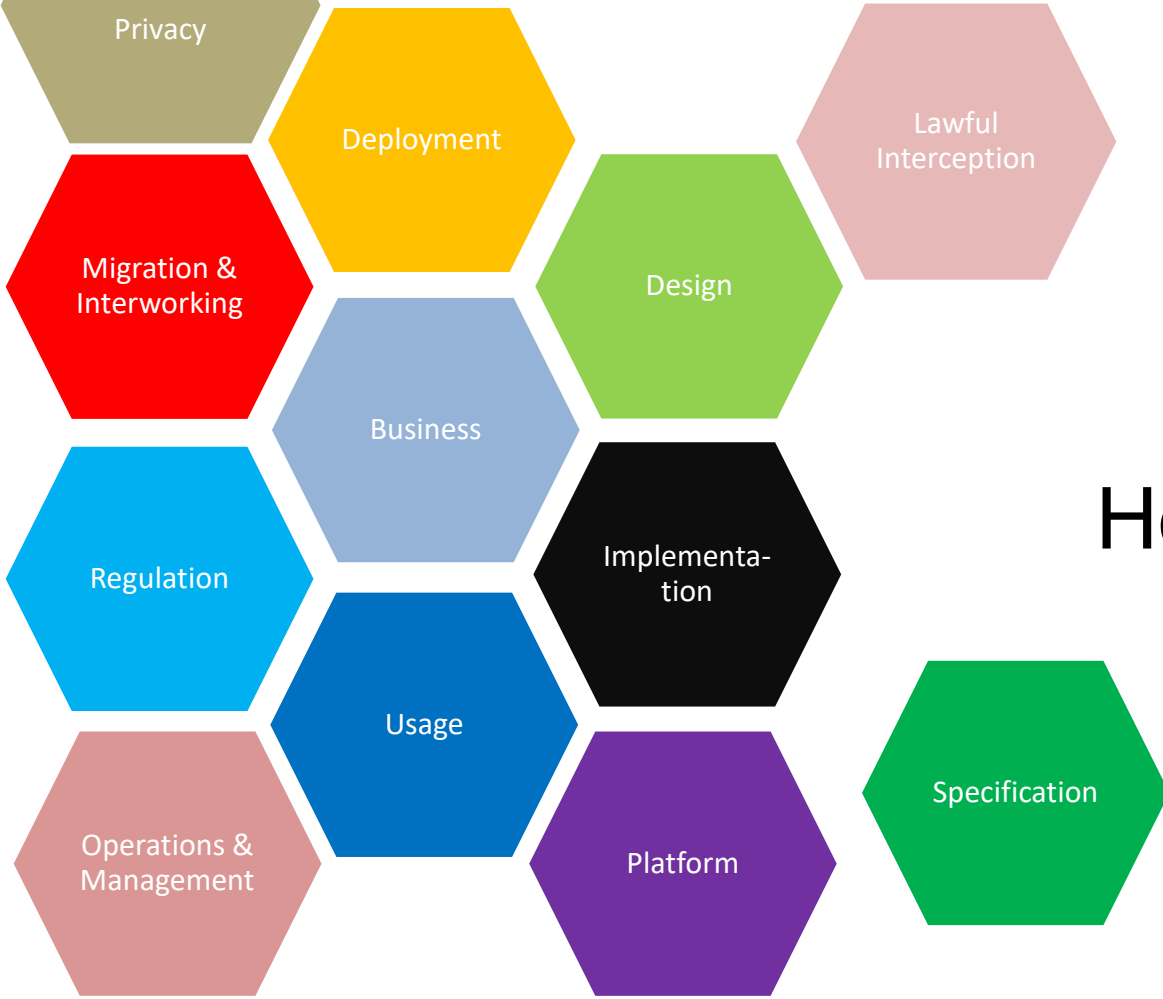
5G system – a flexible architecture





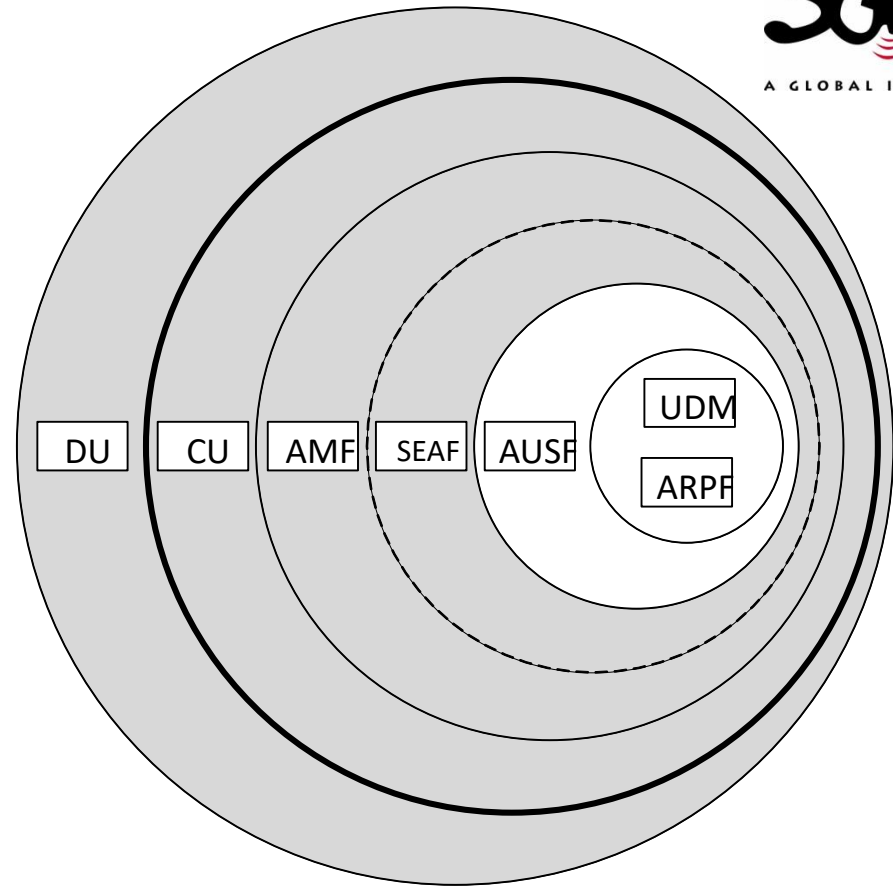
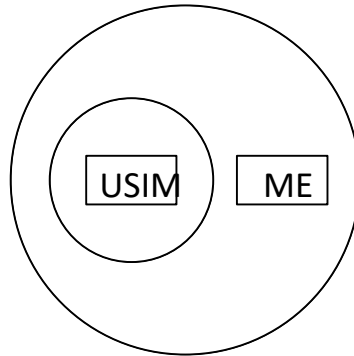
Service based architecture





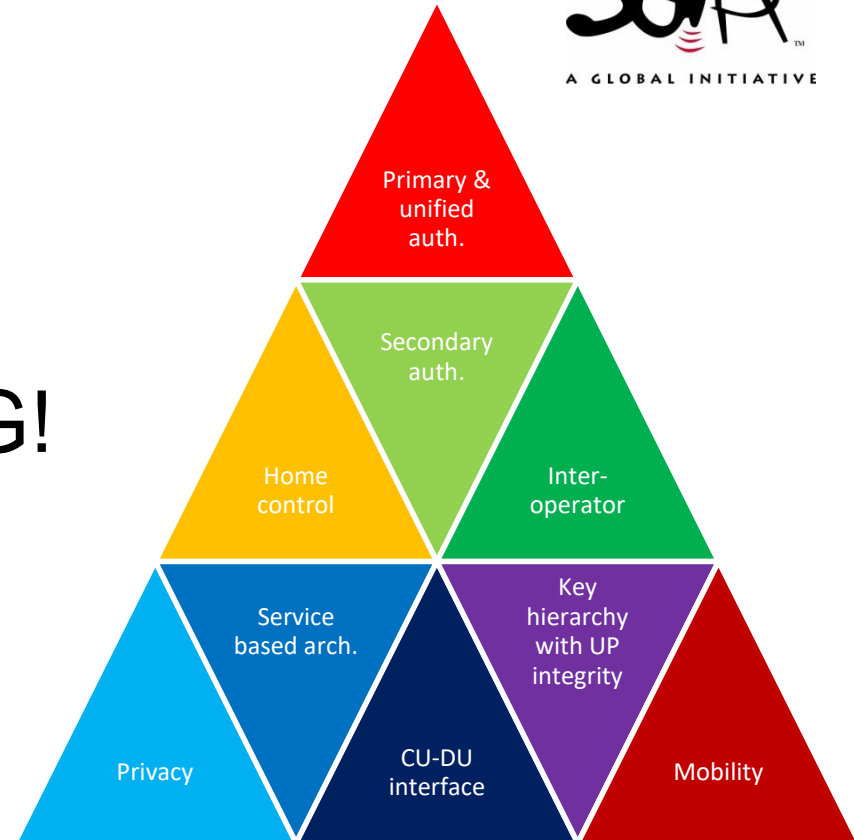
Holistic security from first step

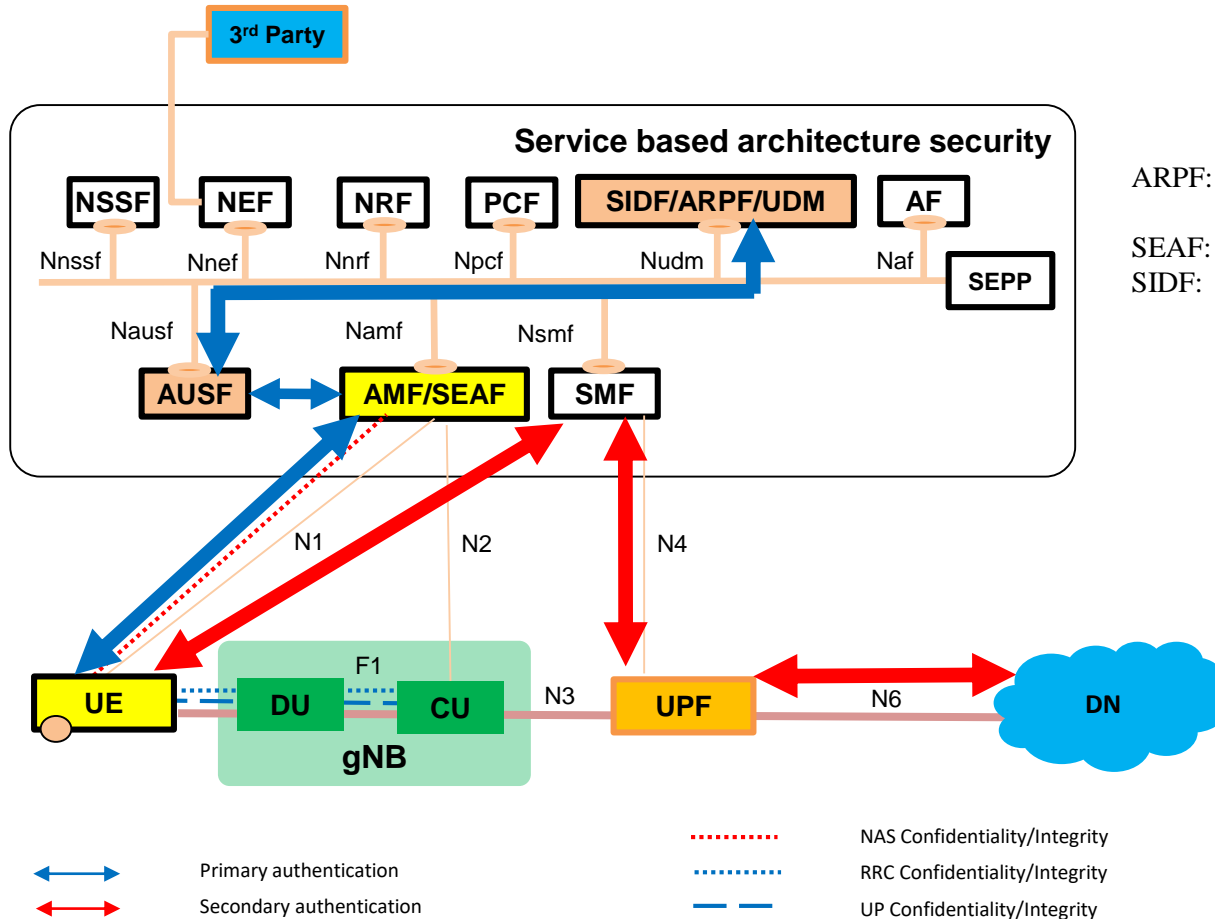
Trust model



Enhanced security with 5G!

evolution from 4G





ARPF: Authentication credential
Repository and Processing Function
SEAF: Security Anchor Function
SIDF: Subscription Identifier De-concealing
Function

More to come in 5G Phase 2

- Long-term key update
- 256 bits keys usage
- Security Assurance
- KDF negotiation
- Enh. of network slicing security
- Location services security
- Security for 5G URLLC
- SECAM and SCAS for 3GPP virtualized network products
- Security for Vertical and LAN Services

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TS 33.501 Security architecture and procedures for 5G system

“Journal of ICT Standardization” special issue on 3GPP 5G Specifications

<https://www.riverpublishers.com/journal.php?j=JICTS/6/2/jart>

Summary of 3GPP 5G Security

http://www.3gpp.org/news-events/3gpp-news/1975-sec_5g

Articles in blog: “Opinion Pieces on Cyber Security”

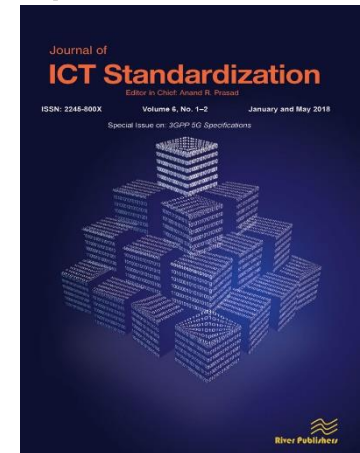
<http://pop.riverpublishers.com/index.php>

NEC whitepaper: “Making 5G a Reality”

https://www.nec.com/en/press/201802/global_20180222_03.html


LinkedIn: Regular posts and articles on 5G and security

<https://jp.linkedin.com/in/arprasad>



Thanks

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