UE
AMF/ SEAF
AUSF
UDM
NSSAAF
AAA
1. Registration Request (SUCI in NAI format)
2. Nausf_UEAuthentication_AuthenticateRequest (SUCI, SN-nameI)
3. Nudm_UEAuthentication_Get_Request (SUCI, SN-name)
4. Authentication Method Selection
5. Nudm_UEAuthentication_Get_Response (SUPI, indicator(EAP-TTLS))
6. Nausf_UEAuthentication_AuthenticateResponse (EAP Request[EAP-TTLS, Start=1])
7. Authentication Request (EAP Request[EAP-TTLS, Start=1], ngKSI, ABBA)
8. Authentication Response (EAP Response[EAP-TTLS, Client_Hello])
9. Nausf_UEAuthentication_AuthenticateRequest (EAP Response[EAP-TTLS, Client_Hello])
10. Nausf_UEAuthentication_AuthenticateResponse (EAP Request[EAP-TTLS, ServerHello, ServerCertificate, ServerKeyExchange, ServerHelloDone])
11. Authentication Request (EAP Request[EAP-TTLS, ServerHello, ServerCertificate, ServerKeyExchange, ServerHelloDone], ngKSI, ABBA)
12. Verify Server Certificate
13. Authentication Response (EAP Response[EAP-TTLS, ClientKeyExchange, ChangeCiperSpec, Finished])
14. Nausf_UEAuthentication_AuthenticateRequest (EAP Response[EAP-TTLS, ClientKeyExchange, ChangeCiperSpec, Finished])
15. Skip authentication of UE
16. Nausf_UEAuthentication_AuthenticateResponse (EAP Request[EAP-TTLS, ChangeCiperSpec, Finished])
17. Authentication Request (EAP Request[EAP-TTLS, ChangeCiperSpec, Finished], ngKSI, ABBA)
18. Authentication Response (EAP Response[EAP-TTLS, AVP[User-Name, MS-CHAP-Challenge, MS-CHAP2- Response]])
19. Nausf_UEAuthentication_AuthenticateRequest (EAP Response[EAP-TTLS, AVP[User-Name, MS-CHAP-Challenge, MS-CHAP2- Response]])
20. Nnssaaf_AIW_AuthenticationRequest (AVP[User-Name, MS-CHAP-Challenge, MS-CHAP2- Response)]
21. AAA Protocol Message/ Access Request (AVP[User-Name, MS-CHAP-Challenge, MS-CHAP2- Response)]
22. MS-CHAP-v2 Authentication
23. AAA Protocol Message/ Access Accept (AVP[MS-CHAP2-Success])
24. Nnssaaf_AIW_AuthenticationResponse (AVP[MS-CHAP2-Success])
25. Nausf_UEAuthentication_AuthenticateResponse (EAP Request[EAP-TTLS, AVP[MS-CHAP2-Success]])
26. Authentication Request (EAP Request[EAP-TTLS, AVP[MS-CHAP2-Success]], ngKSI, ABBA)
27. MS-CHAP-v2 Authentication
28. Authentication Response (EAP Response[EAP-TTLS, empty])
29. Nausf_UEAuthentication_AuthenticateRequest (EAP Response[EAP-TTLS, Empty])
30. Nausf_UEAuthentication_AuthenticateResponse (EAP Success, K_{SEAF}, SUPI)
31. Authentication Result (EAP Success, ngKSI, ABBA)