

3rd Generation Partnership Project;
Technical Specification Group Radio Access Network; (2022-04)
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NG-RAN;
Technical Specification
E1 Application Protocol (E1AP)
(Release 17)



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Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

See TS 37.483 [40].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] -[39] Void.

[40] 3GPP TS 37.483: "E1 Application Protocol (E1AP)".

3 to 10Void

11 E1 Application Protocol (E1AP)

See TS 37.483 [40].

Annex A (informative): Change History

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2018-02	R3 #99	R3-181309	-	-	-	Endorsed skeleton	0.0.0
2018-03	R3 #99	R3-181597	-	-	-	New version capturing agreements from RAN3#99	0.1.0
2018-04	R3 #99b	R3-182531	-	-	-	New version capturing agreements from RAN3#99b	0.2.0
2018-05	R3 #100	R3-183601	-	-	-	New version capturing agreements from RAN3#100	0.3.0
2018-06	RAN#80	RP-181154				Submitted to RAN for approval.	1.0.0
2018-06	RAN#80	-	-	-	-	Specification approved at TSG-RAN and placed under change control	15.0.0
2018-09	RAN#81	RP-181925	0001	3	F	BL CR for TS 38.463 covering agreements from RAN3-AH-1807 and R3-101 Note: CR not based on latest version of the spec. Changes to clause 8.3.2.2 in the CR were implemented in clause 8.3.2.3 in the spec.	15.1.0
2018-12	RAN#82	RP-182451	0002	2	F	NR Corrections (TS 38.463 Baseline CR covering RAN3-101Bis and RAN3-102 agreements)	15.2.0
2019-03	RAN#83	RP-190560	0004	2	F	Correction to Data Forwarding Information IE	15.3.0
2019-03	RAN#83	RP-190555	0005	1	F	Corrections related to Integrity Protection handling at the gNB-CU-UP	15.3.0
2019-03	RAN#83	RP-190554	0007	2	F	Corrections on gNB-CU-UP/gNB-DU-CP Configuration Update	15.3.0
2019-03	RAN#83	RP-190556	0008	2	F	Correction of QoS Flow Mapping Indication	15.3.0
2019-03	RAN#83	RP-190560	0009	1	F	Paging Failure	15.3.0
2019-03	RAN#83	RP-190560	0011	1	F	Release due to pre-emption	15.3.0
2019-03	RAN#83	RP-190560	0013	-	F	Transaction ID in Error Indication procedure	15.3.0
2019-03	RAN#83	RP-190560	0017	1	F	CR to TS 38.463 on inactivity timer over E1	15.3.0
2019-03	RAN#83	RP-190560	0020	1	F	Data volume reporting for MR-DC with 5GC	15.3.0
2019-03	RAN#83	RP-190560	0029	1	F	TS 38.463 ASN.1 corrections	15.3.0
2019-03	RAN#83	RP-190560	0030	-	F	Rapporteur corrections for TS 38.463	15.3.0
2019-03	RAN#83	RP-190611	0035	3	F	S-NSSAI update during EPS to 5GS handover	15.3.0
2019-07	RP#84	RP-191399	0023	2	F	Support of ongoing re-mapping on source side during SDAP mobility	15.4.0
2019-07	RP#84	RP-191399	0028	1	F	TS 38.463 Tabular clean up for Bearer Context messages	15.4.0
2019-07	RP-84	RP-191396	0044	2	F	Correction to DRB 5QI on E1	15.4.0
2019-07	RP-84	RP-191399	0049	2	F	Multiple SCTP associations over E1	15.4.0
2019-07	RP-84	RP-191399	0050	2	F	Rapporteur's editorial corrections for TS 38.463	15.4.0
2019-07	RP-84	RP-191399	0051	-	F	E1AP failure messages correction	15.4.0
2019-07	RP-84	RP-191399	0052	1	F	New UL TNL Information clarification	15.4.0
2019-07	RP-84	RP-191399	0053	4	F	UE Identification over E1	15.4.0
2019-07	RP-84	RP-191394	0057	2	F	CR to 38.463 on deconfiguring PDCP duplication	15.4.0
2019-07	RP-84	RP-191399	0062	2	F	Clarification on security indication in the modification procedure over E1 interface	15.4.0
2019-07	RP-84	RP-191399	0064	2	F	Clarification on counter check procedure	15.4.0
2019-07	RP-84	RP-191397	0065		F	Correction of Network Instance	15.4.0
2019-07	RP-84	RP-191399	0073	1	F	Activity Notification Level in Bearer Context Modification Request E1AP	15.4.0
2019-07	RP-84	RP-191394	0075	1	F	PDCP SN length and RLC mode related clean-up over To Be Modified structure in Bearer Context Modification procedure	15.4.0
2019-07	RP-84	RP-191399	0084	-	F	Bearer Context Release Request Cause	15.4.0
2019-07	RP-84	RP-191399	0085	-	F	Clarification on Bearer Context Setup and Bearer Context Modification failures	15.4.0
2019-07	RP-84	RP-191396	0086	1	F	PDU session split for E1	15.4.0
2019-07	RP-84	RP-191399	0091	-	F	Rapporteur's editorial corrections for TS 38.463	15.4.0
2019-07	RP-84	RP-191399	0092	1	F	Rapporteur's ASN.1 corrections for TS 38.463	15.4.0
2019-07	RP-84	RP-191399	0095	1	F	CR to 38.463 on adding Cause when remove DRB and PDU Session	15.4.0
2019-07	RP-84	RP-191399	0097	-	F	Rapporteur's ASN.1 corrections for TS 38.463	15.4.0
2019-09	RP-85	RP-192168	0094	2	F	CR to 38.463 on Security Indication	15.5.0
2019-09	RP-85	RP-192166	0098	1	F	Correction of security indication	15.5.0
2019-09	RP-85	RP-192166	0111	1	F	Clarification for TNLA removal	15.5.0
2019-09	RP-85	RP-192168	0122	2	F	Correction of semantic descriptions in TS 38.463 (rapporteur)	15.5.0
2019-12	RP-86	RP-192915	0158	1	F	Correction of S-NSSAI coding	15.6.0
2019-12	RP-86	RP-192915	0174	2	F	UL Data Split Threshold correction	15.6.0
2019-12	RP-86	RP-192915	0476	1	F	Correction to DRB to Setup	15.6.0
2019-12	RP-86	RP-192913	0033	7	F	Trace function support for E1AP	16.0.0
2019-12	RP-86	RP-192913	0089	4	B	Introduction of Additional RRM Policy Index (ARPI)	16.0.0
2019-12	RP-86	RP-192913	0096	3	B	Retainability measurements for DRBs and QoS flows	16.0.0
2019-12	RP-86	RP-192913	0163	1	C	Extending the MDBV Range	16.0.0
2019-12	RP-86	RP-193212	0473	4	F	Support for setting up IPsec a priori in E1	16.0.0
2020-03	RP-87-e	RP-200477	0481	4	B	E2E delay measurement for QoS monitoring for URLLC	16.1.0
2020-03	RP-87-e	RP-200425	0487	-	F	E1AP correction of F1 Support for IPsec Setup	16.1.0
2020-03	RP-87-e	RP-200425	0488	-	F	Rapporteur's corrections for TS 38.463	16.1.0
2020-03	RP-87-e	RP-200425	0489	-	D	Rapporteur's editorial corrections for TS 38.463	16.1.0

2020-04						Editorial correction to the ASN.1	16.1.1
2020-07	RP-88-e	RP-201082	0142	12	B	Addition of SON features	16.2.0
2020-07	RP-88-e	RP-201079	0154	11	B	Introduction of NR IIOT support to TS 38.463	16.2.0
2020-07	RP-88-e	RP-201077	0162	6	B	BL CR to 38.463: Support for IAB	16.2.0
2020-07	RP-88-e	RP-201080	0468	7	B	Introduction of Non-Public Networks for TS38.463	16.2.0
2020-07	RP-88-e	RP-201082	0477	6	B	Addition of MDT features	16.2.0
2020-07	RP-88-e	RP-201079	0478	4	B	Support of Ethernet Header Compression	16.2.0
2020-07	RP-88-e	RP-201075	0490	5	B	Baseline CR for introducing Rel-16 NR mobility enhancement	16.2.0
2020-07	RP-88-e	RP-201085	0498	-	D	Rapporteur's editorial corrections for TS 38.463	16.2.0
2020-07	RP-88-e	RP-201091	0500	2	A	Correction of the Old QoS Flow List update during HO	16.2.0
2020-07	RP-88-e	RP-201092	0502	2	A	PDCP Status Report indication in PDCP-Configuration	16.2.0
2020-07	RP-88-e	RP-201074	0511	-	B	Introducing alternative QoS profiles to E1AP	16.2.0
2020-07	RP-88-e	RP-201090	0512	4	F	Correction of S-NSSAI range	16.2.0
2020-09	RP-89-e	RP-201953	0514	3	F	Correction for SN Terminated (option 3x) GBR bearer establishment	16.3.0
2020-09	RP-89-e	RP-201949	0521	2	F	Correction for TS38.463 on Unsuccessful Operation and Abnormal Conditions of MLB	16.3.0
2020-09	RP-89-e	RP-201949	0522	1	F	Correction on Industrial IOT Rel-16 DC+CA duplication for E1AP	16.3.0
2020-09	RP-89-e	RP-201953	0525	1	A	Correction on reusing Source TEID at Handover	16.3.0
2020-09	RP-89-e	RP-201950	0526	3	F	Need of D1 for Qos monitoring for URLLC	16.3.0
2020-09	RP-89-e	RP-201949	0532	1	F	TS38.463 Extend the CHO Usage and Support Intra-SN/inter-UP CPC case	16.3.0
2020-09	RP-89-e	RP-201953	0536	1	F	Rapporteur's corrections for TS 38.463	16.3.0
2020-09	RP-89-e	RP-201953	0537	-	D	Rapporteur's editorial corrections for TS 38.463	16.3.0
2020-09	RP-89-e	RP-201947	0551	1	F	CR on clarification of QoS Mapping Information over E1 for Rel-16 IAB	16.3.0
2020-09	RP-89-e	RP-201955	0554	-	F	Corrections to 38.463 on node name type	16.3.0
2020-12	RP-90-e	RP-202312	0555	1	F	Support of direct data forwarding for inter-system HO	16.4.0
2020-12	RP-90-e	RP-202310	0556	3	F	Correction on DSCP Derivation in IAB-donor node	16.4.0
2020-12	RP-90-e	RP-202313	0562	1	F	Introduction of reporting frequency for Qos monitoring for URLLC	16.4.0
2020-12	RP-90-e	RP-202311	0566	-	F	Correction on Industrial IOT Rel-16 PDCP duplication for E1AP	16.4.0
2021-03	RP-91-e	RP-210240	0568	2	F	Update on QoS monitoring control	16.5.0
2021-03	RP-91-e	RP-210231	0583	2	D	CR to 38.463 Correction on IAB UP TNL Address Update	16.5.0
2021-06	RP-92-e	RP-211335	0577	2	F	Inter-system indicator for Bearer Context Setup	16.6.0
2021-06	RP-92-e	RP-211337	0585	-	F	Private Message Definition	16.6.0
2021-06	RP-92-e	RP-211338	0602	4	C	Maximum number of NR-CGI over E1 [EXT_NRCGI_E1]	16.6.0
2021-09	RP-93-e	RP-211877	0589	2	F	CR on E1AP handling for unmapped DL QoS flows	16.7.0
2021-09	RP-93-e	RP-211877	0612	1	A	Correction of PDU Session level Data Forwarding Information and QoS Flow list	16.7.0
2021-09	RP-93-e	RP-211879	0614	2	F	Restricting the number of DL EHC contexts	16.7.0
2021-09	RP-93-e	RP-211881	0622		F	Correction for UL Data Notification over E1	16.7.0
2021-09	RP-93-e	RP-211873	0632	1	F	Data forwarding address allocation for handover	16.7.0
2021-09	RP-93-e	RP-211873	0636	1	F	Support of direct data forwarding for inter-system HO from 4G to 5G	16.7.0
2021-09	RP-93-e	RP-211881	0638		F	Issue for Intra gNB-CU-UP DAPS HO	16.7.0
2021-12	RP-94-e	RP-212866	0644	3	F	DAPS Inconsistencies	16.8.0
2021-12	RP-94-e	RP-212870	0645	1	F	Adding reference for coding of Common Network Instance	16.8.0
2021-12	RP-94-e	RP-212864	0653	1	F	Direct data forwarding indication for intra-5GS handover	16.8.0
2021-12	RP-94-e	RP-213019	0656	1	F	Correction of Qos Mapping Information IE in E1AP message for IAB (CR to TS38.463, R16)	16.8.0
2021-12	RP-94-e	RP-212866	0657	1	F	E1 impact to support to stop CHO early data forwarding	16.8.0
2021-12	RP-94-e	RP-212870	0662	2	F	Correction CR for 38.463 on lossless intra-system HO with QoS flow remapping in CP-UP separated scenario	16.8.0
2022-03	RP-95-e	RP-220279	0651	2	F	Dynamic ACL over E1 CR 38.463	16.9.0
2022-03	RP-95-e	RP-220278	0672	1	F	Downlink unmapped QoS flows for E1	16.9.0
2022-03	RP-95-e	RP-220276	0673	1	F	Correction on support of Pre-shared key derivation for IAB-donor-CU-UP	16.9.0
2022-03	RP-95-e	RP-220279	0675	2	A	Security indication in the modification procedure over E1 interface	16.9.0
2022-03	RP-95-e	RP-220277	0676		F	CR for 38.463 on fixing DAPS HO handling inconsistency during Bearer Context Modification procedure	16.9.0
2022-03	RP-95-e	RP-220282	0682	-	F	Offered GBR in NR-DC	16.9.0
2022-03	RP-95-e	RP-220217	0665	2	F	E1AP specification transfer to TS 37.483	17.0.0