3GPP TSG-SA WG5 #162 S5-253221

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**Source:** SA5 Chair, SA5 Vice Chair (Ericsson)

**Title:** OAM Breakout Notes

**Document for:** Information

**Agenda Item:** 6.1

# Agenda

**Tuesday breakout 2-Q1 (6.1/6.19.14 TraceQoE\_OAM Continuous MDT)**

**(start from 9:30) (60m)**

6.1

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| 6.1. OAM&P Plenary |
| [**S5-253229**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253229.zip) | Reply to LS on Continuous MDTN: E: the following solutions could be merged into one. HW solution (3522): QC prefers HW solution considering security issues..E solution (3230/3231/3232/3233)ZTE solution (3736)CATT solution: Nokia prefers CATT solution, but still has some drawbacks to address. (3669/3670)HW: two issues to be included in reply LS. feasibility checkSecurity issue-> 3848 (BO)Check of RAN3 principles:•Information from OAM to the NG-RAN nodes participating to Continuous MDT, allowing for the identification of a continuous MDT process, are provided e.g. in the form of specific Trace Reference(s).->Huawei/Nokia/Ericsson/CATT/China Telecom/ZTE agreed with this principle. •Solutions for Continuous MDT shall not have an impact on the 5GC in Rel19 from a RAN3 perspective.Huawei/Nokia do not agree with this principle:* Huawei: if TR and TRSR1 are stored in the 5GC UE context via immediate MDT, gNB can obtain this information that previously gNB used immediately through UE context.
* Nokia: prefer no restrictions on using 5GC to fulfill the solution.

Ericsson/CATT/China Telecom/ZTE agreed with this principle. * Ericsson do not agree with “immediately” in HW comments.
* Ericsson: RAN has made conclusion and should not be challenged by SA5.

•RAN3 agrees to use TR(s) and TRSR(s) to resolve the MDT measurement correlation problem->Huawei/Nokia/Ericsson/CATT/China Telecom/ZTE agreed with this principle. Huawei/Nokia/Ericsson/CATT/China Telecom/ZTE agreed that there is no security risk from SA5 perspective.SA3 needs to be involved. | Ericsson Japan K.K. | Qiang Zu |

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| 6.19.14 Subscriber and Equipment Trace and QoE collection management |
| [**S5-253230**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253230.zip) | Rel-19 CR TS 32.421 Continuous MDTNot discussed in BO. | Ericsson, Deutsche Telekom | Qiang Zu |
| [**S5-253231**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253231.zip) | Rel-19 CR TS 32.422 Continuous MDT3231d1: agreed with making the following update for “connected-mode inter-gNB mobility procedure” ,”In this case, both the received TRSR from source gNB and the reassigned TRSR shall be included in first Trace Record Header of the MDT measurements report.”Nokia: prefer to have dynamic TRSR prefix range solution considering the limitation of number of gNB/UEs. Still to check the number of gNBs/UEs is sufficient.China Telecom: prefer dynamic TRSR prefix. | Ericsson, Deutsche Telekom | Qiang Zu |
| [**S5-253232**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253232.zip) | Rel-19 CR TS 28.622 Continuous MDTNot discussed in BO. | Ericsson, Deutsche Telekom | Qiang Zu |
| [**S5-253233**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253233.zip) | Rel-19 CR TS 28.623 Continuous MDTNot discussed in BO. | Ericsson, Deutsche Telekom | Qiang Zu |

**Tuesday breakout 2-Q4 (6.19.1.1 AIML) (90m)**

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| * 1. **6.19.1.1 AI/ML management phase 2**
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| **WT-1.2: Management capabilities for AI/ML inference emulation** |
| [**S5-253329**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253329.zip) | Rel-19 Input to draftCR TS28.105 Update AIML emulation environment->BOE: environment safety?Handle more than one ? gradually evaluate?The inference emulation should indicate the safety level of the environment for which the ML model has been emulated?Safety environments is subjective. Where to get the indication?Cardinality of EnvironmentType is inconsistent. Prefer one single environment for one producer. NEC: “to configure a managed function to act as a ML inference emulation MnS producer and execute ML models in a controlled way.” ?simScope? E: offline proposals. Suggest to revise to S5-25abcd.  | Nokia | Stephen Mwanje |
| **Cross WT** |
| [**S5-253422**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253422.zip) | Input to DraftCR Rel-19 TS 28.105 Add Procedure for ML Model LCM->BOHW: procedure is missing.E: suggest to split to two : (1) training part to be merged with 3473. (2) others Agree to merge the training part into 3473.N: scalability issue. Introduce some details. Testing:E: concern on step 6, should not have the limitation step4/5 before step 6.Step 5: optional. Step 7 needs to be updated. Step 4 to 6 are interchangeable. Model deployment:E: Similar comments as testing. Do not keep model deployment procedure for this meeting. AIML Inference:E: do not agree with AIML inference procedure as NRM solution is wrong. Concern on step 5.N: suggest to remove “based on the specified ML Model(s).” from step 5.Suggest to revise to S5-25abcd.  | ZTE Corporation | Pengxiang Xie |
| [**S5-253473**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253473.zip) | Input to draftCR Rel-19 TS 28.105 Add generic procedure for ML model training->BON: step 10, to be consistent with procedure. Replace “query” to “read”Step 11, replace “return” to “response”. | Ericsson España S.A. | Jose Antonio Ordoñez Lucena |
| [**S5-253518**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253518.zip) | Input to draftCR TS 28.105 for correct the description for managing AIML based Capabilities->BON: 6.5.4.2 why remove the first sentence?E: 6.5.4.2 remove “defined” E: 4a.2 Suggest to revise to S5-25abcd. | Huawei, NEC | xiaoli Shi |
| [**S5-253684**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253684.zip) | Input to DraftCR Rel-19 TS 28.105 AIML management-Ph2 stage 2 specification corrections and improvements->BOE: remove E from co-sign. Suggest to revise to S5-25abcd. | NEC, Nokia, Nokia Shanghai Bell, Ericsson | Hassan Al-kanani |
| [**S5-253712**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253712.zip) | Input to DraftCR Rel-19 TS 28.105 AIML management - phase 2 rapporteur's clean up->BOE: offline editorial comments.Suggest to revise to S5-25abcd. | NEC Europe Ltd | Hassan Al-kanani |
| [**S5-253393**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253393.zip) | Rel-19 TS 28.105 stage 3 update to align with Rel-19 stage 2 specifications->BOWill be updated according to stage2. | NEC, Nokia, Nokia Shanghai Bell, Ericsson | Hassan Al-kanani |

**Tuesday breakout 2-Q5 (6.19.8.1 SBMA) (30m)**

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| 6.19.8.1 Service Based Management Architecture enhancement phase 3 |
| [**S5-253320**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253320.zip) | Discussion Paper: addition of architecture reference model for management and orchestration in support of SBMANot discussed in BO | NEC, Intel, Huawei, AT&T, ZTE, CATT, MATRIXX Software, Deutsche Telekom, Verizon, China Unicom, China Mobile, Orange | Hassan Al-kanani |
| [**S5-253322**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253322.zip) | Rel-19 CR TS 28.533 addition of architecture reference model for management and orchestration in support of SBMAN: clarify the MLTRF is MnF/managed Function/Management Function?Offline.  | NEC, Intel, Huawei, AT&T, ZTE, CATT, MATRIXX Software, Deutsche Telekom, Verizon, China Unicom, China Mobile, Orange | Hassan Al-kanani |
| [**S5-253323**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253323.zip) | Rel-19 CR TS 28.533: addition of summary descriptions for management functions in support of architecture reference model for management and orchestrationNot discussed in BO | NEC, Intel, Huawei, AT&T, ZTE, CATT, MATRIXX Software, Deutsche Telekom, Verizon, China Unicom, China Mobile, Orange | Hassan Al-kanani |
| [**S5-253544**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253544.zip) | Rel-19 CR TS 28.533 Management services exposureMCC comments.Not discussed in BO | Huawei, AT&T, DTAG, China Mobile, China Unicom, Ericsson | Kai Zhang |
| [**S5-253596**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253596.zip) | DP for reversing endorsement of S5-251948Reallocate 6.19.21.1->6.19.8.1Not discussed in BO | Samsung Electronics GmbH | Deepanshu Gautam |
| [**S5-253545**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253545.zip) | Rel-19 CR TS 28.533 Update on Annex FE: traditional interface. ABC?Suggest to revise to S5-25abcd. | Huawei | Kai Zhang |
| [**S5-253257**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253257.zip) | DP Clarify use of multiple NRMs in 28.541E: EPTransportRef is an example for the issue.DT: For the case of inconsistency, it could be taken as FASMO.HW: should belong to adNRM work, not SBMA. 1. Conflicting definitions should be corrected in Rel-19, missing imported definitions to be corrected in Rel-20.
2. For separating TS 28.541, need further study and could check with MCC.
3. Ok to endorse.

Suggest to revise to S5-25abcd. | Ericsson Hungary Ltd | Balazs Lengyel |

**Wednesday breakout 3-Q1 (6.19.6 CMO) (60m)**

Discussion sequence proposed by rapporteur: 3354/3427/3481/3697/3355/3448/3698/3352/3449/3440/3430/3439/3480/3450/3710/3451

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| 6.19.6 Study on Cloud Aspects of Management and Orchestration |
| [**S5-253350**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253350.zip) | Pseudo-CR on TR28.869 terminology alignmentFROM MAIN SESSION TUESDAY:N: The title is misleading.N: Clause 5.1.1.3 Says “The VNF Configuration Manager resides outside the 3GPP management system” - which is correct but means that the solution is outside the SA5 scope.DCM: This is intended to remove the Editor’s note.N: We don’t agree with the examples either.N: the “can consider the introduction of a new parameter configBackupInfo potentially added within some existing IOC…” is very unclear.N: Adding “to configure NF Deployment non-application parameters” in the 5.1.1.3.6 title is not correct.DCM: Ok we can remove it.E: In general we disagree with replacing of cloud native VNF with NF deployment.DCM: This (to use NF deployment eveywhere) has been agreed earlier. If it cannot be agreed now, it would make it impossible to agree on any conclusion and recommendation for this study. E: I don’t agree that this has been agreed earlier.DCM: We can also discuss updating the definition of NF deployment in 3.1.H and R: We also have comments, offline.* 3883 (recommended to continue discussion in a BO session)

CONTINUATION IN BO SESSION: | NTT DOCOMO INC.. | Kostas Katsalis |
| [**S5-253451**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253451.zip) | Rel-19 pCR TR 28.869 Editorial clean up- Clause 5.2.3.3.2, Annexes D, E and FDCM: Why are the Editor’s notes deleted?E: We thought not needed because they are only giving examples.N: We can add some text to clarify this and then we can remove them* BO session recommends a revision
 | Nokia UK, Ericsson | Winnie Nakimuli |
| [**S5-253480**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253480.zip) | pCR TR 28.869 Updates to declarative descriptor-based LCMN: We don’t agree to “A CR represents NF Deployment instance(s) and conforms to the schema defined in Kubernetes CRD [46].”N. The ref. 46 is about open telemetry and nothing to do with the CRD.R: OK, we can work on it offline.O: Want to co-signH: The options need to be properly structures.E: The options 2 is too much implementation specific.E: Like N, the CRD is also impl. specific. Option 2 should be very abstract.DCM: Also have comments, offline.N: 3.Y and 3.Z is implementation specific and we don’t agree with adding these solutions.E and H: Agree with N.* BO session recommends a revision
 | Rakuten Mobile, Inc | Ravi Chamarty |
| [**S5-253354**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253354.zip) | Pseudo-CR on TR28.869 NF Deployments LCM evaluationDCM, CMCC and E: We propose to merge the following documents: 3354, 3481, 3697, 3427 (baseline)H: This is a mix of evaluations and recommendation, so recommendations should move to a recommendations clause (not part of the merge of these four document, it could move to 3352).E: Agree with H.DCM, E, R and N: We have more comments, can take offline.* BO session asks to Merge this in revision of 3427
 | NTT DOCOMO INC.. | Kostas Katsalis |
| [**S5-253427**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253427.zip) | Pseudo-CR on TR 28.869 Add evaluation for some LCM solutionsDCM, CMCC and E: We propose to merge the following documents: 3354, 3481, 3697, **3427 (baseline)**N: What does it mean in 5.2.1.4 that “In summary, the solution is feasible and optional”?H: I don’t think we have a complete solution described, so don’t think it is feasible.DCM, E, R and N: We have more comments, can take offline.* BO session asks to revise this
 | China Mobile Com. Corporation | guangjing cao |
| [**S5-253481**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253481.zip) | pCR TR 28.869 Evaluations and Conclusions for NF Deployment LCMDCM, CMCC and E: We propose to merge the following documents: 3354, 3481 (evaluation part), 3697, 3427 (baseline)DCM, H, E, R and N: We have more comments, can take offline.All: Propose to merge 3698, 3352 (part related to rec. on LCM), 3440, 3481 (rec. part)* BO session asks to Merge this in revision of 3427 (evaluation part)
 | Rakuten Mobile, Inc | Ravi Chamarty |
| [**S5-253697**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253697.zip) | pCR TR 28.869 Evaluations for LCM of NF Deployment use casesDCM, CMCC and E: We propose to merge the following documents: 3354, 3481, 3697, 3427 (baseline)DCM, E, H, R and N: We have more comments, can take offline* BO session asks to Merge this in revision of 3427
 | Ericsson Limited, Nokia, AT&T | Junfeng Wang |
| [**S5-253355**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253355.zip) | Pseudo-CR on TR28.869 VNF generic OAM functions evaluationDCM , E and N: Propose to merge with 3448 N: We don’t sdpecify interactions between producers and external systems, they are out of scope for SA5.N: The MnS producer needs to be aware of the VNF generic OAM functions and the MnS producer doesn’t need to be aware, it’s up to implementation.N: We don’t agree on “For NF Deployments configuration of non-application parameters 3GPP specifications like 28.531, 28.533 need to consider also the interfaces specified in ETSI GS NFV-IFA 049, besides ETSI GS NFV-IFA008”. Similar comments apply to the following clauses.H: Agree with N.E: In this evaluation, the term NF Deployment is not agreed yet.* BO session asks to merge with 3448
 | NTT DOCOMO INC.. | Kostas Katsalis |
| [**S5-253448**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253448.zip) | Rel-19 pCR TR 28.869 Add Evaluation to the use of VNF generic OAM functionsDCM , E and N: Propose to merge with 3355 (3448 as base)DCM: We have many comments… this is resubmitted from last meeting, so our previous comments apply.DCM: For example, 5.1.2.4 (bullet 2) claims that there is an unclear relationship, but it is very clear because we have a standardised interface.N: Standardised by whom? It is outside SA5. What is the impact on the 3GPP mgmt system?CMCC: Please try to use general descriptions, as this is an evaluation.H: In several cases there is a list of clauses, but one is missing in each solution.* BO session asks to revise it
 | Nokia UK, Ericsson | Winnie Nakimuli |
| [**S5-253439**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253439.zip) | Rel-19 pCR TR 28.869 Clarify the scope of the management of cloud aspectsR, E: We object.H: Please tell us the reason.R: It is not SA5 scope to define what is an NF.H: We are not saying that, just clarify that the scope is only for CN.E: the SID has coverage for both RAN and CN.H: That is a mistake.E: The RAN spec doesn’t care about virtualisation.E: In 28.531 it only mentions LCM.H: If RAN and CN don’t care about what is virtualised, why do we care?Keep open | Huawei | Xian Zhao |
| [**S5-253698**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253698.zip) | pCR TR 28.869 Recommendation for LCM of NF DeploymentAll: Propose to merge 3698, 3352 (part related to rec. on LCM), 3440, 3481 (rec. part) | Ericsson Limited, Nokia, AT&T | Junfeng Wang |
| [**S5-253352**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253352.zip) | Pseudo-CR on TR28.869 conclusions and recommendationsAll: Propose to merge 3698, 3352 (part related to rec. on LCM), 3440, 3481 (rec. part)All: Part of 3352 (related to VNF generic OAM) should be merged with 3449. | NTT DOCOMO INC.. | Kostas Katsalis |
| [**S5-253449**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253449.zip) | Rel-19 pCR TR 28.869 Add conclusions and recommendations to the use of VNF generic OAM functionsAll: Part of 3352 (related to VNF generic OAM) should be merged with 3449.* BO session asks to revise this (merged with part of 3352)
 | Nokia UK, Ericsson | Winnie Nakimuli |
| [**S5-253440**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253440.zip) | Pseudo-CR-TR 28.869 Add some recommendations for Use of industry solutionsAll: Propose to merge 3698, 3352 (part related to rec. on LCM), 3440, 3481 (rec. part) | China Mobile Com. Corporation | guangjing cao |
| [**S5-253430**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253430.zip) | Pseudo-CR-TR 28.869 Add recommendation for terminologyDCM: We have minor comments.* BO session asks to revise it.
 | China Mobile Com. Corporation | guangjing cao |
| [**S5-253450**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253450.zip) | Rel-19 pCR TR 28.869 Add conclusion for data streaming for cloud-native NF deploymentsN: Propose to merge this with 3710  | Nokia UK, Ericsson, Huawei | Winnie Nakimuli |
| [**S5-253710**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253710.zip) | pCR TR 28.869 Add evaluation and recommendation for management data streaming based on message bus N: Propose to merge this with 3450 (use 3710 as base)* BO session asks to revise this
 | Rakuten Mobile, Inc | KEXUAN SUN |

**Wednesday breakout 3-Q2 (6.19.5.1 NDT) (90m)**

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| 6.19.5.1 Management aspects of Network Digital Twins |
| **Use case update** |
| [**S5-253534**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253534.zip) | Clarify evaluation of high-risk operation | Ericsson Korea Partners Co Ltd | Pedro Henrique Gomes |
| [**S5-253535**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253535.zip) | Clarify NDT definition and collaborative NDT use case | Ericsson Korea Partners Co Ltd, China Mobile | Pedro Henrique Gomes |
| [**S5-253337**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253337.zip) | Clarify NDT use cases | Nokia | Stephen Mwanje |
| [**S5-253641**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253641.zip) | Rel-19 pCR TS 28.561 Update the use case in 5.2.2.2, 5.3.2.2, 5.4.2.3 | Huawei | Zhuoyuan Tian |
| **Reference&Abbreviation** |
| [**S5-253638**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253638.zip) | Rel-19 pCR TS 28.561 Update reference and abbreviations | Huawei, China Mobile | Zhuoyuan Tian |
| **Other** |
| [**S5-253397**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253397.zip) | Rel-19 pCR on TS 28.561 Rapporteur clean-up  | China Mobile | Yushuang Hu |
| [**S5-253399**](https://www.3gpp.org/ftp/tsg_sa/WG5_TM/TSGS5_162/Docs/S5-253399.zip) | Presentation sheet of TS 28.561 for SA approval | China Mobile | Yushuang Hu |

**Wednesday breakout 3-Q4 (6.19.21.1 MExpo) (90m)**