**Third Generation Partnership Project (3GPP™)**

**Meeting Report  
for  
TSG SA WG3  
meeting: 99e**

**e-meeting, online, 11/05/2020 to 15/05/2020**

Contents:

1 Agenda and Meeting Objectives 3

2 Meeting Reports 3

3 Reports and Liaisons from other Groups 4

4 Work Areas 9

4.1 Security aspects of 5G System - Phase 1 (Rel-15) 9

4.2 Security Assurance Specification for 5G (Rel-16) 17

4.3 Mission Critical security (Rel-16) 22

4.4 Security aspects of single radio voice continuity from 5GS to UTRAN (Rel-16) 23

4.5 Enhancements for Security aspects of Common API Framework for 3GPP Northbound APIs (Rel-16) 23

4.6 Security of URLLC for 5GS (Rel-16) 23

4.7 Security for 5GS Enhanced support of Vertical and LAN Services (Rel-16) 23

4.8 Security of the enhancement to the 5GC location services (Rel-16) 25

4.9 Security Aspects of the 5G Service Based Architecture (Rel-16) 26

4.10 Authentication and key management for applications based on 3GPP credential in 5G (Rel-16) 30

4.11 Evolution of Cellular IoT security for the 5G System (Rel-16) 37

4.12 Security of the Wireless and Wireline Convergence for the 5G system architecture (Rel-16) 40

4.13 Security aspects of Enhancement of Network Slicing (Rel-16) 43

4.14 Security for NR Integrated Access and Backhaul (Rel-16) 45

4.15 Security aspects of SEAL (Rel-16) 47

4.16 Security Aspects of 3GPP support for Advanced V2X Services (Rel-16) 47

4.17 User Plane Gateway Function for Inter-PLMN Security (Rel-16) 53

4.18 Provision of Access to Restricted Local Operator Services by Unauthenticated UEs – Security Aspects (Rel-16) 53

4.19 3GPP profiles for cryptographic algorithms and security protocols (Rel-16) 53

4.20 Integration of GBA into 5GC (Rel-17) 55

4.21 Security Assurance Specification for IMS (Rel-17) 55

4.22 Security Assurance Specification Enhancements for 5G (Rel-17) 56

4.23 Security Assurance Specification for Service Communication Proxy (SECOP) (Rel-17) 56

4.24 Security Assurance Specification for 5G NWDAF (Rel-17) 58

4.25 Security Assurance Specification for Non-3GPP InterWorking Function (N3IWF) (Rel- 17) 58

4.26 Other work areas 59

4.27 New work item proposals 61

5 Studies 62

5.1 Study on Security Aspects of the 5G Service Based Architecture 62

5.2 Study on Authentication and key management for applications based on 3GPP credential in 5G 62

5.3 Study on Evolution of Cellular IoT security for the 5G System 62

5.4 Study on 5G security enhancement against false base stations 63

5.5 Study on Security aspects of Enhancement of Network Slicing 67

5.6 Study on SECAM and SCAS for 3GPP virtualized network products 69

5.7 Study on Security for 5GS Enhanced support of Vertical and LAN Services 73

5.8 Study on LTKUP Detailed solutions 76

5.9 Study on User Plane Integrity Protection 77

5.10 Study on Security Impacts of Virtualisation 82

5.11 Study on authentication enhancements in 5GS (FS\_AUTH\_ENH) 82

5.12 Study on Security for NR Integrated Access and Backhaul 83

5.13 Study on Security Aspects of 3GPP support for Advanced V2X Services 83

5.14 Study on storage and transport of the security parameters in a 5GC, that are used by the ARPF for Authentication 84

5.15 Other study areas 87

5.16 New study item proposals 87

Annex A: Contribution documents and status 92

A1: List of TDocs 92

A2: Tdoc decision timing 105

Annex B: List of change requests 119

Annex C: Lists of liaisons 127

C1: Incoming liaison statements 127

C2: Outgoing liaison statements 129

Annex D: List of agreed/approved new and revised Work Items 131

Annex E: List of draft Technical Specifications and Reports 132

Annex F: List of participants 133

Annex G: List of future meetings 137

## 1 Agenda and Meeting Objectives

The attention of the delegates to the meeting of this Technical Specification Group was drawn to the fact that 3GPP Individual Members have the obligation under the IPR Policies of their respective Organizational Partners to inform their respective Organizational Partners of Essential IPRs they become aware of.

The delegates were asked to take note that they were thereby invited:

to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.

to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Information Statement and the Licensing declaration forms.

The attention of the delegates to the meeting was drawn to the fact that 3GPP activities were subject to all applicable antitrust and competition laws and that compliance with said laws was therefore required by any participant of the meeting, including the Chairman and Vice-Chairmen and were invited to seek any clarification needed with their legal counsel. The leadership would conduct the present meeting with impartiality and in the interests of 3GPP.

Delegates were reminded that timely submission of work items in advance of TSG/WG meetings was important to allow for full and fair consideration of such matters.

**S3-200900 Agenda**

*Type: agenda For: (not specified)  
 Source: SA WG3 Chair*

**Decision:** The document was **approved**.

**S3-200904 Process for SA3#99-e meeting**

*Type: other For: (not specified)  
 Source: SA WG3 Chair*

**Decision:** The document was **noted**.

**S3-201321 Working assumptions**

*Type: other For: Presentation  
 Source: WG Chair*

**Decision:** The document was **noted**.

## 2 Meeting Reports

**S3-200901 Report from SA3#97**

*Type: report For: (not specified)  
 Source: MCC*

**Decision:** The document was **approved**.

**S3-200902 Report from SA3#98e**

*Type: report For: (not specified)  
 Source: MCC*

**Decision:** The document was **approved**.

**S3-200903 Report from SA3#98Bis-e**

*Type: report For: (not specified)  
 Source: MCC*

**Decision:** The document was **approved**.

**S3-201320 Report from last SA Plenary**

*Type: report For: Information  
 Source: WG Chair*

**Decision:** The document was **noted**.

## 3 Reports and Liaisons from other Groups

**S3-200905 LS on security consideration of performance measurement function protocol**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C1-196940*

**Decision:** The document was **replied to in S3-201069**.

**S3-200909 LS on security context for 5GC to EPC mobility**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C1-202666*

**Decision:** The document was **replied to in S3-201109**.

**S3-200910 LS on selected EPS NAS algorithms for unauthenticated emergency sessions in 5GS**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C1-202826*

**Decision:** The document was **replied to in S3-201300**.

**S3-200911 PAP/CHAP and other point-to-point protocols usage in 5GS**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C1-202933*

**Decision:** The document was **noted**.

**S3-200916 Request for collaboration on migration planning of HSMs to support Quantum Safe Cryptography**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ETSI TC CYBER*

**Decision:** The document was **noted**.

**S3-200921 LS on AMF Reallocation via RAN re-routing**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to S3-201041, cc -  
 Source: S2-2001730*

**Decision:** The document was **postponed**.

**S3-200922 LS on ARPF in UDICOM**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C4-195553*

**Decision:** The document was **replied to in S3-201245**.

**S3-200926 LS on Location information for SMS over IMS**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S3i200161*

**Decision:** The document was **noted**.

**S3-200927 Reply LS on analytics support for energy saving**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S5-201472*

**Decision:** The document was **noted**.

**S3-200929 Observations and questions on 256-bit security goals**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ETSI SAGE*

**Decision:** The document was **postponed**.

**S3-200930 Observations on ZUC-256**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ETSI SAGE*

**Decision:** The document was **postponed**.

**S3-200932 LS on towards post-quantum symmetric and asymmetric cryptography in 5G**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ITU-T SG17*

**Decision:** The document was **replied to in S3-201365**.

**S3-200933 Reply LS to Transfer the study on service-based support for SMS in 5GC to CT WGs**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: SP-191362*

**Decision:** The document was **noted**.

**S3-200936 TCG progress - report from TCG rapporteur**

*Type: other For: Information  
 Source: InterDigital Communications*

**Abstract:**

This contribution provides a brief incremental summary of the progress in TCG Working Groups as of May 2020.

**Decision:** The document was **noted**.

**S3-200942 Reply LS on Questions on onboarding requirements**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2003216*

**Decision:** The document was **noted**.

**S3-200955 Discussion on AMF Reallocation via RAN re-routing**

*Type: discussion For: Endorsement  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-200956 reply LS on AMF Reallocation via RAN re-routing**

*Type: LS out For: Approval  
 to SA2, cc TSG SA  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-200958 reply LS on security consideration of performance measurement function protocol**

*Type: LS out For: Approval  
 to CT1, cc SA2  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-200961 Discussion on Security of AMF re-allocation via direct NAS reroute**

*Type: discussion For: Endorsement  
 33.501 v..  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-200962 Security handling in registration with AMF re-allocation via direct NAS reroute**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0803 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Decision:** The document was **not pursued**.

**S3-201009 Reply LS on S3-200905/C1-196940-PMF security**

*Type: LS out For: Approval  
 to CT1, cc SA2  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-201010 Discussion paper on PMF Protocol Security**

*Type: discussion For: Agreement  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-201012 [DRAFT] Reply-LS on 256 bit algorithm candidates**

*Type: LS out For: Approval  
 to ETSI SAGE  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201030 [DRAFT] Reply LS on ARPF in UDICOM**

*Type: LS out For: Approval  
 to CT4  
 Source: Ericsson*

**Abstract:**

Reply LS on ARPF in UDICOM - Response to: S3-194439 / C4-195553

**Decision:** The document was **noted**.

**S3-201040 AMF reallocation and slicing**

*Type: discussion For: Endorsement  
 33.501 v..  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201041 Reply LS on AMF Reallocation via RAN re-routing**

*Type: LS out For: Approval  
 to SA2, cc TSG SA  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201069 draft Reply LS on PMF protocol security**

*Type: LS out For: Approval  
 to CT1, cc SA2  
 Source: Nokia, Nokia Shanghai Bell, Qualcomm Incorporated*

**Decision:** The document was **revised to S3-201490**.

**S3-201076 draft Reply LS on AMF Re-allocation via RAN**

*Type: LS out For: Approval  
 to SA2  
 Source: Nokia*

**Decision:** The document was **noted**.

**S3-201077 Discussion on SA2 LS S2-2001730 AMF Re-allocation via RAN re-routing**

*Type: discussion For: Endorsement  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-201101 Discussion paper on way forward with AMF reallocation**

*Type: discussion For: Endorsement  
 33.501 v..  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201104 LS reply to SA2 on AMF reallocation**

*Type: LS out For: Approval  
 to SA2  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201109 LS reply to on security context for 5GC to EPC mobility**

*Type: LS out For: Approval  
 to CT1  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-201453**.

**S3-201125 LS reply on selected EPS NAS algorithms to CT1**

*Type: LS out For: Approval  
 to CT1  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201245 Reply LS on ARPF in UDICOM**

*Type: LS out For: Approval  
 to CT4  
 Source: Nokia*

**Decision:** The document was **revised to S3-201471**.

**S3-201276 Reply LS on 256 bit algorithm candidates**

*Type: LS out For: Approval  
 to ETSI SAGE  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-201300 Reply LS on selected EPS NAS algorithms for unauthenticated emergency sessions in 5GS**

*Type: LS out For: Approval  
 to CT1  
 Source: Samsung*

**Decision:** The document was **approved**.

**S3-201301 Discussion on the selected EPS NAS security algorithms**

*Type: discussion For: Approval  
 33.501 v..  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201365 Reply LS to ITU-T Study Group 17 on towards post-quantum symmetric and asymmetric cryptography in 5G**

*Type: LS out For: Information  
 to ITU-T Study Group 17, cc ETSI TC CYBER, ETSI TC CYBER QSC  
 Source: SA3*

**Abstract:**

Reply LS to ITU-T Study Group 17, to their LS sent to SA3#99 (S3-200932/SG17-LS247).

**Decision:** The document was **approved**.

**S3-201453 LS reply to on security context for 5GC to EPC mobility**

*Type: LS out For: Approval  
 to CT1, cc SA2  
 Source: Huawei, Hisilicon*

(Replaces S3-201109)

**Decision:** The document was **approved**.

**S3-201471 Reply LS on ARPF in UDICOM**

*Type: LS out For: Approval  
 to CT4  
 Source: Nokia*

(Replaces S3-201245)

**Decision:** The document was **approved**.

**S3-201490 Reply LS on PMF protocol security**

*Type: LS out For: Approval  
 to CT1, cc SA2  
 Source: Nokia, Nokia Shanghai Bell, Qualcomm Incorporated*

(Replaces S3-201069)

**Decision:** The document was **approved**.

**S3-201328 256 bit algorithm candidates**

*Type: LS in For: discussion  
 Original outgoing LS: -, to -, cc -  
 Source: ETSI SAGE*

**Decision:** The document was **postponed**.

## 4 Work Areas

### 4.1 Security aspects of 5G System - Phase 1 (Rel-15)

**S3-200912 LS on Misalignment on HTTP connections for N32-c and on N32-f contexts termination**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C4-200781*

**Decision:** The document was **replied to in S3-201464**.

**S3-200913 LS on Misalignments on N32-f context Id**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C4-200782*

**Decision:** The document was **replied to in S3-201479**.

**S3-200915 LS on Multiple Kausf upon registering via multiple Serving Networks**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C4-202348*

**Decision:** The document was **replied to in S3-201350**.

**S3-200957 reply LS on Multiple Kausf upon registering via multiple Serving Networks**

*Type: LS out For: Approval  
 to CT4  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-200959 Clarification for distribution of subscriber identities and security data in clause 6.3.1.2**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0801 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Decision:** The document was **not pursued**.

**S3-200960 remove the EN in clause 13.2.3.6**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0802 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Decision:** The document was **not pursued**.

**S3-201043 Add reference to TS 24.301 for enclosed TAU request in the Registration Request**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0809 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **not pursued**.

**S3-201044 Add reference to TS 24.301 for enclosed TAU request in the Registration Request**

*Type: CR For: Agreement  
 33.501 v15.8.0 CR-0810 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **not pursued**.

**S3-201055 Storage of KAUSF in the UE and AUSF, R15**

*Type: CR For: Agreement  
 33.501 v15.8.0 CR-0811 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **not pursued**.

**S3-201056 Storage of KAUSF in the UE and AUSF, R16**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0812 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **not pursued**.

**S3-201058 Reply LS on Multiple Kausf upon registering via multiple Serving Networks**

*Type: LS out For: Approval  
 to CT4  
 Source: Ericsson*

**Decision:** The document was **merged**.

**S3-201072 Discussion on NAS COUNT handling in 5G to 4G Handover**

*Type: discussion For: Endorsement  
 Source: Nokia, Nokia Shanghai Bell, Intel*

**Decision:** The document was **noted**.

**S3-201073 Correcting 5G to 4G handover DL NAS COUNT mismatch**

*Type: CR For: Approval  
 33.501 v15.8.0 CR-0813 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell, Intel*

**Decision:** The document was **not pursued**.

**S3-201074 Correcting 5G to 4G handover DL NAS COUNT mismatch**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0814 Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Intel*

**Decision:** The document was **not pursued**.

**S3-201078 Discussion on AS rekeying failure during Xn-Handover**

*Type: discussion For: Decision  
 33.501 v..  
 Source: CATT*

**Decision:** The document was **noted**.

**S3-201079 Clarification on AS rekeying failure-R15**

*Type: CR For: Approval  
 33.501 v15.8.0 CR-0816 Cat: F (Rel-15)  
  
 Source: CATT*

**Decision:** The document was **not pursued**.

**S3-201080 Clarification on AS rekeying failure-R16**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0815 Cat: A (Rel-16)  
  
 Source: CATT*

**Decision:** The document was **not pursued**.

**S3-201089 Clarification on IPX certificate acquirement in SEPP**

*Type: CR For: Approval  
 33.501 v15.8.0 CR-0817 Cat: F (Rel-15)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201090 Clarification on IPX certificate acquirement in SEPP**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0818 Cat: A (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201110 JSON object modification**

*Type: CR For: Approval  
 33.501 v15.8.0 CR-0821 Cat: F (Rel-15)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201111 JSON object modification**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0822 Cat: A (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201112 SUCI computation clarification**

*Type: CR For: Approval  
 33.501 v15.8.0 CR-0823 Cat: F (Rel-15)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **agreed**.

**S3-201113 SUCI computation clarification**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0824 Cat: A (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **agreed**.

**S3-201119 DP\_for\_LS on Multiple Kausf upon registering via multiple SNs**

*Type: discussion For: Endorsement  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201120 LS reply to CT4 LS on Multiple Kausf upon registering via multiple SNs**

*Type: LS out For: Approval  
 to CT4  
 Source: Huawei, Hisilicon*

**Discussion:**

it was asked to be minuted: When the new Kausf replaces the old Kausf at the UE, needs to be clarified in SA3.

**Decision:** The document was **revised to S3-201350**.

**S3-201179 Correction to security capability negotiation between SEPPs**

*Type: CR For: Approval  
 33.501 v15.8.0 CR-0827 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon,China Mobile*

**Decision:** The document was **revised to S3-201472**.

**S3-201180 Correction to security capability negotiation between SEPPs**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0828 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon,China Mobile*

**Decision:** The document was **revised to S3-201473**.

**S3-201181 Correction to initial EAP Authentication with an external AAA server**

*Type: CR For: Approval  
 33.501 v15.8.0 CR-0829 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **agreed**.

**S3-201182 Correction to initial EAP Authentication with an external AAA server**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0830 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **agreed**.

**S3-201214 Editorial changes to TS 33.501 R15**

*Type: CR For: Approval  
 33.501 v15.8.0 CR-0831 Cat: F (Rel-15)  
  
 Source: Huawei, Hiliscon*

**Decision:** The document was **agreed**.

**S3-201215 Editorial changes to TS 33.501 R16**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0832 Cat: A (Rel-16)  
  
 Source: Huawei, Hiliscon*

**Decision:** The document was **agreed**.

**S3-201247 Clarification to 5G AV**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0834 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-201492**.

**S3-201248 Clarification to SEAF**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0835 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-201493**.

**S3-201252 Several corrections to spec text**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0838 Cat: D (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **agreed**.

**S3-201263 shortResumeMAC-I calculation**

*Type: CR For: Agreement  
 33.501 v15.8.0 CR-0839 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated, Samsung, CATT, Huawei, Hisilicon*

**Discussion:**

It was asked to minute the following: "Ericsson has agreed to this CR only for the sake of progress. In principle, Ericsson is disappointed that stage3 is implemented differently than stage2 and because of time crush, stage2 had to be retrofitted for alignment. In future, stage3 shall not deviate from stage2 without consultation.

**Decision:** The document was **agreed**.

**S3-201264 shortResumeMAC-I calculation (rel-16 mirror)**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0840 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated, Samsung, CATT, Huawei, Hisilicon*

**Discussion:**

It was asked to minute the following: "Ericsson has agreed to this CR only for the sake of progress. In principle, Ericsson is disappointed that stage3 is implemented differently than stage2 and because of time crush, stage2 had to be retrofitted for alignment. In future, stage3 shall not deviate from stage2 without consultation.

**Decision:** The document was **agreed**.

**S3-201272 Clarification on the use of SUPI as the Identity in EAP-AKA’ key derivation**

*Type: CR For: Agreement  
 33.501 v15.8.0 CR-0761 rev 1 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated, Nokia, Nokia Shanghai Bell, ZTE*

(Replaces S3-200361)

**Decision:** The document was **not pursued**.

**S3-201273 Clarification on the use of SUPI as the Identity in EAP-AKA’ key derivation**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0762 rev 1 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated, Nokia, Nokia Shanghai Bell, ZTE*

(Replaces S3-200362)

**Decision:** The document was **not pursued**.

**S3-201280 Reply LS on Calculation of ShortResumeMAC-I**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, Hiliscon*

(Replaces S3-201203)

**Decision:** The document was **revised to S3-201411**.

**S3-201281 Handling of counter wrap around in UDM, R15**

*Type: CR For: Approval  
 33.501 v15.8.0 CR-0842 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Decision:** The document was **not pursued**.

**S3-201282 Handling of counter wrap around in UDM, R16**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0843 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **postponed**.

**S3-201294 Reply LS on Multiple Kausf upon registering via multiple Serving Networks**

*Type: LS out For: Approval  
 to CT4  
 Source: Samsung, Qualcomm Incorporated*

**Decision:** The document was **merged**.

**S3-201322 LS on Calculation of ShortResumeMAC-I**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R2-2004265*

**Decision:** The document was **replied to in S3-201411**.

**S3-201350 LS reply to CT4 LS on Multiple Kausf upon registering via multiple SNs**

*Type: LS out For: Approval  
 to CT4  
 Source: Huawei, Hisilicon*

(Replaces S3-201120)

**Decision:** The document was **approved**.

**S3-201411 Reply LS on Calculation of ShortResumeMAC-I**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, Hiliscon*

(Replaces S3-201280)

**Decision:** The document was **revised to S3-201489**.

**S3-201464 LS Reply to LS on Misalignment on HTTP connections for N32-c and on N32-f contexts termination**

*Type: LS out For: Approval  
 to CT4  
 Source: Nokia*

**Decision:** The document was **approved**.

**S3-201472 Correction to security capability negotiation between SEPPs**

*Type: CR For: Approval  
 33.501 v15.8.0 CR-0827 rev 1 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon,China Mobile*

(Replaces S3-201179)

**Decision:** The document was **agreed**.

**S3-201473 Correction to security capability negotiation between SEPPs**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0828 rev 1 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon,China Mobile*

(Replaces S3-201180)

**Decision:** The document was **agreed**.

**S3-201479 Reply LS on Misalignments on N32-f context Id**

*Type: LS out For: Approval  
 to CT4  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-201484 Reply to: LS on AS rekeying handling**

*Type: LS out For: Approval  
 to RAN3, cc SA2  
 Source: CATT*

(Replaces S3-201327)

**Decision:** The document was **approved**.

**S3-201489 Reply LS on Calculation of ShortResumeMAC-I**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, Hiliscon*

(Replaces S3-201411)

**Decision:** The document was **approved**.

**S3-201492 Clarification to 5G AV**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0834 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201247)

**Decision:** The document was **not pursued**.

**S3-201493 Clarification to SEAF**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0835 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201248)

**Decision:** The document was **not pursued**.

**S3-201325 LS on AS rekeying handling**

*Type: LS in For: Discussion  
 Original outgoing LS: -, to -, cc -  
 Source: R3-202833*

**Decision:** The document was **replied to in S3-201484**.

**S3-201327 Reply to: LS on AS rekeying handling**

*Type: LS out For: approval  
 to RAN3  
 Source: CATT*

**Decision:** The document was **revised to S3-201484**.

### 4.2 Security Assurance Specification for 5G (Rel-16)

**S3-200963 Update the clause 4.2.6.2.4-R16**

*Type: CR For: Agreement  
 33.117 v16.4.1 CR-0059 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Decision:** The document was **agreed**.

**S3-200964 Update the clause 4.2.6.2.4-R15**

*Type: CR For: Agreement  
 33.117 v15.4.0 CR-0060 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision:** The document was **agreed**.

**S3-201086 Clarification on confidential IEs replacement handling in original N32-f message**

*Type: CR For: Approval  
 33.517 v16.1.0 CR-0003 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201087 Clarification on exposure of confidential IEs in N32-f message in 33.926**

*Type: CR For: Approval  
 33.926 v16.3.0 CR-0034 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201103 Deleting test case on TEID uniqueness**

*Type: CR For: Approval  
 33.515 v16.1.0 CR-0005 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **agreed**.

**S3-201105 Clarification on test case on synchronization failure handling**

*Type: CR For: Approval  
 33.512 v16.2.0 CR-0006 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-201347**.

**S3-201106 Clarification on test case on RES\* failure handling**

*Type: CR For: Approval  
 33.512 v16.2.0 CR-0007 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-201348**.

**S3-201195 Clarification about system handling during overload situtations**

*Type: CR For: Approval  
 33.117 v16.4.1 CR-0062 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-201416**.

**S3-201196 description modification for policy regarding consective failed login attempts**

*Type: CR For: Approval  
 33.117 v16.4.1 CR-0063 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-201415**.

**S3-201197 password structure clarification**

*Type: CR For: Approval  
 33.117 v16.4.1 CR-0064 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **agreed**.

**S3-201198 Clarification on the examples of the delay**

*Type: CR For: Approval  
 33.117 v16.4.1 CR-0065 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **agreed**.

**S3-201199 Update testcase in gNB SCAS**

*Type: CR For: Approval  
 33.511 v16.3.0 CR-0013 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-201405**.

**S3-201200 Update testcases in eNB SCAS**

*Type: CR For: Approval  
 33.216 v16.3.0 CR-0015 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-201406**.

**S3-201225 Remove mismatched threat references and test steps**

*Type: CR For: Approval  
 33.511 v16.3.0 CR-0014 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This CR proposes to remove the mismatched threat references and test steps.

**Decision:** The document was **revised to S3-201418**.

**S3-201226 Update to the test case of Storing of UE authentication status by UDM**

*Type: CR For: Approval  
 33.514 v16.1.0 CR-0002 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This CR proposes to update the test case of Storing of UE authentication status by UDM.

**Decision:** The document was **agreed**.

**S3-201227 Test Case on Confidentiality of the Attributes not in Data-Type Encryption Policy**

*Type: CR For: Approval  
 33.517 v16.1.0 CR-0004 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This CR proposes to add a new test case on Confidentiality of the Attributes not in Data-Type Encryption Policy.

**Decision:** The document was **not pursued**.

**S3-201228 Threat analysis on the attributes not in Data-Type Encryption Policy**

*Type: CR For: Approval  
 33.926 v16.3.0 CR-0035 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This CR proposes to update the threat analysis for the attributes not in Data-Type Encryption Policy.

**Decision:** The document was **not pursued**.

**S3-201229 Update to the test case of NF discovery authorization for specific slice**

*Type: CR For: Approval  
 33.518 v16.1.0 CR-0002 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This CR proposes to update the test case of NF discovery authorization for specific slice.

**Decision:** The document was **revised to S3-201420**.

**S3-201347 Clarification on test case on synchronization failure handling**

*Type: CR For: Approval  
 33.512 v16.2.0 CR-0006 rev 1 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

(Replaces S3-201105)

**Decision:** The document was **agreed**.

**S3-201348 Clarification on test case on RES\* failure handling**

*Type: CR For: Approval  
 33.512 v16.2.0 CR-0007 rev 1 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

(Replaces S3-201106)

**Decision:** The document was **agreed**.

**S3-201405 Update testcase in gNB SCAS**

*Type: CR For: Approval  
 33.511 v16.3.0 CR-0013 rev 1 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

(Replaces S3-201199)

**Decision:** The document was **agreed**.

**S3-201406 Update testcases in eNB SCAS**

*Type: CR For: Approval  
 33.216 v16.3.0 CR-0015 rev 1 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

(Replaces S3-201200)

**Decision:** The document was **agreed**.

**S3-201407 Remove mismatched threat references and test steps**

*Type: CR For: Approval  
 33.511 v16.3.0 CR-0014 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201225)

**Abstract:**

This CR proposes to remove the mismatched threat references and test steps.

**Decision:** The document was **withdrawn**.

**S3-201415 description modification for policy regarding consective failed login attempts**

*Type: CR For: Approval  
 33.117 v16.4.1 CR-0063 rev 1 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

(Replaces S3-201196)

**Decision:** The document was **agreed**.

**S3-201416 Clarification about system handling during overload situtations**

*Type: CR For: Approval  
 33.117 v16.4.1 CR-0062 rev 1 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

(Replaces S3-201195)

**Decision:** The document was **agreed**.

**S3-201418 Remove mismatched threat references and test steps**

*Type: CR For: Approval  
 33.511 v16.3.0 CR-0014 rev 2 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201225)

**Abstract:**

This CR proposes to remove the mismatched threat references and test steps.

**Decision:** The document was **agreed**.

**S3-201420 Update to the test case of NF discovery authorization for specific slice**

*Type: CR For: Approval  
 33.518 v16.1.0 CR-0002 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201229)

**Abstract:**

This CR proposes to update the test case of NF discovery authorization for specific slice.

**Decision:** The document was **agreed**.

### 4.3 Mission Critical security (Rel-16)

**S3-201331 [33.180] R16 Fix IdM client terminology**

*Type: CR For: Agreement  
 33.180 v16.3.0 CR-0146 Cat: F (Rel-16)  
  
 Source: Motorola Solutions Danmark A/S*

**Abstract:**

Agreed pCR S3-200809 from SA3#98Bis-e now in CR form.

**Decision:** The document was **agreed**.

**S3-201332 [33.180] R16 Fix XML references**

*Type: CR For: Agreement  
 33.180 v16.3.0 CR-0147 Cat: D (Rel-16)  
  
 Source: Motorola Solutions Danmark A/S*

**Abstract:**

Agreed pCR S3-200810 from SA3#98Bis-e now in CR form.

**Decision:** The document was **agreed**.

**S3-201333 [33.180] R16 TrK-ID and InK-ID indication**

*Type: CR For: Agreement  
 33.180 v16.3.0 CR-0148 Cat: F (Rel-16)  
  
 Source: Motorola Solutions Danmark A/S*

**Abstract:**

Agreed pCR S3-200811 from SA3#98Bis-e now in CR form.

**Decision:** The document was **agreed**.

**S3-201330 [33.179] R13 token scope fix**

*Type: CR For: Agreement  
 33.179 v13.10.0 CR-0106 Cat: F (Rel-13)  
  
 Source: Motorola Solutions*

**Decision:** The document was **agreed**.

### 4.4 Security aspects of single radio voice continuity from 5GS to UTRAN (Rel-16)

### 4.5 Enhancements for Security aspects of Common API Framework for 3GPP Northbound APIs (Rel-16)

**S3-201299 Usage of TLS profiles for CAPIF**

*Type: CR For: Agreement  
 33.122 v16.2.0 CR-0027 Cat: B (Rel-16)  
  
 Source: Samsung*

**Decision:** The document was **agreed**.

### 4.6 Security of URLLC for 5GS (Rel-16)

### 4.7 Security for 5GS Enhanced support of Vertical and LAN Services (Rel-16)

**S3-200906 Reply LS on SUCI computation from an NSI**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C1-200938*

**Decision:** The document was **replied to in S3-201432**.

**S3-200907 Reply LS on sending CAG ID**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C1-201027*

**Decision:** The document was **noted**.

**S3-200908 LS on manipulation of CAG Information element by a VPLMN**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C1-202617*

**Decision:** The document was **noted**.

**S3-200918 Reply LS on Sending CAG ID in NAS layer**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R2-1916349*

**Decision:** The document was **noted**.

**S3-200919 Reply LS on NPN clarifications**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S1-193605*

**Decision:** The document was **noted**.

**S3-200920 LS on Sending CAG ID**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2001616*

**Decision:** The document was **noted**.

**S3-201116 DraftCR\_DDoS mitigation**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201121 DP\_protection\_of\_ allowed CAG list against\_MITM\_Attack**

*Type: discussion For: Endorsement  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201122 LS on protection\_of\_ allowed CAG list against\_mitm\_Attack**

*Type: LS out For: Approval  
 to SA2  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-201414**.

**S3-201250 5G LAN ed note resolution**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0836 Cat: C (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not pursued**.

**S3-201251 TSC security policy enforcement**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0837 Cat: C (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not pursued**.

**S3-201351 LS on protection\_of\_ allowed CAG list against\_mitm\_Attack**

*Type: LS out For: Approval  
 to SA2, cc CT1  
 Source: Huawei, Hisilicon*

(Replaces S3-201122)

**Decision:** The document was **revised to S3-201414**.

**S3-201414 LS on protection\_of\_ allowed CAG list against\_mitm\_Attack**

*Type: LS out For: Approval  
 to SA2, cc CT1  
 Source: Huawei, Hisilicon*

(Replaces S3-201351)

**Decision:** The document was **approved**.

**S3-201432 Reply LS on SUCI computation from an NSI**

*Type: LS out For: Approval  
 to CT1, cc CT6, SA2, CT4  
 Source: Ericsson*

**Decision:** The document was **approved**.

### 4.8 Security of the enhancement to the 5GC location services (Rel-16)

**S3-201022 [DRAFT] LS on security of eLCS**

*Type: LS out For: Approval  
 to RAN2, cc CT1, SA2  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201083 Way forward for the remaining eLCS issues in Release 16**

*Type: other For: Information  
 33.501 v..  
 Source: CATT*

**Decision:** The document was **noted**.

**S3-201084 Draft CR as a living baseline for 5GS LCS normative work**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: CATT*

**Decision:** The document was **revised to S3-201461**.

**S3-201217 Add clarifications to the living CR**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **revised to S3-201279**.

**S3-201279 Add clarifications to the living CR**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, Hisilicon, Ericsson, CATT, Nokia, Nokia Shanghai Bell, AT&T, China Unicom*

(Replaces S3-201217)

**Decision:** The document was **revised to S3-201444**.

**S3-201444 Add clarifications to the living CR**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, Hisilicon, Ericsson, CATT, Nokia, Nokia Shanghai Bell, AT&T, China Unicom*

(Replaces S3-201279)

**Decision:** The document was **approved**.

**S3-201456 CR for 5GS LCS normative work**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0850 Cat: B (Rel-16)  
  
 Source: CATT*

**Decision:** The document was **revised to S3-201482**.

**S3-201461 Draft CR as a living baseline for 5GS LCS normative work**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: CATT*

(Replaces S3-201084)

**Decision:** The document was **approved**.

**S3-201482 CR for 5GS LCS normative work**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0850 rev 1 Cat: B (Rel-16)  
  
 Source: CATT*

(Replaces S3-201456)

**Decision:** The document was **revised to S3-201494**.

**S3-201494 CR for 5GS LCS normative work**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0850 rev 2 Cat: B (Rel-16)  
  
 Source: CATT*

(Replaces S3-201482)

**Decision:** The document was **agreed**.

### 4.9 Security Aspects of the 5G Service Based Architecture (Rel-16)

**S3-201015 Aligning abbreviation of Service Communication Proxy with TS 23.501**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0806 Cat: D (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **agreed**.

**S3-201016 Clarification on SEPP role regarding the 3gpp-Sbi-Target-apiRoot HTTP header**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0807 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **agreed**.

**S3-201017 Authentication in indirect communication scenarios**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0808 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-201382**.

**S3-201018 Consumer-signed authorization codes for access token requests by/via the SCP**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201019 The advantages of following existing RFCs**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201020 Draft-CR as baseline for Token-based authorization for indirect communication with and without delegated discovery**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Ericsson*

**Abstract:**

Living document to be used as a baseline

**Decision:** The document was **merged**.

**S3-201021 Token-based authorization using consumer-signed authorization codes**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Ericsson*

**Decision:** The document was **merged**.

**S3-201081 Client authentications in token-based authorization for indirect communication**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: CableLabs, Mavenir, Nokia, Nokia Bell Labs*

**Decision:** The document was **revised to S3-201386**.

**S3-201082 End to end authentication of NF in SBA**

*Type: discussion For: Approval  
 33.501 v..  
 Source: CableLabs, Mavenir, Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-201093 Trust mode in the eSBA**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0819 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **merged**.

**S3-201094 Authorization in the Subscribe-Notify interaction scenarios**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0820 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201095 Clarification on access token ownership verification**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201128 SBA Network Function certificate profile**

*Type: CR For: Agreement  
 33.310 v16.3.0 CR-0110 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, CommScope, Ericsson*

**Abstract:**

TLS entity profile for SBA Network Functions

**Decision:** The document was **revised to S3-201466**.

**S3-201129 Authentication between Network Functions**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0825 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Authentication between Network Functions

**Decision:** The document was **merged**.

**S3-201130 Authentication between Network Function and NRF**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0826 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Authentication between Network Function and NRF

**Decision:** The document was **merged**.

**S3-201233 Validation of Access Token ownership requirement**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Mavenir, Deutsche Telekom*

**Abstract:**

clarification to the validation of the access token during token-based authorization in the case of Direct and Indirect communication

**Decision:** The document was **noted**.

**S3-201234 Clarification of Token-based authorization**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Mavenir, Deutsche Telekom*

**Abstract:**

What is required to enable end-2-end hop-by-hop mutual authentuication

**Decision:** The document was **noted**.

**S3-201235 Clarification of Indirect Communication Mutual Authentication**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Mavenir, Deutsche Telekom*

**Abstract:**

Removing ambiguity regarding mutual authentication between NFs within same PLMN during Indirect communication, e.g., with SCP as a proxy service node

**Decision:** The document was **merged**.

**S3-201382 Authentication in indirect communication scenarios**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0808 rev 1 Cat: B (Rel-16)  
  
 Source: Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon, Mavenir, CableLabs, Deutsche Telekom*

(Replaces S3-201017)

**Decision:** The document was **agreed**.

**S3-201386 Token-based authorization for indirect communication**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: CableLabs, Mavenir, Nokia, Nokia Shanghai Bell, Ericsson, Huawei, Hisilicon*

(Replaces S3-201081)

**Decision:** The document was **approved**.

**S3-201466 SBA Network Function certificate profile**

*Type: CR For: Agreement  
 33.310 v16.3.0 CR-0110 rev 1 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, CommScope, Ericsson, Deutsche Telekom, Verizon, CableLabs*

(Replaces S3-201128)

**Abstract:**

TLS entity profile for SBA Network Functions

**Decision:** The document was **agreed**.

### 4.10 Authentication and key management for applications based on 3GPP credential in 5G (Rel-16)

**S3-201145 Removing Ens**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

**S3-201146 Discussion and working assumption on AKMA open issues**

*Type: discussion For: Endorsement  
 33.535 v..  
 Source: China Mobile*

**Decision:** The document was **noted**.

**S3-201168 Abbreviations**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: KPN*

**Decision:** The document was **approved**.

**S3-201169 Terminology corrections**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: KPN*

**Decision:** The document was **approved**.

**S3-201188 Kaf refresh procedure**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-201446**.

**S3-201189 Derive Kakma and Kakma ID at the same time**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201190 A-TID generation**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201191 Store A-TID in the UDM**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201277 pCR : Derivation of A-TID**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-201387**.

**S3-201278 pCR : Refresh of KAF**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-201283 Discussion paper to support inclusion of GPSI in AKMA**

*Type: discussion For: Endorsement  
 33.535 v..  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201284 Inclusion of GPSI in AKMA**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201285 Storing A-KID in AUSF**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201286 Key update procedure in AKMA**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201287 Authorization of AF in AKMA**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Samsung, Huawei, HiSilicon*

**Decision:** The document was **revised to S3-201450**.

**S3-201343 pCR to TS 33.535: Store AKMA key material in AAnF**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Ericsson*

(Replaces S3-201050)

**Decision:** The document was **approved**.

**S3-201353 coversheet for TS 33.535 for approval**

*Type: TS or TR cover For: (not specified)  
 33.535 v0.4.0  
 Source: China Mobile Com. Corporation*

**Decision:** The document was **approved**.

**S3-201369 AKMA key generation indication**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0804 rev 1 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

(Replaces S3-200965)

**Decision:** The document was **agreed**.

**S3-201370 Derivation of Kaf**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: ZTE Corporation, China Mobile*

(Replaces S3-200969)

**Decision:** The document was **approved**.

**S3-201371 Store AKMA subscription data in UDM**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: ZTE Corporation*

(Replaces S3-200973)

**Decision:** The document was **approved**.

**S3-201387 pCR : Derivation of A-TID**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-201277)

**Decision:** The document was **approved**.

**S3-201390 draft TS 33.535 v0.5.0**

*Type: draft TS For: Approval  
 33.535 v0.5.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

**S3-200965 AKMA key generation indication**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0804 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-201369**.

**S3-200971 Define the A-TID format**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-200972 Key update renegotiation when Kaf expired in clause 6.4.2**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-200973 Store AKMA subscription data in UDM**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-201371**.

**S3-200979 AKMA subscription data confirmation**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: CATT*

**Decision:** The document was **merged**.

**S3-200980 Definition of AKMA subscription data**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: CATT*

**Decision:** The document was **revised to S3-201393**.

**S3-200981 UDM functionality in clause 4.2**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: CATT*

**Decision:** The document was **withdrawn**.

**S3-200982 UDM functionality in clause 4.2**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: CATT*

**Decision:** The document was **withdrawn**.

**S3-200983 UDM functionality in clause 4.2**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: CATT*

**Decision:** The document was **withdrawn**.

**S3-200986 UDM functionality in clause 4.2**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: CATT*

**Decision:** The document was **noted**.

**S3-201004 AKMA-Initiation of AKMA**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Apple*

**Decision:** The document was **revised to S3-201395**.

**S3-201028 Informative Annex: Deployment scenarios for end-to-end security**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: KPN*

**Decision:** The document was **noted**.

**S3-201049 AKMA Architecture discussion**

*Type: discussion For: Discussion  
 33.535 v..  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201050 pCR to TS 33.535: Store AKMA key material in AAnF**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-201343**.

**S3-201051 pCR to TS 33.535: Optimization in AKMA key generation**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-201102 Security requirements on AKMA Key Identifier**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201144 Derivation of KAF**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: China Mobile*

**Decision:** The document was **merged**.

**S3-200966 AKMA key push in clause 6.1**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-200967 AKMA key push in clause 6.2**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-200968 AKMA key push in clause 6.3**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: ZTE Corporation*

**Decision:** The document was **approved**.

**S3-200969 Derivation of Kaf**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-201370**.

**S3-200970 Discussion on the format of A-TID**

*Type: discussion For: Endorsement  
 33.535 v..  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-201002 AKMA-Clarification in text 6.2**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Apple*

**Decision:** The document was **revised to S3-201394**.

**S3-201003 AKMA-KAF refreshment**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Apple*

**Decision:** The document was **merged**.

**S3-201447 Authorization of AF in AKMA**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Samsung, Huawei, HiSilicon,CATT*

**Decision:** The document was **withdrawn**.

**S3-201448 Authorization of AF in AKMA**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Samsung, Huawei, HiSilicon,CATT*

**Decision:** The document was **withdrawn**.

**S3-201449 Authorization of AF in AKMA**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Samsung, Huawei, HiSilicon,CATT*

**Decision:** The document was **withdrawn**.

**S3-201393 Definition of AKMA subscription data**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: CATT*

(Replaces S3-200980)

**Decision:** The document was **approved**.

**S3-201394 AKMA-Clarification in text 6.2**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Apple*

(Replaces S3-201002)

**Decision:** The document was **approved**.

**S3-201395 AKMA-Initiation of AKMA**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Apple*

(Replaces S3-201004)

**Decision:** The document was **approved**.

**S3-201445 Kaf refresh procedure**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-201188)

**Decision:** The document was **withdrawn**.

**S3-201446 Kaf refresh procedure**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-201188)

**Decision:** The document was **approved**.

**S3-201450 Authorization of AF in AKMA**

*Type: pCR For: Approval  
 33.535 v0.4.0  
 Source: Samsung, Huawei, HiSilicon,CATT*

(Replaces S3-201287)

**Decision:** The document was **approved**.

### 4.11 Evolution of Cellular IoT security for the 5G System (Rel-16)

**S3-200923 LS on 5G-GUTI reallocation after paging of a UE in 5GMM-IDLE mode with suspend indication**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C1-200967*

**Decision:** The document was **replied to in S3-201292**.

**S3-200943 LS on SA WG2 status of MT-EDT in Rel-16**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2003505*

**Decision:** The document was **noted**.

**S3-201032 UE caps protection using AS security in EPS Rel-16**

*Type: CR For: Approval  
 33.401 v16.2.0 CR-0694 Cat: C (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-201439**.

**S3-201033 UE caps protection using AS security in 5GS Rel-16**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Ericsson*

**Abstract:**

This draftCR is for the living document.

**Decision:** The document was **revised to S3-201440**.

**S3-201036 Way forward for UE caps protection and NB-IoT Ues**

*Type: discussion For: Endorsement  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201038 DraftCR – Living document for supporting 5G CIoT security**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Ericsson*

**Abstract:**

Baseline for the CIoT normative work.

**Decision:** The document was **revised to S3-201441**.

**S3-201039 Way forward for remaining CIoT issues in Release 16**

*Type: discussion For: Information  
 Source: Ericsson*

**Abstract:**

Rapporteur summary of outstanding issues.

**Decision:** The document was **noted**.

**S3-201042 [Draft CR] Input to MESSAGE when calculating ShortResumeMAC-I in RRC Connection Suspend and Resume**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-201126 Security of RRC UE capability transfer procedure in 5G for CIoT optimisation**

*Type: draftCR For: (not specified)  
 33.501 v16.2.0  
 Source: Intel China Ltd.*

**Decision:** The document was **noted**.

**S3-201127 UE capability transfer for AS security**

*Type: discussion For: (not specified)  
 Source: Intel China Ltd.*

**Decision:** The document was **noted**.

**S3-201203 Reply LS on Calculation of ShortResumeMAC-I**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, Hiliscon*

**Decision:** The document was **revised to S3-201280**.

**S3-201204 Address EN for Calculation of ShortResumeMAC-I for UP CIoT Optimisation**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, Hisilicon, CATT, Qualcomm, Samsung*

**Decision:** The document was **noted**.

**S3-201205 Editorial Change of UP 5GS CIoT Optimisation**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **approved**.

**S3-201216 Protection of UE radio capability transfer for CIoT UEs that only support CP optimization**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201262 Protection of UE radio capability transfer for UEs without AS security**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Qualcomm Incorporated*

(Replaces S3-200764)

**Decision:** The document was **noted**.

**S3-201292 Reply LS on 5G-GUTI reallocation after paging of a UE in 5GMM-IDLE mode with suspend indication**

*Type: LS out For: Approval  
 to CT1  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201439 UE caps protection using AS security in EPS Rel-16**

*Type: CR For: Approval  
 33.401 v16.2.0 CR-0694 rev 1 Cat: C (Rel-16)  
  
 Source: Ericsson*

(Replaces S3-201032)

**Decision:** The document was **agreed**.

**S3-201440 UE caps protection using AS security in 5GS Rel-16**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Ericsson*

(Replaces S3-201033)

**Abstract:**

This draftCR is for the living document.

**Decision:** The document was **approved**.

**S3-201441 DraftCR – Living document for supporting 5G CIoT security**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Ericsson*

(Replaces S3-201038)

**Abstract:**

Baseline for the CIoT normative work.

**Decision:** The document was **approved**.

**S3-201485 Normative text for supporting 5G CIoT security**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0851 Cat: B (Rel-16)  
  
 Source: Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon*

**Abstract:**

This CR contains all the agreed text from the Living draft CR available in S3-201441

**Decision:** The document was **revised to S3-201488**.

**S3-201488 Normative text for supporting 5G CIoT security**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0851 rev 1 Cat: B (Rel-16)  
  
 Source: Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon*

(Replaces S3-201485)

**Abstract:**

This CR contains all the agreed text from the Living draft CR available in S3-201441. Revised to fix the cover sheet.

**Decision:** The document was **agreed**.

### 4.12 Security of the Wireless and Wireline Convergence for the 5G system architecture (Rel-16)

**S3-200914 Reply LS on Further clarifications on GLI/GCI and Line ID/ HFC\_Identifier**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C4-201220*

**Decision:** The document was **noted**.

**S3-200924 Clarification on encryption requirements for AGF interfaces (N1, N2, N3) [WWC]**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: BBF*

**Decision:** The document was **replied to in S3-201380**.

**S3-200925 LS on uniqueness of PEI in certain FN-RG configurations**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S3i200069*

**Decision:** The document was **postponed**.

**S3-201011 UE configuration for non-3GPP access**

*Type: other For: Approval  
 Source: Ericsson LM*

**Decision:** The document was **noted**.

**S3-201065 Correction of SUPI in IKE\_AUTH exchange**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Motorola Mobility, Lenovo, Ericsson*

**Abstract:**

The registration via trusted non-3GPP access is corrected, so that the UE includes the 5G-GUTI or SUCI in the IKE\_AUTH exchange corresponding to the UE identity provided in the AN parameters first.

**Decision:** The document was **revised to S3-201346**.

**S3-201066 Sending the IP address of TNGF to UE**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Motorola Mobility, Lenovo*

**Abstract:**

It is specified that the TNGF sends the TNGF address to UE after it receives the TNGF key from the AMF in step 10a. At this point, the TNGF first sends the TNGF address to UE within an EAP-Request/5G-Notification packet and then sends the EAP-Success pack

**Decision:** The document was **approved**.

**S3-201192 Editoral Change to 33.501 on 5wwc**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-201409**.

**S3-201193 The value of user ID used in 33.501**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-201194 living CR of 5wwc**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-201410**.

**S3-201302 UE pre-configuration for non-3GPP access networks**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0846 Cat: B (Rel-16)  
  
 Source: THALES, ORANGE*

**Abstract:**

This CR corresponds to S3-200783 approved during SA3#Bis-e meeting (April 2020).

**Decision:** The document was **agreed**.

**S3-201303 Correction of trust indication**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Motorola Mobility, Lenovo, Thales*

**Abstract:**

The trust indicaiton during primary authentication was specified for 4G but procedures and principles changed in 5G so that this indication does not fit anymore.

In 5G. when the UE starts the primary authentication, the UE has already decided to use trust

**Decision:** The document was **revised to S3-201486**.

**S3-201346 Correction of SUPI in IKE\_AUTH exchange**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Motorola Mobility, Lenovo, Ericsson, Huawei*

(Replaces S3-201065)

**Abstract:**

The registration via trusted non-3GPP access is corrected, so that the UE includes the 5G-GUTI or SUCI in the IKE\_AUTH exchange corresponding to the UE identity provided in the AN parameters first.

**Decision:** The document was **approved**.

**S3-201380 Reply-LS on FN-RG authentication and related questions**

*Type: LS out For: Approval  
 to BBF  
 Source: Juniper*

**Decision:** The document was **approved**.

**S3-201409 Editoral Change to 33.501 on 5wwc**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, HiSilicon*

(Replaces S3-201192)

**Decision:** The document was **approved**.

**S3-201410 living CR of 5wwc**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, HiSilicon*

(Replaces S3-201194)

**Decision:** The document was **approved**.

**S3-201417 CR of 5WWC**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0849 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **agreed**.

**S3-201486 Correction of trust indication**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Motorola Mobility, Lenovo, Thales, Broadcom*

(Replaces S3-201303)

**Abstract:**

The trust indicaiton during primary authentication was specified for 4G but procedures and principles changed in 5G so that this indication does not fit anymore.

In 5G. when the UE starts the primary authentication, the UE has already decided to use trust

**Decision:** The document was **approved**.

### 4.13 Security aspects of Enhancement of Network Slicing (Rel-16)

**S3-200917 LS on Generic Slice Template with Public Safety Feedback**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: TCCA*

**Decision:** The document was **noted**.

**S3-201062 Draft CR- Adding security requirements to NSSAAF**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Ericsson, Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution targets the living document.

**Decision:** The document was **revised to S3-201438**.

**S3-201067 Living CR for Slice Specific Authentication and Authrorization clauses**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Nokia, Nokia Shanghai Bell, Huawei, HiSilicon, Ericsson, Hewlett-Packard Enterprise, China Mobile, CATT, Interdigital*

(Replaces S3-200807)

**Abstract:**

Text for subclauses for eNS

**Decision:** The document was **noted**.

**S3-201070 Discussion on EN on sending S-NSSAI to AAA-S**

*Type: discussion For: Endorsement  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-201071 Deletion of EN in clause X.X.3 on sending S-NSSAI**

*Type: draftCR For: (not specified)  
 33.501 v16.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-201075 eNS Living CR showing separate NSSAAF and AAA-P**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-201462**.

**S3-201100 Security requirements on NSSAAF**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **merged**.

**S3-201117 DP\_on\_resolving\_the\_gaps\_in\_NSSAA\_procedure**

*Type: discussion For: Endorsement  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201118 LS\_on\_resolving\_the\_gaps\_in\_NSSAA\_procedure**

*Type: LS out For: Approval  
 to SA2  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201154 Address EN on whether to transmit NSSAI to AAA**

*Type: draftCR For: Agreement  
 33.501 v16.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201155 validity peirod of NSSAA results**

*Type: draftCR For: Agreement  
 33.501 v16.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201156 Serving network name in NSSAA**

*Type: draftCR For: Agreement  
 33.501 v16.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201157 Normative text for NSaaS**

*Type: draftCR For: Agreement  
 33.501 v16.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201438 Draft CR- Adding security requirements to NSSAAF**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon*

(Replaces S3-201062)

**Abstract:**

This contribution targets the living document.

**Decision:** The document was **approved**.

**S3-201462 eNS Living CR showing separate NSSAAF and AAA-P**

*Type: draftCR For: Approval  
 33.501 v16.2.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201075)

**Decision:** The document was **approved**.

### 4.14 Security for NR Integrated Access and Backhaul (Rel-16)

**S3-200974 Adding a definition for IAB-UE**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0805 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Decision:** The document was **agreed**.

**S3-201265 F1 security setup with certificate based IKEv2 authentication**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0798 rev 1 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Ericsson, Intel*

(Replaces S3-200762)

**Decision:** The document was **merged**.

**S3-201266 F1 security setup with PSK based IKEv2 authentication**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0799 rev 1 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Ericsson, Intel*

(Replaces S3-200763)

**Decision:** The document was **merged**.

**S3-201267 Security of dynamic PSK**

*Type: discussion For: Endorsement  
 Source: Qualcomm Incorporated, Ericsson*

**Decision:** The document was **noted**.

**S3-201293 F1 interface security set-up procedure**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0844 Cat: B (Rel-16)  
  
 Source: Samsung, Nokia, Nokia Shanghai Bell, ZTE, T-Mobile, Mavenir, CableLabs, Lenovo, Motorola Mobility, Thales*

**Decision:** The document was **revised to S3-201437**.

**S3-201313 Report on Rel-16 IAB open issues e-mail discussion**

*Type: report For: (not specified)  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201334 Editorial change to the security for IAB**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0848 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **agreed**.

**S3-201335 Add requirement for OAM to IAB ENDC**

*Type: CR For: Approval  
 33.401 v16.2.0 CR-0697 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **agreed**.

**S3-201437 F1 interface security set-up procedure**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0844 rev 1 Cat: B (Rel-16)  
  
 Source: Samsung, Nokia, Nokia Shanghai Bell, ZTE, T-Mobile, Mavenir, CableLabs, Lenovo, Motorola Mobility, Thales, Intel, Qualcomm Incorporated, Ericsson*

(Replaces S3-201293)

**Decision:** The document was **agreed**.

### 4.15 Security aspects of SEAL (Rel-16)

**S3-201291 Clean-up: TS 33.434**

*Type: pCR For: Approval  
 33.434 v0.3.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-201396**.

**S3-201396 Clean-up: TS 33.434**

*Type: pCR For: Approval  
 33.434 v0.3.0  
 Source: Samsung*

(Replaces S3-201291)

**Decision:** The document was **approved**.

**S3-201401 Draft 33.434 v0.4.0**

*Type: draft TS For: (not specified)  
 33.434 v0.4.0  
 Source: Samsung*

**Decision:** The document was **approved**.

**S3-201413 Cover sheet TS 33.434**

*Type: TS or TR cover For: (not specified)  
 33.434 v0.4.0  
 Source: Samsung*

**Decision:** The document was **approved**.

### 4.16 Security Aspects of 3GPP support for Advanced V2X Services (Rel-16)

**S3-200931 LS on ITU-T SG17 activity on V2X security**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ITU-T SG17*

**Decision:** The document was **noted**.

**S3-200937 Privacy Threat of Knpr ID**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: InterDigital Communications*

**Abstract:**

This contribution proposes to document the newly-introduced privacy threat that allows the adversary to link two subsequent connections due to either the same KNRP ID or the same partial KNRP ID value being sent in the Direct Communication Request message

**Decision:** The document was **merged**.

**S3-200938 Remediation for Privacy of Knpr ID Threat**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: InterDigital Communications*

**Abstract:**

This contribution proposes updates of KNRP ID to prevent two subsequent PC5 unicast connections between two UEs from being linked. It is also clarified that identity privacy procedures are always used with signalling protection enabled.

**Decision:** The document was **revised to S3-201344**.

**S3-200939 Clarifications related to link identifier messages**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: InterDigital Communications*

**Decision:** The document was **revised to S3-201345**.

**S3-200951 Discussion Paper - Countermeasures for Privacy of KNRP ID Threat**

*Type: discussion For: Discussion  
 Source: InterDigital Communications*

**Abstract:**

This contribution discusses possible countermeasures for new privacy threat of KNRP ID being possibly linked between two subsequent PC5 unicast connections for two UEs.

**Decision:** The document was **endorsed**.

**S3-200952 TS 33.536 - Security policy**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: LG Electronics Inc.*

**Abstract:**

This pCR proposes some changes to clarify the mechanism for security policy handling.

**Decision:** The document was **revised to S3-201342**.

**S3-200975 Update the clause 5.3.3.1.4.3**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-201385**.

**S3-200976 Clean up of V2X TS**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: ZTE Corporation*

**Decision:** The document was **approved**.

**S3-201024 PC5 SL - LCID and BEARER**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201096 eV2X: removing the UP security policy**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201161 Discussion paper for eV2X groupcast privacy**

*Type: discussion For: Endorsement  
 33.536 v..  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201162 Groupcast Privacy**

*Type: draftCR For: Agreement  
 33.536 v1.1.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201163 Group ID conversion**

*Type: draftCR For: Agreement  
 33.536 v1.1.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201220 Propose to protect the privacy of K\_NRP ID**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201221 Propose to protect Application Layer ID from privacy violations**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201222 Signalling security mandatory activation for unicast**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Huawei, Hiliscon*

**Discussion:**

Huawei asked to be minuted: "Huawei and Hisilicon propose that the bidding down attacks caused by eV2X unprotected scenarios as feasible vulnerabilities. Huawei and Hisilicon propose to find solution(s) to mitigate the vulnerabilities."

**Decision:** The document was **noted**.

**S3-201223 Clarification on procedures without security protection**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **revised to S3-201454**.

**S3-201224 Clarification on input parameters of Null protection algorithms**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **revised to S3-201412**.

**S3-201253 Resolving the editor’s note on the protection of messages**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Qualcomm Incorporated*

(Replaces S3-200757)

**Decision:** The document was **approved**.

**S3-201254 Privacy of K\_NRP ID**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Qualcomm Incorporated*

(Replaces S3-200756)

**Decision:** The document was **noted**.

**S3-201255 Proposal to resolve the Editor’s note of the size of COUNT**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Qualcomm Incorporated*

(Replaces S3-200755)

**Decision:** The document was **approved**.

**S3-201256 Leaving destination identity privacy to the application**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-201424**.

**S3-201257 Allocation of FC values for TS 33.356**

*Type: CR For: Agreement  
 33.220 v16.0.0 CR-0199 rev 1 Cat: C (Rel-16)  
  
 Source: Qualcomm Incorporated*

(Replaces S3-200350)

**Decision:** The document was **agreed**.

**S3-201319 LS response to SA3 on the security related issues for NR SL**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R2-2004083*

**Decision:** The document was **replied to in S3-201326**.

**S3-201326 Reply to: LS response to SA3 on the security related issues for NR SL**

*Type: LS out For: approval  
 to RAN2  
 Source: CATT*

**Decision:** The document was **revised to S3-201483**.

**S3-201336 Clarifications related to link identifier update messages**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: InterDigital Communications*

**Abstract:**

This pCR is a revision of S3-200939. It adds clarifications as to when and how is signalling protected for link identifier update, Layer-2 link modification and Layer-2 link release procedures.

**Decision:** The document was **withdrawn**.

**S3-201338 draft TS 33.536 v1.2.0**

*Type: draft TS For: Approval  
 33.536 v1.2.0  
 Source: LG Electronics Inc.*

**Abstract:**

draft TS 33.536 v1.2.0 implements the agreed pCRs during SA3#99e meeting

**Decision:** The document was **approved**.

**S3-201340 Presentation of TS 33.536 to TSG for approval**

*Type: TS or TR cover For: Approval  
 33.536 v1.2.0  
 Source: LG Electronics Inc.*

**Abstract:**

This cover sheet is intended to send the TS to the plenary for approval

**Decision:** The document was **approved**.

**S3-201342 TS 33.536 - Security policy**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: LG Electronics Inc.*

(Replaces S3-200952)

**Abstract:**

This pCR proposes some changes to clarify the mechanism for security policy handling.

**Decision:** The document was **approved**.

**S3-201344 Remediation for Privacy of KNRP ID Threat**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: InterDigital Communications*

(Replaces S3-200938)

**Abstract:**

This contribution details a new privacy threat and proposes to enable updates of KNRP ID to prevent two subsequent PC5 unicast connections between two UEs from being linked.

**Decision:** The document was **approved**.

**S3-201345 Clarifications related to link identifier update messages**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: InterDigital Communications*

(Replaces S3-200939)

**Abstract:**

This pCR is a revision of S3-200939 based on online and offline comments received during SA3#99-e.

**Decision:** The document was **approved**.

**S3-201385 Update the clause 5.3.3.1.4.3**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: ZTE Corporation*

(Replaces S3-200975)

**Decision:** The document was **approved**.

**S3-201412 Clarification on input parameters of Null protection algorithms**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Huawei, Hiliscon*

(Replaces S3-201224)

**Decision:** The document was **approved**.

**S3-201424 Leaving destination identity privacy to the application**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Qualcomm Incorporated*

(Replaces S3-201256)

**Decision:** The document was **approved**.

**S3-201454 Clarification on procedures without security protection**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Huawei, Hiliscon*

(Replaces S3-201223)

**Decision:** The document was **approved**.

**S3-201483 Reply to: LS response to SA3 on the security related issues for NR SL**

*Type: LS out For: Approval  
 to RAN2  
 Source: CATT*

(Replaces S3-201326)

**Decision:** The document was **approved**.

### 4.17 User Plane Gateway Function for Inter-PLMN Security (Rel-16)

**S3-201246 Security entities at the perimeter of the 5G Core network**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0833 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Juniper*

**Decision:** The document was **revised to S3-201431**.

**S3-201431 Security entities at the perimeter of the 5G Core network**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0833 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Juniper*

(Replaces S3-201246)

**Decision:** The document was **agreed**.

### 4.18 Provision of Access to Restricted Local Operator Services by Unauthenticated UEs – Security Aspects (Rel-16)

### 4.19 3GPP profiles for cryptographic algorithms and security protocols (Rel-16)

**S3-200987 Update on RSA exponent requirement**

*Type: CR For: (not specified)  
 33.310 v16.3.0 CR-0108 Cat: F (Rel-16)  
  
 Source: Apple Computer Trading Co. Ltd*

**Decision:** The document was **revised to S3-201399**.

**S3-201045 Elliptic Curve Group Size**

*Type: CR For: Agreement  
 33.210 v16.3.0 CR-0069 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-201422**.

**S3-201046 TLS 1.3 cipher suites**

*Type: CR For: Agreement  
 33.210 v16.3.0 CR-0070 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-201423**.

**S3-201047 Corrections on PKCS#1v1.5 padding and Elliptic Curves**

*Type: CR For: Agreement  
 33.310 v16.3.0 CR-0109 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-201419**.

**S3-201399 Update on RSA exponent requirement**

*Type: CR For: (not specified)  
 33.310 v16.3.0 CR-0108 rev 1 Cat: F (Rel-16)  
  
 Source: Apple Computer Trading Co. Ltd*

(Replaces S3-200987)

**Decision:** The document was **agreed**.

**S3-201419 Corrections on PKCS#1v1.5 padding and Elliptic Curves**

*Type: CR For: Agreement  
 33.310 v16.3.0 CR-0109 rev 1 Cat: F (Rel-16)  
  
 Source: Ericsson*

(Replaces S3-201047)

**Decision:** The document was **agreed**.

**S3-201422 Elliptic Curve Group Size**

*Type: CR For: Agreement  
 33.210 v16.3.0 CR-0069 rev 1 Cat: F (Rel-16)  
  
 Source: Ericsson*

(Replaces S3-201045)

**Decision:** The document was **agreed**.

**S3-201423 TLS 1.3 cipher suites**

*Type: CR For: Agreement  
 33.210 v16.3.0 CR-0070 rev 1 Cat: F (Rel-16)  
  
 Source: Ericsson*

(Replaces S3-201046)

**Decision:** The document was **agreed**.

### 4.20 Integration of GBA into 5GC (Rel-17)

**S3-201052 Integration of GBA into 5GC**

*Type: discussion For: Information  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201053 Living document of Service Based Interfaces for GBA**

*Type: draftCR For: Approval  
 33.220 v16.0.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-201477**.

**S3-201054 Living document of Service Based Interfaces for GBA Push**

*Type: draftCR For: Approval  
 33.223 v15.0.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-201478**.

**S3-201477 Living document of Service Based Interfaces for GBA**

*Type: draftCR For: Approval  
 33.220 v16.0.0  
 Source: Ericsson*

(Replaces S3-201053)

**Decision:** The document was **approved**.

**S3-201478 Living document of Service Based Interfaces for GBA Push**

*Type: draftCR For: Approval  
 33.223 v15.0.0  
 Source: Ericsson*

(Replaces S3-201054)

**Decision:** The document was **approved**.

### 4.21 Security Assurance Specification for IMS (Rel-17)

**S3-201091 Skeleton for IMS SCAS TS 33.226**

*Type: draft TS For: Approval  
 33.226 v0.0.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **approved**.

**S3-201092 Scope for IMS SCAS TS 33.226**

*Type: pCR For: Approval  
 33.226 v0.0.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **approved**.

**S3-201433 draft TS 33.226 v0.1.0**

*Type: draft TS For: Approval  
 33.226 v0.1.0  
 Source: Huawei Technologies Sweden AB*

**Decision:** The document was **approved**.

### 4.22 Security Assurance Specification Enhancements for 5G (Rel-17)

**S3-201315 Add DTLS requirement to 33.117**

*Type: pCR For: Approval  
 33.226 v0.0.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

**S3-201316 Add inactivate scenario to gNB SCAS**

*Type: pCR For: Approval  
 33.226 v0.0.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

**S3-201408 Add DTLS requirement**

*Type: draftCR For: Approval  
 33.117 v16.4.1  
 Source: Huawei, HiSilicon*

(Replaces S3-201323)

**Decision:** The document was **approved**.

**S3-201323 Add DTLS requirement**

*Type: draftCR For: Approval  
 33.117 v16.4.1  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-201408**.

**S3-201324 Add inactivate scenario to gNB SCAS**

*Type: draftCR For: Approval  
 33.511 v..  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

### 4.23 Security Assurance Specification for Service Communication Proxy (SECOP) (Rel-17)

**S3-201176 Skeleton of Security Assurance Specification for Service Communication Proxy (SECOP)**

*Type: draft TS For: Approval  
 33.522 v0.0.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This pCR proposes the skeleton of Security Assurance Specification for Service Communication Proxy (SECOP) network product class (TS 33.5xx), which is outlined in the enclosed companion contribution.

**Decision:** The document was **revised to S3-201373**.

**S3-201177 SCAS SECOP: Scope**

*Type: pCR For: Approval  
 33.522 v0.0.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This pCR proposes the scope of SCAS SECOP based on the proposed skeleton of the specification.

**Decision:** The document was **revised to S3-201374**.

**S3-201178 SCAS SECOP: Introduction and General Approach**

*Type: pCR For: Approval  
 33.522 v0.0.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This pCR proposes the text in the clauses of Introduction for SECOP-specific security requirements and related test cases.

**Decision:** The document was **revised to S3-201375**.

**S3-201373 Skeleton of Security Assurance Specification for Service Communication Proxy (SECOP)**

*Type: pCR For: Approval  
 33.522 v0.0.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201176)

**Abstract:**

This pCR proposes the skeleton of Security Assurance Specification for Service Communication Proxy (SECOP) network product class (TS 33.5xx), which is outlined in the enclosed companion contribution.

**Decision:** The document was **approved**.

**S3-201374 SCAS SECOP: Scope**

*Type: pCR For: Approval  
 33.522 v0.0.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201177)

**Abstract:**

This pCR proposes the scope of SCAS SECOP based on the proposed skeleton of the specification.

**Decision:** The document was **approved**.

**S3-201375 SCAS SECOP: Introduction and General Approach**

*Type: pCR For: Approval  
 33.522 v0.0.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201178)

**Abstract:**

This pCR proposes the text in the clauses of Introduction for SECOP-specific security requirements and related test cases.

**Decision:** The document was **approved**.

**S3-201379 draft TS 33.522 (v0.1.0)**

*Type: draft TS For: Approval  
 33.522 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This is the draft TS updated the agreed pCRs.

**Decision:** The document was **approved**.

### 4.24 Security Assurance Specification for 5G NWDAF (Rel-17)

**S3-201148 The skeleton of NWDAF SCAS**

*Type: draft TS For: Approval  
 33.521 v0.0.0  
 Source: China Mobile Com. Corporation*

**Decision:** The document was **approved**.

**S3-201149 The scope of NWDAF SCAS TS**

*Type: pCR For: Approval  
 33.521 v0.0.0  
 Source: China Mobile Com. Corporation*

**Decision:** The document was **approved**.

**S3-201389 draft TS 33.521 v0.1.0**

*Type: draft TS For: (not specified)  
 33.521 v0.1.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

### 4.25 Security Assurance Specification for Non-3GPP InterWorking Function (N3IWF) (Rel- 17)

**S3-200940 Threat related to no authentication on N3IWF**

*Type: draftCR For: Approval  
 33.926 v16.3.0  
 Source: China Telecommunications,Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-200984 Scope of SCAS\_5G\_N3IWF**

*Type: pCR For: (not specified)  
 33.520 v0.0.0  
 Source: China Unicom*

**Decision:** The document was **approved**.

**S3-200985 Skeleton of SCAS\_5G\_N3IWF**

*Type: draft TS For: (not specified)  
 33.520 v0.0.0  
 Source: China Unicom*

**Decision:** The document was **approved**.

**S3-201434 Skeleton of SCAS\_5G\_N3IWF**

*Type: pCR For: (not specified)  
 33.520 v0.0.1  
 Source: China Unicom*

**Decision:** The document was **approved**.

**S3-201435 draft TS 33.520**

*Type: draft TS For: (not specified)  
 33.520 v0.1.0  
 Source: China Unicom*

**Decision:** The document was **approved**.

### 4.26 Other work areas

**S3-200934 Editorial corrections to NDS/IP**

*Type: CR For: (not specified)  
 33.210 v16.2.0 CR-0068 Cat: F (Rel-16)  
  
 Source: Juniper Networks*

**Decision:** The document was **revised to S3-201367**.

**S3-200935 Editorial corrections to NDS/AF**

*Type: CR For: (not specified)  
 33.102 v15.1.0 CR-0280 Cat: F (Rel-16)  
  
 Source: Juniper Networks*

**Decision:** The document was **revised to S3-201368**.

**S3-200950 Revision of null-scheme SUCI usage in 5G NR**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0800 Cat: C (Rel-16)  
  
 Source: T-Mobile USA Inc.*

**Abstract:**

A 5G-capable UE with a 4G USIM may not have the Home Network Public Key provisioned so it will send the SUPI in the clear (unprotected) when doing an initial registration to a gNB over NR. This clarifies UE behavior to prevent UE from using the null-sche

**Decision:** The document was **not pursued**.

**S3-201099 Clarification on Handling of ICMP**

*Type: CR For: Approval  
 33.117 v16.4.1 CR-0061 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201147 Status of RFC 5448bis update**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201183 Correction to definition about the case of 'Temporary group call – user regroup''**

*Type: CR For: Approval  
 33.180 v15.7.0 CR-0145 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **agreed**.

**S3-201304 SUCI computation: implementers' test data for network specific identifier-based SUPI**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0847 Cat: F (Rel-16)  
  
 Source: THALES*

**Abstract:**

SUCI computation: implementers' test data for network specific identifier-based SUPI

**Decision:** The document was **revised to S3-201363**.

**S3-201363 SUCI computation: implementers' test data for network specific identifier-based SUPI**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0847 rev 1 Cat: B (Rel-16)  
  
 Source: THALES*

(Replaces S3-201304)

**Abstract:**

SUCI computation: implementers' test data for network specific identifier-based SUPI

**Decision:** The document was **agreed**.

**S3-201367 Editorial corrections to NDS/IP**

*Type: CR For: (not specified)  
 33.210 v16.3.0 CR-0068 rev 1 Cat: F (Rel-16)  
  
 Source: Juniper Networks*

(Replaces S3-200934)

**Decision:** The document was **agreed**.

**S3-201368 Editorial corrections to NDS/AF**

*Type: CR For: (not specified)  
 33.102 v15.1.0 CR-0280 rev 1 Cat: F (Rel-16)  
  
 Source: Juniper Networks*

(Replaces S3-200935)

**Decision:** The document was **agreed**.

### 4.27 New work item proposals

**S3-200977 New WID on Security Assurance Specification for Inter PLMN UP Security (IPUPS)**

*Type: WID new For: Approval  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-201372**.

**S3-201308 draft WID - Normative changes for UPIP**

*Type: WID new For: Approval  
 Source: VODAFONE Group Plc*

(Replaces S3-200632)

**Abstract:**

This WID covers changes to SA3 specification to implement updates to UPIP

**Decision:** The document was **revised to S3-201455**.

**S3-201372 New WID on Security Assurance Specification for Inter PLMN UP Security (IPUPS)**

*Type: WID new For: Approval  
 Source: ZTE Corporation*

(Replaces S3-200977)

**Decision:** The document was **agreed**.

**S3-201455 draft WID - Normative changes for UPIP**

*Type: WID new For: Approval  
 Source: VODAFONE Group Plc*

(Replaces S3-201308)

**Abstract:**

This WID covers changes to SA3 specification to implement updates to UPIP

**Decision:** The document was **agreed**.

## 5 Studies

### 5.1 Study on Security Aspects of the 5G Service Based Architecture

**S3-201014 Presentation of Specification/Report to TSG: TR 33.855**

*Type: TS or TR cover For: Agreement  
 33.855 v..  
 Source: Ericsson*

**Decision:** The document was **revised to S3-201480**.

**S3-201097 Update on the Subscribe-Notify Key issues and its conclusion**

*Type: pCR For: Approval  
 33.855 v1.9.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **noted**.

**S3-201480 Presentation of Specification/Report to TSG: TR 33.855**

*Type: TS or TR cover For: Agreement  
 33.855 v..  
 Source: Ericsson*

(Replaces S3-201014)

**Decision:** The document was **approved**.

### 5.2 Study on Authentication and key management for applications based on 3GPP credential in 5G

**S3-201143 Clean up of TR 33.835**

*Type: CR For: Approval  
 33.835 v16.0.0 CR-0001 Cat: F (Rel-16)  
  
 Source: China Mobile*

**Decision:** The document was **agreed**.

### 5.3 Study on Evolution of Cellular IoT security for the 5G System

**S3-201034 Presentation of Specification/Report to TSG:**

**TR 33.861, Version 1.6.0**

*Type: TS or TR cover For: Agreement  
 33.861 v..  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-201035 Further evaluation to Solution #25: Security solution for preventing Botnet Attacks from Improper CIOT Device Use**

*Type: pCR For: Approval  
 33.861 v1.5.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-201383**.

**S3-201037 Major clean-up of TR**

*Type: pCR For: Approval  
 33.861 v1.5.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-201383 Further evaluation to Solution #25: Security solution for preventing Botnet Attacks from Improper CIOT Device Use**

*Type: pCR For: Approval  
 33.861 v1.5.0  
 Source: Ericsson*

(Replaces S3-201035)

**Decision:** The document was **approved**.

**S3-201384 Draft TR 33.861**

*Type: draft TR For: Approval  
 33.861 v1.6.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

### 5.4 Study on 5G security enhancement against false base stations

**S3-200944 Reply LS to SA3 on FBS detection**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R2-1914224*

**Decision:** The document was **postponed**.

**S3-200988 Draft reply LS to RAN2 on reply LS to SA3 on FBS detection(R2-1914224/S3-200944)**

*Type: LS out For: Approval  
 to RAN2  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-200989 5GFBS-Evaluation for solution#17**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-200990 5GFBS-Conclusion of key issue#1-RRCResumeRequest**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-200991 5GFBS-Evaluation for solution#7**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **revised to S3-201475**.

**S3-200992 5GFBS-Conclusion of key issue#3**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-200993 5GFBS-Evaluation for solution#19**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-200994 5GFBS-Solving EN on PKI implementation for solution #11**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-200995 5GFBS-Solving EN on roaming issue for solution #11**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **approved**.

**S3-200996 5GFBS-Solving EN on key provisioning for solution #11**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **approved**.

**S3-200997 5GFBS-Adding Clarification on bidding down attack for solution #11**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **approved**.

**S3-200998 5GFBS-Solving EN on MitM attack for solution #11**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-200999 5GFBS-Solving EN on interworking for solution #11**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **approved**.

**S3-201000 5GFBS-5GFBS-Addressing the EN on how to prevent UE camping on the FBS for solution#11**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-201001 5GFBS-Notes of 5GFBS conference call on April 28th 2020**

*Type: report For: Information  
 33.809 v0.8.0  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-201023 [DRAFT] Reply LS on false base station detection**

*Type: LS out For: Approval  
 to RAN2, cc RAN3  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201057 Updates to solution #17 - resolving ENs**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201166 Reply LS to RAN2 on FBS detection**

*Type: LS out For: Approval  
 to RAN2, cc RAN3  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201167 Clarification for solution 4**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201210 LS on Backward Compatibility of RRC Resume Request message Protection**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201219 NAS security based MIB/SIBs integrity protection**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201268 Evaluation on UE behavior on detection of false signature**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-201269 Evaluation on signing key management**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-201270 Solution #4 Evaluation (Enriched MR)**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-201271 Conclusion of Key Issue #2**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-201288 Updates to Solution#19 on hash calculation**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-201459**.

**S3-201289 Conclusion for Key issue#2 in FBS**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201290 Way forward for Resumecause protection**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201306 pCR: Conclusion of Key issue#5**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Motorola Mobility, Lenovo*

**Abstract:**

This pCR proposes to add the conclusion of key issue#5.

**Decision:** The document was **noted**.

**S3-201309 Delegated digital signing for mitigating false base stations**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: CableLabs, Apple, Intel, Deutsche Telekom AG, InterDigital Communications, MITRE, Rogers Communications, Charter Communications*

**Decision:** The document was **revised to S3-201463**.

**S3-201459 Updates to Solution#19 on hash calculation**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Samsung*

(Replaces S3-201288)

**Decision:** The document was **approved**.

**S3-201463 Delegated digital signing for mitigating false base stations**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: CableLabs, Apple, Intel, Deutsche Telekom AG, InterDigital Communications, MITRE, Rogers Communications, Charter Communications*

(Replaces S3-201309)

**Decision:** The document was **approved**.

**S3-201475 5GFBS-Evaluation for solution#7**

*Type: pCR For: Approval  
 33.809 v0.8.0  
 Source: Apple*

(Replaces S3-200991)

**Decision:** The document was **approved**.

**S3-201476 TR33.809**

*Type: draft TR For: Approval  
 33.809 v0.9.0  
 Source: Apple Computer Trading Co. Ltd*

**Decision:** The document was **approved**.

### 5.5 Study on Security aspects of Enhancement of Network Slicing

**S3-200978 Editorial correction to solution#12**

*Type: pCR For: Approval  
 33.813 v0.8.0  
 Source: ZTE Corporation*

**Decision:** The document was **approved**.

**S3-201059 Conclusion on KI#6**

*Type: pCR For: Approval  
 33.813 v0.8.0  
 Source: Ericsson, Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-201060 Conclusion on KI#3**

*Type: pCR For: Approval  
 33.813 v0.8.0  
 Source: Ericsson, Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-201061 Conclusion on KI#7**

*Type: pCR For: Approval  
 33.813 v0.8.0  
 Source: Ericsson, Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-201068 Draft TR 33.813 Study on Enhancement of Network Slice security**

*Type: draft TR For: Approval  
 33.813 v0.8.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-194543)

**Decision:** The document was **withdrawn**.

**S3-201158 Conclusion to KI#3**

*Type: pCR For: Approval  
 33.813 v0.8.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201159 Update to Solution 8**

*Type: pCR For: Approval  
 33.813 v0.8.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-201160 Conclusion to KI#6**

*Type: pCR For: Approval  
 33.813 v0.8.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201261 Correcting the S-NSSAI length in solution 10 in TR 33.813**

*Type: pCR For: Approval  
 33.813 v0.8.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-201426**.

**S3-201360 draft TR on Study on Enhancement of Network Slicing**

*Type: draft TR For: Approval  
 33.813 v0.9.0  
 Source: Nokia*

**Decision:** The document was **approved**.

**S3-201361 Cover Sheet for TR33.813 for presentation to SA**

*Type: TS or TR cover For: Approval  
 33.813 v0.9.0  
 Source: Nokia*

**Decision:** The document was **approved**.

**S3-201426 Correcting the S-NSSAI length in solution 10 in TR 33.813**

*Type: pCR For: Approval  
 33.813 v0.8.0  
 Source: Qualcomm Incorporated*

(Replaces S3-201261)

**Decision:** The document was **approved**.

### 5.6 Study on SECAM and SCAS for 3GPP virtualized network products

**S3-201107 Security requirements on test case for type 1 GVNP**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-201349**.

**S3-201108 Security requirements on test case for type 2 GVNP**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **merged**.

**S3-201123 NFV\_SCAS\_TC\_VNF\_Package\_integrity**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **merged**.

**S3-201124 NFV\_SCAS\_requirement\_on\_authorization\_of\_resource\_management**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-201352**.

**S3-201131 Adding security threats for GVNP**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

**S3-201132 Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 1**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

**Decision:** The document was **revised to S3-201355**.

**S3-201133 Adding test case into clause 5.2.5.5.3.3.5**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

**Decision:** The document was **revised to S3-201356**.

**S3-201134 Adding security requirements and related test cases for GVNP of type 2**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

**Decision:** The document was **revised to S3-201357**.

**S3-201135 Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 2**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

**Decision:** The document was **revised to S3-201358**.

**S3-201136 Adding security requirements for GVNP of type 3**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

**S3-201137 Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 3**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

**Decision:** The document was **revised to S3-201359**.

**S3-201138 Adding generic assets, threats and requirements for virtualised network functions supporting SBA interfaces**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

**S3-201139 Adding improvement of SCAS and new security requirements**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

**S3-201230 Update to the critical assets of GVNP**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This pCR proposes to update the critical assets of GVNP for type 1.

**Decision:** The document was **revised to S3-201376**.

**S3-201231 Update to the threat analysis of software tampering**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Nokia. Nokia Shanghai Bell*

**Abstract:**

This pCR proposes to update the threat analysis of software tampering.

**Decision:** The document was **revised to S3-201377**.

**S3-201232 Update to the requirements of VNF package integrity**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This pCR proposes to update the requirements of VNF package integrity.

**Decision:** The document was **revised to S3-201378**.

**S3-201349 Security requirements on test case for type 1 GVNP**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Huawei, Hisilicon*

(Replaces S3-201107)

**Decision:** The document was **approved**.

**S3-201352 NFV\_SCAS\_requirement\_on\_authorization\_of\_resource\_management**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Huawei, Hisilicon*

(Replaces S3-201124)

**Decision:** The document was **approved**.

**S3-201355 Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 1**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

(Replaces S3-201132)

**Decision:** The document was **approved**.

**S3-201356 Adding test case into clause 5.2.5.5.3.3.5**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

(Replaces S3-201133)

**Decision:** The document was **approved**.

**S3-201357 Adding security requirements and related test cases for GVNP of type 2**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

(Replaces S3-201134)

**Decision:** The document was **approved**.

**S3-201358 Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 2**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

(Replaces S3-201135)

**Decision:** The document was **approved**.

**S3-201359 Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 3**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: China Mobile*

(Replaces S3-201137)

**Decision:** The document was **approved**.

**S3-201376 Update to the critical assets of GVNP**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201230)

**Abstract:**

This pCR proposes to update the critical assets of GVNP for type 1.

**Decision:** The document was **approved**.

**S3-201377 Update to the threat analysis of software tampering**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Nokia. Nokia Shanghai Bell*

(Replaces S3-201231)

**Abstract:**

This pCR proposes to update the threat analysis of software tampering.

**Decision:** The document was **approved**.

**S3-201378 Update to the requirements of VNF package integrity**

*Type: pCR For: Approval  
 33.818 v0.6.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-201232)

**Abstract:**

This pCR proposes to update the requirements of VNF package integrity.

**Decision:** The document was **approved**.

**S3-201388 draft TR 33.818 v0.7.0**

*Type: draft TR For: (not specified)  
 33.818 v0.7.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

### 5.7 Study on Security for 5GS Enhanced support of Vertical and LAN Services

**S3-201098 Adding conclusion on KI #6.2**

*Type: CR For: Approval  
 33.819 v16.0.0 CR-0010 Cat: F (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **agreed**.

**S3-201114 New solution for DDoS mitigation**

*Type: CR For: Approval  
 33.819 v16.0.0 CR-0011 Cat: B (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201115 conclusion for KI#6.1**

*Type: CR For: Approval  
 33.819 v16.0.0 CR-0012 Cat: B (Rel-16)  
  
 Source: Huawei, Hisilicon*

**Decision:** The document was **not pursued**.

**S3-201164 Conclusion for Key Issue #2.2**

*Type: draftCR For: Agreement  
 33.819 v16.0.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-201165 Conclusion for Key Issue #2.3**

*Type: draftCR For: Agreement  
 33.819 v16.0.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-201236 VLAN introduction**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0001 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-200375)

**Decision:** The document was **revised to S3-201470**.

**S3-201237 Resolution of ed note on serving network name**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0002 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-200376)

**Decision:** The document was **revised to S3-201469**.

**S3-201238 KI on interworking NPN and PLMN - security req**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0003 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-200377)

**Decision:** The document was **revised to S3-201468**.

**S3-201239 KI on service continuity - threats and reqs**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0004 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-200378)

**Decision:** The document was **revised to S3-201481**.

**S3-201240 Resolution of editors note on AAA**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0005 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-200379)

**Decision:** The document was **agreed**.

**S3-201241 Threats and requirements on AAA**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0006 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-200380)

**Decision:** The document was **revised to S3-201467**.

**S3-201242 Resolution of editor's note in solution 1**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0007 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-200381)

**Decision:** The document was **agreed**.

**S3-201243 Resolution of editor's note in solution 15**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0008 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-200382)

**Decision:** The document was **agreed**.

**S3-201244 UP security policy enforcement in 5GLAN**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0009 rev 1 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-200383)

**Decision:** The document was **agreed**.

**S3-201467 Threats and requirements on AAA**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0006 rev 2 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-201241)

**Decision:** The document was **agreed**.

**S3-201468 KI on interworking NPN and PLMN - security req**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0003 rev 2 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-201238)

**Decision:** The document was **agreed**.

**S3-201469 Resolution of ed note on serving network name**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0002 rev 2 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-201237)

**Decision:** The document was **agreed**.

**S3-201470 VLAN introduction**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0001 rev 2 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-201236)

**Decision:** The document was **agreed**.

**S3-201481 KI on service continuity - threats and reqs**

*Type: CR For: Agreement  
 33.819 v16.0.0 CR-0004 rev 2 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-201239)

**Decision:** The document was **agreed**.

### 5.8 Study on LTKUP Detailed solutions

**S3-201311 pCR to TR33.935 - Addition of Diffie - Helman Key agreements section**

*Type: pCR For: Approval  
 33.935 v0.1.0  
 Source: Vodafone GmbH*

(Replaces S3-191482)

**Decision:** The document was **approved**.

**S3-201312 Cover sheet for TR 33.935 LTKUP**

*Type: TS or TR cover For: Agreement  
 33.935 v0.2.0  
 Source: VODAFONE Group Plc*

**Decision:** The document was **approved**.

**S3-201451 TR 33.935 v0.3.0**

*Type: draft TR For: Approval  
 33.935 v0.3.0  
 Source: VODAFONE Group Plc*

**Decision:** The document was **approved**.

### 5.9 Study on User Plane Integrity Protection

**S3-201008 UP IP-new solution on UP security policy activation**

*Type: pCR For: Approval  
 33.853 v0.8.0  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-201031 CR to 33.501 - Update to User Plane Integrity Protection**

*Type: CR For: Approval  
 33.501 v16.2.0 CR-0785 rev 1 Cat: C (Rel-16)  
  
 Source: Deutsche Telekom*

(Replaces S3-200633)

**Abstract:**

Modification of S3-200633

**Decision:** The document was **not pursued**.

**S3-201142 Revise the Evaluations for Solution 5 in TR 33.853**

*Type: pCR For: Approval  
 33.853 v0.8.0  
 Source: China Mobile*

**Decision:** The document was **noted**.

**S3-201206 LS to SA2 and RAN2 on questions of UP IP**

*Type: LS out For: Approval  
 to RAN2, SA2  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201207 Modification on the Key issue #3 for UP IP**

*Type: pCR For: Approval  
 33.853 v0.7.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201208 UPIP: pCR for new solution to address UP IP support at full data rate**

*Type: pCR For: Approval  
 33.853 v0.7.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201209 UP IP: Conclusion for Key Issue #3**

*Type: pCR For: Approval  
 33.853 v0.7.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201274 Security Aspects of DNS and ICMP**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0841 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-201391**.

**S3-201275 Security Aspects of DNS and ICMP**

*Type: CR For: Agreement  
 33.401 v16.2.0 CR-0695 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-201392**.

**S3-201295 Protection of DNS messages**

*Type: CR For: Agreement  
 33.401 v16.2.0 CR-0696 Cat: B (Rel-16)  
  
 Source: Samsung*

**Decision:** The document was **not pursued**.

**S3-201296 UP integrity protection for UP Signalling messages**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0845 Cat: B (Rel-16)  
  
 Source: Samsung*

**Decision:** The document was **revised to S3-201457**.

**S3-201297 Integrity Protection for UP Signalling messages**

*Type: discussion For: Endorsement  
 33.501 v..  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201298 Conclusion to Key Issue #5**

*Type: pCR For: Approval  
 33.853 v0.8.0  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-201305 pCR to TR 33.853 (UPIP): addition of new solution - use NR PDCP for LTE**

*Type: pCR For: Approval  
 33.853 v0.8.0  
 Source: VODAFONE Group Plc*

(Replaces S3-200631)

**Abstract:**

this adds a new solution for the LTE core options.

**Decision:** The document was **revised to S3-201427**.

**S3-201307 LS to RAN2 and CT1 on Updated User Plane Integrity Protection advice**

*Type: LS out For: Approval  
 to RAN2, CT1, cc SA, RAN, SA2  
 Source: VODAFONE Group Plc*

**Decision:** The document was **revised to S3-201452**.

**S3-201310 Cover sheet for TR 33.853 for Information**

*Type: TS or TR cover For: Approval  
 33.853 v0.7.0  
 Source: VODAFONE Group Plc*

(Replaces S3-200635)

**Decision:** The document was **approved**.

**S3-201314 pCR to 33.853 (UPIP) - Correction to Key Issue 5**

*Type: pCR For: Approval  
 33.853 v0.7.0  
 Source: VODAFONE Group Plc*

(Replaces S3-200639)

**Decision:** The document was **revised to S3-201421**.

**S3-201317 Reduced overhead for UP IP for 5G RAN updates and conclusion**

*Type: pCR For: Agreement  
 33.853 v0.7.0  
 Source: Philips International B.V.*

**Decision:** The document was **revised to S3-201366**.

**S3-201318 Draft TR 33.853**

*Type: draft TR For: (not specified)  
 33.853 v0.8.0  
 Source: VODAFONE Group Plc*

**Decision:** The document was **approved**.

**S3-201366 Reduced overhead for UP IP for 5G RAN updates and conclusion**

*Type: pCR For: Agreement  
 33.853 v0.7.0  
 Source: Philips International B.V.*

(Replaces S3-201317)

**Decision:** The document was **approved**.

**S3-201391 Security Aspects of DNS and ICMP**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0841 rev 1 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

(Replaces S3-201274)

**Decision:** The document was **revised to S3-201442**.

**S3-201392 Security Aspects of DNS and ICMP**

*Type: CR For: Agreement  
 33.401 v16.2.0 CR-0695 rev 1 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

(Replaces S3-201275)

**Decision:** The document was **revised to S3-201443**.

**S3-201421 pCR to 33.853 (UPIP) - Correction to Key Issue 5**

*Type: pCR For: Approval  
 33.853 v0.7.0  
 Source: VODAFONE Group Plc*

(Replaces S3-201314)

**Decision:** The document was **approved**.

**S3-201427 pCR to TR 33.853 (UPIP): addition of new solution - use NR PDCP for LTE**

*Type: pCR For: Approval  
 33.853 v0.8.0  
 Source: VODAFONE Group Plc*

(Replaces S3-201305)

**Abstract:**

this adds a new solution for the LTE core options.

**Decision:** The document was **approved**.

**S3-201429 Rapporteurs minutes for UPIP (agenda 5.9)**

*Type: report For: Information  
 Source: VODAFONE Group Plc*

**Decision:** The document was **revised to S3-201458**.

**S3-201430 TR33853v090**

*Type: draft TR For: Approval  
 33.853 v0.9.0  
 Source: VODAFONE Group Plc*

**Decision:** The document was **approved**.

**S3-201442 Security Aspects of DNS and ICMP**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0841 rev 2 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

(Replaces S3-201391)

**Decision:** The document was **agreed**.

**S3-201443 Security Aspects of DNS and ICMP**

*Type: CR For: Agreement  
 33.401 v16.2.0 CR-0695 rev 2 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

(Replaces S3-201392)

**Decision:** The document was **agreed**.

**S3-201452 LS to SA2 and CT1 on Updated User Plane Integrity Protection advice**

*Type: LS out For: Approval  
 to SA2, CT1, cc SA, RAN  
 Source: VODAFONE Group Plc*

(Replaces S3-201307)

**Decision:** The document was **revised to S3-201487**.

**S3-201487 LS to SA2 and CT1 on Updated User Plane Integrity Protection advice**

*Type: LS out For: Approval  
 to SA2, CT1, cc SA, RAN  
 Source: VODAFONE Group Plc*

(Replaces S3-201452)

**Decision:** The document was **approved**.

**S3-201457 UP integrity protection for UP Signalling messages**

*Type: CR For: Agreement  
 33.501 v16.2.0 CR-0845 rev 1 Cat: B (Rel-16)  
  
 Source: Samsung*

(Replaces S3-201296)

**Decision:** The document was **not pursued**.

**S3-201458 Rapporteurs minutes for UPIP (agenda 5.9) up to commenting deadline**

*Type: report For: Information  
 Source: VODAFONE Group Plc*

(Replaces S3-201429)

**Decision:** The document was **noted**.

**S3-201329 Illustrative flow for the proposal in the CR S3-201296**

*Type: discussion For: Information  
 Source: Samsung*

**Decision:** The document was **noted**.

### 5.10 Study on Security Impacts of Virtualisation

### 5.11 Study on authentication enhancements in 5GS (FS\_AUTH\_ENH)

**S3-200928 Reply to LS on Resynchronisations**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ETSI SAGE*

**Decision:** The document was **postponed**.

**S3-200941 Revise the solution details for Solution#2.5 in TR 33.846**

*Type: pCR For: Approval  
 33.846 v0.5.0  
 Source: China Telecommunications,Huawei, Hisilicon*

**Decision:** The document was **approved**.

**S3-201140 Clarification to the Usage of KAUSF for Solution #2.2 in TR 33.846**

*Type: pCR For: Approval  
 33.846 v0.5.0  
 Source: China Mobile*

**Decision:** The document was **revised to S3-201474**.

**S3-201141 Complementary to key issue to mitigate the SUPI guessing attacks**

*Type: pCR For: Approval  
 33.846 v0.5.0  
 Source: China Mobile*

**Decision:** The document was **noted**.

**S3-201213 Address the EN on the NAS procedure impact in Solution#2.4**

*Type: pCR For: Approval  
 33.846 v0.5.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **approved**.

**S3-201218 A new solution to protect SQN**

*Type: pCR For: Approval  
 33.846 v0.5.0  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201460 Draft TR 33.846**

*Type: draft TR For: Approval  
 33.846 v0.6.0  
 Source: Ericsson Japan K.K.*

**Decision:** The document was **approved**.

**S3-201474 Clarification to the Usage of KAUSF for Solution #2.2 in TR 33.846**

*Type: pCR For: Approval  
 33.846 v0.5.0  
 Source: China Mobile*

(Replaces S3-201140)

**Decision:** The document was **approved**.

### 5.12 Study on Security for NR Integrated Access and Backhaul

### 5.13 Study on Security Aspects of 3GPP support for Advanced V2X Services

**S3-200953 TR 33.836 - conclusion 4**

*Type: pCR For: Approval  
 33.836 v0.5.0  
 Source: LG Electronics Inc.*

**Abstract:**

This contributions proposes the conclusion for the key issue 4

**Decision:** The document was **approved**.

**S3-200954 TR 33.836 - conclusion 9**

*Type: pCR For: Approval  
 33.836 v0.5.0  
 Source: LG Electronics Inc.*

**Abstract:**

This contributions proposes the conclusion for the key issue 9

**Decision:** The document was **approved**.

**S3-201005 eV2XARC-PDCP COUNT check for PC5**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-201006 eV2XARC-LCID clarification**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Apple*

**Discussion:**

It was asked to be minuted: "No one objected that dynamically indication of mapping between LCID and BEARER sent by initiating UE using RRCreconfig SL is “not” ruled out for future releases like Rel-17".

**Decision:** The document was **revised to S3-201397**.

**S3-201007 eV2XARC-Security requirement for PC5**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Apple*

**Decision:** The document was **revised to S3-201398**.

**S3-201339 draft TR 33.836 v0.6.0**

*Type: draft TR For: (not specified)  
 33.836 v0.6.0  
 Source: LG Electronics Inc.*

**Abstract:**

draft TR 33.836 v0.6.0 implements the agreed pCRs during SA3#99e meeting

**Decision:** The document was **approved**.

**S3-201341 Presentation of TR 33.836 to TSG for approval**

*Type: TS or TR cover For: Approval  
 33.836 v0.6.0  
 Source: LG Electronics Inc.*

**Abstract:**

This cover sheet is intended to send the TR to the plenary for approval

**Decision:** The document was **approved**.

**S3-201397 eV2XARC-LCID clarification**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Apple*

(Replaces S3-201006)

**Decision:** The document was **approved**.

**S3-201398 eV2XARC-Security requirement for PC5**

*Type: pCR For: Approval  
 33.536 v1.1.0  
 Source: Apple*

(Replaces S3-201007)

**Decision:** The document was **approved**.

### 5.14 Study on storage and transport of the security parameters in a 5GC, that are used by the ARPF for Authentication

**S3-201025 Solution for KI#1 – Authorization and Isolation of Authentication Data using existing specifications**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: Ericsson*

**Abstract:**

a solution to KI#1

**Decision:** The document was **approved**.

**S3-201026 Solution for KI#2 – Protection of LTK access over Nudr**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: Ericsson*

**Abstract:**

a solution to KI#2

**Decision:** The document was **revised to S3-201428**.

**S3-201027 Solution for KI#3 – Protection of LTK over Nudr**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: Ericsson*

**Abstract:**

a solution to KI#3

**Decision:** The document was **approved**.

**S3-201029 Removal of ENs in section 4**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: Ericsson*

**Abstract:**

resolve Editor’s Notes in section 4

**Decision:** The document was **approved**.

**S3-201170 Key issue on Protection of the Milenage OPc value during storage in UDR**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: KPN, Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-201171 Key issue on Protection of the Milenage OPc value during transfer out of UDR**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: KPN, Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-201172 Key issue on Protection of the Milenage OP value during storage in UDR**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: KPN*

**Decision:** The document was **revised to S3-201362**.

**S3-201173 Key issue on Protection of the Milenage OP value during transfer out of UDR**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: KPN*

**Decision:** The document was **revised to S3-201364**.

**S3-201174 Key issue on Protection of the sequence number SQN during storage in UDR**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: KPN*

**Decision:** The document was **approved**.

**S3-201175 Key issue on Protection of the sequence number SQN during transfer out of UDR**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: KPN*

**Decision:** The document was **approved**.

**S3-201184 Secondary authentication**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-201185 Primary authentication**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-201186 AMF related parameters**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-201362 Key issue on Protection of the Milenage OP value during storage in UDR**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: KPN*

(Replaces S3-201172)

**Decision:** The document was **approved**.

**S3-201364 Key issue on Protection of the Milenage OP value during transfer out of UDR**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: KPN*

(Replaces S3-201173)

**Decision:** The document was **approved**.

**S3-201403 Primary authentication**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

**S3-201404 Primary authentication**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: Huawei, HiSilicon*

(Replaces S3-201185)

**Decision:** The document was **approved**.

**S3-201428 Solution for KI#2 – Protection of LTK access over Nudr**

*Type: pCR For: Approval  
 33.845 v0.2.0  
 Source: Ericsson*

(Replaces S3-201026)

**Abstract:**

a solution to KI#2

**Decision:** The document was **approved**.

**S3-201491 TR 33.845 version 0.3.0**

*Type: draft TR For: Approval  
 33.845 v0.3.0  
 Source: VODAFONE Group Plc*

**Decision:** The document was **approved**.

### 5.15 Other study areas

### 5.16 New study item proposals

**S3-200945 Study on security aspects of the Disaggregated gNB Architecture**

*Type: SID new For: Agreement  
 Source: China Telecom, China Unicom, CATT, Xiaomi, vivo*

**Decision:** The document was **revised to S3-201381**.

**S3-200946 Discussion on the Support of Multi-CU-UP connectivity in Rel-17**

*Type: discussion For: Discussion  
 Source: China Telecomunication Corp.*

**Decision:** The document was **noted**.

**S3-200947 Discussion on the Support of Multi-CU-UP connectivity in Rel-17**

*Type: discussion For: Discussion  
 Source: China Telecomunication Corp.*

**Decision:** The document was **withdrawn**.

**S3-200948 Discussion on the Support of Multi-CU-UP connectivity in Rel-17**

*Type: discussion For: Discussion  
 Source: China Telecomunication Corp.*

**Decision:** The document was **withdrawn**.

**S3-200949 Discussion on the Support of Multi-CU-UP connectivity in Rel-17**

*Type: discussion For: Discussion  
 Source: China Telecomunication Corp.*

**Decision:** The document was **withdrawn**.

**S3-201013 New WID on Study of certificate management for the Service Based Architecture (SBA)**

*Type: SID new For: Agreement  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201048 New SID on slice isolation security in the 5G System**

*Type: SID new For: Approval  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201063 Discussion on new SID for enhanced security to support new Non Public Network evolvement**

*Type: discussion For: Endorsement  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-201064 Study on enhanced security support for Non-Public Networks**

*Type: SID new For: Approval  
 Source: Ericsson, Interdigital*

**Decision:** The document was **revised to S3-201436**.

**S3-201085 Study on Security Aspects of Enhancement for Proximity Based Services in 5GS**

*Type: SID new For: Approval  
 Source: CATT*

**Decision:** The document was **revised to S3-201400**.

**S3-201088 New SID: Study on Security Aspects of Enhancement of Support for Edge Computing in 5GC**

*Type: SID new For: Approval  
 Source: Huawei, Hisilicon, China Unicom, CAICT, China Telecom, ZTE*

**Decision:** The document was **revised to S3-201354**.

**S3-201150 Discussion paper for Rel17 SID on UAS**

*Type: discussion For: Decision  
 Source: Huawei, HiSilicon, China Unicom, CATT*

**Decision:** The document was **noted**.

**S3-201151 Study on security aspects of UAS Remote Identification and Application**

*Type: SID new For: Approval  
 Source: Huawei, HiSilicon, China Unicom, CATT*

**Decision:** The document was **merged**.

**S3-201152 Discussion paper for Rel17 SID on network slicing security**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon, CATT*

**Decision:** The document was **noted**.

**S3-201153 New SID on security aspects of network slicing - RAN and Phase 2**

*Type: SID new For: Approval  
 Source: Huawei, HiSilicon, CATT*

**Decision:** The document was **noted**.

**S3-201187 SID on introducing EVA in SCAS**

*Type: SID new For: Approval  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-201201 Discussion on Unified Group Key Management**

*Type: discussion For: Discussion  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201202 Study on Unified Group Key Management**

*Type: SID new For: Approval  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201211 Discussion on security of 5MBS enhancemen**

*Type: discussion For: Discussion  
 Source: Huawei, Hiliscon*

**Decision:** The document was **noted**.

**S3-201212 New SID: Study on Security Aspects of Enhancements for 5G Multicast-Broadcast Services**

*Type: SID new For: Approval  
 Source: Huawei, Hiliscon*

**Decision:** The document was **revised to S3-201402**.

**S3-201249 SID on IIoT**

*Type: SID new For: Agreement  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-201465**.

**S3-201258 Proposed SID for Unmanned Aerial Systems**

*Type: SID new For: Agreement  
 Source: Qualcomm Incorporated, Ericsson, Samsung, Nokia, Nokia Shanghai Bell, Interdigital*

**Decision:** The document was **revised to S3-201425**.

**S3-201259 Proposed TR skeleton for Unmanned Aerial Systems**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision:** The document was **approved**.

**S3-201260 Details from the SA2 UAS moderated e-mail discussion**

*Type: other For: Information  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-201337 Background infos for IIoT study proposal**

*Type: discussion For: Presentation  
 Source: Nokia Germany*

**Decision:** The document was **noted**.

**S3-201354 New SID: Study on Security Aspects of Enhancement of Support for Edge Computing in 5GC**

*Type: SID new For: Approval  
 Source: Huawei, Hisilicon, China Unicom, CAICT, China Telecom, ZTE*

(Replaces S3-201088)

**Decision:** The document was **agreed**.

**S3-201381 Study on security aspects of the Disaggregated gNB Architecture**

*Type: SID new For: Approval  
 Source: China Telecom, China Unicom, CATT, Xiaomi, vivo*

(Replaces S3-200945)

**Discussion:**

Agreed with one sustained objection from Futurewei.

**Decision:** The document was **agreed**.

**S3-201400 Study on Security Aspects of Enhancement for Proximity Based Services in 5GS**

*Type: SID new For: Approval  
 Source: CATT*

(Replaces S3-201085)

**Decision:** The document was **agreed**.

**S3-201402 New SID: Study on Security Aspects of Enhancements for 5G Multicast-Broadcast Services**

*Type: SID new For: Approval  
 Source: Huawei, Hiliscon*

(Replaces S3-201212)

**Decision:** The document was **agreed**.

**S3-201425 Proposed SID for Unmanned Aerial Systems**

*Type: SID new For: Agreement  
 Source: Qualcomm Incorporated, Ericsson, Samsung, Nokia, Nokia Shanghai Bell, Interdigital*

(Replaces S3-201258)

**Decision:** The document was **agreed**.

**S3-201436 Study on enhanced security support for Non-Public Networks**

*Type: SID new For: Approval  
 Source: Ericsson, Interdigital*

(Replaces S3-201064)

**Discussion:**

Agreed with three sustained objections from IDEMIA, ORANGE and Thales.

**Decision:** The document was **agreed**.

**S3-201465 SID on IIoT**

*Type: SID new For: Agreement  
 Source: Nokia, Nokia Shanghai Bell, Interdigital, Verizon, CMCC, BMWi, Huawei, HiSilicon, Samsung, Ericsson*

(Replaces S3-201249)

**Decision:** The document was **agreed**.

## Annex A: Contribution documents and status

### A1: List of TDocs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Document | Title | Source | Decision | Replaces | Replaced by |
| * S3-200900 | * Agenda | * SA WG3 Chair | * approved | * - | * - |
| * S3-200901 | * Report from SA3#97 | * MCC | * approved | * - | * - |
| * S3-200902 | * Report from SA3#98e | * MCC | * approved | * - | * - |
| * S3-200903 | * Report from SA3#98Bis-e | * MCC | * approved | * - | * - |
| * S3-200904 | * Process for SA3#99-e meeting | * SA WG3 Chair | * noted | * - | * - |
| * S3-200905 | * LS on security consideration of performance measurement function protocol | * C1-196940 | * replied to | * - | * - |
| * S3-200906 | * Reply LS on SUCI computation from an NSI | * C1-200938 | * replied to | * - | * - |
| * S3-200907 | * Reply LS on sending CAG ID | * C1-201027 | * noted | * - | * - |
| * S3-200908 | * LS on manipulation of CAG Information element by a VPLMN | * C1-202617 | * noted | * - | * - |
| * S3-200909 | * LS on security context for 5GC to EPC mobility | * C1-202666 | * replied to | * - | * - |
| * S3-200910 | * LS on selected EPS NAS algorithms for unauthenticated emergency sessions in 5GS | * C1-202826 | * replied to | * - | * - |
| * S3-200911 | * PAP/CHAP and other point-to-point protocols usage in 5GS | * C1-202933 | * noted | * - | * - |
| * S3-200912 | * LS on Misalignment on HTTP connections for N32-c and on N32-f contexts termination | * C4-200781 | * replied to | * - | * - |
| * S3-200913 | * LS on Misalignments on N32-f context Id | * C4-200782 | * replied to | * - | * - |
| * S3-200914 | * Reply LS on Further clarifications on GLI/GCI and Line ID/ HFC\_Identifier | * C4-201220 | * noted | * - | * - |
| * S3-200915 | * LS on Multiple Kausf upon registering via multiple Serving Networks | * C4-202348 | * replied to | * - | * - |
| * S3-200916 | * Request for collaboration on migration planning of HSMs to support Quantum Safe Cryptography | * ETSI TC CYBER | * noted | * - | * - |
| * S3-200917 | * LS on Generic Slice Template with Public Safety Feedback | * TCCA | * noted | * - | * - |
| * S3-200918 | * Reply LS on Sending CAG ID in NAS layer | * R2-1916349 | * noted | * - | * - |
| * S3-200919 | * Reply LS on NPN clarifications | * S1-193605 | * noted | * - | * - |
| * S3-200920 | * LS on Sending CAG ID | * S2-2001616 | * noted | * - | * - |
| * S3-200921 | * LS on AMF Reallocation via RAN re-routing | * S2-2001730 | * postponed | * - | * - |
| * S3-200922 | * LS on ARPF in UDICOM | * C4-195553 | * replied to | * - | * - |
| * S3-200923 | * LS on 5G-GUTI reallocation after paging of a UE in 5GMM-IDLE mode with suspend indication | * C1-200967 | * replied to | * - | * - |
| * S3-200924 | * Clarification on encryption requirements for AGF interfaces (N1, N2, N3) [WWC] | * BBF | * replied to | * - | * - |
| * S3-200925 | * LS on uniqueness of PEI in certain FN-RG configurations | * S3i200069 | * postponed | * - | * - |
| * S3-200926 | * LS on Location information for SMS over IMS | * S3i200161 | * noted | * - | * - |
| * S3-200927 | * Reply LS on analytics support for energy saving | * S5-201472 | * noted | * - | * - |
| * S3-200928 | * Reply to LS on Resynchronisations | * ETSI SAGE | * postponed | * - | * - |
| * S3-200929 | * Observations and questions on 256-bit security goals | * ETSI SAGE | * postponed | * - | * - |
| * S3-200930 | * Observations on ZUC-256 | * ETSI SAGE | * postponed | * - | * - |
| * S3-200931 | * LS on ITU-T SG17 activity on V2X security | * ITU-T SG17 | * noted | * - | * - |
| * S3-200932 | * LS on towards post-quantum symmetric and asymmetric cryptography in 5G | * ITU-T SG17 | * replied to | * - | * - |
| * S3-200933 | * Reply LS to Transfer the study on service-based support for SMS in 5GC to CT WGs | * SP-191362 | * noted | * - | * - |
| * S3-200934 | * Editorial corrections to NDS/IP | * Juniper Networks | * revised | * - | * S3-201367 |
| * S3-200935 | * Editorial corrections to NDS/AF | * Juniper Networks | * revised | * - | * S3-201368 |
| * S3-200936 | * TCG progress - report from TCG rapporteur | * InterDigital Communications | * noted | * - | * - |
| * S3-200937 | * Privacy Threat of Knpr ID | * InterDigital Communications | * merged | * - | * S3-201344 |
| * S3-200938 | * Remediation for Privacy of Knpr ID Threat | * InterDigital Communications | * revised | * - | * S3-201344 |
| * S3-200939 | * Clarifications related to link identifier messages | * InterDigital Communications | * revised | * - | * S3-201345 |
| * S3-200940 | * Threat related to no authentication on N3IWF | * China Telecommunications,Huawei, Hisilicon | * noted | * - | * - |
| * S3-200941 | * Revise the solution details for Solution#2.5 in TR 33.846 | * China Telecommunications,Huawei, Hisilicon | * approved | * - | * - |
| * S3-200942 | * Reply LS on Questions on onboarding requirements | * S2-2003216 | * noted | * - | * - |
| * S3-200943 | * LS on SA WG2 status of MT-EDT in Rel-16 | * S2-2003505 | * noted | * - | * - |
| * S3-200944 | * Reply LS to SA3 on FBS detection | * R2-1914224 | * postponed | * - | * - |
| * S3-200945 | * Study on security aspects of the Disaggregated gNB Architecture | * China Telecom, China Unicom, CATT, Xiaomi, vivo | * revised | * - | * S3-201381 |
| * S3-200946 | * Discussion on the Support of Multi-CU-UP connectivity in Rel-17 | * China Telecomunication Corp. | * noted | * - | * - |
| * S3-200947 | * Discussion on the Support of Multi-CU-UP connectivity in Rel-17 | * China Telecomunication Corp. | * withdrawn | * - | * - |
| * S3-200948 | * Discussion on the Support of Multi-CU-UP connectivity in Rel-17 | * China Telecomunication Corp. | * withdrawn | * - | * - |
| * S3-200949 | * Discussion on the Support of Multi-CU-UP connectivity in Rel-17 | * China Telecomunication Corp. | * withdrawn | * - | * - |
| * S3-200950 | * Revision of null-scheme SUCI usage in 5G NR | * T-Mobile USA Inc. | * not pursued | * - | * - |
| * S3-200951 | * Discussion Paper - Countermeasures for Privacy of KNRP ID Threat | * InterDigital Communications | * endorsed | * - | * - |
| * S3-200952 | * TS 33.536 - Security policy | * LG Electronics Inc. | * revised | * - | * S3-201342 |
| * S3-200953 | * TR 33.836 - conclusion 4 | * LG Electronics Inc. | * approved | * - | * - |
| * S3-200954 | * TR 33.836 - conclusion 9 | * LG Electronics Inc. | * approved | * - | * - |
| * S3-200955 | * Discussion on AMF Reallocation via RAN re-routing | * ZTE Corporation | * noted | * - | * - |
| * S3-200956 | * reply LS on AMF Reallocation via RAN re-routing | * ZTE Corporation | * noted | * - | * - |
| * S3-200957 | * reply LS on Multiple Kausf upon registering via multiple Serving Networks | * ZTE Corporation | * noted | * - | * - |
| * S3-200958 | * reply LS on security consideration of performance measurement function protocol | * ZTE Corporation | * noted | * - | * - |
| * S3-200959 | * Clarification for distribution of subscriber identities and security data in clause 6.3.1.2 | * ZTE Corporation | * not pursued | * - | * - |
| * S3-200960 | * remove the EN in clause 13.2.3.6 | * ZTE Corporation | * not pursued | * - | * - |
| * S3-200961 | * Discussion on Security of AMF re-allocation via direct NAS reroute | * ZTE Corporation | * noted | * - | * - |
| * S3-200962 | * Security handling in registration with AMF re-allocation via direct NAS reroute | * ZTE Corporation | * not pursued | * - | * - |
| * S3-200963 | * Update the clause 4.2.6.2.4-R16 | * ZTE Corporation | * agreed | * - | * - |
| * S3-200964 | * Update the clause 4.2.6.2.4-R15 | * ZTE Corporation | * agreed | * - | * - |
| * S3-200965 | * AKMA key generation indication | * ZTE Corporation | * revised | * - | * S3-201369 |
| * S3-200966 | * AKMA key push in clause 6.1 | * ZTE Corporation | * noted | * - | * - |
| * S3-200967 | * AKMA key push in clause 6.2 | * ZTE Corporation | * noted | * - | * - |
| * S3-200968 | * AKMA key push in clause 6.3 | * ZTE Corporation | * approved | * - | * - |
| * S3-200969 | * Derivation of Kaf | * ZTE Corporation | * revised | * - | * S3-201370 |
| * S3-200970 | * Discussion on the format of A-TID | * ZTE Corporation | * noted | * - | * - |
| * S3-200971 | * Define the A-TID format | * ZTE Corporation | * noted | * - | * - |
| * S3-200972 | * Key update renegotiation when Kaf expired in clause 6.4.2 | * ZTE Corporation | * noted | * - | * - |
| * S3-200973 | * Store AKMA subscription data in UDM | * ZTE Corporation | * revised | * - | * S3-201371 |
| * S3-200974 | * Adding a definition for IAB-UE | * ZTE Corporation | * agreed | * - | * - |
| * S3-200975 | * Update the clause 5.3.3.1.4.3 | * ZTE Corporation | * revised | * - | * S3-201385 |
| * S3-200976 | * Clean up of V2X TS | * ZTE Corporation | * approved | * - | * - |
| * S3-200977 | * New WID on Security Assurance Specification for Inter PLMN UP Security (IPUPS) | * ZTE Corporation | * revised | * - | * S3-201372 |
| * S3-200978 | * Editorial correction to solution#12 | * ZTE Corporation | * approved | * - | * - |
| * S3-200979 | * AKMA subscription data confirmation | * CATT | * merged | * - | * S3-201450 |
| * S3-200980 | * Definition of AKMA subscription data | * CATT | * revised | * - | * S3-201393 |
| * S3-200981 | * UDM functionality in clause 4.2 | * CATT | * withdrawn | * - | * - |
| * S3-200982 | * UDM functionality in clause 4.2 | * CATT | * withdrawn | * - | * - |
| * S3-200983 | * UDM functionality in clause 4.2 | * CATT | * withdrawn | * - | * - |
| * S3-200984 | * Scope of SCAS\_5G\_N3IWF | * China Unicom | * approved | * - | * - |
| * S3-200985 | * Skeleton of SCAS\_5G\_N3IWF | * China Unicom | * approved | * - | * - |
| * S3-200986 | * UDM functionality in clause 4.2 | * CATT | * noted | * - | * - |
| * S3-200987 | * Update on RSA exponent requirement | * Apple Computer Trading Co. Ltd | * revised | * - | * S3-201399 |
| * S3-200988 | * Draft reply LS to RAN2 on reply LS to SA3 on FBS detection(R2-1914224/S3-200944) | * Apple | * noted | * - | * - |
| * S3-200989 | * 5GFBS-Evaluation for solution#17 | * Apple | * noted | * - | * - |
| * S3-200990 | * 5GFBS-Conclusion of key issue#1-RRCResumeRequest | * Apple | * noted | * - | * - |
| * S3-200991 | * 5GFBS-Evaluation for solution#7 | * Apple | * revised | * - | * S3-201475 |
| * S3-200992 | * 5GFBS-Conclusion of key issue#3 | * Apple | * noted | * - | * - |
| * S3-200993 | * 5GFBS-Evaluation for solution#19 | * Apple | * noted | * - | * - |
| * S3-200994 | * 5GFBS-Solving EN on PKI implementation for solution #11 | * Apple | * noted | * - | * - |
| * S3-200995 | * 5GFBS-Solving EN on roaming issue for solution #11 | * Apple | * approved | * - | * - |
| * S3-200996 | * 5GFBS-Solving EN on key provisioning for solution #11 | * Apple | * approved | * - | * - |
| * S3-200997 | * 5GFBS-Adding Clarification on bidding down attack for solution #11 | * Apple | * approved | * - | * - |
| * S3-200998 | * 5GFBS-Solving EN on MitM attack for solution #11 | * Apple | * noted | * - | * - |
| * S3-200999 | * 5GFBS-Solving EN on interworking for solution #11 | * Apple | * approved | * - | * - |
| * S3-201000 | * 5GFBS-5GFBS-Addressing the EN on how to prevent UE camping on the FBS for solution#11 | * Apple | * noted | * - | * - |
| * S3-201001 | * 5GFBS-Notes of 5GFBS conference call on April 28th 2020 | * Apple | * noted | * - | * - |
| * S3-201002 | * AKMA-Clarification in text 6.2 | * Apple | * revised | * - | * S3-201394 |
| * S3-201003 | * AKMA-KAF refreshment | * Apple | * merged | * - | * S3-201446 |
| * S3-201004 | * AKMA-Initiation of AKMA | * Apple | * revised | * - | * S3-201395 |
| * S3-201005 | * eV2XARC-PDCP COUNT check for PC5 | * Apple | * noted | * - | * - |
| * S3-201006 | * eV2XARC-LCID clarification | * Apple | * revised | * - | * S3-201397 |
| * S3-201007 | * eV2XARC-Security requirement for PC5 | * Apple | * revised | * - | * S3-201398 |
| * S3-201008 | * UP IP-new solution on UP security policy activation | * Apple | * noted | * - | * - |
| * S3-201009 | * Reply LS on S3-200905/C1-196940-PMF security | * Apple | * noted | * - | * - |
| * S3-201010 | * Discussion paper on PMF Protocol Security | * Apple | * noted | * - | * - |
| * S3-201011 | * UE configuration for non-3GPP access | * Ericsson LM | * noted | * - | * - |
| * S3-201012 | * [DRAFT] Reply-LS on 256 bit algorithm candidates | * Ericsson | * noted | * - | * - |
| * S3-201013 | * New WID on Study of certificate management for the Service Based Architecture (SBA) | * Ericsson | * noted | * - | * - |
| * S3-201014 | * Presentation of Specification/Report to TSG: TR 33.855 | * Ericsson | * revised | * - | * S3-201480 |
| * S3-201015 | * Aligning abbreviation of Service Communication Proxy with TS 23.501 | * Ericsson | * agreed | * - | * - |
| * S3-201016 | * Clarification on SEPP role regarding the 3gpp-Sbi-Target-apiRoot HTTP header | * Ericsson | * agreed | * - | * - |
| * S3-201017 | * Authentication in indirect communication scenarios | * Ericsson | * revised | * - | * S3-201382 |
| * S3-201018 | * Consumer-signed authorization codes for access token requests by/via the SCP | * Ericsson | * noted | * - | * - |
| * S3-201019 | * The advantages of following existing RFCs | * Ericsson | * noted | * - | * - |
| * S3-201020 | * Draft-CR as baseline for Token-based authorization for indirect communication with and without delegated discovery | * Ericsson | * merged | * - | * S3-201386 |
| * S3-201021 | * Token-based authorization using consumer-signed authorization codes | * Ericsson | * merged | * - | * S3-201386 |
| * S3-201022 | * [DRAFT] LS on security of eLCS | * Ericsson | * noted | * - | * - |
| * S3-201023 | * [DRAFT] Reply LS on false base station detection | * Ericsson | * noted | * - | * - |
| * S3-201024 | * PC5 SL - LCID and BEARER | * Ericsson | * noted | * - | * - |
| * S3-201025 | * Solution for KI#1 – Authorization and Isolation of Authentication Data using existing specifications | * Ericsson | * approved | * - | * - |
| * S3-201026 | * Solution for KI#2 – Protection of LTK access over Nudr | * Ericsson | * revised | * - | * S3-201428 |
| * S3-201027 | * Solution for KI#3 – Protection of LTK over Nudr | * Ericsson | * approved | * - | * - |
| * S3-201028 | * Informative Annex: Deployment scenarios for end-to-end security | * KPN | * noted | * - | * - |
| * S3-201029 | * Removal of ENs in section 4 | * Ericsson | * approved | * - | * - |
| * S3-201030 | * [DRAFT] Reply LS on ARPF in UDICOM | * Ericsson | * noted | * - | * - |
| * S3-201031 | * CR to 33.501 - Update to User Plane Integrity Protection | * Deutsche Telekom | * not pursued | * S3-200633 | * - |
| * S3-201032 | * UE caps protection using AS security in EPS Rel-16 | * Ericsson | * revised | * - | * S3-201439 |
| * S3-201033 | * UE caps protection using AS security in 5GS Rel-16 | * Ericsson | * revised | * - | * S3-201440 |
| * S3-201034 | * Presentation of Specification/Report to TSG: * TR 33.861, Version 1.6.0 | * Ericsson | * approved | * - | * - |
| * S3-201035 | * Further evaluation to Solution #25: Security solution for preventing Botnet Attacks from Improper CIOT Device Use | * Ericsson | * revised | * - | * S3-201383 |
| * S3-201036 | * Way forward for UE caps protection and NB-IoT Ues | * Ericsson | * noted | * - | * - |
| * S3-201037 | * Major clean-up of TR | * Ericsson | * approved | * - | * - |
| * S3-201038 | * DraftCR – Living document for supporting 5G CIoT security | * Ericsson | * revised | * - | * S3-201441 |
| * S3-201039 | * Way forward for remaining CIoT issues in Release 16 | * Ericsson | * noted | * - | * - |
| * S3-201040 | * AMF reallocation and slicing | * Ericsson | * noted | * - | * - |
| * S3-201041 | * Reply LS on AMF Reallocation via RAN re-routing | * Ericsson | * noted | * - | * - |
| * S3-201042 | * [Draft CR] Input to MESSAGE when calculating ShortResumeMAC-I in RRC Connection Suspend and Resume | * Ericsson | * approved | * - | * - |
| * S3-201043 | * Add reference to TS 24.301 for enclosed TAU request in the Registration Request | * Ericsson | * not pursued | * - | * - |
| * S3-201044 | * Add reference to TS 24.301 for enclosed TAU request in the Registration Request | * Ericsson | * not pursued | * - | * - |
| * S3-201045 | * Elliptic Curve Group Size | * Ericsson | * revised | * - | * S3-201422 |
| * S3-201046 | * TLS 1.3 cipher suites | * Ericsson | * revised | * - | * S3-201423 |
| * S3-201047 | * Corrections on PKCS#1v1.5 padding and Elliptic Curves | * Ericsson | * revised | * - | * S3-201419 |
| * S3-201048 | * New SID on slice isolation security in the 5G System | * Ericsson | * noted | * - | * - |
| * S3-201049 | * AKMA Architecture discussion | * Ericsson | * noted | * - | * - |
| * S3-201050 | * pCR to TS 33.535: Store AKMA key material in AAnF | * Ericsson | * revised | * - | * S3-201343 |
| * S3-201051 | * pCR to TS 33.535: Optimization in AKMA key generation | * Ericsson | * approved | * - | * - |
| * S3-201052 | * Integration of GBA into 5GC | * Ericsson | * noted | * - | * - |
| * S3-201053 | * Living document of Service Based Interfaces for GBA | * Ericsson | * revised | * - | * S3-201477 |
| * S3-201054 | * Living document of Service Based Interfaces for GBA Push | * Ericsson | * revised | * - | * S3-201478 |
| * S3-201055 | * Storage of KAUSF in the UE and AUSF, R15 | * Ericsson | * not pursued | * - | * - |
| * S3-201056 | * Storage of KAUSF in the UE and AUSF, R16 | * Ericsson | * not pursued | * - | * - |
| * S3-201057 | * Updates to solution #17 - resolving ENs | * Ericsson | * noted | * - | * - |
| * S3-201058 | * Reply LS on Multiple Kausf upon registering via multiple Serving Networks | * Ericsson | * merged | * - | * S3-201350 |
| * S3-201059 | * Conclusion on KI#6 | * Ericsson, Nokia, Nokia Shanghai Bell | * noted | * - | * - |
| * S3-201060 | * Conclusion on KI#3 | * Ericsson, Nokia, Nokia Shanghai Bell | * noted | * - | * - |
| * S3-201061 | * Conclusion on KI#7 | * Ericsson, Nokia, Nokia Shanghai Bell | * approved | * - | * - |
| * S3-201062 | * Draft CR- Adding security requirements to NSSAAF | * Ericsson, Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201438 |
| * S3-201063 | * Discussion on new SID for enhanced security to support new Non Public Network evolvement | * Ericsson | * noted | * - | * - |
| * S3-201064 | * Study on enhanced security support for Non-Public Networks | * Ericsson, Interdigital | * revised | * - | * S3-201436 |
| * S3-201065 | * Correction of SUPI in IKE\_AUTH exchange | * Motorola Mobility, Lenovo, Ericsson | * revised | * - | * S3-201346 |
| * S3-201066 | * Sending the IP address of TNGF to UE | * Motorola Mobility, Lenovo | * approved | * - | * - |
| * S3-201067 | * Living CR for Slice Specific Authentication and Authrorization clauses | * Nokia, Nokia Shanghai Bell, Huawei, HiSilicon, Ericsson, Hewlett-Packard Enterprise, China Mobile, CATT, Interdigital | * noted | * S3-200807 | * - |
| * S3-201068 | * Draft TR 33.813 Study on Enhancement of Network Slice security | * Nokia, Nokia Shanghai Bell | * withdrawn | * S3-194543 | * - |
| * S3-201069 | * draft Reply LS on PMF protocol security | * Nokia, Nokia Shanghai Bell, Qualcomm Incorporated | * revised | * - | * S3-201490 |
| * S3-201070 | * Discussion on EN on sending S-NSSAI to AAA-S | * Nokia, Nokia Shanghai Bell | * noted | * - | * - |
| * S3-201071 | * Deletion of EN in clause X.X.3 on sending S-NSSAI | * Nokia, Nokia Shanghai Bell | * noted | * - | * - |
| * S3-201072 | * Discussion on NAS COUNT handling in 5G to 4G Handover | * Nokia, Nokia Shanghai Bell, Intel | * noted | * - | * - |
| * S3-201073 | * Correcting 5G to 4G handover DL NAS COUNT mismatch | * Nokia, Nokia Shanghai Bell, Intel | * not pursued | * - | * - |
| * S3-201074 | * Correcting 5G to 4G handover DL NAS COUNT mismatch | * Nokia, Nokia Shanghai Bell, Intel | * not pursued | * - | * - |
| * S3-201075 | * eNS Living CR showing separate NSSAAF and AAA-P | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201462 |
| * S3-201076 | * draft Reply LS on AMF Re-allocation via RAN | * Nokia | * noted | * - | * - |
| * S3-201077 | * Discussion on SA2 LS S2-2001730 AMF Re-allocation via RAN re-routing | * Nokia, Nokia Shanghai Bell | * noted | * - | * - |
| * S3-201078 | * Discussion on AS rekeying failure during Xn-Handover | * CATT | * noted | * - | * - |
| * S3-201079 | * Clarification on AS rekeying failure-R15 | * CATT | * not pursued | * - | * - |
| * S3-201080 | * Clarification on AS rekeying failure-R16 | * CATT | * not pursued | * - | * - |
| * S3-201081 | * Client authentications in token-based authorization for indirect communication | * CableLabs, Mavenir, Nokia, Nokia Bell Labs | * revised | * - | * S3-201386 |
| * S3-201082 | * End to end authentication of NF in SBA | * CableLabs, Mavenir, Nokia, Nokia Shanghai Bell | * noted | * - | * - |
| * S3-201083 | * Way forward for the remaining eLCS issues in Release 16 | * CATT | * noted | * - | * - |
| * S3-201084 | * Draft CR as a living baseline for 5GS LCS normative work | * CATT | * revised | * - | * S3-201461 |
| * S3-201085 | * Study on Security Aspects of Enhancement for Proximity Based Services in 5GS | * CATT | * revised | * - | * S3-201400 |
| * S3-201086 | * Clarification on confidential IEs replacement handling in original N32-f message | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201087 | * Clarification on exposure of confidential IEs in N32-f message in 33.926 | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201088 | * New SID: Study on Security Aspects of Enhancement of Support for Edge Computing in 5GC | * Huawei, Hisilicon, China Unicom, CAICT, China Telecom, ZTE | * revised | * - | * S3-201354 |
| * S3-201089 | * Clarification on IPX certificate acquirement in SEPP | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201090 | * Clarification on IPX certificate acquirement in SEPP | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201091 | * Skeleton for IMS SCAS TS 33.226 | * Huawei, Hisilicon | * approved | * - | * - |
| * S3-201092 | * Scope for IMS SCAS TS 33.226 | * Huawei, Hisilicon | * approved | * - | * - |
| * S3-201093 | * Trust mode in the eSBA | * Huawei, Hisilicon | * merged | * - | * S3-201382 |
| * S3-201094 | * Authorization in the Subscribe-Notify interaction scenarios | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201095 | * Clarification on access token ownership verification | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201096 | * eV2X: removing the UP security policy | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201097 | * Update on the Subscribe-Notify Key issues and its conclusion | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201098 | * Adding conclusion on KI #6.2 | * Huawei, Hisilicon | * agreed | * - | * - |
| * S3-201099 | * Clarification on Handling of ICMP | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201100 | * Security requirements on NSSAAF | * Huawei, Hisilicon | * merged | * - | * S3-201438 |
| * S3-201101 | * Discussion paper on way forward with AMF reallocation | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201102 | * Security requirements on AKMA Key Identifier | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201103 | * Deleting test case on TEID uniqueness | * Huawei, Hisilicon | * agreed | * - | * - |
| * S3-201104 | * LS reply to SA2 on AMF reallocation | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201105 | * Clarification on test case on synchronization failure handling | * Huawei, Hisilicon | * revised | * - | * S3-201347 |
| * S3-201106 | * Clarification on test case on RES\* failure handling | * Huawei, Hisilicon | * revised | * - | * S3-201348 |
| * S3-201107 | * Security requirements on test case for type 1 GVNP | * Huawei, Hisilicon | * revised | * - | * S3-201349 |
| * S3-201108 | * Security requirements on test case for type 2 GVNP | * Huawei, Hisilicon | * merged | * - | * S3-201357 |
| * S3-201109 | * LS reply to on security context for 5GC to EPC mobility | * Huawei, Hisilicon | * revised | * - | * S3-201453 |
| * S3-201110 | * JSON object modification | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201111 | * JSON object modification | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201112 | * SUCI computation clarification | * Huawei, Hisilicon | * agreed | * - | * - |
| * S3-201113 | * SUCI computation clarification | * Huawei, Hisilicon | * agreed | * - | * - |
| * S3-201114 | * New solution for DDoS mitigation | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201115 | * conclusion for KI#6.1 | * Huawei, Hisilicon | * not pursued | * - | * - |
| * S3-201116 | * DraftCR\_DDoS mitigation | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201117 | * DP\_on\_resolving\_the\_gaps\_in\_NSSAA\_procedure | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201118 | * LS\_on\_resolving\_the\_gaps\_in\_NSSAA\_procedure | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201119 | * DP\_for\_LS on Multiple Kausf upon registering via multiple SNs | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201120 | * LS reply to CT4 LS on Multiple Kausf upon registering via multiple SNs | * Huawei, Hisilicon | * revised | * - | * S3-201350 |
| * S3-201121 | * DP\_protection\_of\_ allowed CAG list against\_MITM\_Attack | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201122 | * LS on protection\_of\_ allowed CAG list against\_mitm\_Attack | * Huawei, Hisilicon | * revised | * - | * S3-201414 |
| * S3-201123 | * NFV\_SCAS\_TC\_VNF\_Package\_integrity | * Huawei, Hisilicon | * merged | * - | * S3-201356 |
| * S3-201124 | * NFV\_SCAS\_requirement\_on\_authorization\_of\_resource\_management | * Huawei, Hisilicon | * revised | * - | * S3-201352 |
| * S3-201125 | * LS reply on selected EPS NAS algorithms to CT1 | * Huawei, Hisilicon | * noted | * - | * - |
| * S3-201126 | * Security of RRC UE capability transfer procedure in 5G for CIoT optimisation | * Intel China Ltd. | * noted | * - | * - |
| * S3-201127 | * UE capability transfer for AS security | * Intel China Ltd. | * noted | * - | * - |
| * S3-201128 | * SBA Network Function certificate profile | * Nokia, Nokia Shanghai Bell, CommScope, Ericsson | * revised | * - | * S3-201466 |
| * S3-201129 | * Authentication between Network Functions | * Nokia, Nokia Shanghai Bell | * merged | * - | * S3-201382 |
| * S3-201130 | * Authentication between Network Function and NRF | * Nokia, Nokia Shanghai Bell | * merged | * - | * S3-201382 |
| * S3-201131 | * Adding security threats for GVNP | * China Mobile | * approved | * - | * - |
| * S3-201132 | * Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 1 | * China Mobile | * revised | * - | * S3-201355 |
| * S3-201133 | * Adding test case into clause 5.2.5.5.3.3.5 | * China Mobile | * revised | * - | * S3-201356 |
| * S3-201134 | * Adding security requirements and related test cases for GVNP of type 2 | * China Mobile | * revised | * - | * S3-201357 |
| * S3-201135 | * Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 2 | * China Mobile | * revised | * - | * S3-201358 |
| * S3-201136 | * Adding security requirements for GVNP of type 3 | * China Mobile | * approved | * - | * - |
| * S3-201137 | * Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 3 | * China Mobile | * revised | * - | * S3-201359 |
| * S3-201138 | * Adding generic assets, threats and requirements for virtualised network functions supporting SBA interfaces | * China Mobile | * approved | * - | * - |
| * S3-201139 | * Adding improvement of SCAS and new security requirements | * China Mobile | * approved | * - | * - |
| * S3-201140 | * Clarification to the Usage of KAUSF for Solution #2.2 in TR 33.846 | * China Mobile | * revised | * - | * S3-201474 |
| * S3-201141 | * Complementary to key issue to mitigate the SUPI guessing attacks | * China Mobile | * noted | * - | * - |
| * S3-201142 | * Revise the Evaluations for Solution 5 in TR 33.853 | * China Mobile | * noted | * - | * - |
| * S3-201143 | * Clean up of TR 33.835 | * China Mobile | * agreed | * - | * - |
| * S3-201144 | * Derivation of KAF | * China Mobile | * merged | * - | * S3-201370 |
| * S3-201145 | * Removing Ens | * China Mobile | * approved | * - | * - |
| * S3-201146 | * Discussion and working assumption on AKMA open issues | * China Mobile | * noted | * - | * - |
| * S3-201147 | * Status of RFC 5448bis update | * Ericsson | * noted | * - | * - |
| * S3-201148 | * The skeleton of NWDAF SCAS | * China Mobile Com. Corporation | * approved | * - | * - |
| * S3-201149 | * The scope of NWDAF SCAS TS | * China Mobile Com. Corporation | * approved | * - | * - |
| * S3-201150 | * Discussion paper for Rel17 SID on UAS | * Huawei, HiSilicon, China Unicom, CATT | * noted | * - | * - |
| * S3-201151 | * Study on security aspects of UAS Remote Identification and Application | * Huawei, HiSilicon, China Unicom, CATT | * merged | * - | * S3-201425 |
| * S3-201152 | * Discussion paper for Rel17 SID on network slicing security | * Huawei, HiSilicon, CATT | * noted | * - | * - |
| * S3-201153 | * New SID on security aspects of network slicing - RAN and Phase 2 | * Huawei, HiSilicon, CATT | * noted | * - | * - |
| * S3-201154 | * Address EN on whether to transmit NSSAI to AAA | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201155 | * validity peirod of NSSAA results | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201156 | * Serving network name in NSSAA | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201157 | * Normative text for NSaaS | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201158 | * Conclusion to KI#3 | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201159 | * Update to Solution 8 | * Huawei, HiSilicon | * approved | * - | * - |
| * S3-201160 | * Conclusion to KI#6 | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201161 | * Discussion paper for eV2X groupcast privacy | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201162 | * Groupcast Privacy | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201163 | * Group ID conversion | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201164 | * Conclusion for Key Issue #2.2 | * Huawei, HiSilicon | * approved | * - | * - |
| * S3-201165 | * Conclusion for Key Issue #2.3 | * Huawei, HiSilicon | * approved | * - | * - |
| * S3-201166 | * Reply LS to RAN2 on FBS detection | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201167 | * Clarification for solution 4 | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201168 | * Abbreviations | * KPN | * approved | * - | * - |
| * S3-201169 | * Terminology corrections | * KPN | * approved | * - | * - |
| * S3-201170 | * Key issue on Protection of the Milenage OPc value during storage in UDR | * KPN, Nokia, Nokia Shanghai Bell | * approved | * - | * - |
| * S3-201171 | * Key issue on Protection of the Milenage OPc value during transfer out of UDR | * KPN, Nokia, Nokia Shanghai Bell | * approved | * - | * - |
| * S3-201172 | * Key issue on Protection of the Milenage OP value during storage in UDR | * KPN | * revised | * - | * S3-201362 |
| * S3-201173 | * Key issue on Protection of the Milenage OP value during transfer out of UDR | * KPN | * revised | * - | * S3-201364 |
| * S3-201174 | * Key issue on Protection of the sequence number SQN during storage in UDR | * KPN | * approved | * - | * - |
| * S3-201175 | * Key issue on Protection of the sequence number SQN during transfer out of UDR | * KPN | * approved | * - | * - |
| * S3-201176 | * Skeleton of Security Assurance Specification for Service Communication Proxy (SECOP) | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201373 |
| * S3-201177 | * SCAS SECOP: Scope | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201374 |
| * S3-201178 | * SCAS SECOP: Introduction and General Approach | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201375 |
| * S3-201179 | * Correction to security capability negotiation between SEPPs | * Huawei, HiSilicon,China Mobile | * revised | * - | * S3-201472 |
| * S3-201180 | * Correction to security capability negotiation between SEPPs | * Huawei, HiSilicon,China Mobile | * revised | * - | * S3-201473 |
| * S3-201181 | * Correction to initial EAP Authentication with an external AAA server | * Huawei, HiSilicon | * agreed | * - | * - |
| * S3-201182 | * Correction to initial EAP Authentication with an external AAA server | * Huawei, HiSilicon | * agreed | * - | * - |
| * S3-201183 | * Correction to definition about the case of 'Temporary group call – user regroup'' | * Huawei, HiSilicon | * agreed | * - | * - |
| * S3-201184 | * Secondary authentication | * Huawei, HiSilicon | * approved | * - | * - |
| * S3-201185 | * Primary authentication | * Huawei, HiSilicon | * approved | * - | * - |
| * S3-201186 | * AMF related parameters | * Huawei, HiSilicon | * approved | * - | * - |
| * S3-201187 | * SID on introducing EVA in SCAS | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201188 | * Kaf refresh procedure | * Huawei, HiSilicon | * revised | * - | * S3-201446 |
| * S3-201189 | * Derive Kakma and Kakma ID at the same time | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201190 | * A-TID generation | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201191 | * Store A-TID in the UDM | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201192 | * Editoral Change to 33.501 on 5wwc | * Huawei, HiSilicon | * revised | * - | * S3-201409 |
| * S3-201193 | * The value of user ID used in 33.501 | * Huawei, HiSilicon | * merged | * - | * S3-201346 |
| * S3-201194 | * living CR of 5wwc | * Huawei, HiSilicon | * revised | * - | * S3-201410 |
| * S3-201195 | * Clarification about system handling during overload situtations | * Huawei, HiSilicon | * revised | * - | * S3-201416 |
| * S3-201196 | * description modification for policy regarding consective failed login attempts | * Huawei, HiSilicon | * revised | * - | * S3-201415 |
| * S3-201197 | * password structure clarification | * Huawei, HiSilicon | * agreed | * - | * - |
| * S3-201198 | * Clarification on the examples of the delay | * Huawei, HiSilicon | * agreed | * - | * - |
| * S3-201199 | * Update testcase in gNB SCAS | * Huawei, HiSilicon | * revised | * - | * S3-201405 |
| * S3-201200 | * Update testcases in eNB SCAS | * Huawei, HiSilicon | * revised | * - | * S3-201406 |
| * S3-201201 | * Discussion on Unified Group Key Management | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201202 | * Study on Unified Group Key Management | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201203 | * Reply LS on Calculation of ShortResumeMAC-I | * Huawei, Hiliscon | * revised | * - | * S3-201280 |
| * S3-201204 | * Address EN for Calculation of ShortResumeMAC-I for UP CIoT Optimisation | * Huawei, Hisilicon, CATT, Qualcomm, Samsung | * noted | * - | * - |
| * S3-201205 | * Editorial Change of UP 5GS CIoT Optimisation | * Huawei, Hiliscon | * approved | * - | * - |
| * S3-201206 | * LS to SA2 and RAN2 on questions of UP IP | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201207 | * Modification on the Key issue #3 for UP IP | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201208 | * UPIP: pCR for new solution to address UP IP support at full data rate | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201209 | * UP IP: Conclusion for Key Issue #3 | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201210 | * LS on Backward Compatibility of RRC Resume Request message Protection | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201211 | * Discussion on security of 5MBS enhancemen | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201212 | * New SID: Study on Security Aspects of Enhancements for 5G Multicast-Broadcast Services | * Huawei, Hiliscon | * revised | * - | * S3-201402 |
| * S3-201213 | * Address the EN on the NAS procedure impact in Solution#2.4 | * Huawei, Hiliscon | * approved | * - | * - |
| * S3-201214 | * Editorial changes to TS 33.501 R15 | * Huawei, Hiliscon | * agreed | * - | * - |
| * S3-201215 | * Editorial changes to TS 33.501 R16 | * Huawei, Hiliscon | * agreed | * - | * - |
| * S3-201216 | * Protection of UE radio capability transfer for CIoT UEs that only support CP optimization | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201217 | * Add clarifications to the living CR | * Huawei, Hiliscon | * revised | * - | * S3-201279 |
| * S3-201218 | * A new solution to protect SQN | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201219 | * NAS security based MIB/SIBs integrity protection | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201220 | * Propose to protect the privacy of K\_NRP ID | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201221 | * Propose to protect Application Layer ID from privacy violations | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201222 | * Signalling security mandatory activation for unicast | * Huawei, Hiliscon | * noted | * - | * - |
| * S3-201223 | * Clarification on procedures without security protection | * Huawei, Hiliscon | * revised | * - | * S3-201454 |
| * S3-201224 | * Clarification on input parameters of Null protection algorithms | * Huawei, Hiliscon | * revised | * - | * S3-201412 |
| * S3-201225 | * Remove mismatched threat references and test steps | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201418 |
| * S3-201226 | * Update to the test case of Storing of UE authentication status by UDM | * Nokia, Nokia Shanghai Bell | * agreed | * - | * - |
| * S3-201227 | * Test Case on Confidentiality of the Attributes not in Data-Type Encryption Policy | * Nokia, Nokia Shanghai Bell | * not pursued | * - | * - |
| * S3-201228 | * Threat analysis on the attributes not in Data-Type Encryption Policy | * Nokia, Nokia Shanghai Bell | * not pursued | * - | * - |
| * S3-201229 | * Update to the test case of NF discovery authorization for specific slice | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201420 |
| * S3-201230 | * Update to the critical assets of GVNP | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201376 |
| * S3-201231 | * Update to the threat analysis of software tampering | * Nokia. Nokia Shanghai Bell | * revised | * - | * S3-201377 |
| * S3-201232 | * Update to the requirements of VNF package integrity | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201378 |
| * S3-201233 | * Validation of Access Token ownership requirement | * Mavenir, Deutsche Telekom | * noted | * - | * - |
| * S3-201234 | * Clarification of Token-based authorization | * Mavenir, Deutsche Telekom | * noted | * - | * - |
| * S3-201235 | * Clarification of Indirect Communication Mutual Authentication | * Mavenir, Deutsche Telekom | * merged | * - | * S3-201382 |
| * S3-201236 | * VLAN introduction | * Nokia, Nokia Shanghai Bell, Interdigital | * revised | * S3-200375 | * S3-201470 |
| * S3-201237 | * Resolution of ed note on serving network name | * Nokia, Nokia Shanghai Bell, Interdigital | * revised | * S3-200376 | * S3-201469 |
| * S3-201238 | * KI on interworking NPN and PLMN - security req | * Nokia, Nokia Shanghai Bell, Interdigital | * revised | * S3-200377 | * S3-201468 |
| * S3-201239 | * KI on service continuity - threats and reqs | * Nokia, Nokia Shanghai Bell, Interdigital | * revised | * S3-200378 | * S3-201481 |
| * S3-201240 | * Resolution of editors note on AAA | * Nokia, Nokia Shanghai Bell | * agreed | * S3-200379 | * - |
| * S3-201241 | * Threats and requirements on AAA | * Nokia, Nokia Shanghai Bell, Interdigital | * revised | * S3-200380 | * S3-201467 |
| * S3-201242 | * Resolution of editor's note in solution 1 | * Nokia, Nokia Shanghai Bell, Interdigital | * agreed | * S3-200381 | * - |
| * S3-201243 | * Resolution of editor's note in solution 15 | * Nokia, Nokia Shanghai Bell | * agreed | * S3-200382 | * - |
| * S3-201244 | * UP security policy enforcement in 5GLAN | * Nokia, Nokia Shanghai Bell, Interdigital | * agreed | * S3-200383 | * - |
| * S3-201245 | * Reply LS on ARPF in UDICOM | * Nokia | * revised | * - | * S3-201471 |
| * S3-201246 | * Security entities at the perimeter of the 5G Core network | * Nokia, Nokia Shanghai Bell, Juniper | * revised | * - | * S3-201431 |
| * S3-201247 | * Clarification to 5G AV | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201492 |
| * S3-201248 | * Clarification to SEAF | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201493 |
| * S3-201249 | * SID on IIoT | * Nokia, Nokia Shanghai Bell | * revised | * - | * S3-201465 |
| * S3-201250 | * 5G LAN ed note resolution | * Nokia, Nokia Shanghai Bell | * not pursued | * - | * - |
| * S3-201251 | * TSC security policy enforcement | * Nokia, Nokia Shanghai Bell | * not pursued | * - | * - |
| * S3-201252 | * Several corrections to spec text | * Nokia, Nokia Shanghai Bell | * agreed | * - | * - |
| * S3-201253 | * Resolving the editor’s note on the protection of messages | * Qualcomm Incorporated | * approved | * S3-200757 | * - |
| * S3-201254 | * Privacy of K\_NRP ID | * Qualcomm Incorporated | * noted | * S3-200756 | * - |
| * S3-201255 | * Proposal to resolve the Editor’s note of the size of COUNT | * Qualcomm Incorporated | * approved | * S3-200755 | * - |
| * S3-201256 | * Leaving destination identity privacy to the application | * Qualcomm Incorporated | * revised | * - | * S3-201424 |
| * S3-201257 | * Allocation of FC values for TS 33.356 | * Qualcomm Incorporated | * agreed | * S3-200350 | * - |
| * S3-201258 | * Proposed SID for Unmanned Aerial Systems | * Qualcomm Incorporated, Ericsson, Samsung, Nokia, Nokia Shanghai Bell, Interdigital | * revised | * - | * S3-201425 |
| * S3-201259 | * Proposed TR skeleton for Unmanned Aerial Systems | * Qualcomm Incorporated | * approved | * - | * - |
| * S3-201260 | * Details from the SA2 UAS moderated e-mail discussion | * Qualcomm Incorporated | * noted | * - | * - |
| * S3-201261 | * Correcting the S-NSSAI length in solution 10 in TR 33.813 | * Qualcomm Incorporated | * revised | * - | * S3-201426 |
| * S3-201262 | * Protection of UE radio capability transfer for UEs without AS security | * Qualcomm Incorporated | * noted | * S3-200764 | * - |
| * S3-201263 | * shortResumeMAC-I calculation | * Qualcomm Incorporated, Samsung, CATT, Huawei, Hisilicon | * agreed | * - | * - |
| * S3-201264 | * shortResumeMAC-I calculation (rel-16 mirror) | * Qualcomm Incorporated, Samsung, CATT, Huawei, Hisilicon | * agreed | * - | * - |
| * S3-201265 | * F1 security setup with certificate based IKEv2 authentication | * Qualcomm Incorporated, Ericsson, Intel | * merged | * S3-200762 | * S3-201437 |
| * S3-201266 | * F1 security setup with PSK based IKEv2 authentication | * Qualcomm Incorporated, Ericsson, Intel | * merged | * S3-200763 | * S3-201437 |
| * S3-201267 | * Security of dynamic PSK | * Qualcomm Incorporated, Ericsson | * noted | * - | * - |
| * S3-201268 | * Evaluation on UE behavior on detection of false signature | * Qualcomm Incorporated | * noted | * - | * - |
| * S3-201269 | * Evaluation on signing key management | * Qualcomm Incorporated | * noted | * - | * - |
| * S3-201270 | * Solution #4 Evaluation (Enriched MR) | * Qualcomm Incorporated | * noted | * - | * - |
| * S3-201271 | * Conclusion of Key Issue #2 | * Qualcomm Incorporated | * noted | * - | * - |
| * S3-201272 | * Clarification on the use of SUPI as the Identity in EAP-AKA’ key derivation | * Qualcomm Incorporated, Nokia, Nokia Shanghai Bell, ZTE | * not pursued | * S3-200361 | * - |
| * S3-201273 | * Clarification on the use of SUPI as the Identity in EAP-AKA’ key derivation | * Qualcomm Incorporated, Nokia, Nokia Shanghai Bell, ZTE | * not pursued | * S3-200362 | * - |
| * S3-201274 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * revised | * - | * S3-201391 |
| * S3-201275 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * revised | * - | * S3-201392 |
| * S3-201276 | * Reply LS on 256 bit algorithm candidates | * Qualcomm Incorporated | * noted | * - | * - |
| * S3-201277 | * pCR : Derivation of A-TID | * Qualcomm Incorporated | * revised | * - | * S3-201387 |
| * S3-201278 | * pCR : Refresh of KAF | * Qualcomm Incorporated | * noted | * - | * - |
| * S3-201279 | * Add clarifications to the living CR | * Huawei, Hisilicon, Ericsson, CATT, Nokia, Nokia Shanghai Bell, AT&T, China Unicom | * revised | * S3-201217 | * S3-201444 |
| * S3-201280 | * Reply LS on Calculation of ShortResumeMAC-I | * Huawei, Hiliscon | * revised | * S3-201203 | * S3-201411 |
| * S3-201281 | * Handling of counter wrap around in UDM, R15 | * Ericsson | * not pursued | * - | * - |
| * S3-201282 | * Handling of counter wrap around in UDM, R16 | * Ericsson | * postponed | * - | * - |
| * S3-201283 | * Discussion paper to support inclusion of GPSI in AKMA | * Samsung | * noted | * - | * - |
| * S3-201284 | * Inclusion of GPSI in AKMA | * Samsung | * noted | * - | * - |
| * S3-201285 | * Storing A-KID in AUSF | * Samsung | * noted | * - | * - |
| * S3-201286 | * Key update procedure in AKMA | * Samsung | * noted | * - | * - |
| * S3-201287 | * Authorization of AF in AKMA | * Samsung, Huawei, HiSilicon | * revised | * - | * S3-201450 |
| * S3-201288 | * Updates to Solution#19 on hash calculation | * Samsung | * revised | * - | * S3-201459 |
| * S3-201289 | * Conclusion for Key issue#2 in FBS | * Samsung | * noted | * - | * - |
| * S3-201290 | * Way forward for Resumecause protection | * Samsung | * noted | * - | * - |
| * S3-201291 | * Clean-up: TS 33.434 | * Samsung | * revised | * - | * S3-201396 |
| * S3-201292 | * Reply LS on 5G-GUTI reallocation after paging of a UE in 5GMM-IDLE mode with suspend indication | * Samsung | * noted | * - | * - |
| * S3-201293 | * F1 interface security set-up procedure | * Samsung, Nokia, Nokia Shanghai Bell, ZTE, T-Mobile, Mavenir, CableLabs, Lenovo, Motorola Mobility, Thales | * revised | * - | * S3-201437 |
| * S3-201294 | * Reply LS on Multiple Kausf upon registering via multiple Serving Networks | * Samsung, Qualcomm Incorporated | * merged | * - | * S3-201350 |
| * S3-201295 | * Protection of DNS messages | * Samsung | * not pursued | * - | * - |
| * S3-201296 | * UP integrity protection for UP Signalling messages | * Samsung | * revised | * - | * S3-201457 |
| * S3-201297 | * Integrity Protection for UP Signalling messages | * Samsung | * noted | * - | * - |
| * S3-201298 | * Conclusion to Key Issue #5 | * Samsung | * noted | * - | * - |
| * S3-201299 | * Usage of TLS profiles for CAPIF | * Samsung | * agreed | * - | * - |
| * S3-201300 | * Reply LS on selected EPS NAS algorithms for unauthenticated emergency sessions in 5GS | * Samsung | * approved | * - | * - |
| * S3-201301 | * Discussion on the selected EPS NAS security algorithms | * Samsung | * noted | * - | * - |
| * S3-201302 | * UE pre-configuration for non-3GPP access networks | * THALES, ORANGE | * agreed | * - | * - |
| * S3-201303 | * Correction of trust indication | * Motorola Mobility, Lenovo, Thales | * revised | * - | * S3-201486 |
| * S3-201304 | * SUCI computation: implementers' test data for network specific identifier-based SUPI | * THALES | * revised | * - | * S3-201363 |
| * S3-201305 | * pCR to TR 33.853 (UPIP): addition of new solution - use NR PDCP for LTE | * VODAFONE Group Plc | * revised | * S3-200631 | * S3-201427 |
| * S3-201306 | * pCR: Conclusion of Key issue#5 | * Motorola Mobility, Lenovo | * noted | * - | * - |
| * S3-201307 | * LS to RAN2 and CT1 on Updated User Plane Integrity Protection advice | * VODAFONE Group Plc | * revised | * - | * S3-201452 |
| * S3-201308 | * draft WID - Normative changes for UPIP | * VODAFONE Group Plc | * revised | * S3-200632 | * S3-201455 |
| * S3-201309 | * Delegated digital signing for mitigating false base stations | * CableLabs, Apple, Intel, Deutsche Telekom AG, InterDigital Communications, MITRE, Rogers Communications, Charter Communications | * revised | * - | * S3-201463 |
| * S3-201310 | * Cover sheet for TR 33.853 for Information | * VODAFONE Group Plc | * approved | * S3-200635 | * - |
| * S3-201311 | * pCR to TR33.935 - Addition of Diffie - Helman Key agreements section | * Vodafone GmbH | * approved | * S3-191482 | * - |
| * S3-201312 | * Cover sheet for TR 33.935 LTKUP | * VODAFONE Group Plc | * approved | * - | * - |
| * S3-201313 | * Report on Rel-16 IAB open issues e-mail discussion | * Samsung | * noted | * - | * - |
| * S3-201314 | * pCR to 33.853 (UPIP) - Correction to Key Issue 5 | * VODAFONE Group Plc | * revised | * S3-200639 | * S3-201421 |
| * S3-201315 | * Add DTLS requirement to 33.117 | * Huawei, HiSilicon | * withdrawn | * - | * - |
| * S3-201316 | * Add inactivate scenario to gNB SCAS | * Huawei, HiSilicon | * withdrawn | * - | * - |
| * S3-201317 | * Reduced overhead for UP IP for 5G RAN updates and conclusion | * Philips International B.V. | * revised | * - | * S3-201366 |
| * S3-201318 | * Draft TR 33.853 | * VODAFONE Group Plc | * approved | * - | * - |
| * S3-201319 | * LS response to SA3 on the security related issues for NR SL | * R2-2004083 | * replied to | * - | * - |
| * S3-201320 | * Report from last SA Plenary | * WG Chair | * noted | * - | * - |
| * S3-201321 | * Working assumptions | * WG Chair | * noted | * - | * - |
| * S3-201322 | * LS on Calculation of ShortResumeMAC-I | * R2-2004265 | * replied to | * - | * - |
| * S3-201323 | * Add DTLS requirement | * Huawei, HiSilicon | * revised | * - | * S3-201408 |
| * S3-201324 | * Add inactivate scenario to gNB SCAS | * Huawei, HiSilicon | * noted | * - | * - |
| * S3-201325 | * LS on AS rekeying handling | * R3-202833 | * replied to | * - | * - |
| * S3-201326 | * Reply to: LS response to SA3 on the security related issues for NR SL | * CATT | * revised | * - | * S3-201483 |
| * S3-201327 | * Reply to: LS on AS rekeying handling | * CATT | * revised | * - | * S3-201484 |
| * S3-201328 | * 256 bit algorithm candidates | * ETSI SAGE | * postponed | * - | * - |
| * S3-201329 | * Illustrative flow for the proposal in the CR S3-201296 | * Samsung | * noted | * - | * - |
| * S3-201330 | * [33.179] R13 token scope fix | * Motorola Solutions | * agreed | * - | * - |
| * S3-201331 | * [33.180] R16 Fix IdM client terminology | * Motorola Solutions Danmark A/S | * agreed |  |  |
| * S3-201332 | * [33.180] R16 Fix XML references | * Motorola Solutions Danmark A/S | * agreed |  |  |
| * S3-201333 | * [33.180] R16 TrK-ID and InK-ID indication | * Motorola Solutions Danmark A/S | * agreed |  |  |
| * S3-201334 | * Editorial change to the security for IAB | * Huawei, Hisilicon | * agreed |  |  |
| * S3-201335 | * Add requirement for OAM to IAB ENDC | * Huawei, Hisilicon | * agreed |  |  |
| * S3-201336 | * Clarifications related to link identifier update messages | * InterDigital Communications | * withdrawn | * - |  |
| * S3-201337 | * Background infos for IIoT study proposal | * Nokia Germany | * noted |  |  |
| * S3-201338 | * draft TS 33.536 v1.2.0 | * LG Electronics Inc. | * approved |  |  |
| * S3-201339 | * draft TR 33.836 v0.6.0 | * LG Electronics Inc. | * approved |  |  |
| * S3-201340 | * Presentation of TS 33.536 to TSG for approval | * LG Electronics Inc. | * approved |  |  |
| * S3-201341 | * Presentation of TR 33.836 to TSG for approval | * LG Electronics Inc. | * approved |  |  |
| * S3-201342 | * TS 33.536 - Security policy | * LG Electronics Inc. | * approved | * S3-200952 |  |
| * S3-201343 | * pCR to TS 33.535: Store AKMA key material in AAnF | * Ericsson | * approved | * S3-201050 |  |
| * S3-201344 | * Remediation for Privacy of KNRP ID Threat | * InterDigital Communications | * approved | * S3-200938 |  |
| * S3-201345 | * Clarifications related to link identifier update messages | * InterDigital Communications | * approved | * S3-200939 |  |
| * S3-201346 | * Correction of SUPI in IKE\_AUTH exchange | * Motorola Mobility, Lenovo, Ericsson, Huawei | * approved | * S3-201065 |  |
| * S3-201347 | * Clarification on test case on synchronization failure handling | * Huawei, Hisilicon | * agreed | * S3-201105 |  |
| * S3-201348 | * Clarification on test case on RES\* failure handling | * Huawei, Hisilicon | * agreed | * S3-201106 |  |
| * S3-201349 | * Security requirements on test case for type 1 GVNP | * Huawei, Hisilicon | * approved | * S3-201107 |  |
| * S3-201350 | * LS reply to CT4 LS on Multiple Kausf upon registering via multiple SNs | * Huawei, Hisilicon | * approved | * S3-201120 |  |
| * S3-201351 | * LS on protection\_of\_ allowed CAG list against\_mitm\_Attack | * Huawei, Hisilicon | * revised | * S3-201122 | * S3-201414 |
| * S3-201352 | * NFV\_SCAS\_requirement\_on\_authorization\_of\_resource\_management | * Huawei, Hisilicon | * approved | * S3-201124 |  |
| * S3-201353 | * coversheet for TS 33.535 for approval | * China Mobile Com. Corporation | * approved |  |  |
| * S3-201354 | * New SID: Study on Security Aspects of Enhancement of Support for Edge Computing in 5GC | * Huawei, Hisilicon, China Unicom, CAICT, China Telecom, ZTE | * agreed | * S3-201088 |  |
| * S3-201355 | * Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 1 | * China Mobile | * approved | * S3-201132 |  |
| * S3-201356 | * Adding test case into clause 5.2.5.5.3.3.5 | * China Mobile | * approved | * S3-201133 |  |
| * S3-201357 | * Adding security requirements and related test cases for GVNP of type 2 | * China Mobile | * approved | * S3-201134 |  |
| * S3-201358 | * Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 2 | * China Mobile | * approved | * S3-201135 |  |
| * S3-201359 | * Adding security functional requirements deriving virtualisation and related test cases for GVNP of type 3 | * China Mobile | * approved | * S3-201137 |  |
| * S3-201360 | * draft TR on Study on Enhancement of Network Slicing | * Nokia | * approved |  |  |
| * S3-201361 | * Cover Sheet for TR33.813 for presentation to SA | * Nokia | * approved |  |  |
| * S3-201362 | * Key issue on Protection of the Milenage OP value during storage in UDR | * KPN | * approved | * S3-201172 |  |
| * S3-201363 | * SUCI computation: implementers' test data for network specific identifier-based SUPI | * THALES | * agreed | * S3-201304 |  |
| * S3-201364 | * Key issue on Protection of the Milenage OP value during transfer out of UDR | * KPN | * approved | * S3-201173 |  |
| * S3-201365 | * Reply LS to ITU-T Study Group 17 on towards post-quantum symmetric and asymmetric cryptography in 5G | * SA3 | * approved | * - |  |
| * S3-201366 | * Reduced overhead for UP IP for 5G RAN updates and conclusion | * Philips International B.V. | * approved | * S3-201317 |  |
| * S3-201367 | * Editorial corrections to NDS/IP | * Juniper Networks | * agreed | * S3-200934 |  |
| * S3-201368 | * Editorial corrections to NDS/AF | * Juniper Networks | * agreed | * S3-200935 |  |
| * S3-201369 | * AKMA key generation indication | * ZTE Corporation | * agreed | * S3-200965 |  |
| * S3-201370 | * Derivation of Kaf | * ZTE Corporation, China Mobile | * approved | * S3-200969 |  |
| * S3-201371 | * Store AKMA subscription data in UDM | * ZTE Corporation | * approved | * S3-200973 |  |
| * S3-201372 | * New WID on Security Assurance Specification for Inter PLMN UP Security (IPUPS) | * ZTE Corporation | * agreed | * S3-200977 |  |
| * S3-201373 | * Skeleton of Security Assurance Specification for Service Communication Proxy (SECOP) | * Nokia, Nokia Shanghai Bell | * approved | * S3-201176 |  |
| * S3-201374 | * SCAS SECOP: Scope | * Nokia, Nokia Shanghai Bell | * approved | * S3-201177 |  |
| * S3-201375 | * SCAS SECOP: Introduction and General Approach | * Nokia, Nokia Shanghai Bell | * approved | * S3-201178 |  |
| * S3-201376 | * Update to the critical assets of GVNP | * Nokia, Nokia Shanghai Bell | * approved | * S3-201230 |  |
| * S3-201377 | * Update to the threat analysis of software tampering | * Nokia. Nokia Shanghai Bell | * approved | * S3-201231 |  |
| * S3-201378 | * Update to the requirements of VNF package integrity | * Nokia, Nokia Shanghai Bell | * approved | * S3-201232 |  |
| * S3-201379 | * draft TS 33.522 (v0.1.0) | * Nokia, Nokia Shanghai Bell | * approved |  |  |
| * S3-201380 | * Reply-LS on FN-RG authentication and related questions | * Juniper | * approved |  |  |
| * S3-201381 | * Study on security aspects of the Disaggregated gNB Architecture | * China Telecom, China Unicom, CATT, Xiaomi, vivo | * agreed | * S3-200945 |  |
| * S3-201382 | * Authentication in indirect communication scenarios | * Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon, Mavenir, CableLabs, Deutsche Telekom | * agreed | * S3-201017 |  |
| * S3-201383 | * Further evaluation to Solution #25: Security solution for preventing Botnet Attacks from Improper CIOT Device Use | * Ericsson | * approved | * S3-201035 |  |
| * S3-201384 | * Draft TR 33.861 | * Ericsson | * approved |  |  |
| * S3-201385 | * Update the clause 5.3.3.1.4.3 | * ZTE Corporation | * approved | * S3-200975 |  |
| * S3-201386 | * Token-based authorization for indirect communication | * CableLabs, Mavenir, Nokia, Nokia Shanghai Bell, Ericsson, Huawei, Hisilicon | * approved | * S3-201081 |  |
| * S3-201387 | * pCR : Derivation of A-TID | * Qualcomm Incorporated | * approved | * S3-201277 |  |
| * S3-201388 | * draft TR 33.818 v0.7.0 | * China Mobile | * approved |  |  |
| * S3-201389 | * draft TS 33.521 v0.1.0 | * China Mobile | * approved |  |  |
| * S3-201390 | * draft TS 33.535 v0.5.0 | * China Mobile | * approved |  |  |
| * S3-201391 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * revised | * S3-201274 | * S3-201442 |
| * S3-201392 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * revised | * S3-201275 | * S3-201443 |
| * S3-201393 | * Definition of AKMA subscription data | * CATT | * approved | * S3-200980 |  |
| * S3-201394 | * AKMA-Clarification in text 6.2 | * Apple | * approved | * S3-201002 |  |
| * S3-201395 | * AKMA-Initiation of AKMA | * Apple | * approved | * S3-201004 |  |
| * S3-201396 | * Clean-up: TS 33.434 | * Samsung | * approved | * S3-201291 |  |
| * S3-201397 | * eV2XARC-LCID clarification | * Apple | * approved | * S3-201006 |  |
| * S3-201398 | * eV2XARC-Security requirement for PC5 | * Apple | * approved | * S3-201007 |  |
| * S3-201399 | * Update on RSA exponent requirement | * Apple Computer Trading Co. Ltd | * agreed | * S3-200987 |  |
| * S3-201400 | * Study on Security Aspects of Enhancement for Proximity Based Services in 5GS | * CATT | * agreed | * S3-201085 |  |
| * S3-201401 | * Draft 33.434 v0.4.0 | * Samsung | * approved |  |  |
| * S3-201402 | * New SID: Study on Security Aspects of Enhancements for 5G Multicast-Broadcast Services | * Huawei, Hiliscon | * agreed | * S3-201212 |  |
| * S3-201403 | * Primary authentication | * Huawei, HiSilicon | * withdrawn | * - |  |
| * S3-201404 | * Primary authentication | * Huawei, HiSilicon | * approved | * S3-201185 |  |
| * S3-201405 | * Update testcase in gNB SCAS | * Huawei, HiSilicon | * agreed | * S3-201199 |  |
| * S3-201406 | * Update testcases in eNB SCAS | * Huawei, HiSilicon | * agreed | * S3-201200 |  |
| * S3-201407 | * Remove mismatched threat references and test steps | * Nokia, Nokia Shanghai Bell | * withdrawn | * S3-201225 |  |
| * S3-201408 | * Add DTLS requirement | * Huawei, HiSilicon | * approved | * S3-201323 |  |
| * S3-201409 | * Editoral Change to 33.501 on 5wwc | * Huawei, HiSilicon | * approved | * S3-201192 |  |
| * S3-201410 | * living CR of 5wwc | * Huawei, HiSilicon | * approved | * S3-201194 |  |
| * S3-201411 | * Reply LS on Calculation of ShortResumeMAC-I | * Huawei, Hiliscon | * revised | * S3-201280 | * S3-201489 |
| * S3-201412 | * Clarification on input parameters of Null protection algorithms | * Huawei, Hiliscon | * approved | * S3-201224 |  |
| * S3-201413 | * Cover sheet TS 33.434 | * Samsung | * approved |  |  |
| * S3-201414 | * LS on protection\_of\_ allowed CAG list against\_mitm\_Attack | * Huawei, Hisilicon | * approved | * S3-201351 | * - |
| * S3-201415 | * description modification for policy regarding consective failed login attempts | * Huawei, HiSilicon | * agreed | * S3-201196 |  |
| * S3-201416 | * Clarification about system handling during overload situtations | * Huawei, HiSilicon | * agreed | * S3-201195 |  |
| * S3-201417 | * CR of 5WWC | * Huawei, HiSilicon | * agreed |  |  |
| * S3-201418 | * Remove mismatched threat references and test steps | * Nokia, Nokia Shanghai Bell | * agreed | * S3-201225 |  |
| * S3-201419 | * Corrections on PKCS#1v1.5 padding and Elliptic Curves | * Ericsson | * agreed | * S3-201047 |  |
| * S3-201420 | * Update to the test case of NF discovery authorization for specific slice | * Nokia, Nokia Shanghai Bell | * agreed | * S3-201229 |  |
| * S3-201421 | * pCR to 33.853 (UPIP) - Correction to Key Issue 5 | * VODAFONE Group Plc | * approved | * S3-201314 |  |
| * S3-201422 | * Elliptic Curve Group Size | * Ericsson | * agreed | * S3-201045 |  |
| * S3-201423 | * TLS 1.3 cipher suites | * Ericsson | * agreed | * S3-201046 |  |
| * S3-201424 | * Leaving destination identity privacy to the application | * Qualcomm Incorporated | * approved | * S3-201256 |  |
| * S3-201425 | * Proposed SID for Unmanned Aerial Systems | * Qualcomm Incorporated, Ericsson, Samsung, Nokia, Nokia Shanghai Bell, Interdigital | * agreed | * S3-201258 |  |
| * S3-201426 | * Correcting the S-NSSAI length in solution 10 in TR 33.813 | * Qualcomm Incorporated | * approved | * S3-201261 |  |
| * S3-201427 | * pCR to TR 33.853 (UPIP): addition of new solution - use NR PDCP for LTE | * VODAFONE Group Plc | * approved | * S3-201305 |  |
| * S3-201428 | * Solution for KI#2 – Protection of LTK access over Nudr | * Ericsson | * approved | * S3-201026 |  |
| * S3-201429 | * Rapporteurs minutes for UPIP (agenda 5.9) | * VODAFONE Group Plc | * revised |  | * S3-201458 |
| * S3-201430 | * TR33853v090 | * VODAFONE Group Plc | * approved |  |  |
| * S3-201431 | * Security entities at the perimeter of the 5G Core network | * Nokia, Nokia Shanghai Bell, Juniper | * agreed | * S3-201246 |  |
| * S3-201432 | * Reply LS on SUCI computation from an NSI | * Ericsson | * approved |  |  |
| * S3-201433 | * draft TS 33.226 v0.1.0 | * Huawei Technologies Sweden AB | * approved |  |  |
| * S3-201434 | * Skeleton of SCAS\_5G\_N3IWF | * China Unicom | * approved |  |  |
| * S3-201435 | * draft TS 33.520 | * China Unicom | * approved |  |  |
| * S3-201436 | * Study on enhanced security support for Non-Public Networks | * Ericsson, Interdigital | * agreed | * S3-201064 |  |
| * S3-201437 | * F1 interface security set-up procedure | * Samsung, Nokia, Nokia Shanghai Bell, ZTE, T-Mobile, Mavenir, CableLabs, Lenovo, Motorola Mobility, Thales, Intel, Qualcomm Incorporated, Ericsson | * agreed | * S3-201293 |  |
| * S3-201438 | * Draft CR- Adding security requirements to NSSAAF | * Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon | * approved | * S3-201062 |  |
| * S3-201439 | * UE caps protection using AS security in EPS Rel-16 | * Ericsson | * agreed | * S3-201032 |  |
| * S3-201440 | * UE caps protection using AS security in 5GS Rel-16 | * Ericsson | * approved | * S3-201033 |  |
| * S3-201441 | * DraftCR – Living document for supporting 5G CIoT security | * Ericsson | * approved | * S3-201038 |  |
| * S3-201442 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * agreed | * S3-201391 |  |
| * S3-201443 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * agreed | * S3-201392 |  |
| * S3-201444 | * Add clarifications to the living CR | * Huawei, Hisilicon, Ericsson, CATT, Nokia, Nokia Shanghai Bell, AT&T, China Unicom | * approved | * S3-201279 |  |
| * S3-201445 | * Kaf refresh procedure | * Huawei, HiSilicon | * withdrawn | * S3-201188 |  |
| * S3-201446 | * Kaf refresh procedure | * Huawei, HiSilicon | * approved | * S3-201188 |  |
| * S3-201447 | * Authorization of AF in AKMA | * Samsung, Huawei, HiSilicon,CATT | * withdrawn | * - |  |
| * S3-201448 | * Authorization of AF in AKMA | * Samsung, Huawei, HiSilicon,CATT | * withdrawn | * - |  |
| * S3-201449 | * Authorization of AF in AKMA | * Samsung, Huawei, HiSilicon,CATT | * withdrawn | * - |  |
| * S3-201450 | * Authorization of AF in AKMA | * Samsung, Huawei, HiSilicon,CATT | * approved | * S3-201287 |  |
| * S3-201451 | * TR 33.935 v0.3.0 | * VODAFONE Group Plc | * approved |  |  |
| * S3-201452 | * LS to SA2 and CT1 on Updated User Plane Integrity Protection advice | * VODAFONE Group Plc | * revised | * S3-201307 | * S3-201487 |
| * S3-201453 | * LS reply to on security context for 5GC to EPC mobility | * Huawei, Hisilicon | * approved | * S3-201109 |  |
| * S3-201454 | * Clarification on procedures without security protection | * Huawei, Hiliscon | * approved | * S3-201223 |  |
| * S3-201455 | * draft WID - Normative changes for UPIP | * VODAFONE Group Plc | * agreed | * S3-201308 |  |
| * S3-201456 | * CR for 5GS LCS normative work | * CATT | * revised |  | * S3-201482 |
| * S3-201457 | * UP integrity protection for UP Signalling messages | * Samsung | * not pursued | * S3-201296 |  |
| * S3-201458 | * Rapporteurs minutes for UPIP (agenda 5.9) up to commenting deadline | * VODAFONE Group Plc | * noted | * S3-201429 |  |
| * S3-201459 | * Updates to Solution#19 on hash calculation | * Samsung | * approved | * S3-201288 |  |
| * S3-201460 | * Draft TR 33.846 | * Ericsson Japan K.K. | * approved |  |  |
| * S3-201461 | * Draft CR as a living baseline for 5GS LCS normative work | * CATT | * approved | * S3-201084 |  |
| * S3-201462 | * eNS Living CR showing separate NSSAAF and AAA-P | * Nokia, Nokia Shanghai Bell | * approved | * S3-201075 |  |
| * S3-201463 | * Delegated digital signing for mitigating false base stations | * CableLabs, Apple, Intel, Deutsche Telekom AG, InterDigital Communications, MITRE, Rogers Communications, Charter Communications | * approved | * S3-201309 |  |
| * S3-201464 | * LS Reply to LS on Misalignment on HTTP connections for N32-c and on N32-f contexts termination | * Nokia | * approved |  |  |
| * S3-201465 | * SID on IIoT | * Nokia, Nokia Shanghai Bell, Interdigital, Verizon, CMCC, BMWi, Huawei, HiSilicon, Samsung, Ericsson | * agreed | * S3-201249 |  |
| * S3-201466 | * SBA Network Function certificate profile | * Nokia, Nokia Shanghai Bell, CommScope, Ericsson, Deutsche Telekom, Verizon, CableLabs | * agreed | * S3-201128 |  |
| * S3-201467 | * Threats and requirements on AAA | * Nokia, Nokia Shanghai Bell, Interdigital | * agreed | * S3-201241 |  |
| * S3-201468 | * KI on interworking NPN and PLMN - security req | * Nokia, Nokia Shanghai Bell, Interdigital | * agreed | * S3-201238 |  |
| * S3-201469 | * Resolution of ed note on serving network name | * Nokia, Nokia Shanghai Bell, Interdigital | * agreed | * S3-201237 |  |
| * S3-201470 | * VLAN introduction | * Nokia, Nokia Shanghai Bell, Interdigital | * agreed | * S3-201236 |  |
| * S3-201471 | * Reply LS on ARPF in UDICOM | * Nokia | * approved | * S3-201245 |  |
| * S3-201472 | * Correction to security capability negotiation between SEPPs | * Huawei, HiSilicon,China Mobile | * agreed | * S3-201179 |  |
| * S3-201473 | * Correction to security capability negotiation between SEPPs | * Huawei, HiSilicon,China Mobile | * agreed | * S3-201180 |  |
| * S3-201474 | * Clarification to the Usage of KAUSF for Solution #2.2 in TR 33.846 | * China Mobile | * approved | * S3-201140 |  |
| * S3-201475 | * 5GFBS-Evaluation for solution#7 | * Apple | * approved | * S3-200991 |  |
| * S3-201476 | * TR33.809 | * Apple Computer Trading Co. Ltd | * approved |  |  |
| * S3-201477 | * Living document of Service Based Interfaces for GBA | * Ericsson | * approved | * S3-201053 |  |
| * S3-201478 | * Living document of Service Based Interfaces for GBA Push | * Ericsson | * approved | * S3-201054 |  |
| * S3-201479 | * Reply LS on Misalignments on N32-f context Id | * Ericsson | * approved |  |  |
| * S3-201480 | * Presentation of Specification/Report to TSG: TR 33.855 | * Ericsson | * approved | * S3-201014 |  |
| * S3-201481 | * KI on service continuity - threats and reqs | * Nokia, Nokia Shanghai Bell, Interdigital | * agreed | * S3-201239 |  |
| * S3-201482 | * CR for 5GS LCS normative work | * CATT | * revised | * S3-201456 | * S3-201494 |
| * S3-201483 | * Reply to: LS response to SA3 on the security related issues for NR SL | * CATT | * approved | * S3-201326 |  |
| * S3-201484 | * Reply to: LS on AS rekeying handling | * CATT | * approved | * S3-201327 |  |
| * S3-201485 | * Normative text for supporting 5G CIoT security | * Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon | * revised |  | * S3-201488 |
| * S3-201486 | * Correction of trust indication | * Motorola Mobility, Lenovo, Thales, Broadcom | * approved | * S3-201303 |  |
| * S3-201487 | * LS to SA2 and CT1 on Updated User Plane Integrity Protection advice | * VODAFONE Group Plc | * approved | * S3-201452 | * - |
| * S3-201488 | * Normative text for supporting 5G CIoT security | * Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon | * agreed | * S3-201485 |  |
| * S3-201489 | * Reply LS on Calculation of ShortResumeMAC-I | * Huawei, Hiliscon | * approved | * S3-201411 |  |
| * S3-201490 | * Reply LS on PMF protocol security | * Nokia, Nokia Shanghai Bell, Qualcomm Incorporated | * approved | * S3-201069 |  |
| * S3-201491 | * TR 33.845 version 0.3.0 | * VODAFONE Group Plc | * approved |  |  |
| * S3-201492 | * Clarification to 5G AV | * Nokia, Nokia Shanghai Bell | * not pursued | * S3-201247 |  |
| * S3-201493 | * Clarification to SEAF | * Nokia, Nokia Shanghai Bell | * not pursued | * S3-201248 |  |
| * S3-201494 | * CR for 5GS LCS normative work | * CATT | * agreed | * S3-201482 |  |

### A2: Tdoc decision timing

|  |  |  |
| --- | --- | --- |
| Document | Date/time UTC | Decision |
| * C3-195000 | * 01/01/2020 10:26:05 | * approved |
| * C3-195000 | * 01/01/2020 10:26:15 | * noted |
| * C3-195000 | * 01/01/2020 10:26:22 | * approved |
| * C3-195000 | * 21/02/2020 14:30:18 | * agreed |
| * C3-195000 | * 21/02/2020 14:30:38 | * noted |
| * C3-195000 | * 22/02/2020 08:50:03 | * agreed |
| * C3-195000 | * 22/02/2020 08:50:06 | * noted |
| * C3-195000 | * 22/02/2020 08:54:01 | * postponed |
| * C3-195000 | * 22/02/2020 08:54:09 | * noted |
| * C3-195183 | * 01/01/2020 10:32:41 | * postponed |
| * C3-195183 | * 01/01/2020 13:52:18 | * noted |
| * C3-195183 | * 01/01/2020 13:52:25 | * approved |
| * C3-195183 | * 01/01/2020 13:52:27 | * noted |
| * C3-195183 | * 01/01/2020 13:52:31 | * agreed |
| * C3-195183 | * 01/01/2020 13:52:36 | * postponed |
| * S3-200600 | * 23/04/2020 09:23:40 | * approved |
| * S3-200601 | * 27/04/2020 14:05:12 | * available |
| * S3-200602 | * 27/04/2020 14:05:28 | * noted |
| * S3-200603 | * 27/04/2020 14:05:31 | * noted |
| * S3-200604 | * 27/04/2020 14:05:49 | * noted |
| * S3-200605 | * 27/04/2020 14:05:54 | * approved |
| * S3-200606 | * 24/04/2020 14:57:28 | * noted |
| * S3-200607 | * 24/04/2020 15:02:29 | * available |
| * S3-200608 | * 24/04/2020 15:02:57 | * noted |
| * S3-200609 | * 24/04/2020 15:03:00 | * noted |
| * S3-200610 | * 24/04/2020 15:03:06 | * noted |
| * S3-200611 | * 27/04/2020 14:15:35 | * approved |
| * S3-200612 | * 15/04/2020 15:29:55 | * approved |
| * S3-200613 | * 23/04/2020 10:37:54 | * noted |
| * S3-200614 | * 23/04/2020 10:37:58 | * noted |
| * S3-200615 | * 27/04/2020 13:49:26 | * postponed |
| * S3-200616 | * 07/04/2020 08:08:37 | * withdrawn |
| * S3-200617 | * 07/04/2020 08:08:38 | * withdrawn |
| * S3-200618 | * 14/04/2020 08:48:19 | * postponed |
| * S3-200618 | * 14/04/2020 14:06:53 | * noted |
| * S3-200619 | * 14/04/2020 08:49:15 | * postponed |
| * S3-200620 | * 27/04/2020 14:06:41 | * available |
| * S3-200621 | * 14/04/2020 08:50:11 | * noted |
| * S3-200622 | * 27/04/2020 13:54:15 | * available |
| * S3-200623 | * 14/04/2020 08:48:51 | * noted |
| * S3-200624 | * 14/04/2020 08:48:38 | * noted |
| * S3-200625 | * 14/04/2020 14:43:03 | * noted |
| * S3-200626 | * 14/04/2020 08:49:58 | * noted |
| * S3-200627 | * 14/04/2020 08:49:04 | * postponed |
| * S3-200628 | * 14/04/2020 15:12:01 | * available |
| * S3-200629 | * 27/04/2020 14:15:52 | * noted |
| * S3-200631 | * 27/04/2020 14:16:19 | * noted |
| * S3-200632 | * 27/04/2020 14:16:22 | * noted |
| * S3-200633 | * 27/04/2020 14:16:32 | * available |
| * S3-200634 | * 27/04/2020 14:16:41 | * noted |
| * S3-200635 | * 27/04/2020 14:16:45 | * noted |
| * S3-200636 | * 27/04/2020 14:16:50 | * noted |
| * S3-200637 | * 27/04/2020 14:16:51 | * noted |
| * S3-200639 | * 27/04/2020 14:17:05 | * noted |
| * S3-200640 | * 24/04/2020 15:03:11 | * approved |
| * S3-200641 | * 23/04/2020 10:33:42 | * noted |
| * S3-200642 | * 27/04/2020 14:08:15 | * available |
| * S3-200643 | * 27/04/2020 14:17:10 | * noted |
| * S3-200644 | * 23/04/2020 09:24:06 | * available |
| * S3-200645 | * 14/04/2020 15:18:05 | * available |
| * S3-200646 | * 14/04/2020 15:19:59 | * available |
| * S3-200647 | * 14/04/2020 15:21:28 | * available |
| * S3-200648 | * 14/04/2020 15:22:45 | * available |
| * S3-200649 | * 14/04/2020 15:12:17 | * approved |
| * S3-200650 | * 15/04/2020 15:07:10 | * approved |
| * S3-200651 | * 27/04/2020 14:02:46 | * available |
| * S3-200652 | * 27/04/2020 13:51:47 | * approved |
| * S3-200653 | * 15/04/2020 15:30:36 | * approved |
| * S3-200654 | * 27/04/2020 14:09:12 | * available |
| * S3-200655 | * 27/04/2020 14:09:47 | * noted |
| * S3-200656 | * 27/04/2020 14:09:50 | * noted |
| * S3-200657 | * 27/04/2020 13:55:09 | * noted |
| * S3-200658 | * 27/04/2020 13:56:00 | * available |
| * S3-200659 | * 27/04/2020 14:21:17 | * available |
| * S3-200660 | * 23/04/2020 10:38:11 | * noted |
| * S3-200661 | * 24/04/2020 15:03:15 | * approved |
| * S3-200662 | * 23/04/2020 10:38:17 | * available |
| * S3-200663 | * 23/04/2020 10:38:24 | * noted |
| * S3-200664 | * 23/04/2020 10:38:30 | * noted |
| * S3-200665 | * 23/04/2020 10:38:32 | * available |
| * S3-200666 | * 24/04/2020 14:55:43 | * available |
| * S3-200667 | * 27/04/2020 13:49:35 | * noted |
| * S3-200668 | * 27/04/2020 13:49:40 | * noted |
| * S3-200669 | * 24/04/2020 15:03:22 | * approved |
| * S3-200670 | * 24/04/2020 15:03:26 | * noted |
| * S3-200671 | * 24/04/2020 15:03:30 | * noted |
| * S3-200672 | * 24/04/2020 15:03:36 | * noted |
| * S3-200673 | * 24/04/2020 15:03:39 | * noted |
| * S3-200674 | * 24/04/2020 15:03:43 | * noted |
| * S3-200675 | * 24/04/2020 15:03:49 | * noted |
| * S3-200676 | * 24/04/2020 15:03:52 | * noted |
| * S3-200677 | * 24/04/2020 15:03:53 | * noted |
| * S3-200678 | * 24/04/2020 15:03:59 | * noted |
| * S3-200679 | * 24/04/2020 15:04:00 | * noted |
| * S3-200680 | * 27/04/2020 13:59:27 | * available |
| * S3-200681 | * 27/04/2020 14:00:50 | * available |
| * S3-200682 | * 27/04/2020 14:09:58 | * approved |
| * S3-200683 | * 27/04/2020 14:10:24 | * available |
| * S3-200684 | * 27/04/2020 14:10:56 | * available |
| * S3-200685 | * 15/04/2020 15:28:31 | * noted |
| * S3-200685 | * 15/04/2020 15:28:32 | * approved |
| * S3-200686 | * 24/04/2020 14:56:07 | * available |
| * S3-200687 | * 24/04/2020 14:56:20 | * noted |
| * S3-200688 | * 16/04/2020 15:49:56 | * available |
| * S3-200689 | * 24/04/2020 14:56:33 | * available |
| * S3-200690 | * 16/04/2020 14:28:34 | * approved |
| * S3-200691 | * 27/04/2020 14:11:16 | * noted |
| * S3-200692 | * 27/04/2020 14:11:20 | * noted |
| * S3-200693 | * 27/04/2020 14:11:24 | * noted |
| * S3-200694 | * 27/04/2020 14:00:58 | * available |
| * S3-200695 | * 14/04/2020 14:11:15 | * noted |
| * S3-200696 | * 27/04/2020 14:17:23 | * available |
| * S3-200697 | * 27/04/2020 14:17:31 | * available |
| * S3-200698 | * 23/04/2020 10:33:50 | * approved |
| * S3-200699 | * 27/04/2020 14:17:36 | * noted |
| * S3-200700 | * 27/04/2020 14:17:42 | * noted |
| * S3-200701 | * 27/04/2020 13:49:45 | * noted |
| * S3-200702 | * 23/04/2020 10:33:56 | * noted |
| * S3-200703 | * 14/04/2020 16:02:57 | * noted |
| * S3-200704 | * 24/04/2020 15:04:16 | * noted |
| * S3-200705 | * 24/04/2020 15:04:21 | * noted |
| * S3-200706 | * 24/04/2020 15:04:22 | * noted |
| * S3-200707 | * 24/04/2020 15:04:25 | * noted |
| * S3-200708 | * 27/04/2020 14:11:57 | * available |
| * S3-200709 | * 24/04/2020 15:05:39 | * available |
| * S3-200710 | * 24/04/2020 15:06:07 | * noted |
| * S3-200711 | * 24/04/2020 15:06:08 | * noted |
| * S3-200712 | * 24/04/2020 15:06:08 | * noted |
| * S3-200713 | * 24/04/2020 15:06:23 | * noted |
| * S3-200714 | * 24/04/2020 15:06:28 | * approved |
| * S3-200715 | * 24/04/2020 15:07:04 | * available |
| * S3-200716 | * 24/04/2020 15:07:12 | * noted |
| * S3-200717 | * 24/04/2020 15:07:12 | * noted |
| * S3-200718 | * 24/04/2020 15:07:14 | * noted |
| * S3-200719 | * 24/04/2020 15:02:05 | * available |
| * S3-200720 | * 23/04/2020 10:34:02 | * noted |
| * S3-200721 | * 27/04/2020 14:01:11 | * approved |
| * S3-200722 | * 27/04/2020 13:49:55 | * noted |
| * S3-200723 | * 27/04/2020 13:49:56 | * noted |
| * S3-200724 | * 24/04/2020 15:07:38 | * available |
| * S3-200725 | * 24/04/2020 15:09:58 | * available |
| * S3-200726 | * 24/04/2020 15:10:43 | * available |
| * S3-200727 | * 27/04/2020 14:12:15 | * noted |
| * S3-200728 | * 27/04/2020 14:12:19 | * noted |
| * S3-200729 | * 27/04/2020 14:12:24 | * noted |
| * S3-200730 | * 27/04/2020 14:12:52 | * available |
| * S3-200731 | * 27/04/2020 14:01:11 | * approved |
| * S3-200732 | * 23/04/2020 10:34:07 | * noted |
| * S3-200733 | * 27/04/2020 13:50:00 | * noted |
| * S3-200734 | * 27/04/2020 13:50:06 | * noted |
| * S3-200735 | * 27/04/2020 13:50:06 | * noted |
| * S3-200736 | * 14/04/2020 14:42:39 | * noted |
| * S3-200737 | * 27/04/2020 14:17:43 | * noted |
| * S3-200738 | * 27/04/2020 14:17:44 | * noted |
| * S3-200739 | * 24/04/2020 15:11:37 | * available |
| * S3-200740 | * 14/04/2020 15:43:47 | * noted |
| * S3-200741 | * 24/04/2020 15:11:59 | * noted |
| * S3-200742 | * 27/04/2020 14:13:04 | * noted |
| * S3-200743 | * 27/04/2020 14:13:12 | * noted |
| * S3-200744 | * 27/04/2020 13:50:13 | * noted |
| * S3-200745 | * 27/04/2020 14:19:21 | * available |
| * S3-200746 | * 27/04/2020 14:19:48 | * available |
| * S3-200747 | * 27/04/2020 13:50:17 | * noted |
| * S3-200748 | * 27/04/2020 13:50:25 | * available |
| * S3-200749 | * 27/04/2020 13:50:30 | * available |
| * S3-200750 | * 23/04/2020 10:34:11 | * noted |
| * S3-200751 | * 23/04/2020 10:34:16 | * noted |
| * S3-200752 | * 27/04/2020 13:52:17 | * available |
| * S3-200753 | * 27/04/2020 14:13:19 | * noted |
| * S3-200754 | * 27/04/2020 14:13:24 | * noted |
| * S3-200755 | * 27/04/2020 14:13:30 | * noted |
| * S3-200756 | * 27/04/2020 14:13:33 | * noted |
| * S3-200757 | * 27/04/2020 14:13:32 | * noted |
| * S3-200758 | * 27/04/2020 14:14:51 | * noted |
| * S3-200759 | * 27/04/2020 14:14:52 | * noted |
| * S3-200760 | * 27/04/2020 14:19:59 | * approved |
| * S3-200761 | * 27/04/2020 14:20:02 | * approved |
| * S3-200762 | * 27/04/2020 14:01:18 | * available |
| * S3-200763 | * 27/04/2020 14:01:31 | * available |
| * S3-200764 | * 27/04/2020 13:50:45 | * noted |
| * S3-200765 | * 27/04/2020 13:51:09 | * noted |
| * S3-200766 | * 27/04/2020 14:20:07 | * noted |
| * S3-200767 | * 27/04/2020 14:20:11 | * noted |
| * S3-200768 | * 27/04/2020 14:20:15 | * approved |
| * S3-200769 | * 24/04/2020 15:12:37 | * available |
| * S3-200770 | * 24/04/2020 15:12:52 | * noted |
| * S3-200771 | * 24/04/2020 15:13:12 | * available |
| * S3-200772 | * 24/04/2020 15:13:27 | * available |
| * S3-200773 | * 24/04/2020 15:13:34 | * approved |
| * S3-200774 | * 24/04/2020 15:13:39 | * noted |
| * S3-200775 | * 24/04/2020 15:13:45 | * noted |
| * S3-200776 | * 27/04/2020 14:21:28 | * noted |
| * S3-200777 | * 27/04/2020 14:21:32 | * noted |
| * S3-200778 | * 27/04/2020 13:51:13 | * noted |
| * S3-200779 | * 27/04/2020 13:52:23 | * noted |
| * S3-200780 | * 27/04/2020 13:56:36 | * available |
| * S3-200781 | * 27/04/2020 13:57:09 | * available |
| * S3-200782 | * 15/04/2020 14:09:48 | * noted |
| * S3-200783 | * 16/04/2020 15:33:21 | * approved |
| * S3-200784 | * 15/04/2020 14:09:49 | * noted |
| * S3-200785 | * 27/04/2020 13:53:54 | * available |
| * S3-200786 | * 27/04/2020 13:58:21 | * available |
| * S3-200787 | * 27/04/2020 13:58:41 | * noted |
| * S3-200788 | * 27/04/2020 13:58:52 | * available |
| * S3-200789 | * 27/04/2020 14:14:55 | * noted |
| * S3-200791 | * 23/04/2020 10:34:22 | * noted |
| * S3-200792 | * 24/04/2020 14:56:41 | * noted |
| * S3-200793 | * 23/04/2020 09:23:46 | * noted |
| * S3-200794 | * 24/04/2020 14:56:47 | * noted |
| * S3-200795 | * 24/04/2020 14:56:54 | * noted |
| * S3-200796 | * 24/04/2020 14:56:57 | * noted |
| * S3-200797 | * 24/04/2020 14:57:02 | * noted |
| * S3-200798 | * 24/04/2020 14:57:08 | * noted |
| * S3-200799 | * 14/04/2020 07:55:53 | * withdrawn |
| * S3-200800 | * 24/04/2020 14:57:20 | * noted |
| * S3-200801 | * 24/04/2020 14:57:23 | * noted |
| * S3-200802 | * 27/04/2020 14:20:30 | * noted |
| * S3-200803 | * 24/04/2020 15:11:22 | * approved |
| * S3-200806 | * 27/04/2020 14:08:10 | * approved |
| * S3-200807 | * 27/04/2020 13:55:43 | * approved |
| * S3-200808 | * 23/04/2020 10:32:37 | * approved |
| * S3-200809 | * 23/04/2020 10:32:49 | * approved |
| * S3-200810 | * 23/04/2020 10:32:54 | * approved |
| * S3-200811 | * 23/04/2020 10:33:00 | * approved |
| * S3-200812 | * 24/04/2020 15:12:29 | * approved |
| * S3-200813 | * 27/04/2020 14:24:43 | * withdrawn |
| * S3-200814 | * 24/04/2020 15:06:56 | * approved |
| * S3-200815 | * 24/04/2020 15:07:24 | * approved |
| * S3-200816 | * 24/04/2020 15:10:03 | * approved |
| * S3-200817 | * 24/04/2020 15:10:37 | * approved |
| * S3-200818 | * 28/04/2020 07:07:09 | * approved |
| * S3-200819 | * 27/04/2020 14:12:43 | * approved |
| * S3-200820 | * 27/04/2020 14:07:20 | * approved |
| * S3-200821 | * 27/04/2020 13:54:30 | * approved |
| * S3-200822 | * 27/04/2020 14:15:08 | * approved |
| * S3-200823 | * 27/04/2020 14:09:06 | * approved |
| * S3-200824 | * 27/04/2020 14:05:02 | * approved |
| * S3-200825 | * 27/04/2020 14:10:19 | * approved |
| * S3-200826 | * 24/04/2020 15:05:55 | * approved |
| * S3-200827 | * 27/04/2020 14:29:24 | * approved |
| * S3-200828 | * 27/04/2020 14:10:51 | * approved |
| * S3-200829 | * 27/04/2020 14:00:30 | * approved |
| * S3-200830 | * 24/04/2020 15:13:07 | * approved |
| * S3-200831 | * 24/04/2020 15:00:19 | * approved |
| * S3-200832 | * 27/04/2020 14:19:13 | * approved |
| * S3-200833 | * 27/04/2020 14:19:41 | * approved |
| * S3-200834 | * 27/04/2020 14:15:21 | * approved |
| * S3-200835 | * 27/04/2020 14:02:07 | * approved |
| * S3-200836 | * 27/04/2020 14:02:50 | * approved |
| * S3-200837 | * 27/04/2020 13:51:30 | * noted |
| * S3-200900 | * 12/05/2020 08:35:16 | * approved |
| * S3-200901 | * 12/05/2020 08:35:29 | * approved |
| * S3-200902 | * 12/05/2020 08:35:30 | * approved |
| * S3-200903 | * 12/05/2020 08:35:30 | * approved |
| * S3-200904 | * 12/05/2020 08:35:20 | * noted |
| * S3-200905 | * 26/05/2020 10:33:31 | * available |
| * S3-200906 | * 19/05/2020 11:49:24 | * available |
| * S3-200907 | * 11/05/2020 10:03:43 | * noted |
| * S3-200908 | * 11/05/2020 10:03:53 | * noted |
| * S3-200909 | * 18/05/2020 11:05:13 | * available |
| * S3-200910 | * 18/05/2020 10:06:28 | * available |
| * S3-200911 | * 11/05/2020 10:02:25 | * noted |
| * S3-200912 | * 11/05/2020 10:03:29 | * noted |
| * S3-200912 | * 18/05/2020 10:07:24 | * available |
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| * S3-200916 | * 11/05/2020 10:02:40 | * noted |
| * S3-200917 | * 19/05/2020 10:13:47 | * noted |
| * S3-200918 | * 11/05/2020 10:04:09 | * noted |
| * S3-200919 | * 18/05/2020 14:52:53 | * noted |
| * S3-200920 | * 11/05/2020 10:04:21 | * noted |
| * S3-200921 | * 18/05/2020 09:22:01 | * available |
| * S3-200921 | * 01/07/2020 14:12:09 | * postponed |
| * S3-200922 | * 18/05/2020 09:22:36 | * available |
| * S3-200922 | * 18/05/2020 09:22:38 | * reserved |
| * S3-200923 | * 19/05/2020 07:56:25 | * available |
| * S3-200924 | * 11/05/2020 10:05:00 | * noted |
| * S3-200925 | * 19/05/2020 10:10:24 | * postponed |
| * S3-200926 | * 18/05/2020 09:23:23 | * noted |
| * S3-200927 | * 18/05/2020 09:23:24 | * noted |
| * S3-200928 | * 19/05/2020 15:19:39 | * postponed |
| * S3-200929 | * 18/05/2020 09:23:31 | * postponed |
| * S3-200930 | * 18/05/2020 09:23:37 | * postponed |
| * S3-200931 | * 11/05/2020 10:14:07 | * noted |
| * S3-200932 | * 18/05/2020 09:25:30 | * available |
| * S3-200933 | * 11/05/2020 10:03:05 | * noted |
| * S3-200934 | * 19/05/2020 14:39:09 | * agreed |
| * S3-200935 | * 19/05/2020 14:40:09 | * available |
| * S3-200936 | * 13/05/2020 07:37:21 | * noted |
| * S3-200937 | * 19/05/2020 10:40:53 | * available |
| * S3-200938 | * 19/05/2020 10:40:38 | * available |
| * S3-200939 | * 19/05/2020 11:07:01 | * available |
| * S3-200940 | * 19/05/2020 14:38:46 | * noted |
| * S3-200941 | * 19/05/2020 15:19:49 | * available |
| * S3-200941 | * 25/05/2020 10:40:54 | * approved |
| * S3-200942 | * 11/05/2020 10:03:16 | * noted |
| * S3-200943 | * 11/05/2020 10:04:35 | * noted |
| * S3-200944 | * 19/05/2020 14:44:23 | * available |
| * S3-200944 | * 25/05/2020 10:39:15 | * postponed |
| * S3-200945 | * 19/05/2020 15:28:37 | * agreed |
| * S3-200946 | * 19/05/2020 15:29:34 | * noted |
| * S3-200950 | * 19/05/2020 14:40:21 | * available |
| * S3-200951 | * 19/05/2020 11:07:44 | * available |
| * S3-200952 | * 19/05/2020 11:07:50 | * approved |
| * S3-200953 | * 19/05/2020 15:20:51 | * approved |
| * S3-200954 | * 19/05/2020 15:20:55 | * approved |
| * S3-200955 | * 13/05/2020 07:37:29 | * noted |
| * S3-200956 | * 18/05/2020 09:27:53 | * noted |
| * S3-200957 | * 18/05/2020 10:22:29 | * noted |
| * S3-200958 | * 18/05/2020 09:44:51 | * noted |
| * S3-200959 | * 14/05/2020 12:38:26 | * available |
| * S3-200960 | * 12/05/2020 08:32:17 | * available |
| * S3-200961 | * 13/05/2020 07:37:36 | * noted |
| * S3-200962 | * 18/05/2020 09:44:57 | * available |
| * S3-200963 | * 18/05/2020 14:10:17 | * agreed |
| * S3-200964 | * 18/05/2020 14:10:23 | * agreed |
| * S3-200965 | * 18/05/2020 15:14:28 | * available |
| * S3-200966 | * 18/05/2020 15:15:03 | * noted |
| * S3-200967 | * 18/05/2020 15:15:06 | * noted |
| * S3-200968 | * 18/05/2020 15:15:16 | * approved |
| * S3-200969 | * 18/05/2020 15:15:19 | * approved |
| * S3-200970 | * 18/05/2020 15:15:54 | * noted |
| * S3-200971 | * 18/05/2020 15:15:58 | * noted |
| * S3-200972 | * 18/05/2020 15:16:14 | * noted |
| * S3-200973 | * 18/05/2020 15:16:44 | * available |
| * S3-200974 | * 19/05/2020 10:35:19 | * agreed |
| * S3-200975 | * 19/05/2020 11:08:46 | * available |
| * S3-200976 | * 19/05/2020 11:08:58 | * approved |
| * S3-200977 | * 19/05/2020 14:42:26 | * available |
| * S3-200978 | * 19/05/2020 14:47:52 | * approved |
| * S3-200979 | * 26/05/2020 10:13:51 | * available |
| * S3-200980 | * 18/05/2020 15:19:17 | * available |
| * S3-200981 | * 18/05/2020 15:19:25 | * withdrawn |
| * S3-200982 | * 18/05/2020 15:19:26 | * withdrawn |
| * S3-200983 | * 18/05/2020 15:19:28 | * withdrawn |
| * S3-200984 | * 19/05/2020 14:39:02 | * approved |
| * S3-200985 | * 19/05/2020 14:39:04 | * approved |
| * S3-200986 | * 18/05/2020 15:19:36 | * noted |
| * S3-200987 | * 19/05/2020 11:53:27 | * available |
| * S3-200988 | * 19/05/2020 14:44:34 | * available |
| * S3-200988 | * 25/05/2020 10:39:49 | * noted |
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| * S3-200989 | * 25/05/2020 10:33:46 | * noted |
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| * S3-200990 | * 25/05/2020 10:33:49 | * noted |
| * S3-200991 | * 19/05/2020 14:45:15 | * available |
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| * S3-200992 | * 25/05/2020 10:38:35 | * noted |
| * S3-200993 | * 19/05/2020 14:45:38 | * available |
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| * S3-201254 | * 19/05/2020 11:50:15 | * noted |
| * S3-201255 | * 19/05/2020 11:50:22 | * approved |
| * S3-201256 | * 19/05/2020 11:50:43 | * available |
| * S3-201257 | * 19/05/2020 11:51:00 | * available |
| * S3-201257 | * 25/05/2020 15:59:53 | * agreed |
| * S3-201258 | * 19/05/2020 15:48:40 | * available |
| * S3-201259 | * 19/05/2020 15:56:16 | * approved |
| * S3-201260 | * 19/05/2020 15:52:34 | * noted |
| * S3-201261 | * 19/05/2020 14:49:53 | * approved |
| * S3-201262 | * 19/05/2020 07:58:40 | * noted |
| * S3-201263 | * 18/05/2020 10:28:26 | * agreed |
| * S3-201264 | * 18/05/2020 10:28:39 | * agreed |
| * S3-201265 | * 25/05/2020 16:02:13 | * available |
| * S3-201266 | * 25/05/2020 16:02:20 | * available |
| * S3-201267 | * 13/05/2020 07:39:43 | * noted |
| * S3-201268 | * 19/05/2020 14:47:09 | * available |
| * S3-201268 | * 25/05/2020 10:36:32 | * noted |
| * S3-201269 | * 19/05/2020 14:47:15 | * available |
| * S3-201269 | * 25/05/2020 10:36:35 | * noted |
| * S3-201270 | * 19/05/2020 14:47:16 | * available |
| * S3-201270 | * 25/05/2020 10:38:52 | * noted |
| * S3-201271 | * 19/05/2020 14:47:26 | * available |
| * S3-201271 | * 25/05/2020 10:36:40 | * noted |
| * S3-201272 | * 18/05/2020 10:28:58 | * available |
| * S3-201273 | * 18/05/2020 10:29:07 | * available |
| * S3-201274 | * 18/05/2020 07:53:33 | * available |
| * S3-201274 | * 18/05/2020 13:06:48 | * left for email approval |
| * S3-201275 | * 18/05/2020 07:53:40 | * available |
| * S3-201275 | * 18/05/2020 13:07:00 | * left for email approval |
| * S3-201276 | * 18/05/2020 10:06:10 | * available |
| * S3-201276 | * 26/05/2020 11:35:33 | * noted |
| * S3-201277 | * 18/05/2020 15:25:37 | * available |
| * S3-201278 | * 18/05/2020 15:26:02 | * noted |
| * S3-201279 | * 18/05/2020 15:07:31 | * available |
| * S3-201279 | * 25/05/2020 10:32:14 | * left for email approval |
| * S3-201280 | * 18/05/2020 10:37:45 | * available |
| * S3-201281 | * 18/05/2020 10:44:17 | * available |
| * S3-201282 | * 18/05/2020 10:44:20 | * available |
| * S3-201282 | * 18/05/2020 13:39:29 | * postponed |
| * S3-201283 | * 19/05/2020 07:53:18 | * noted |
| * S3-201284 | * 19/05/2020 07:53:33 | * noted |
| * S3-201285 | * 19/05/2020 07:53:34 | * noted |
| * S3-201286 | * 19/05/2020 07:53:38 | * noted |
| * S3-201287 | * 19/05/2020 07:53:58 | * available |
| * S3-201287 | * 25/05/2020 15:29:53 | * left for email approval |
| * S3-201288 | * 19/05/2020 14:47:28 | * available |
| * S3-201288 | * 25/05/2020 10:37:38 | * left for email approval |
| * S3-201289 | * 19/05/2020 14:47:33 | * available |
| * S3-201289 | * 25/05/2020 10:37:50 | * noted |
| * S3-201290 | * 19/05/2020 14:47:38 | * available |
| * S3-201290 | * 25/05/2020 10:34:19 | * noted |
| * S3-201291 | * 19/05/2020 10:37:39 | * available |
| * S3-201292 | * 19/05/2020 07:56:10 | * available |
| * S3-201292 | * 25/05/2020 15:42:29 | * noted |
| * S3-201293 | * 19/05/2020 10:35:56 | * available |
| * S3-201293 | * 25/05/2020 16:00:33 | * left for email approval |
| * S3-201294 | * 18/05/2020 10:44:52 | * available |
| * S3-201295 | * 19/05/2020 15:06:16 | * available |
| * S3-201296 | * 19/05/2020 15:06:19 | * available |
| * S3-201296 | * 25/05/2020 08:10:46 | * not pursued |
| * S3-201297 | * 19/05/2020 15:06:47 | * noted |
| * S3-201298 | * 19/05/2020 15:06:53 | * noted |
| * S3-201299 | * 18/05/2020 14:33:11 | * agreed |
| * S3-201300 | * 18/05/2020 10:06:19 | * approved |
| * S3-201301 | * 13/05/2020 07:38:17 | * noted |
| * S3-201302 | * 12/05/2020 08:32:48 | * agreed |
| * S3-201303 | * 19/05/2020 10:13:18 | * available |
| * S3-201303 | * 26/05/2020 08:15:12 | * left for email approval |
| * S3-201304 | * 19/05/2020 14:41:47 | * available |
| * S3-201305 | * 25/05/2020 16:09:40 | * available |
| * S3-201306 | * 19/05/2020 14:47:43 | * available |
| * S3-201306 | * 25/05/2020 10:39:03 | * noted |
| * S3-201307 | * 19/05/2020 15:14:46 | * available |
| * S3-201307 | * 25/05/2020 16:07:13 | * left for email approval |
| * S3-201308 | * 19/05/2020 14:42:39 | * available |
| * S3-201308 | * 25/05/2020 15:45:32 | * left for email approval |
| * S3-201309 | * 19/05/2020 14:47:48 | * available |
| * S3-201309 | * 25/05/2020 10:38:20 | * left for email approval |
| * S3-201310 | * 19/05/2020 15:15:01 | * approved |
| * S3-201311 | * 19/05/2020 15:00:58 | * approved |
| * S3-201312 | * 19/05/2020 15:01:03 | * approved |
| * S3-201313 | * 13/05/2020 07:39:50 | * noted |
| * S3-201314 | * 19/05/2020 15:15:05 | * approved |
| * S3-201317 | * 19/05/2020 15:16:21 | * available |
| * S3-201318 | * 19/05/2020 15:19:14 | * approved |
| * S3-201319 | * 06/05/2020 08:46:12 | * replied to |
| * S3-201319 | * 19/05/2020 11:51:23 | * available |
| * S3-201320 | * 12/05/2020 08:35:35 | * noted |
| * S3-201321 | * 12/05/2020 08:35:22 | * noted |
| * S3-201322 | * 18/05/2020 10:43:22 | * available |
| * S3-201323 | * 19/05/2020 11:56:32 | * available |
| * S3-201324 | * 19/05/2020 11:56:44 | * noted |
| * S3-201325 | * 06/05/2020 08:47:27 | * replied to |
| * S3-201325 | * 18/05/2020 10:46:28 | * available |
| * S3-201325 | * 25/05/2020 15:07:29 | * left for email approval |
| * S3-201326 | * 19/05/2020 11:51:51 | * available |
| * S3-201326 | * 25/05/2020 16:04:03 | * left for email approval |
| * S3-201327 | * 18/05/2020 10:46:42 | * available |
| * S3-201327 | * 25/05/2020 15:07:13 | * left for email approval |
| * S3-201328 | * 18/05/2020 10:07:06 | * available |
| * S3-201328 | * 26/05/2020 11:35:11 | * postponed |
| * S3-201329 | * 13/05/2020 11:09:48 | * noted |
| * S3-201330 | * 13/05/2020 07:38:51 | * agreed |
| * S3-201331 | * 18/05/2020 14:32:58 | * agreed |
| * S3-201332 | * 18/05/2020 14:33:00 | * agreed |
| * S3-201333 | * 18/05/2020 14:33:00 | * agreed |
| * S3-201334 | * 19/05/2020 10:36:42 | * agreed |
| * S3-201335 | * 19/05/2020 10:36:46 | * agreed |
| * S3-201336 | * 19/05/2020 11:07:16 | * withdrawn |
| * S3-201337 | * 26/05/2020 09:27:24 | * noted |
| * S3-201338 | * 26/05/2020 10:21:22 | * approved |
| * S3-201339 | * 26/05/2020 10:27:48 | * approved |
| * S3-201340 | * 26/05/2020 10:21:23 | * approved |
| * S3-201341 | * 26/05/2020 10:27:49 | * approved |
| * S3-201342 | * 19/05/2020 11:08:13 | * approved |
| * S3-201343 | * 18/05/2020 15:22:25 | * approved |
| * S3-201344 | * 19/05/2020 10:40:33 | * approved |
| * S3-201345 | * 19/05/2020 11:06:56 | * approved |
| * S3-201346 | * 19/05/2020 10:12:05 | * approved |
| * S3-201347 | * 18/05/2020 14:12:08 | * agreed |
| * S3-201348 | * 18/05/2020 14:12:42 | * agreed |
| * S3-201349 | * 19/05/2020 14:51:58 | * approved |
| * S3-201350 | * 18/05/2020 10:40:39 | * available |
| * S3-201350 | * 18/05/2020 10:40:45 | * S3-201350 |
| * S3-201350 | * 25/05/2020 10:23:21 | * approved |
| * S3-201351 | * 18/05/2020 15:05:57 | * revised |
| * S3-201352 | * 19/05/2020 14:55:13 | * approved |
| * S3-201353 | * 26/05/2020 09:33:39 | * approved |
| * S3-201354 | * 19/05/2020 15:45:03 | * agreed |
| * S3-201355 | * 19/05/2020 14:55:55 | * approved |
| * S3-201356 | * 19/05/2020 14:54:00 | * approved |
| * S3-201357 | * 19/05/2020 14:52:39 | * approved |
| * S3-201358 | * 19/05/2020 14:56:45 | * approved |
| * S3-201359 | * 19/05/2020 14:57:18 | * approved |
| * S3-201360 | * 26/05/2020 10:23:44 | * approved |
| * S3-201361 | * 26/05/2020 10:23:45 | * approved |
| * S3-201362 | * 19/05/2020 15:22:51 | * approved |
| * S3-201363 | * 19/05/2020 14:41:48 | * agreed |
| * S3-201364 | * 19/05/2020 15:23:25 | * approved |
| * S3-201365 | * 18/05/2020 09:25:56 | * approved |
| * S3-201366 | * 19/05/2020 15:16:15 | * approved |
| * S3-201367 | * 19/05/2020 14:39:41 | * agreed |
| * S3-201368 | * 19/05/2020 14:40:02 | * agreed |
| * S3-201369 | * 18/05/2020 15:14:21 | * agreed |
| * S3-201370 | * 18/05/2020 15:15:40 | * approved |
| * S3-201371 | * 18/05/2020 15:16:37 | * approved |
| * S3-201372 | * 19/05/2020 14:42:19 | * agreed |
| * S3-201373 | * 19/05/2020 11:57:10 | * approved |
| * S3-201374 | * 19/05/2020 11:57:37 | * approved |
| * S3-201375 | * 19/05/2020 11:58:05 | * approved |
| * S3-201376 | * 19/05/2020 14:58:16 | * approved |
| * S3-201377 | * 19/05/2020 14:58:44 | * approved |
| * S3-201378 | * 19/05/2020 14:59:05 | * approved |
| * S3-201379 | * 19/05/2020 14:38:06 | * approved |
| * S3-201380 | * 19/05/2020 08:43:00 | * approved |
| * S3-201381 | * 19/05/2020 15:28:54 | * agreed |
| * S3-201382 | * 18/05/2020 15:08:29 | * agreed |
| * S3-201383 | * 19/05/2020 14:43:53 | * approved |
| * S3-201384 | * 26/05/2020 10:20:13 | * approved |
| * S3-201385 | * 19/05/2020 11:08:39 | * approved |
| * S3-201386 | * 18/05/2020 15:10:06 | * approved |
| * S3-201387 | * 18/05/2020 15:25:30 | * approved |
| * S3-201388 | * 26/05/2020 10:24:41 | * approved |
| * S3-201389 | * 26/05/2020 09:58:16 | * approved |
| * S3-201390 | * 26/05/2020 09:33:22 | * approved |
| * S3-201391 | * 18/05/2020 13:09:04 | * available |
| * S3-201391 | * 19/05/2020 15:05:37 | * agreed |
| * S3-201391 | * 26/05/2020 08:10:22 | * left for email approval |
| * S3-201392 | * 18/05/2020 13:08:54 | * available |
| * S3-201392 | * 19/05/2020 15:05:38 | * agreed |
| * S3-201392 | * 26/05/2020 08:10:58 | * left for email approval |
| * S3-201393 | * 18/05/2020 15:19:12 | * approved |
| * S3-201394 | * 18/05/2020 15:19:51 | * approved |
| * S3-201395 | * 18/05/2020 15:21:32 | * approved |
| * S3-201396 | * 19/05/2020 10:37:42 | * approved |
| * S3-201397 | * 26/05/2020 10:30:44 | * approved |
| * S3-201398 | * 26/05/2020 10:30:45 | * approved |
| * S3-201399 | * 19/05/2020 11:53:21 | * agreed |
| * S3-201400 | * 19/05/2020 15:44:34 | * agreed |
| * S3-201401 | * 26/05/2020 09:46:07 | * approved |
| * S3-201402 | * 19/05/2020 15:50:05 | * agreed |
| * S3-201404 | * 19/05/2020 15:24:14 | * approved |
| * S3-201405 | * 18/05/2020 14:29:24 | * agreed |
| * S3-201406 | * 18/05/2020 14:30:02 | * agreed |
| * S3-201408 | * 19/05/2020 11:56:34 | * approved |
| * S3-201409 | * 19/05/2020 10:15:56 | * approved |
| * S3-201410 | * 26/05/2020 10:17:09 | * approved |
| * S3-201411 | * 18/05/2020 10:37:58 | * approved |
| * S3-201412 | * 19/05/2020 11:48:03 | * approved |
| * S3-201413 | * 26/05/2020 09:46:10 | * approved |
| * S3-201414 | * 18/05/2020 14:55:24 | * approved |
| * S3-201415 | * 18/05/2020 14:28:31 | * agreed |
| * S3-201416 | * 18/05/2020 14:28:12 | * agreed |
| * S3-201417 | * 26/05/2020 09:57:42 | * agreed |
| * S3-201418 | * 18/05/2020 14:31:00 | * agreed |
| * S3-201419 | * 19/05/2020 11:54:51 | * agreed |
| * S3-201420 | * 18/05/2020 14:32:09 | * agreed |
| * S3-201421 | * 19/05/2020 15:56:35 | * approved |
| * S3-201422 | * 19/05/2020 11:55:08 | * agreed |
| * S3-201423 | * 19/05/2020 11:55:19 | * agreed |
| * S3-201424 | * 19/05/2020 11:50:37 | * approved |
| * S3-201425 | * 19/05/2020 15:48:33 | * agreed |
| * S3-201426 | * 19/05/2020 14:51:04 | * approved |
| * S3-201427 | * 19/05/2020 15:56:29 | * approved |
| * S3-201428 | * 19/05/2020 15:21:40 | * approved |
| * S3-201429 | * 26/05/2020 08:06:57 | * available |
| * S3-201430 | * 26/05/2020 08:07:24 | * approved |
| * S3-201431 | * 19/05/2020 11:52:29 | * agreed |
| * S3-201432 | * 19/05/2020 11:49:30 | * approved |
| * S3-201433 | * 27/05/2020 08:08:22 | * approved |
| * S3-201434 | * 26/05/2020 10:01:30 | * approved |
| * S3-201435 | * 27/05/2020 09:35:51 | * approved |
| * S3-201436 | * 19/05/2020 16:02:19 | * agreed |
| * S3-201437 | * 25/05/2020 16:00:26 | * agreed |
| * S3-201438 | * 25/05/2020 15:57:37 | * approved |
| * S3-201439 | * 25/05/2020 15:31:29 | * agreed |
| * S3-201440 | * 25/05/2020 15:32:18 | * approved |
| * S3-201441 | * 25/05/2020 15:32:56 | * approved |
| * S3-201442 | * 26/05/2020 08:10:13 | * agreed |
| * S3-201443 | * 26/05/2020 08:10:49 | * agreed |
| * S3-201444 | * 25/05/2020 10:32:08 | * approved |
| * S3-201446 | * 25/05/2020 10:28:53 | * approved |
| * S3-201447 | * 26/05/2020 09:15:52 | * withdrawn |
| * S3-201448 | * 26/05/2020 09:15:46 | * withdrawn |
| * S3-201449 | * 26/05/2020 09:15:47 | * withdrawn |
| * S3-201450 | * 25/05/2020 15:29:47 | * approved |
| * S3-201451 | * 26/05/2020 10:25:05 | * approved |
| * S3-201452 | * 26/05/2020 10:36:03 | * revised |
| * S3-201453 | * 25/05/2020 10:20:53 | * approved |
| * S3-201454 | * 25/05/2020 10:31:31 | * approved |
| * S3-201455 | * 25/05/2020 15:45:17 | * agreed |
| * S3-201457 | * 25/05/2020 08:10:54 | * available |
| * S3-201458 | * 26/05/2020 08:06:50 | * noted |
| * S3-201459 | * 25/05/2020 10:37:31 | * approved |
| * S3-201460 | * 25/05/2020 10:41:45 | * approved |
| * S3-201461 | * 25/05/2020 15:09:55 | * approved |
| * S3-201462 | * 25/05/2020 15:55:41 | * approved |
| * S3-201463 | * 25/05/2020 10:38:12 | * approved |
| * S3-201464 | * 26/05/2020 10:31:36 | * approved |
| * S3-201465 | * 26/05/2020 09:32:49 | * agreed |
| * S3-201466 | * 25/05/2020 15:28:30 | * agreed |
| * S3-201467 | * 25/05/2020 15:53:03 | * agreed |
| * S3-201468 | * 25/05/2020 15:52:11 | * agreed |
| * S3-201469 | * 25/05/2020 15:51:41 | * agreed |
| * S3-201470 | * 25/05/2020 15:51:09 | * agreed |
| * S3-201471 | * 25/05/2020 14:54:28 | * approved |
| * S3-201472 | * 25/05/2020 10:26:59 | * agreed |
| * S3-201473 | * 25/05/2020 10:28:18 | * agreed |
| * S3-201474 | * 25/05/2020 10:41:06 | * approved |
| * S3-201475 | * 25/05/2020 10:35:21 | * approved |
| * S3-201476 | * 26/05/2020 10:22:04 | * approved |
| * S3-201477 | * 26/05/2020 10:18:09 | * approved |
| * S3-201478 | * 26/05/2020 10:18:10 | * approved |
| * S3-201479 | * 26/05/2020 08:28:14 | * approved |
| * S3-201480 | * 25/05/2020 15:48:13 | * approved |
| * S3-201481 | * 25/05/2020 15:50:39 | * agreed |
| * S3-201482 | * 25/05/2020 15:22:57 | * agreed |
| * S3-201482 | * 27/05/2020 09:30:05 | * revised |
| * S3-201483 | * 25/05/2020 16:03:41 | * approved |
| * S3-201484 | * 25/05/2020 15:06:41 | * approved |
| * S3-201485 | * 26/05/2020 10:26:51 | * agreed |
| * S3-201486 | * 26/05/2020 08:15:05 | * approved |
| * S3-201487 | * 26/05/2020 10:38:58 | * approved |
| * S3-201488 | * 26/05/2020 12:44:46 | * agreed |
| * S3-201489 | * 26/05/2020 12:45:16 | * approved |
| * S3-201490 | * 26/05/2020 12:46:05 | * approved |
| * S3-201491 | * 28/05/2020 16:28:34 | * approved |
| * S3-201492 | * 26/05/2020 15:18:10 | * available |
| * S3-201493 | * 26/05/2020 15:18:24 | * available |
| * S3-201494 | * 28/05/2020 08:11:49 | * agreed |

## Annex B: List of change requests

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Document | Title | Source | Spec | CR | Rev | Rel | Cat | WI | Decision |
| * S3-200935 | * Editorial corrections to NDS/AF | * Juniper Networks | * 33.102 | * 0280 | * - | * Rel-16 | * F | * TEI16,NDS\_Backhaul | * revised |
| * S3-201368 | * Editorial corrections to NDS/AF | * Juniper Networks | * 33.102 | * 0280 | * 1 | * Rel-16 | * F | * NDS\_Backhaul, TEI16 | * agreed |
| * S3-200963 | * Update the clause 4.2.6.2.4-R16 | * ZTE Corporation | * 33.117 | * 0059 | * - | * Rel-16 | * A | * SCAS\_eNB | * agreed |
| * S3-200964 | * Update the clause 4.2.6.2.4-R15 | * ZTE Corporation | * 33.117 | * 0060 | * - | * Rel-15 | * F | * SCAS\_eNB | * agreed |
| * S3-201099 | * Clarification on Handling of ICMP | * Huawei, Hisilicon | * 33.117 | * 0061 | * - | * Rel-16 | * F | * SCAS\_5G | * not pursued |
| * S3-201195 | * Clarification about system handling during overload situtations | * Huawei, HiSilicon | * 33.117 | * 0062 | * - | * Rel-16 | * F | * SCAS\_5G | * revised |
| * S3-201416 | * Clarification about system handling during overload situtations | * Huawei, HiSilicon | * 33.117 | * 0062 | * 1 | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201196 | * description modification for policy regarding consective failed login attempts | * Huawei, HiSilicon | * 33.117 | * 0063 | * - | * Rel-16 | * F | * SCAS\_5G | * revised |
| * S3-201415 | * description modification for policy regarding consective failed login attempts | * Huawei, HiSilicon | * 33.117 | * 0063 | * 1 | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201197 | * password structure clarification | * Huawei, HiSilicon | * 33.117 | * 0064 | * - | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201198 | * Clarification on the examples of the delay | * Huawei, HiSilicon | * 33.117 | * 0065 | * - | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201299 | * Usage of TLS profiles for CAPIF | * Samsung | * 33.122 | * 0027 | * - | * Rel-16 | * B | * eCAPIF | * agreed |
| * S3-201330 | * [33.179] R13 token scope fix | * Motorola Solutions | * 33.179 | * 0106 | * - | * Rel-13 | * F | * MCPTT | * agreed |
| * S3-201183 | * Correction to definition about the case of 'Temporary group call – user regroup'' | * Huawei, HiSilicon | * 33.180 | * 0145 | * - | * Rel-15 | * F | * eMCSec | * agreed |
| * S3-201331 | * [33.180] R16 Fix IdM client terminology | * Motorola Solutions Danmark A/S | * 33.180 | * 0146 | * - | * Rel-16 | * F | * MCXSec | * agreed |
| * S3-201332 | * [33.180] R16 Fix XML references | * Motorola Solutions Danmark A/S | * 33.180 | * 0147 | * - | * Rel-16 | * D | * MCXSec | * agreed |
| * S3-201333 | * [33.180] R16 TrK-ID and InK-ID indication | * Motorola Solutions Danmark A/S | * 33.180 | * 0148 | * - | * Rel-16 | * F | * MCXSec | * agreed |
| * S3-200934 | * Editorial corrections to NDS/IP | * Juniper Networks | * 33.210 | * 0068 | * - | * Rel-16 | * F | * TEI16,NDS\_Backhaul | * revised |
| * S3-201367 | * Editorial corrections to NDS/IP | * Juniper Networks | * 33.210 | * 0068 | * 1 | * Rel-16 | * F | * NDS\_Backhaul, TEI16 | * agreed |
| * S3-201045 | * Elliptic Curve Group Size | * Ericsson | * 33.210 | * 0069 | * - | * Rel-16 | * F | * CryptPr | * revised |
| * S3-201422 | * Elliptic Curve Group Size | * Ericsson | * 33.210 | * 0069 | * 1 | * Rel-16 | * F | * CryptPr | * agreed |
| * S3-201046 | * TLS 1.3 cipher suites | * Ericsson | * 33.210 | * 0070 | * - | * Rel-16 | * F | * CryptPr | * revised |
| * S3-201423 | * TLS 1.3 cipher suites | * Ericsson | * 33.210 | * 0070 | * 1 | * Rel-16 | * F | * CryptPr | * agreed |
| * S3-201200 | * Update testcases in eNB SCAS | * Huawei, HiSilicon | * 33.216 | * 0015 | * - | * Rel-16 | * F | * SCAS\_5G | * revised |
| * S3-201406 | * Update testcases in eNB SCAS | * Huawei, HiSilicon | * 33.216 | * 0015 | * 1 | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201257 | * Allocation of FC values for TS 33.356 | * Qualcomm Incorporated | * 33.220 | * 0199 | * 1 | * Rel-16 | * C | * eV2XARC | * agreed |
| * S3-200987 | * Update on RSA exponent requirement | * Apple Computer Trading Co. Ltd | * 33.310 | * 0108 | * - | * Rel-16 | * F | * CryptPr | * revised |
| * S3-201399 | * Update on RSA exponent requirement | * Apple Computer Trading Co. Ltd | * 33.310 | * 0108 | * 1 | * Rel-16 | * F | * CryptPr | * agreed |
| * S3-201047 | * Corrections on PKCS#1v1.5 padding and Elliptic Curves | * Ericsson | * 33.310 | * 0109 | * - | * Rel-16 | * F | * CryptPr | * revised |
| * S3-201419 | * Corrections on PKCS#1v1.5 padding and Elliptic Curves | * Ericsson | * 33.310 | * 0109 | * 1 | * Rel-16 | * F | * CryptPr | * agreed |
| * S3-201128 | * SBA Network Function certificate profile | * Nokia, Nokia Shanghai Bell, CommScope, Ericsson | * 33.310 | * 0110 | * - | * Rel-16 | * B | * 5G\_eSBA | * revised |
| * S3-201466 | * SBA Network Function certificate profile | * Nokia, Nokia Shanghai Bell, CommScope, Ericsson, Deutsche Telekom, Verizon, CableLabs | * 33.310 | * 0110 | * 1 | * Rel-16 | * B | * 5G\_eSBA | * agreed |
| * S3-201032 | * UE caps protection using AS security in EPS Rel-16 | * Ericsson | * 33.401 | * 0694 | * - | * Rel-16 | * C | * 5G\_CIoT | * revised |
| * S3-201439 | * UE caps protection using AS security in EPS Rel-16 | * Ericsson | * 33.401 | * 0694 | * 1 | * Rel-16 | * C | * 5G\_CIoT | * agreed |
| * S3-201275 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * 33.401 | * 0695 | * - | * Rel-16 | * B | * DUMMY | * revised |
| * S3-201392 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * 33.401 | * 0695 | * 1 | * Rel-16 | * B | * DUMMY | * revised |
| * S3-201443 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * 33.401 | * 0695 | * 2 | * Rel-16 | * B | * DUMMY | * agreed |
| * S3-201295 | * Protection of DNS messages | * Samsung | * 33.401 | * 0696 | * - | * Rel-16 | * B | * DUMMY | * not pursued |
| * S3-201335 | * Add requirement for OAM to IAB ENDC | * Huawei, Hisilicon | * 33.401 | * 0697 | * - | * Rel-16 | * F | * IAB | * agreed |
| * S3-201272 | * Clarification on the use of SUPI as the Identity in EAP-AKA’ key derivation | * Qualcomm Incorporated, Nokia, Nokia Shanghai Bell, ZTE | * 33.501 | * 0761 | * 1 | * Rel-15 | * F | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201273 | * Clarification on the use of SUPI as the Identity in EAP-AKA’ key derivation | * Qualcomm Incorporated, Nokia, Nokia Shanghai Bell, ZTE | * 33.501 | * 0762 | * 1 | * Rel-16 | * A | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201031 | * CR to 33.501 - Update to User Plane Integrity Protection | * Deutsche Telekom | * 33.501 | * 0785 | * 1 | * Rel-16 | * C | * DUMMY | * not pursued |
| * S3-201265 | * F1 security setup with certificate based IKEv2 authentication | * Qualcomm Incorporated, Ericsson, Intel | * 33.501 | * 0798 | * 1 | * Rel-16 | * B | * NR\_IAB | * merged |
| * S3-201266 | * F1 security setup with PSK based IKEv2 authentication | * Qualcomm Incorporated, Ericsson, Intel | * 33.501 | * 0799 | * 1 | * Rel-16 | * B | * NR\_IAB | * merged |
| * S3-200950 | * Revision of null-scheme SUCI usage in 5G NR | * T-Mobile USA Inc. | * 33.501 | * 0800 | * - | * Rel-16 | * C | * TEI16 | * not pursued |
| * S3-200959 | * Clarification for distribution of subscriber identities and security data in clause 6.3.1.2 | * ZTE Corporation | * 33.501 | * 0801 | * - | * Rel-16 | * F | * TEI16,5GS\_Ph1-SEC | * not pursued |
| * S3-200960 | * remove the EN in clause 13.2.3.6 | * ZTE Corporation | * 33.501 | * 0802 | * - | * Rel-16 | * F | * 5GS\_Ph1-SEC | * not pursued |
| * S3-200962 | * Security handling in registration with AMF re-allocation via direct NAS reroute | * ZTE Corporation | * 33.501 | * 0803 | * - | * Rel-16 | * F | * TEI16,5GS\_Ph1-SEC | * not pursued |
| * S3-200965 | * AKMA key generation indication | * ZTE Corporation | * 33.501 | * 0804 | * - | * Rel-16 | * F | * AKMA | * revised |
| * S3-201369 | * AKMA key generation indication | * ZTE Corporation | * 33.501 | * 0804 | * 1 | * Rel-16 | * F | * AKMA | * agreed |
| * S3-200974 | * Adding a definition for IAB-UE | * ZTE Corporation | * 33.501 | * 0805 | * - | * Rel-16 | * F | * NR\_IAB | * agreed |
| * S3-201015 | * Aligning abbreviation of Service Communication Proxy with TS 23.501 | * Ericsson | * 33.501 | * 0806 | * - | * Rel-16 | * D | * 5G\_eSBA | * agreed |
| * S3-201016 | * Clarification on SEPP role regarding the 3gpp-Sbi-Target-apiRoot HTTP header | * Ericsson | * 33.501 | * 0807 | * - | * Rel-16 | * F | * 5G\_eSBA | * agreed |
| * S3-201017 | * Authentication in indirect communication scenarios | * Ericsson | * 33.501 | * 0808 | * - | * Rel-16 | * B | * 5G\_eSBA | * revised |
| * S3-201382 | * Authentication in indirect communication scenarios | * Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon, Mavenir, CableLabs, Deutsche Telekom | * 33.501 | * 0808 | * 1 | * Rel-16 | * B | * 5G\_eSBA | * agreed |
| * S3-201043 | * Add reference to TS 24.301 for enclosed TAU request in the Registration Request | * Ericsson | * 33.501 | * 0809 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201044 | * Add reference to TS 24.301 for enclosed TAU request in the Registration Request | * Ericsson | * 33.501 | * 0810 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201055 | * Storage of KAUSF in the UE and AUSF, R15 | * Ericsson | * 33.501 | * 0811 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201056 | * Storage of KAUSF in the UE and AUSF, R16 | * Ericsson | * 33.501 | * 0812 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201073 | * Correcting 5G to 4G handover DL NAS COUNT mismatch | * Nokia, Nokia Shanghai Bell, Intel | * 33.501 | * 0813 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201074 | * Correcting 5G to 4G handover DL NAS COUNT mismatch | * Nokia, Nokia Shanghai Bell, Intel | * 33.501 | * 0814 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201080 | * Clarification on AS rekeying failure-R16 | * CATT | * 33.501 | * 0815 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201079 | * Clarification on AS rekeying failure-R15 | * CATT | * 33.501 | * 0816 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201089 | * Clarification on IPX certificate acquirement in SEPP | * Huawei, Hisilicon | * 33.501 | * 0817 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201090 | * Clarification on IPX certificate acquirement in SEPP | * Huawei, Hisilicon | * 33.501 | * 0818 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201093 | * Trust mode in the eSBA | * Huawei, Hisilicon | * 33.501 | * 0819 | * - | * Rel-16 | * F | * 5G\_eSBA | * merged |
| * S3-201094 | * Authorization in the Subscribe-Notify interaction scenarios | * Huawei, Hisilicon | * 33.501 | * 0820 | * - | * Rel-16 | * F | * 5G\_eSBA | * not pursued |
| * S3-201110 | * JSON object modification | * Huawei, Hisilicon | * 33.501 | * 0821 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201111 | * JSON object modification | * Huawei, Hisilicon | * 33.501 | * 0822 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201112 | * SUCI computation clarification | * Huawei, Hisilicon | * 33.501 | * 0823 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * agreed |
| * S3-201113 | * SUCI computation clarification | * Huawei, Hisilicon | * 33.501 | * 0824 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * agreed |
| * S3-201129 | * Authentication between Network Functions | * Nokia, Nokia Shanghai Bell | * 33.501 | * 0825 | * - | * Rel-16 | * B | * 5G\_eSBA | * merged |
| * S3-201130 | * Authentication between Network Function and NRF | * Nokia, Nokia Shanghai Bell | * 33.501 | * 0826 | * - | * Rel-16 | * B | * 5G\_eSBA | * merged |
| * S3-201179 | * Correction to security capability negotiation between SEPPs | * Huawei, HiSilicon,China Mobile | * 33.501 | * 0827 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * revised |
| * S3-201472 | * Correction to security capability negotiation between SEPPs | * Huawei, HiSilicon,China Mobile | * 33.501 | * 0827 | * 1 | * Rel-15 | * F | * 5GS\_Ph1-SEC | * agreed |
| * S3-201180 | * Correction to security capability negotiation between SEPPs | * Huawei, HiSilicon,China Mobile | * 33.501 | * 0828 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * revised |
| * S3-201473 | * Correction to security capability negotiation between SEPPs | * Huawei, HiSilicon,China Mobile | * 33.501 | * 0828 | * 1 | * Rel-16 | * A | * 5GS\_Ph1-SEC | * agreed |
| * S3-201181 | * Correction to initial EAP Authentication with an external AAA server | * Huawei, HiSilicon | * 33.501 | * 0829 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * agreed |
| * S3-201182 | * Correction to initial EAP Authentication with an external AAA server | * Huawei, HiSilicon | * 33.501 | * 0830 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * agreed |
| * S3-201214 | * Editorial changes to TS 33.501 R15 | * Huawei, Hiliscon | * 33.501 | * 0831 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * agreed |
| * S3-201215 | * Editorial changes to TS 33.501 R16 | * Huawei, Hiliscon | * 33.501 | * 0832 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * agreed |
| * S3-201246 | * Security entities at the perimeter of the 5G Core network | * Nokia, Nokia Shanghai Bell, Juniper | * 33.501 | * 0833 | * - | * Rel-16 | * F | * UPGF | * revised |
| * S3-201431 | * Security entities at the perimeter of the 5G Core network | * Nokia, Nokia Shanghai Bell, Juniper | * 33.501 | * 0833 | * 1 | * Rel-16 | * F | * UPGF | * agreed |
| * S3-201247 | * Clarification to 5G AV | * Nokia, Nokia Shanghai Bell | * 33.501 | * 0834 | * - | * Rel-16 | * F | * TEI16,5GS\_Ph1-SEC | * revised |
| * S3-201492 | * Clarification to 5G AV | * Nokia, Nokia Shanghai Bell | * 33.501 | * 0834 | * 1 | * Rel-16 | * F | * 5GS\_Ph1-SEC, TEI16 | * not pursued |
| * S3-201248 | * Clarification to SEAF | * Nokia, Nokia Shanghai Bell | * 33.501 | * 0835 | * - | * Rel-16 | * F | * TEI16,5GS\_Ph1-SEC | * revised |
| * S3-201493 | * Clarification to SEAF | * Nokia, Nokia Shanghai Bell | * 33.501 | * 0835 | * 1 | * Rel-16 | * F | * 5GS\_Ph1-SEC, TEI16 | * not pursued |
| * S3-201250 | * 5G LAN ed note resolution | * Nokia, Nokia Shanghai Bell | * 33.501 | * 0836 | * - | * Rel-16 | * C | * Vertical\_LAN\_SEC | * not pursued |
| * S3-201251 | * TSC security policy enforcement | * Nokia, Nokia Shanghai Bell | * 33.501 | * 0837 | * - | * Rel-16 | * C | * Vertical\_LAN\_SEC | * not pursued |
| * S3-201252 | * Several corrections to spec text | * Nokia, Nokia Shanghai Bell | * 33.501 | * 0838 | * - | * Rel-16 | * D | * TEI16,5GS\_Ph1-SEC | * agreed |
| * S3-201263 | * shortResumeMAC-I calculation | * Qualcomm Incorporated, Samsung, CATT, Huawei, Hisilicon | * 33.501 | * 0839 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * agreed |
| * S3-201264 | * shortResumeMAC-I calculation (rel-16 mirror) | * Qualcomm Incorporated, Samsung, CATT, Huawei, Hisilicon | * 33.501 | * 0840 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * agreed |
| * S3-201274 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * 33.501 | * 0841 | * - | * Rel-16 | * B | * DUMMY | * revised |
| * S3-201391 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * 33.501 | * 0841 | * 1 | * Rel-16 | * B | * DUMMY | * revised |
| * S3-201442 | * Security Aspects of DNS and ICMP | * Qualcomm Incorporated | * 33.501 | * 0841 | * 2 | * Rel-16 | * B | * DUMMY | * agreed |
| * S3-201281 | * Handling of counter wrap around in UDM, R15 | * Ericsson | * 33.501 | * 0842 | * - | * Rel-15 | * F | * 5GS\_Ph1-SEC | * not pursued |
| * S3-201282 | * Handling of counter wrap around in UDM, R16 | * Ericsson | * 33.501 | * 0843 | * - | * Rel-16 | * A | * 5GS\_Ph1-SEC | * postponed |
| * S3-201293 | * F1 interface security set-up procedure | * Samsung, Nokia, Nokia Shanghai Bell, ZTE, T-Mobile, Mavenir, CableLabs, Lenovo, Motorola Mobility, Thales | * 33.501 | * 0844 | * - | * Rel-16 | * B | * IAB | * revised |
| * S3-201437 | * F1 interface security set-up procedure | * Samsung, Nokia, Nokia Shanghai Bell, ZTE, T-Mobile, Mavenir, CableLabs, Lenovo, Motorola Mobility, Thales, Intel, Qualcomm Incorporated, Ericsson | * 33.501 | * 0844 | * 1 | * Rel-16 | * B | * IAB | * agreed |
| * S3-201296 | * UP integrity protection for UP Signalling messages | * Samsung | * 33.501 | * 0845 | * - | * Rel-16 | * B | * DUMMY | * revised |
| * S3-201457 | * UP integrity protection for UP Signalling messages | * Samsung | * 33.501 | * 0845 | * 1 | * Rel-16 | * B | * DUMMY | * not pursued |
| * S3-201302 | * UE pre-configuration for non-3GPP access networks | * THALES, ORANGE | * 33.501 | * 0846 | * - | * Rel-16 | * B | * 5WWC | * agreed |
| * S3-201304 | * SUCI computation: implementers' test data for network specific identifier-based SUPI | * THALES | * 33.501 | * 0847 | * - | * Rel-16 | * F | * TEI16 | * revised |
| * S3-201363 | * SUCI computation: implementers' test data for network specific identifier-based SUPI | * THALES | * 33.501 | * 0847 | * 1 | * Rel-16 | * B | * TEI16 | * agreed |
| * S3-201334 | * Editorial change to the security for IAB | * Huawei, Hisilicon | * 33.501 | * 0848 | * - | * Rel-16 | * F | * IAB | * agreed |
| * S3-201417 | * CR of 5WWC | * Huawei, HiSilicon | * 33.501 | * 0849 | * - | * Rel-16 | * F | * 5WWC | * agreed |
| * S3-201456 | * CR for 5GS LCS normative work | * CATT | * 33.501 | * 0850 | * - | * Rel-16 | * B | * 5G\_eLCS | * revised |
| * S3-201482 | * CR for 5GS LCS normative work | * CATT | * 33.501 | * 0850 | * 1 | * Rel-16 | * B | * 5G\_eLCS | * revised |
| * S3-201494 | * CR for 5GS LCS normative work | * CATT | * 33.501 | * 0850 | * 2 | * Rel-16 | * B | * 5G\_eLCS | * agreed |
| * S3-201485 | * Normative text for supporting 5G CIoT security | * Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon | * 33.501 | * 0851 | * - | * Rel-16 | * B | * 5G\_CIoT | * revised |
| * S3-201488 | * Normative text for supporting 5G CIoT security | * Ericsson, Nokia, Nokia Shanghai Bell, Huawei, Hisilicon | * 33.501 | * 0851 | * 1 | * Rel-16 | * B | * 5G\_CIoT | * agreed |
| * S3-201199 | * Update testcase in gNB SCAS | * Huawei, HiSilicon | * 33.511 | * 0013 | * - | * Rel-16 | * F | * SCAS\_5G | * revised |
| * S3-201405 | * Update testcase in gNB SCAS | * Huawei, HiSilicon | * 33.511 | * 0013 | * 1 | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201225 | * Remove mismatched threat references and test steps | * Nokia, Nokia Shanghai Bell | * 33.511 | * 0014 | * - | * Rel-16 | * F | * SCAS\_5G | * revised |
| * S3-201407 | * Remove mismatched threat references and test steps | * Nokia, Nokia Shanghai Bell | * 33.511 | * 0014 | * 1 | * Rel-16 | * F | * SCAS\_5G | * withdrawn |
| * S3-201418 | * Remove mismatched threat references and test steps | * Nokia, Nokia Shanghai Bell | * 33.511 | * 0014 | * 2 | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201105 | * Clarification on test case on synchronization failure handling | * Huawei, Hisilicon | * 33.512 | * 0006 | * - | * Rel-16 | * F | * SCAS\_5G | * revised |
| * S3-201347 | * Clarification on test case on synchronization failure handling | * Huawei, Hisilicon | * 33.512 | * 0006 | * 1 | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201106 | * Clarification on test case on RES\* failure handling | * Huawei, Hisilicon | * 33.512 | * 0007 | * - | * Rel-16 | * F | * SCAS\_5G | * revised |
| * S3-201348 | * Clarification on test case on RES\* failure handling | * Huawei, Hisilicon | * 33.512 | * 0007 | * 1 | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201226 | * Update to the test case of Storing of UE authentication status by UDM | * Nokia, Nokia Shanghai Bell | * 33.514 | * 0002 | * - | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201103 | * Deleting test case on TEID uniqueness | * Huawei, Hisilicon | * 33.515 | * 0005 | * - | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201086 | * Clarification on confidential IEs replacement handling in original N32-f message | * Huawei, Hisilicon | * 33.517 | * 0003 | * - | * Rel-16 | * F | * SCAS\_5G | * not pursued |
| * S3-201227 | * Test Case on Confidentiality of the Attributes not in Data-Type Encryption Policy | * Nokia, Nokia Shanghai Bell | * 33.517 | * 0004 | * - | * Rel-16 | * B | * SCAS\_5G | * not pursued |
| * S3-201229 | * Update to the test case of NF discovery authorization for specific slice | * Nokia, Nokia Shanghai Bell | * 33.518 | * 0002 | * - | * Rel-16 | * F | * SCAS\_5G | * revised |
| * S3-201420 | * Update to the test case of NF discovery authorization for specific slice | * Nokia, Nokia Shanghai Bell | * 33.518 | * 0002 | * 1 | * Rel-16 | * F | * SCAS\_5G | * agreed |
| * S3-201236 | * VLAN introduction | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0001 | * 1 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * revised |
| * S3-201470 | * VLAN introduction | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0001 | * 2 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * agreed |
| * S3-201237 | * Resolution of ed note on serving network name | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0002 | * 1 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * revised |
| * S3-201469 | * Resolution of ed note on serving network name | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0002 | * 2 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * agreed |
| * S3-201238 | * KI on interworking NPN and PLMN - security req | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0003 | * 1 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * revised |
| * S3-201468 | * KI on interworking NPN and PLMN - security req | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0003 | * 2 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * agreed |
| * S3-201239 | * KI on service continuity - threats and reqs | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0004 | * 1 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * revised |
| * S3-201481 | * KI on service continuity - threats and reqs | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0004 | * 2 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * agreed |
| * S3-201240 | * Resolution of editors note on AAA | * Nokia, Nokia Shanghai Bell | * 33.819 | * 0005 | * 1 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * agreed |
| * S3-201241 | * Threats and requirements on AAA | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0006 | * 1 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * revised |
| * S3-201467 | * Threats and requirements on AAA | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0006 | * 2 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * agreed |
| * S3-201242 | * Resolution of editor's note in solution 1 | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0007 | * 1 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * agreed |
| * S3-201243 | * Resolution of editor's note in solution 15 | * Nokia, Nokia Shanghai Bell | * 33.819 | * 0008 | * 1 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * agreed |
| * S3-201244 | * UP security policy enforcement in 5GLAN | * Nokia, Nokia Shanghai Bell, Interdigital | * 33.819 | * 0009 | * 1 | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * agreed |
| * S3-201098 | * Adding conclusion on KI #6.2 | * Huawei, Hisilicon | * 33.819 | * 0010 | * - | * Rel-16 | * F | * FS\_Vertical\_LAN\_SEC | * agreed |
| * S3-201114 | * New solution for DDoS mitigation | * Huawei, Hisilicon | * 33.819 | * 0011 | * - | * Rel-16 | * B | * FS\_Vertical\_LAN\_SEC | * not pursued |
| * S3-201115 | * conclusion for KI#6.1 | * Huawei, Hisilicon | * 33.819 | * 0012 | * - | * Rel-16 | * B | * FS\_Vertical\_LAN\_SEC | * not pursued |
| * S3-201143 | * Clean up of TR 33.835 | * China Mobile | * 33.835 | * 0001 | * - | * Rel-16 | * F | * FS\_AKMA | * agreed |
| * S3-201087 | * Clarification on exposure of confidential IEs in N32-f message in 33.926 | * Huawei, Hisilicon | * 33.926 | * 0034 | * - | * Rel-16 | * F | * SCAS\_5G | * not pursued |
| * S3-201228 | * Threat analysis on the attributes not in Data-Type Encryption Policy | * Nokia, Nokia Shanghai Bell | * 33.926 | * 0035 | * - | * Rel-16 | * F | * SCAS\_5G | * not pursued |

## Annex C: Lists of liaisons

### C1: Incoming liaison statements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| * S3-200905 |  | * LS on security consideration of performance measurement function protocol | * C1-196940 | * replied to | * S3-201490 |
| * S3-200906 |  | * Reply LS on SUCI computation from an NSI | * C1-200938 | * replied to | * S3-201432 |
| * S3-200907 |  | * Reply LS on sending CAG ID | * C1-201027 | * noted | * (none) |
| * S3-200908 |  | * LS on manipulation of CAG Information element by a VPLMN | * C1-202617 | * noted | * (none) |
| * S3-200909 |  | * LS on security context for 5GC to EPC mobility | * C1-202666 | * replied to | * S3-201453 |
| * S3-200910 |  | * LS on selected EPS NAS algorithms for unauthenticated emergency sessions in 5GS | * C1-202826 | * replied to | * S3-201300 |
| * S3-200911 |  | * PAP/CHAP and other point-to-point protocols usage in 5GS | * C1-202933 | * noted | * (none) |
| * S3-200912 |  | * LS on Misalignment on HTTP connections for N32-c and on N32-f contexts termination | * C4-200781 | * replied to | * S3-201464 |
| * S3-200913 |  | * LS on Misalignments on N32-f context Id | * C4-200782 | * replied to | * S3-201479 |
| * S3-200914 |  | * Reply LS on Further clarifications on GLI/GCI and Line ID/ HFC\_Identifier | * C4-201220 | * noted | * (none) |
| * S3-200915 |  | * LS on Multiple Kausf upon registering via multiple Serving Networks | * C4-202348 | * replied to | * S3-201350 |
| * S3-200916 |  | * Request for collaboration on migration planning of HSMs to support Quantum Safe Cryptography | * ETSI TC CYBER | * noted | * (none) |
| * S3-200917 |  | * LS on Generic Slice Template with Public Safety Feedback | * TCCA | * noted | * (none) |
| * S3-200918 |  | * Reply LS on Sending CAG ID in NAS layer | * R2-1916349 | * noted | * (none) |
| * S3-200919 |  | * Reply LS on NPN clarifications | * S1-193605 | * noted | * (none) |
| * S3-200920 |  | * LS on Sending CAG ID | * S2-2001616 | * noted | * (none) |
| * S3-200921 |  | * LS on AMF Reallocation via RAN re-routing | * S2-2001730 | * postponed | * (none) |
| * S3-200922 |  | * LS on ARPF in UDICOM | * C4-195553 | * replied to | * S3-201471 |
| * S3-200923 |  | * LS on 5G-GUTI reallocation after paging of a UE in 5GMM-IDLE mode with suspend indication | * C1-200967 | * replied to | * S3-201292 |
| * S3-200924 |  | * Clarification on encryption requirements for AGF interfaces (N1, N2, N3) [WWC] | * BBF | * replied to | * S3-201380 |
| * S3-200925 |  | * LS on uniqueness of PEI in certain FN-RG configurations | * S3i200069 | * postponed | * (none) |
| * S3-200926 |  | * LS on Location information for SMS over IMS | * S3i200161 | * noted | * (none) |
| * S3-200927 |  | * Reply LS on analytics support for energy saving | * S5-201472 | * noted | * (none) |
| * S3-200928 |  | * Reply to LS on Resynchronisations | * ETSI SAGE | * postponed | * (none) |
| * S3-200929 |  | * Observations and questions on 256-bit security goals | * ETSI SAGE | * postponed | * (none) |
| * S3-200930 |  | * Observations on ZUC-256 | * ETSI SAGE | * postponed | * (none) |
| * S3-200931 |  | * LS on ITU-T SG17 activity on V2X security | * ITU-T SG17 | * noted | * (none) |
| * S3-200932 |  | * LS on towards post-quantum symmetric and asymmetric cryptography in 5G | * ITU-T SG17 | * replied to | * S3-201365 |
| * S3-200933 |  | * Reply LS to Transfer the study on service-based support for SMS in 5GC to CT WGs | * SP-191362 | * noted | * (none) |
| * S3-200942 |  | * Reply LS on Questions on onboarding requirements | * S2-2003216 | * noted | * (none) |
| * S3-200943 |  | * LS on SA WG2 status of MT-EDT in Rel-16 | * S2-2003505 | * noted | * (none) |
| * S3-200944 |  | * Reply LS to SA3 on FBS detection | * R2-1914224 | * postponed | * (none) |
| * S3-201319 |  | * LS response to SA3 on the security related issues for NR SL | * R2-2004083 | * replied to | * S3-201483 |
| * S3-201322 |  | * LS on Calculation of ShortResumeMAC-I | * R2-2004265 | * replied to | * S3-201489 |
| * S3-201325 |  | * LS on AS rekeying handling | * R3-202833 | * replied to | * S3-201484 |
| * S3-201328 |  | * 256 bit algorithm candidates | * ETSI SAGE | * postponed | * (none) |
| Document | Title | To | Cc | reply to i/c LS |  |
| * S3-201300 | * Reply LS on selected EPS NAS algorithms for unauthenticated emergency sessions in 5GS | * CT1 | * - | * S3-200910 |  |
| * S3-201350 | * LS reply to CT4 LS on Multiple Kausf upon registering via multiple SNs | * CT4 | * - | * S3-200915 |  |
| * S3-201365 | * Reply LS to ITU-T Study Group 17 on towards post-quantum symmetric and asymmetric cryptography in 5G | * ITU-T Study Group 17 | * ETSI TC CYBER, ETSI TC CYBER QSC | * S3-200932 |  |
| * S3-201380 | * Reply-LS on FN-RG authentication and related questions | * BBF | * - | * S3-200924 |  |
| * S3-201414 | * LS on protection\_of\_ allowed CAG list against\_mitm\_Attack | * SA2 | * CT1 | * - |  |
| * S3-201432 | * Reply LS on SUCI computation from an NSI | * CT1 | * CT6, SA2, CT4 | * S3-200906 |  |
| * S3-201453 | * LS reply to on security context for 5GC to EPC mobility | * CT1 | * SA2 | * S3-200909 |  |
| * S3-201464 | * LS Reply to LS on Misalignment on HTTP connections for N32-c and on N32-f contexts termination | * CT4 | * - | * S3-200912 |  |
| * S3-201471 | * Reply LS on ARPF in UDICOM | * CT4 | * - | * S3-200922 |  |
| * S3-201479 | * Reply LS on Misalignments on N32-f context Id | * CT4 | * - | * S3-200913 |  |
| * S3-201483 | * Reply to: LS response to SA3 on the security related issues for NR SL | * RAN2 | * - | * S3-201319 |  |
| * S3-201484 | * Reply to: LS on AS rekeying handling | * RAN3 | * SA2 | * S3-201325 |  |
| * S3-201487 | * LS to SA2 and CT1 on Updated User Plane Integrity Protection advice | * SA2, CT1 | * SA, RAN | * - |  |
| * S3-201489 | * Reply LS on Calculation of ShortResumeMAC-I | * RAN2 | * - | * S3-201322 |  |
| * S3-201490 | * Reply LS on PMF protocol security | * CT1 | * SA2 | * S3-200905 |  |

### C2: Outgoing liaison statements

| **outgoing-LSs** | | | | |
| --- | --- | --- | --- | --- |
| **Tdoc** | **Title** | **To** | **Cc** | **ReplyTo** |
| S3-201300 | Reply LS on selected EPS NAS algorithms for unauthenticated emergency sessions in 5GS | CT1 | - | S3-200910 |
| S3-201350 | LS reply to CT4 LS on Multiple Kausf upon registering via multiple SNs | CT4 | - | S3-200915 |
| S3-201365 | Reply LS to ITU-T Study Group 17 on towards post-quantum symmetric and asymmetric cryptography in 5G | ITU-T Study Group 17 | ETSI TC CYBER, ETSI TC CYBER QSC | S3-200932 |
| S3-201380 | Reply-LS on FN-RG authentication and related questions | BBF | - | S3-200924 |
| S3-201414 | LS on protection\_of\_ allowed CAG list against\_mitm\_Attack | SA2 | CT1 | - |
| S3-201432 | Reply LS on SUCI computation from an NSI | CT1 | CT6, SA2, CT4 | S3-200906 |
| S3-201453 | LS reply to on security context for 5GC to EPC mobility | CT1 | SA2 | S3-200909 |
| S3-201464 | LS Reply to LS on Misalignment on HTTP connections for N32-c and on N32-f contexts termination | CT4 | - | S3-200912 |
| S3-201471 | Reply LS on ARPF in UDICOM | CT4 | - | S3-200922 |
| S3-201479 | Reply LS on Misalignments on N32-f context Id | CT4 | - | S3-200913 |
| S3-201483 | Reply to: LS response to SA3 on the security related issues for NR SL | RAN2 | - | S3-201319 |
| S3-201484 | Reply to: LS on AS rekeying handling | RAN3 | SA2 | S3-201325 |
| S3-201487 | LS to SA2 and CT1 on Updated User Plane Integrity Protection advice | SA2, CT1 | SA, RAN | - |
| S3-201489 | Reply LS on Calculation of ShortResumeMAC-I | RAN2 | - | S3-201322 |
| S3-201490 | Reply LS on PMF protocol security | CT1 | SA2 | S3-200905 |

## Annex D: List of agreed/approved new and revised Work Items

|  |  |  |  |
| --- | --- | --- | --- |
| Document | Title | Source | new/revised |
| * S3-201354 | * New SID: Study on Security Aspects of Enhancement of Support for Edge Computing in 5GC | * Huawei, Hisilicon, China Unicom, CAICT, China Telecom, ZTE | * SID new |
| * S3-201381 | * Study on security aspects of the Disaggregated gNB Architecture | * China Telecom, China Unicom, CATT, Xiaomi, vivo | * SID new |
| * S3-201400 | * Study on Security Aspects of Enhancement for Proximity Based Services in 5GS | * CATT | * SID new |
| * S3-201402 | * New SID: Study on Security Aspects of Enhancements for 5G Multicast-Broadcast Services | * Huawei, Hiliscon | * SID new |
| * S3-201425 | * Proposed SID for Unmanned Aerial Systems | * Qualcomm Incorporated, Ericsson, Samsung, Nokia, Nokia Shanghai Bell, Interdigital | * SID new |
| * S3-201436 | * Study on enhanced security support for Non-Public Networks | * Ericsson, Interdigital | * SID new |
| * S3-201465 | * SID on IIoT | * Nokia, Nokia Shanghai Bell, Interdigital, Verizon, CMCC, BMWi, Huawei, HiSilicon, Samsung, Ericsson | * SID new |
| * S3-201372 | * New WID on Security Assurance Specification for Inter PLMN UP Security (IPUPS) | * ZTE Corporation | * WID new |
| * S3-201455 | * draft WID - Normative changes for UPIP | * VODAFONE Group Plc | * WID new |

## Annex E: List of draft Technical Specifications and Reports

|  |  |  |  |
| --- | --- | --- | --- |
| Document | Spec | vers | Doc title |
| * S3-200985 | * 33.520 | * 0.0.0 | * Skeleton of SCAS\_5G\_N3IWF |
| * S3-201068 | * 33.813 | * 0.8.0 | * Draft TR 33.813 Study on Enhancement of Network Slice security |
| * S3-201091 | * 33.226 | * 0.0.0 | * Skeleton for IMS SCAS TS 33.226 |
| * S3-201148 | * 33.521 | * 0.0.0 | * The skeleton of NWDAF SCAS |
| * S3-201176 | * 33.522 | * 0.0.0 | * Skeleton of Security Assurance Specification for Service Communication Proxy (SECOP) |
| * S3-201318 | * 33.853 | * 0.8.0 | * Draft TR 33.853 |
| * S3-201338 | * 33.536 | * 1.2.0 | * draft TS 33.536 v1.2.0 |
| * S3-201339 | * 33.836 | * 0.6.0 | * draft TR 33.836 v0.6.0 |
| * S3-201360 | * 33.813 | * 0.9.0 | * draft TR on Study on Enhancement of Network Slicing |
| * S3-201379 | * 33.522 | * 0.1.0 | * draft TS 33.522 (v0.1.0) |
| * S3-201384 | * 33.861 | * 1.6.0 | * Draft TR 33.861 |
| * S3-201388 | * 33.818 | * 0.7.0 | * draft TR 33.818 v0.7.0 |
| * S3-201389 | * 33.521 | * 0.1.0 | * draft TS 33.521 v0.1.0 |
| * S3-201390 | * 33.535 | * 0.5.0 | * draft TS 33.535 v0.5.0 |
| * S3-201401 | * 33.434 | * 0.4.0 | * Draft 33.434 v0.4.0 |
| * S3-201430 | * 33.853 | * 0.9.0 | * TR33853v090 |
| * S3-201433 | * 33.226 | * 0.1.0 | * draft TS 33.226 v0.1.0 |
| * S3-201435 | * 33.520 | * 0.1.0 | * draft TS 33.520 |
| * S3-201451 | * 33.935 | * 0.3.0 | * TR 33.935 v0.3.0 |
| * S3-201460 | * 33.846 | * 0.6.0 | * Draft TR 33.846 |
| * S3-201476 | * 33.809 | * 0.9.0 | * TR33.809 |
| * S3-201491 | * 33.845 | * 0.3.0 | * TR 33.845 version 0.3.0 |

## Annex F: List of participants

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| TITLE | Family Name | Given Name | Employer Organization | Employer Category Code | Organization Represented | Organization Represented Category Code |
| Prof. | Babbage | Steve | VODAFONE Group Plc | ETSI | VODAFONE Group Plc | ETSI |
| Dr. | Baboescu | Florin | BROADCOM CORPORATION | ETSI | BROADCOM CORPORATION | ETSI |
| Dr. | Baskaran | Sheeba Backia Mary | Motorola Mobility Germany GmbH | ETSI | Motorola Mobility Germany GmbH | ETSI |
| Dr. | Ben Henda | Noamen | Ericsson LM | ETSI | Ericsson LM | ETSI |
| Ms. | Bi | Xiaoyu | CATT | CCSA | CATT | CCSA |
| Mr. | Blanchard | Colin | BT plc | ETSI | BT plc | ETSI |
| Mr. | Brusilovsky | Alec | InterDigital, Inc. | ETSI | InterDigital Communications | ATIS |
| Mr. | Cano Soveri | Mirko | ETSI | ETSI | ETSI | ETSI |
| Mr. | Canterbury | Mark | Tencastle Limited | | National Technical Assistance | ETSI |
| Dr. | Carlberg | Ken | FCC | ATIS | FCC | ATIS |
| Mrs. | Carrion | Inma | CommScope Technologies AG | ETSI | CommScope Technologies AG | ETSI |
| Mr. | CHO | SANGHOON | SK Telecom | TTA | SK Telecom | TTA |
| Mr. | Choyi | Vinod Kumar | Verizon UK Ltd | ETSI | Verizon UK Ltd | ETSI |
| Mr. | Cichonski | Jeffrey | NIST | ATIS | NIST | ATIS |
| Ms. | Comak | Pinar | Ericsson LM | ETSI | Ericsson LM | ETSI |
| Dr. | Corbett | Cherita | Johns Hopkins University APL | ATIS | Johns Hopkins University APL | ATIS |
| Mr. | Dees | Walter | Philips International B.V. | ETSI | Philips International B.V. | ETSI |
| Ms. | Deng | Juan | HuaWei Technologies Co., Ltd | CCSA | HiSilicon Technologies Co. Ltd | CCSA |
| Mr. | Doerr | Johannes | BMWi | ETSI | BMWi | ETSI |
| Mr. | Dolly | Martin | AT&T | ATIS | AT&T | ATIS |
| Mr. | Dressler | Christian | ZITiS | ETSI | ZITiS | ETSI |
| Ms. | Ebschbach | Linda | umlaut | ETSI | umlaut | ETSI |
| Mr. | Ennesser | Fran?ois | Huawei Technologies France | ETSI | Huawei Technologies France | ETSI |
| Dr. | Escott | Adrian | Qualcomm CDMA Technologies | ETSI | Qualcomm CDMA Technologies | ETSI |
| Mr. | Evans | Tim P. | VODAFONE Group Plc | ETSI | VODAFONE Group Plc | ETSI |
| Mr. | Everett | Jared | Johns Hopkins University APL | ATIS | Johns Hopkins University APL | ATIS |
| Mr. | Ferdi | Samir | InterDigital, Inc. | ETSI | InterDigital, Europe, Ltd. | ETSI |
| Mr. | Gamishev | Todor | Orange | ETSI | Orange | ETSI |
| Dr. | Gao | Feng | China Unicom | CCSA | China Unicom | CCSA |
| Dr. | Garcia-Morchon | Oscar | Philips International B.V. | ETSI | Philips International B.V. | ETSI |
| Mr. | Goldberg | Martin | U.S. Department of Defense | ATIS | U.S. Department of Defense | ATIS |
| Mr. | Graham | Jason | OTD | ETSI | OTD | ETSI |
| Mr. | Grewal | Rajpreet Singh | NTIA | ATIS | NTIA | ATIS |
| Ms. | Guo | Ivy | Apple Computer Trading Co. Ltd | CCSA | Apple Computer Trading Co. Ltd | CCSA |
| Mr. | Guo | Longhua | HUAWEI TECH. GmbH | ETSI | Huawei Device Co., Ltd | CCSA |
| Mr. | Hanhisalo | Markus | Ericsson LM | ETSI | Ericsson LM | ETSI |
| Mr. | Hoffpauir | Dusty | Charter Communications, Inc | ATIS | Charter Communications, Inc | ATIS |
| Miss | Jerichow | Anja | Nokia Germany | ETSI | Nokia Germany | ETSI |
| Dr. | Jost | Christine | Ericsson LM | ETSI | Ericsson GmbH, Eurolab | ETSI |
| Dr. | Karakoc | Ferhat | Ericsson LM | ETSI | Ericsson LM | ETSI |
| Dr. | Keesmaat | Iko | TNO | ETSI | TNO | ETSI |
| Mr. | Kim | Dongjoo | LG Electronics Inc. | TTA | LG Electronics Inc. | TTA |
| Mr. | Kohalmi | Steve | Juniper Networks | ETSI | Juniper Networks | ETSI |
| Mr. | Kolekar | Abhijeet | Intel Corporation (UK) Ltd | ETSI | Intel China Ltd. | CCSA |
| Dr. | Kunz | Andreas | Motorola Mobility Germany GmbH | ETSI | Motorola Mobility Germany GmbH | ETSI |
| Mr. | Laitinen | Mika | Airbus | ETSI | Airbus | ETSI |
| Mr. | Leadbeater | Alex | BT plc | ETSI | BT plc | ETSI |
| Dr. | Lee | Soo Bum | Qualcomm Incorporated | ATIS | Qualcomm Incorporated | ATIS |
| Mr. | Lee | Xiaoyang | CISA ECD | ATIS | CISA ECD | ATIS |
| Mr. | Lehtovirta | Vesa | Ericsson LM | ETSI | Ericsson LM | ETSI |
| Dr. | LEI | AO | HUAWEI TECHNOLOGIES Co. Ltd. | ETSI | HUAWEI Technologies Japan K.K. | ARIB |
| Dr. | Lei | Zander (Zhongding) | HuaWei Technologies Co., Ltd | CCSA | Huawei Technologies Japan K.K. | TTC |
| Mr. | Li | He | HUAWEI TECHNOLOGIES Co. Ltd. | ETSI | HuaWei Technologies Co., Ltd | CCSA |
| Mr. | Libunao | Gerardo | Verizon UK Ltd | ETSI | Verizon Denmark | ETSI |
| Ms. | Ling | Ying | China Telecommunications | ETSI | China Telecommunications | ETSI |
| Mr. | Loushine | Mike | AT&T | ATIS | AT&T | ATIS |
| Miss | Lu | Wei | Nokia Korea | TTA | Nokia Shanghai Bell | CCSA |
| Mr. | McKee | Alan | NCSC | ETSI | NCSC | ETSI |
| Dr. | Muhanna | Ahmad | Mavenir | ETSI | Mavenir | ETSI |
| Mr. | Nair | Suresh | Nokia Germany | ETSI | Nokia Corporation | ETSI |
| Mr. | Nakarmi | Prajwol Kumar | Ericsson Limited | ETSI | Nanjing Ericsson Panda Com Ltd | CCSA |
| Mr. | Normann | Henrik Andreas | Ericsson LM | ETSI | Ericsson Telecomunicazioni SpA | ETSI |
| Mr. | O'Driscoll | James | NCSC | ETSI | NCSC | ETSI |
| Mr. | Pätzold | Thomas | Deutsche Telekom AG | ETSI | Deutsche Telekom AG | ETSI |
| Mrs. | Pauliac | Mireille | THALES | ETSI | THALES | ETSI |
| Mr. | PENG | Jin | ZTE Corporation | ETSI | ZTE Corporation | ETSI |
| Mr. | Qi | Minpeng | China Mobile Com. Corporation | CCSA | China Mobile Com. Corporation | CCSA |
| Mr. | Rajadurai | Rajavelsamy | Samsung R&D Institute UK | ETSI | Samsung Electronics Co., Ltd | TTA |
| Mrs. | Rong | Wu | HUAWEI TECHNOLOGIES Co. Ltd. | ETSI | HUAWEI TECHNOLOGIES Co. Ltd. | ETSI |
| Mr. | Schumacher | Greg | T-Mobile USA | ETSI | T-Mobile USA Inc. | ATIS |
| Ms. | Shen | Jun | China Telecommunications | ETSI | China Telecommunications | ETSI |
| Mr. | Smith | Brian | Bell Mobility | ETSI | Bell Mobility | ETSI |
| Mr. | Syrett | Mark | Hewlett-Packard Enterprise | ETSI | Hewlett-Packard Enterprise | ETSI |
| Mr. | Toor | Gurbakshish Singh | TD Tech Ltd | CCSA | Huawei Tech.(UK) Co., Ltd | ETSI |
| Ms. | Trakinat | Jean | T-Mobile USA Inc. | ATIS | T-Mobile USA Inc. | ATIS |
| Mr. | Trygar | Tobey | Perspecta Labs Inc. | ATIS | Perspecta Labs Inc. | ATIS |
| Dr. | Tsiatsis | Vlasios | Ericsson LM | ETSI | Ericsson Japan K.K. | ARIB |
| Mrs. | Vahidi | Helena | Ericsson LM | ETSI | Ericsson LM | ETSI |
| Mrs. | Vasel | Sarah | NTIA | ATIS | NTIA | ATIS |
| Mrs. | Vasel | Sarah | NTIA | ATIS | NTIA | ATIS |
| Ms. | Villebrun | Emmanuelle | Ministère Economie et Finances | ETSI | Ministère Economie et Finances | ETSI |
| Mr. | Vujcic | Dragan | IDEMIA | ETSI | IDEMIA | ETSI |
| Dr. | Wan | Tao | CableLabs | ETSI | CableLabs | ETSI |
| Mr. | Whorlow | Colin | NCSC | ETSI | HOME OFFICE | ETSI |
| Ms. | Wifvesson | Monica | Ericsson LM | ETSI | Ericsson LM | ETSI |
| Mr. | Wong | Marcus | Futurewei | ETSI | Futurewei | ETSI |
| Mr. | Woodward | Tim | Motorola Solutions Danmark A/S | ETSI | Motorola Solutions Danmark A/S | ETSI |
| Miss | Xu | Hui | CATT | ETSI | CICT | CCSA |
| Mr. | xu | sen | China Telecommunications | ETSI | China Telecomunication Corp. | CCSA |
| Mr. | Yoo | Mike | Johns Hopkins University APL | ATIS | Johns Hopkins University APL | ATIS |
| Dr. | Zhang | Bo | HUAWEI TECHNOLOGIES Co. Ltd. | ETSI | Huawei Technologies Sweden AB | ETSI |
| Mr. | Zhou | Wei | CATT | CCSA | CATT | CCSA |

## Annex G: List of future meetings

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Title | Start date | End date (OP) | Town | Country | Reference |
| * SA3#100e | * 2020-08-17 | * 2020-08-28 | * Online |  | * S3-100e |
| * SA3#100Bis-e | * 2020-10-12 | * 2020-10-16 | * Online |  | * S3-10Bis-e |