**3GPP TSG-CT WG4 Meeting #111-eC4-224nnn**

**E-Meeting, 18th – 26th August 2022 *Was C4-224388***

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **29.518** | **CR** | **0789** | **rev** | **1** | **Current version:** | **17.6.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| --- |
|  |
| ***Title:***  | EPS interworking Info in UE Context |
|  |  |
| ***Source to WG:*** | Hewlett Packard Enterprise, Microsoft |
| ***Source to TSG:*** | CT4 |
|  |  |
| ***Work item code:*** | TEI17, UDICOM |  | ***Date:*** | 2022-08-05 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-17 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | In 5GC, for a DNN, the UE can have multiple PDU sessions registered in different SMFs.In EPC, an APN can only be associated with one PGW-C.For interworking between the MME and the AMF using N26, the AMF determines the associations between APN/DNN and PGW-C+SMF.When the UE moves from the MME to the AMF with N26, the AMF registers with the EPS interworking info in the UDM/UDR. Thus when the UE then moves to the ePDG, the HSS can get the EPS interworking info from the UDM for the session contiurity.Due to N26, when the AMF is registered in the UDM/UDR, the HSS cancels the MME.However, after the MME to AMF handover with N26, during the inter AMF handover, the old AMF does not transfer the EPS interworking info to the new AMF. The new AMF registers in the UDM/UDRand does not have sufficient information to recreate the epsInterworkingInfo. Thus when the UE moves to the ePDG, HSS cannot get the EPS interworking info from the UDM and the session continuity fails.The proposed solution is that the old AMF transfers the EPS interworking info to the new AMF. Thus, the new AMF registers in the UDM/UDR with the EPS interworking info. The old AMF also transfers the PGW IDs and the Serving PLMN ID where the of the interworking sessions to the new AMF. This gives the new AMF full control to modify the EPS interworking info and update the UDM/UDR, if needed. |
|  |  |
| ***Summary of change:*** | Add the EPS interworking Info in UE Context.Add PLMNID, PGW FQDN and IP address in Pdu Session Context. |
|  |  |
| ***Consequences if not approved:*** | The EPS interworking Info cannot be passed from the old AMF to the new AMF. When the UE moves to the ePDG, the session continuity fails. |
|  |  |
| ***Clauses affected:*** | 6.1.6.1, 6.1.6.2.25, 6.1.6.2.37, A.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** | This CR introduces backwards compatible changes toTS29518\_Namf\_Communication.yaml API |
|  |  |
| ***This CR's revision history:*** | Rev 1: Add plmnId of the PGW-C+SMF in PduSessionContext and clarify on the cover page.. |

\* \* \* First Change \* \* \* \*

#### 6.1.6.1 General

This clause specifies the application data model supported by the API.

Table 6.1.6.1-1 specifies the data types defined for the Namf\_Communication service based interface protocol.

Table 6.1.6.1-1: Namf\_Communication specific Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Clause defined | Description |
| SubscriptionData | 6.1.6.2.2 | Data within an AMF Status Change Subscription request and response. |
| AmfStatusChangeNotification | 6.1.6.2.3 | Data within an AMF Status Change Notification request. |
| AmfStatusInfo | 6.1.6.2.4 | AMF Status Information  |
| AssignEbiData | 6.1.6.2.5 | Data within an EBI assignment request. |
| AssignedEbiData | 6.1.6.2.6 | Data within a successful response to an EBI assignment request. |
| AssignEbiFailed | 6.1.6.2.7 | Represents failed assignment of EBI(s) |
| UEContextRelease | 6.1.6.2.8 | Data within a Release UE Context request. |
| N2InformationTransferReqData | 6.1.6.2.9 | Data within a N2 Information Transfer request containing the N2 information requested to be transferred to 5G AN. |
| NonUeN2InfoSubscriptionCreateData | 6.1.6.2.10 | Data within a create subscription requestfor non-UE specific N2 information notification. |
| NonUeN2InfoSubscriptionCreatedData | 6.1.6.2.11 | Data for the created subscription for non-UE specific N2 information notification. |
| UeN1N2InfoSubscriptionCreateData | 6.1.6.2.12 | Data within a create subscription request for UE specific N1 and/or N2 information notification. |
| UeN1N2InfoSubscriptionCreatedData | 6.1.6.2.13 | Data for the created subscription for UE specific N1 and/or N2 information notification. |
| N2InformationNotification | 6.1.6.2.14 | Data within a N2 information notification request. |
| N2InfoContainer | 6.1.6.2.15 | N2 information container. |
| N1MessageNotification | 6.1.6.2.16 | Data within a N1 message notification request. |
| N1MessageContainer | 6.1.6.2.17 | N1 Message Container. |
| N1N2MessageTransferReqData | 6.1.6.2.18 | Data within a N1/N2 message transfer request. |
| N1N2MessageTransferRspData | 6.1.6.2.19 | Data within a N1/N2 message transfer response. |
| RegistrationContextContainer | 6.1.6.2.20 | Registration Context Container used to send the UE context information, N1 message from UE, AN address etc during Registration with AMF re-allocation procedure. |
| AreaOfValidity | 6.1.6.2.21 | Area of validity information for N2 information transfer |
| UeContextTransferReqData | 6.1.6.2.23 | Data within a UE Context Transfer Request to start transferring of an individual ueContext resource from old AMF to new AMF. |
| UeContextTransferRspData | 6.1.6.2.24 | Data within a successful response to the UE Context Transfer request. |
| UeContext | 6.1.6.2.25 | Represents an individual ueContext resource |
| N2SmInformation | 6.1.6.2.26 | Represents the session management SMF related N2 information data part. |
| N2InfoContent | 6.1.6.2.27 | Represents a transparent N2 information content to be relayed by AMF. |
| NrppaInformation | 6.1.6.2.28 | Represents a NRPPa related N2 information data part. |
| PwsInformation | 6.1.6.2.29 | Represents a PWS related information data part. |
| N1N2MsgTxfrFailureNotification | 6.1.6.2.30 | Data within a N1/N2 Message Transfer Failure Notification request |
| N1N2MessageTransferError | 6.1.6.2.31 | Data within a N1/N2 Message Transfer Error response. |
| N1N2MsgTxfrErrDetail | 6.1.6.2.32 | N1/N2 Message Transfer Error Details |
| N2InformationTransferRspData | 6.1.6.2.33 | Data within a successful response to the N2 Information Transfer request to transfer N2 Information to the AN. |
| MmContext | 6.1.6.2.34 | Represents a Mobility Management Context in UE Context |
| SeafData | 6.1.6.2.35 | Represents SEAF data derived from data received from AUSF |
| NasSecurityMode | 6.1.6.2.36 | Indicates the NAS Security Mode |
| PduSessionContext | 6.1.6.2.37 | Represents a PDU Session Context in UE Context |
| NssaiMapping | 6.1.6.2.38 | Represents the mapping between a S-NSSAI in serving PLMN to a S-NSSAI in home PLMN. |
| UeRegStatusUpdateReqData | 6.1.6.2.39 | Data within a UE registration status update request to indicate a completion of transferring at a target AMF. |
| AssignEbiError | 6.1.6.2.40 | Data within a failure response to the EBI assignment request. |
| UeContextCreateData | 6.1.6.2.41 | Data within a request to create an individual ueContext resource |
| UeContextCreatedData | 6.1.6.2.42 | Data within a successful response for creating an individual ueContext resource |
| UeContextCreateError | 6.1.6.2.43 | Data within a failure response for creating a UE context |
| NgRanTargetId | 6.1.6.2.44 | Indicates a NG RAN as target of the handover |
| N2InformationTransferError | 6.1.6.2.45 | Data within a failure response for a non-UE related N2 Information Transfer.  |
| PWSResponseData | 6.1.6.2.46 | Data related PWS included in a N2 Information Transfer response. |
| PWSErrorData | 6.1.6.2.47 | Data related to PWS error included in a N2 Information Transfer failure response. |
| NgKsi | 6.1.6.2.49 | Represents the ngKSI (see 3GPP TS 33.501 [27]) |
| KeyAmf | 6.1.6.2.50 | Represents the Kamf or K'amf. (see 3GPP TS 33.501 [27]). |
| ExpectedUeBehavior | 6.1.6.2.51 | Represents the expected UE behavior (e.g. UE moving trajectory) and its validity period. |
| UeRegStatusUpdateRspData | 6.1.6.2.52 | Data within a UE registration status update response to provides the status of UE context transfer status update at a source AMF. |
| N2RanInformation | 6.1.6.2.53 | Represents the RAN related N2 information data part. |
| N2InfoNotificationRspData | 6.1.6.2.54 | Data within a N2 information notification response. |
| SmallDataRateStatusInfo | 6.1.6.2.55 | Represents the small data rate status |
| SmfChangeInfo | 6.1.6.2.56 | SMF change information for PDU session(s) |
| V2xContext | 6.1.6.2.57 | Represents the V2X services related parameters |
| ImmediateMdtConf | 6.1.6.2.58 | Immediate MDT Configuration |
| V2xInformation | 6.1.6.2.59 | V2X related N2 information |
| EpsNasSecurityMode | 6.1.6.2.60 | Indicates the EPS NAS Security Mode |
| UeContextRelocateData | 6.1.6.2.61 | Data within a Relocate UE Context request |
| UeContextRelocatedData | 6.1.6.2.62 | Data within a Relocate UE Context  |
| EcRestrictionDataWb | 6.1.6.2.64 | Enhanced Coverage Restriction Data for WB-N1 mode. |
| ExtAmfEventSubscription | 6.1.6.2.65 | AMF event subscription extended with additional information received for the subscription |
| AmfEventSubscriptionAddInfo | 6.1.6.2.66 | Additional information received for an AMF event subscription, e.g. binding indications. |
| UeContextCancelRelocateData | 6.1.6.2.67 | Data structure used for cancellation of UE Context Relocation. |
| UeDifferentiationInfo | 6.1.6.2.68 | Represents the UE Differentiation Information and its validity time. |
| CeModeBInd | 6.1.6.2.69 | CE-mode-B Support Indicator |
| LteMInd | 6.1.6.2.70 | LTE-M Indication |
| NpnAccessInfo | 6.1.6.2.71 | NPN Access Information |
| ProseContext | 6.1.6.2.72 | Represents the ProSE services related parameters |
| AnalyticsSubscription | 6.1.6.2.73 | Analytics subscriptions created in the NWDAF. |
| NwdafSubscription | 6.1.6.2.74 | Individual NWDAF subscription identified by the subscription Id. |
| UpdpSubscriptionData | 6.1.6.2.75 | UE policy delivery related N1 message notification subscription data |
| ProSeInformation | 6.1.6.2.76 | 5G ProSe related N2 information. |
| ReleaseSessionInfo | 6.1.6.2.77 | PDU session Id(s) and the cause for triggering the release |
| EpsBearerId | 6.1.6.3.2 | EPS Bearer Identifier |
| Ppi | 6.1.6.3.2 | Paging Policy Indicator |
| NasCount | 6.1.6.3.2 | Represents a NAS COUNT |
| 5GMmCapability | 6.1.6.3.2 | Represents a 5GMM capability |
| UeSecurityCapability | 6.1.6.3.2 | Represents a UE Security Capability |
| S1UeNetworkCapability | 6.1.6.3.2 | Represents a S1 UE Network Capability |
| DrxParameter | 6.1.6.3.2 | Indicates the UE DRX Parameters |
| OmcIdentifier | 6.1.6.3.2 | Represents the OMC Identifier |
| MSClassmark2 | 6.1.6.3.2 | Indicates the MS Classmark 2 of a 5G SRVCC UE |
| SupportedCodec | 6.1.6.3.2 | Indicates the supported codec of a 5G SRVCC UE |
| StatusChange | 6.1.6.3.3 | Enumeration for AMF status |
| N2InformationClass | 6.1.6.3.4 | Enumeration for N2 Information Class |
| N1MessageClass | 6.1.6.3.5 | Enumeration for N1 Message Class |
| N1N2MessageTransferCause | 6.1.6.3.6 | Enumeration for N1N2Message Transfer Cause |
| UeContextTransferStatus | 6.1.6.3.7 | Describes the status of an individual ueContext resource in UE Context Transfer procedures |
| N2InformationTransferResult | 6.1.6.3.8 | Describes the result of N2 information transfer by AMF to the AN. |
| CipheringAlgorithm | 6.1.6.3.9 | Indicates the supported Ciphering Algorithm |
| IntegrityAlgorithm | 6.1.6.3.10 | Indicates the supported Integrity Algorithm |
| SmsSupport | 6.1.6.3.11 | Indicates the supported SMS delivery of a UE. |
| ScType | 6.1.6.3.12 | Indicates the security context type. |
| KeyAmfType | 6.1.6.3.13 | Indicates the Kamf type. |
| TransferReason | 6.1.6.3.14 | Indicates UE Context Transfer Reason |
| PolicyReqTrigger | 6.1.6.3.15 | Policy Request Triggers |
| RatSelector | 6.1.6.3.16 | Indicates the RAT type for the transfer of N2 information |
| NgapIeType | 6.1.6.3.17 | Indicates the supported NGAP IE types |
| N2InfoNotifyReason | 6.1.6.3.18 | N2 Information Notify Reason |
| SmfChangeIndication | 6.1.6.3.19 | Indicates the I-SMF or V-SMF change or removal |
| SbiBindingLevel | 6.1.6.3.20 | SBI Binding Level |
| EpsNasCipheringAlgorithm | 6.1.6.3.21 | Indicates the supported EPS NAS Ciphering Algorithm |
| EpsNasIntegrityAlgorithm | 6.1.6.3.22 | Indicates the supported EPS NAS Integrity Algorithm |
| PeriodicCommunicationIndicator | 6.1.6.3.23 | Indicates the Periodic Communication Indicator |
| UuaaMmStatus | 6.1.6.3.24 | Indicates UUAA-MM status |
| ReleaseCause | 6.1.6.3.25 | The cause for triggering the release |

Table 6.1.6.1-2 specifies data types re-used by the Namf service based interface protocol from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the Namf service based interface.

Table 6.1.6.1-2: Namf re-used Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Reference | Comments |
| Snssai | 3GPP TS 29.571 [6] |  |
| Arp | 3GPP TS 29.571 [6] |  |
| PduSesisonId | 3GPP TS 29.571 [6] |  |
| Guami | 3GPP TS 29.571 [6] | Globally Unique AMF Identifier |
| AmfName | 3GPP TS 29.571 [6] | The name of the AMF |
| Supi | 3GPP TS 29.571 [6] | Subscription Permanent Identifier |
| Cause | 3GPP TS 29.571 [6] | 5G-AN Cause |
| ProblemDetails | 3GPP TS 29.571 [6] | Detailed problems in failure case |
| supportedFeatures | 3GPP TS 29.571 [6] | Supported Features |
| TimeZone | 3GPP TS 29.571 [6] |  |
| UserLocation | 3GPP TS 29.571 [6] |  |
| AccessType | 3GPP TS 29.571 [6] |  |
| AllowedNssai | 3GPP TS 29.531 [18] |  |
| NfInstanceId | 3GPP TS 29.571 [6] |  |
| Uri | 3GPP TS 29.571 [6] |  |
| Ecgi | 3GPP TS 29.571 [6] | EUTRA Cell Identifier |
| Ncgi | 3GPP TS 29.571 [6] | NR Cell Identifier |
| Uint16 | 3GPP TS 29.571 [6] |  |
| 5Qi | 3GPP TS 29.571 [6] | 5G QoS Identifier |
| CorrelationID | 3GPP TS 29.572 [25] | LCS Correlation ID |
| Pei | 3GPP TS 29.571 [6] |  |
| Dnn | 3GPP TS 29.571 [6] |  |
| Gpsi | 3GPP TS 29.571 [6] |  |
| GroupId | 3GPP TS 29.571 [6] |  |
| PlmnId | 3GPP TS 29.571 [6] |  |
| RfspIndex | 3GPP TS 29.571 [6] |  |
| EbiArpMapping | 3GPP TS 29.502 [16] | EBI - ARP mapping |
| NsiId | 3GPP TS 29.531 [18] |  |
| TraceData | 3GPP TS 29.571 [6] | Trace control and configuration parameters |
| ConfiguredSnssai | 3GPP TS 29.531 [18] |  |
| NgApCause | 3GPP TS 29.571 [6] | Represents the NG AP cause IE |
| Area | 3GPP TS 29.571 [6] |  |
| ServiceAreaRestriction | 3GPP TS 29.571 [6] |  |
| CoreNetworkType | 3GPP TS 29.571 [6] |  |
| Ambr | 3GPP TS 29.571 [6] |  |
| SliceMbr | 3GPP TS 29.571 [6] |  |
| GlobalRanNodeId | 3GPP TS 29.571 [6] |  |
| NfGroupId | 3GPP TS 29.571 [6] | Network Function Group Id |
| DurationSec | 3GPP TS 29.571 [6] |  |
| StnSr | 3GPP TS 29.571 [6] | Session Transfer Number for SRVCC |
| CMsisdn | 3GPP TS 29.571 [6] | Correlation MSISDN |
| DateTime | 3GPP TS 29.571 [6] |  |
| SmallDataRateStatus | 3GPP TS 29.571 [6] |  |
| NfSetId | 3GPP TS 29.571 [13] | NF Set ID |
| NfServiceSetId | 3GPP TS 29.571 [13] | NF Service Set ID |
| LMFIdentification | 3GPP TS 29.572 [25] | LMF Identification |
| PlmnAssiUeRadioCapId | 3GPP TS 29.571 [6] |  |
| ManAssiUeRadioCapId | 3GPP TS 29.571 [6] |  |
| NrV2xAuth | 3GPP TS 29.571 [6] | NR V2X services authorized |
| LteV2xAuth | 3GPP TS 29.571 [6] | LTE V2X services authorized |
| BitRate | 3GPP TS 29.571 [6] | Bit Rate |
| Pc5QoSPara | 3GPP TS 29.571 [6] | PC5 QoS parameters |
| PduSessionInfo | 3GPP TS 29.571 [6] | The Slice and DNN combination of a PDU session. |
| PcfUeCallbackInfo | 3GPP TS 29.571 [6] | The callback information of the PCF for the UE to allow the PCF for the PDU session to send SM Policy Association Establishment and Termination events notification. |
| CnAssistedRanPara | 3GPP TS 29.502 [16] | SMF derived CN assisted RAN Parameters Tuning |
| MoExpDataCounter | 3GPP TS 29.571 [6] | MO Exception Data Counter |
| CagData | 3GPP TS 29.503 [35] | Closed Access Group Data |
| NssaaStatus | 3GPP TS 29.571 [6] | Subscribed S-NSSAI subject to NSSAA procedure and the status |
| JobType | 3GPP TS 29.571 [6] | Job Type in the trace |
| MeasurementLteForMdt | 3GPP TS 29.571 [6] | Measurements used for MDT in LTE in the trace |
| MeasurementNrForMdt | 3GPP TS 29.571 [6] | Measurements used for MDT in NR in the trace |
| ReportingTrigger | 3GPP TS 29.571 [6] | Reporting Triggers for MDT in the trace |
| ReportIntervalMdt | 3GPP TS 29.571 [6] | Report Interval for MDT in LTE in the trace |
| ReportAmountMdt | 3GPP TS 29.571 [6] | Report Amount for MDT in the trace |
| CollectionPeriodRmmLteMdt | 3GPP TS 29.571 [6] | Collection period for RRM measurements LTE for MDT in the trace |
| MeasurementPeriodLteMdt | 3GPP TS 29.571 [6] | Measurement period LTE for MDT in the trace in |
| AreaScope | 3GPP TS 29.571 [6] | Area Scope |
| PositioningMethodMdt | 3GPP TS 29.571 [6] | Positioning Method for MDT in the trace in LTE |
| ReportIntervalNrMdt | 3GPP TS 29.571 [6] | Report Interval for MDT in NR in the trace  |
| CollectionPeriodRmmNrMdt | 3GPP TS 29.571 [6] | Collection period for RRM measurements NR for MDT in the trace |
| SensorMeasurement | 3GPP TS 29.571 [6] | Sensor information for MDT in the trace |
| ScheduledCommunicationTime | 3GPP TS 29.571 [6] | Scheduled Communication Time |
| StationaryIndication | 3GPP TS 29.571 [6] | Stationary Indication |
| TrafficProfile | 3GPP TS 29.571 [6] | Traffic Profile |
| BatteryIndication | 3GPP TS 29.571 [6] | Battery Indication |
| NFType | 3GPP TS 29.510 [29] | NF type |
| UeAuth | 3GPP TS 29.571 [6] | UE authorisation for PC5 service |
| PartitioningCriteria | 3GPP TS 29.571 [6] | Partitioning Criteria |
| RedirectResponse | 3GPP TS 29.571 [6] | Response body of the redirect response message. |
| CagId | 3GPP TS 29.571 [6] | CAG ID |
| NnwdafEventsSubscription | 3GPP TS 29.520 [52] | Represents an Individual NWDAF Event Subscription resource |
| PresenceInfo | 3GPP TS 29.571 [6] |  |
| UePositioningCapabilities | 3GPP TS 29.572 [25] | Indicates the positioning capabilities supported by the UE. |
| SmfSelectionData | 3GPP TS 29.507 [32] |  |
| EpsInterworkingInfo | 3GPP TS 29.503 [35] |  |
| IpAddress | 3GPP TS 29.503 [35] |  |
| Fqdn | 3GPP TS 29.571 [6] |  |

\* \* \* Next Change \* \* \* \*

##### 6.1.6.2.25 Type: UeContext

Table 6.1.6.2.25-1: Definition of type UeContext

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| supi | Supi | C | 0..1 | This IE shall be present if available. When present, this IE contains SUPI of the UE. |  |
| supiUnauthInd | boolean | C | 0..1 | This IE shall be present if SUPI is present. When present, it shall indicate whether the SUPI is unauthenticated. |  |
| gpsiList | array(Gpsi) | C | 1..N | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, this IE shall contain the GPSI(s) of the UE. |  |
| pei | Pei | C | 0..1 | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, this IE shall contain Mobile Equipment Identity of the UE. |  |
| udmGroupId | NfGroupId | O | 0..1 | When present, it shall indicate the identity of the UDM Group serving the UE. |  |
| ausfGroupId | NfGroupId | O | 0..1 | When present, it shall indicate the identity of the AUSF Group serving the UE. |  |
| pcfGroupId | NfGroupId | O | 0..1 | When present, it shall indicate the identity of the PCF Group serving the UE. |  |
| routingIndicator | string | O | 0..1 | When present, it shall indicate the Routing Indicator of the UE. |  |
| hNwPubKeyId | integer | O | 0..1 | When present, it shall indicate the Home Network Public Key Identifier of the UE. (NOTE 4). |  |
| groupList | array(GroupId) | C | 1..N | This IE shall be present if the UE belongs to any subscribed internal group(s) and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, this IE shall list the subscribed internal group(s) to which the UE belongs to. |  |
| drxParameter | DrxParameter | C | 0..1 | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, this IE shall contain the DRX parameter of the UE. |  |
| subRfsp | RfspIndex | C | 0..1 | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, it shall indicate the subscribed RFSP Index of the UE. |  |
| usedRfsp | RfspIndex | C | 0..1 | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, it shall indicate the used RFSP Index of the UE. |  |
| subUeAmbr | Ambr | C | 0..1 | This IE shall be present if subscribed UE-AMBR has been retrieved from UDM and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a.When present, this IE shall indicate the value of subscribed UE AMBR of the UE. |  |
| subUeSliceMbrList | map(SliceMbr) | C | 1..N | Map of SliceMbr, where the S-NSSAI shall be used as the key of the map.This IE shall be present if the list of subscribed UE-Slice-MBR(s) has been retrieved from UDM and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a.When present, this IE shall indicate the list of subscribed UE-Slice-MBR(s) per S-NSSAI for the UE. |  |
| smsfId | NfInstanceId | C | 0..1 | This IE shall be present if the SMS service for UE is activated and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, it indicates the identifier of the SMSF network function instance serving the UE. The NF service consumer (e.g. target AMF) may use this information to identify the SMSF NF service profile from among the SMSF NF service profiles it received from the NRF. |  |
| seafData | SeafData | C | 0..1 | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a or the case specified in clause 5.2.2.2.1.2. When present, this IE contains the security data derived from data received from AUSF of the UE. |  |
| 5gMmCapability | 5GMmCapability | C | 0..1 | This IE shall be present if the UE had provided this IE during Registration Procedure and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, this IE shall contain 5G MM capability of the UE. |  |
| pcfId | NfInstanceId | C | 0..1 | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, this IE indicates the identity of the PCF for AM Policy and/or UE Policy. |  |
| pcfSetId | NfSetId | C | 0..1 | This IE shall be present, if available. When present, it shall contain the NF Set ID of the PCF for AM Policy and/or UE Policy. |  |
| pcfAmpServiceSetId | NfServiceSetId | C | 0..1 | This shall be present, if available. When present, it shall contain the NF Service Set ID of the PCF's AM Policy service. |  |
| pcfUepServiceSetId | NfServiceSetId | C | 0..1 | This shall be present, if available. When present, it shall contain the NF Service Set ID of the PCF's UE Policy service. |  |
| pcfBindingLevel | SbiBindingLevel | C | 0..1 | This IE shall be present if available. When present, this IE shall contain the SBI binding level of the PCF's AM policy and UE Policy association resources. (NOTE 6) |  |
| pcfAmPolicyUri | Uri | C | 0..1 | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present this IE shall contain the URI of the individual AM policy resource (see 3GPP TS 29.507 [32] clause 5.3.3.2) used by the AMF. |  |
| amPolicyReqTriggerList | array(PolicyReqTrigger) | C | 1..N | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present this IE shall indicate the AM policy request triggers towards the PCF. The NF Service Consumer (e.g. target AMF) shall use these triggers to request AM policy from the PCF whenever these triggers are met.The possible AM policy control request triggers are specified in clause 6.1.2.5 of 3GPP TS 23.503 [7]. |  |
| pcfUePolicyUri | Uri | C | 0..1 | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present this IE shall contain the URI of the individual UE policy resource (see 3GPP TS 29.507 [32] clause 5.3.3.2) used by the AMF. |  |
| uePolicyReqTriggerList | array(PolicyReqTrigger) | C | 1..N | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present this IE shall indicate the UE policy request triggers towards the PCF. The NF Service Consumer (e.g. target AMF) shall use these triggers to request UE policy from the PCF whenever these triggers are met.The possible UE policy control request triggers are specified in clause 6.1.2.5 of 3GPP TS 23.503 [7]. |  |
| hpcfId | NfInstanceId | O | 0..1 | This IE indicates the identity of PCF for UE Policy in home PLMN, when the UE is roaming. |  |
| hpcfSetId | NfSetId | O | 0..1 | When present, this IE shall contain the NF Set ID of the PCF for UE Policy in home PLMN, when the UE is roaming. |  |
| restrictedRatList | array(RatType) | O | 1..N | When present, this IE shall indicate the list of RAT types that are restricted for the UE; see 3GPP TS 29.571 [6] (NOTE 1) |  |
| forbiddenAreaList | array(Area) | O | 1..N | When present, this IE shall indicate the list of forbidden areas of the UE. |  |
| serviceAreaRestriction | ServiceAreaRestriction | O | 0..1 | When present, this IE shall indicate subscribed Service Area Restriction for the UE. |  |
| restrictedCnList | array(CoreNetworkType) | O | 1..N | When present, this IE shall indicate the list of Core Network Types that are restricted for the UE. |  |
| eventSubscriptionList | array(ExtAmfEventSubscription) | C | 1..N | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, it shall indicate the event subscription(s) targeting the UE or the group the UE is part of.If the source AMF supports binding procedures and if it received binding indications for event notifications (i.e. with "callback" scope) or for subscription change event notifications (i.e. with "subscription-events" scope) for certain subscriptions, these binding indications should also be included.If the source AMF knows the NF type of the NF that created the subscription, this information should also be indicated. |  |
| mmContextList | array(MmContext) | C | 1..2 | This IE shall be present if available and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a. When present, this IE contains the MM Contexts of the UE. |  |
| sessionContextList | array(PduSessionContext) | C | 1..N | This IE shall be present if available and if it is neither case a) nor case b) specified in clause 5.2.2.2.1.1 step 2a. When present, this IE contains the PDU Session Contexts of the UE.(NOTE 2) |  |
| epsInterworkingInfo | EpsInterworkingInfo | C | 0..1 | This IE shall contain the associations between APN/DNN and PGW-C+SMF for EPS interworking, if available. |  |
| traceData | TraceData | C | 0..1 | This IE shall be present if signalling based trace has been activated (see 3GPP TS 32.422 [30]) and if it is not case b) specified in clause 5.2.2.2.1.1 step 2a.  |  |
| serviceGapExpiryTime | DateTime | C | 0..1 | This IE shall be present if Service Gap Control is enabled and if the AMF has started a Service Gap Timer which has not expired yet (see clause 5.31.16 of 3GPP TS 23.501 [2]).The value of the IE shall indicate the expiry time of the active Service Gap Timer for the UE. |  |
| stnSr | StnSr | O | 0..1 | This IE shall be present if available, for UE supporting 5G-SRVCC (see clause 5.2.2.2.11 of 3GPP TS 23.502 [3]).When present, this IE contains STN-SR of the UE. |  |
| cMsisdn | CMsisdn | O | 0..1 | This IE shall be present if available, for UE supporting 5G-SRVCC (see clause 5.2.2.2.11 of 3GPP TS 23.502 [3]).When present, this IE contains C-MSISDN of the UE. |  |
| msClassmark2 | MSClassmark2 | O | 0..1 | This IE shall be present if available, for UE supporting 5G-SRVCC (see clause 5.2.2.2.11 of 3GPP TS 23.502 [3]).When present, this IE contains Mobile Station Classmark 2 of the UE. |  |
| supportedCodecList | array(SupportedCodec) | O | 1..N | This IE shall be present if available, for UE supporting 5G-SRVCC (see clause 5.2.2.2.11 of 3GPP TS 23.502 [3]).When present, this IE shall indicate the list of speech codecs supported by the UE. |  |
| smallDataRateStatusInfos | array(SmallDataRateStatusInfo) | O | 1..N | List of Small Data Rate Control Statuses for released PDU Sessions, see clause 5.31.14.3 of TS 23.501 [2]. | CIOT |
| restrictedPrimaryRatList | array(RatType) | O | 1..N | When present, this IE shall indicate the list of RAT types that are restricted for use as primary RAT for the UE; see 3GPP TS 29.571 [6] (NOTE 1) |  |
| restrictedSecondaryRatList | array(RatType) | O | 1..N | When present, this IE shall indicate the list of RAT types that are restricted for use as secondary RAT for the UE; see 3GPP TS 29.571 [6] (NOTE 1) |  |
| v2xContext | V2xContext | O | 0..1 | This IE shall be present if available (see clause 6.5.4 of 3GPP TS 23.287 [47]).When present, this IE shall indicate the parameters related to the V2X services. |  |
| lteCatMInd | boolean | C | 0..1 | This IE shall be present with value "true" if the UE is a LTE Category M UE based on indication provided by the NG-RAN or by the MME at EPS to 5GS handover, as specified in 3GPP TS 23.502 [3].When present, this IE shall be set as following:- true: the UE is a Category M UE- false (default): this UE is not a Category M UE. |  |
| redCapInd | boolean | C | 0..1 | This IE shall be present with value "true" if the UE is a NR RedCap UE based on indication provided by the NG-RAN, as specified in 3GPP TS 23.502 [3].When present, this IE shall be set as following:- true: the UE is a NR RedCap UE- false (default): this UE is not a NR RedCap UE. |  |
| moExpDataCounter | MoExpDataCounter | C | 0..1 | This IE shall be present if a non-zero MO Exception counter has not been reported yet to SMF.When present, this IE shall contain the MO Exception Data Counter, as specified in clause 5.31.14.3 of 3GPP TS 23.501 [2]. |  |
| cagData | CagData | O | 0..1 | Closed Access Group DataWhen present, the provisioningTime attribute (from the CagData data type) shall be absent. | NPN |
| managementMdtInd | boolean | C | 0..1 | This flag shall be present with value "true" if Management Based Minimization of Drive Tests (MDT) is allowed, as specified in 3GPP TS 32.422 [30].When present, this IE shall be set as following:- true: management based MDT is allowed.- false (default): management based MDT is not allowed. |  |
| immediateMdtConf | ImmediateMdtConf | C | 0..1 | This IE shall be sent by the source AMF to the target AMF, if the Job Type indicates Immediate MDT. See clause 4.10 of 3GPP TS 32.422 [30]. |  |
| ecRestrictionDataWb | EcRestrictionDataWb | C | 0..1 | This IE shall be present if the AMF determines whether Enhanced Coverage is restricted or not for the UE for WB-N1 mode.If absent, this IE indicates Enhanced Coverage is not restricted for WB-N1 mode.(NOTE 3) |  |
| ecRestrictionDataNb | boolean | C | 0..1 | This IE shall be present if the AMF determines whether Enhanced Coverage is restricted or not for the UE for NB-N1 mode.If present, this IE shall indicate whether Enhanced Coverage for NB-N1 mode is restricted or not.true: Enhanced Coverage for NB-N1 mode is restricted.false or absent: Enhanced Coverage for NB-N1 mode is allowed. (NOTE 3) |  |
| iabOperationAllowed | boolean | O | 0..1 | This IE shall be present if the UE is allowed for IAB operation. It may be present otherwise.When present, it shall indicate whether the UE is allowed for IAB operation, as follows:- true: indicates that the UE is allowed for IAB operation.- false: indicates that the UE is not allowed for IAB operation. |  |
| proseContext | ProseContext | O | 0..1 | This IE shall be present if available (see clause 6.7 of 3GPP TS 23.304 [51]).When present, this IE shall indicate the parameters related to the ProSe services. | ProSe |
| analyticsSubscriptionList | array(AnalyticsSubscription) | C | 1..N | This IE shall be present if the AMF has created analytics subscription(s) towards NWDAF related to the UE.If present, this IE shall include the list of analytics subscriptions, as specified in clauses 5.2.2.2.2 and 5.2.2.2.11 of 3GPP TS 23.502 [3]. |  |
| pcfUepBindingInfo | string | C | 0..1 | This IE shall be present if Binding Indication was received for UE Policy Association resource from the PCF. When present, this IE shall contain the Binding indication of the PCF's UE Policy Association resource and shall be set to the value of the 3gpp-Sbi-Binding header defined in clause 5.2.3.2.6 of 3GPP TS 29.500 [4], without the header name. |  |
| pcfAmpBindingInfo | string | C | 0..1 | This IE shall be present if Binding Indication was received for AM Policy Association resource from the PCF. When present, this IE shall contain the Binding indications of the PCF's AM policy Association resource and shall be set to the value of the 3gpp-Sbi-Binding header defined in clause 5.2.3.2.6 of 3GPP TS 29.500 [4], without the header name. |  |
| usedServiceAreaRestriction | ServiceAreaRestriction | O | 0..1 | When present, this IE shall include the Service Area Restriction from PCF. |  |
| praInAmPolicy | map(PresenceInfo) | O | 1..N | When present, this IE shall include the map of PRA Information for the subscribed "PRA\_CHANGE" PolicyReqTrigger in the AM Policy Association.The key of the map shall be the "praId" attribute within the PresenceInfo data type. The "presenceState" attribute within the PresenceInfo data type shall not be supplied here. |  |
| praInUePolicy | map(PresenceInfo) | O | 1..N | When present, this IE shall include the map of PRA Information for the subscribed "PRA\_CHANGE" PolicyReqTrigger in the UE Policy Association.The key of the map shall be the "praId" attribute within the PresenceInfo data type. The "presenceState" attribute within the PresenceInfo data type shall not be supplied here. |  |
| updpSubscriptionData | UpdpSubscriptionData | O | 0..1 | When present, this IE shall include the subscription resource in the AMF for a UE policy delivery related N1 message notification. |  |
| smPolicyNotifyPduList | array(PduSessionInfo) | C | 1..N | This IE shall be present if it has been received from the PCF for the UE, i.e. the PCF for the AM Policy Association and possibly the UE Policy Association.When present, this IE shall contain the information (Slice and DNN combination) of the PDU session(s) applicable for the notification of SM Policy Association Establishment and Termination events.(NOTE 5) | SPAE |
| pcfUeCallbackInfo | PcfUeCallbackInfo | C | 0..1 | This IE shall be present if the smPolicyNotifyPduList IE is present.When present, this IE shall contain the callback information of the PCF for the UE to receive SM Policy Association Establishment and Termination events notification from the PCF for the SM Policy.(NOTE 5) | SPAE |
| uePositioningCap | UePositioningCapabilities | O | 0..1 | When present, this IE shall indicate the positioning capabilities supported by the UE. |  |
| snpnOnboardInd | boolean | C | 0..1 | This IE shall be present if the UE is registered for onboarding in an SNPN.When present, it shall indicate the following:- true: indicates that the UE is registered for onboarding in an SNPN.- false (default): indicates that the UE is not registered for onboarding in an SNPN. | eNPN |
| astiDistributionIndication | boolean | O | 0..1 | When present, this IE shall indicate whether the access stratum time distribution via Uu reference point should be activated or deactivated for the UE.When present, this IE shall be set as following:- true: ASTI distribution is activated for the UE.- false (default): ASTI distribution is deactivated for the UE. |  |
| tsErrorBudget | integer | O | 0..1 | When present, this IE shall indicate the Uu time synchronization error budget for the time synchronization service (as described in clause 5.27.1 in TS 23.501 [2]). It indicates the value in nano seconds. |  |
| smfSelInfo | SmfSelectionData | C | 0..1 | This IE shall be present if conditions for SMF Selection information replacement are received from the PCF for AM Policy. When present, It shall include the conditions for SMF selection information replacement, as determined by the PCF. |  |
| pcfUeSliceMbrList | map(SliceMbr) | C | 1..N | This IE shall be present when UE Slice MBR(s) were received from the PCF for AM Policy.When present, this IE shall include one or more UE-Slice-MBR(s) as determined by the PCF for allowed S-NSSAI(s). The key of the map is the S-NSSAI in the allowed NSSAI to which the UE-Slice-MBR belongs. |  |
| NOTE 1: If the restrictedPrimaryRatList and restrictedSecondaryRatList attributes are supported by the sender, the sender shall include the list of RAT Types that are restricted, if any, in the restrictedRatList attribute, shall include the list of RAT Types that are restricted for use as primary RAT, if any, in the restrictedPrimaryRatList attribute and shall include the list of RAT Types that are restricted for use as secondary RAT, if any, in the restrictedSsecondaryRatList attribute. If the restrictedPrimaryRatList and restrictedSecondaryRatList attributes are supported by the receiver, the receiver shall use the data in the restrictedPrimaryRatList attribute, if received, as the list of RAT Types that are restricted for use as primary RAT for the UE, and shall use the data in the restrictedSecondaryRatList attribute, if received, as the list of RAT Types that are restricted for use as secondary RAT for the UE, otherwise the receiver shall use the data in the restrictedRatList attribute, if received, as the list of RAT Types that are restricted for the UE.NOTE 2: A particular PDU session not supported by the target AMF shall not be transferred, e.g. MA-PDU session context shall not be transferred if target AMF does not support ATSSS.NOTE 3: After ecRestrictionDataWb and/or ecRestrictionDataNb attributes are sent from source AMF to target AMF to build the UeContext in the target AMF, the target AMF shall re-determine the EC restriction information based on the received subscription data from UDM and UE 5GMM capability because EC restriction information may change (e.g. due to that subscription data in UDM is changed but not notified the old AMF yet) and then compare the re-determined EC restriction information with the one received in the UeContext. If the target AMF finds EC restriction information has changed after comparing, the target AMF shall proceed as described in clause 5.31.12, 3GPP TS 23.501 [2].NOTE 4: If present, this attribute shall be used together with routingIndicator. This attribute is only used by the HPLMN in roaming scenarios.NOTE 5: If the information as indicated in both IEs were received from the PCF for the UE or from the old AMF in UE Context, the AMF shall identify whether a non-roaming or local breakout PDU session is applicable for SM Policy Association events, i.e, whethe the slice and DNN combination of the PDU session is listed in the smPolicyNotifyPduList IE or not. If the PDU session is applicable for notification of SM Policy Association events , the AMF shall provide the callback information for the PCF of the UE contained in the pcfUeCallbackInfo IE to the SMF of a new PDU session via Create SM Context service operation, or to the SMF for an ongoing PDU session via Update SM Context service operation, together with the indication for notification of SM Policy Association events. See clause 4.3.2.2.1 and clause 4.3.3.2 of 3GPP TS 23.502 [3].NOTE 6: This IE is deprecated. An AMF complying with this version of specification shall use the pcfAmpBindingInfo IE to carry the Binding indication of the AM Policy Association resource and use the pcfUepBindingInfo IE to carry the binding indication of the UE Policy Association resource. |

\* \* \* Next Changes \* \* \* \*

##### 6.1.6.2.37 Type: PduSessionContext

Table 6.1.6.2.37-1: Definition of type PduSessionContext

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| pduSessionId | PduSessionId | M | 1 | Indicates the identifier of the PDU Session. |  |
| smContextRef | Uri | M | 1 | Indicates the resource URI of the SM context, including the apiRoot (see clause 6.1.3.3.2 of 3GPP TS 29.502 [16]).When present, it shall carry the URI of SM Context of:- I-SMF, for a PDU session with I-SMF; or- V-SMF, for HR PDU session; or- SMF, for non-roaming PDU session without I-SMF, or LBO roaming PDU session; |  |
| sNssai | Snssai | M | 1 | Indicates the associated S-NSSAI for the PDU Session. It shall be the S-NSSAI in HPLMN in non-roaming, LBO roaming or HR roaming. |  |
| additionalSnssai | Snssai | C | 0..1 | This IE shall be present in intra-VPLMN mobility of LBO roaming and HR roaming.When present, this IE shall indicate the associated S-NSSAI in VPLMN for the PDU Session. |  |
| dnn | Dnn | M | 1 | This IE shall indicate the Data Network Name. The DNN shall be the full DNN (i.e. with both the Network Identifier and Operator Identifier) for a HR PDU session, and it should be the full DNN in LBO and non-roaming scenarios. If the Operator Identifier is absent, the serving core network operator shall be assumed. |  |
| selectedDnn | Dnn | C | 0..1 | This IE shall be present, if another DNN other than the UE requested DNN is selected for this PDU session.When present, it shall contain the selected DNN. The DNN shall be the full DNN (i.e. with both the Network Identifier and Operator Identifier) for a HR PDU session, and it should be the full DNN in LBO and non-roaming scenarios. If the Operator Identifier is absent, the serving core network operator shall be assumed. |  |
| accessType | AccessType | M | 1 | Indicates the access type of the PDU session. |  |
| additionalAccessType | AccessType | C | 0..1 | Indicates the additional access type for a MA PDU session, if the UE registers to both 3GPP access and Non-3GPP access. |  |
| allocatedEbiList | array(EbiArpMapping) | C | 1..N | This IE shall be present when at least one EBI is allocated to the PDU session.When present, this IE shall contain the EBIs currently allocated to the PDU session. |  |
| hsmfId | NfInstanceId | C | 0..1 | This IE shall be present for non-roaming and home-routed PDU sessions.When present, it shall indicate the associated:- home SMF for HR PDU Session, or- SMF, for non-roaming PDU session, regardless of whether an I-SMF is involved or not. |  |
| hsmfSetId | NfSetId | C | 0..1 | This IE shall be present, if available.When present, this IE shall contain the NF Set ID of the home SMF or the SMF indicated by hsmfId. |  |
| hsmfServiceSetId | NfServiceSetId | C | 0..1 | This IE shall be present, if available.When present, this IE shall contain the NF Service Set ID of the selected PDUSession service instance of home SMF or the SMF indicated by hsmfId. |  |
| smfBinding | SbiBindingLevel | C | 0..1 | This IE shall be present if available, for a non-roaming PDU session. When present, this IE shall contain the SBI binding level of the SMF's SM context resource. |  |
| vsmfId | NfInstanceId | C | 0..1 | This IE shall be present for roaming PDU sessions. When present, it shall indicate the associated visited SMF for home-routed the PDU Session, or the SMF for the local-breakout PDU session (regardless of whether an I-SMF is involved or not). |  |
| vsmfSetId | NfSetId | C | 0..1 | This IE shall be present, if available. When present, this IE shall contain the NF Set ID of the V-SMF. |  |
| vsmfServiceSetId | NfServiceSetId | C | 0..1 | This IE shall be present, if available. When present, this IE shall contain the NF Service Set ID of the V-SMF's PDUSession service instance. |  |
| vsmfBinding | SbiBindingLevel | C | 0..1 | This IE shall be present, if available. When present, this IE shall contain the SBI binding level of the V-SMF's SM context resource. |  |
| ismfId | NfInstanceId | C | 0..1 | This IE shall be present if I-SMF is involved in the PDU session. When present, it shall indicate the associated I-SMF for the PDU Session. | DTSSA |
| ismfSetId | NfSetId | C | 0..1 | This IE shall be present, if available. When present, this IE shall contain the NF Set ID of the I-SMF. | DTSSA |
| ismfServiceSetId | NfServiceSetId | C | 0..1 | This IE shall be present, if available. When present, this IE shall contain the NF Service Set ID of the I-SMF's PDUSession service instance. | DTSSA |
| ismfBinding | SbiBindingLevel | C | 0..1 | This IE shall be present if available. When present, this IE shall contain the SBI binding level of the I-SMF's SM Context resource. | DTSSA |
| nsInstance | NsiId | C | 0..1 | This IE shall be present if available. When present, this IE shall Indicate Network Slice Instance for the PDU Session |  |
| smfServiceInstanceId | string | O | 0..1 | When present, this IE shall contain the serviceInstanceId of the SMF PDUSession service instance serving the SM Context, i.e. of:- the I-SMF, for a PDU session with I-SMF;- the V-SMF, for a HR PDU session; or- the SMF, for a non-roaming or an LBO roaming PDU session without I-SMF.This IE may be used by the AMF to identify PDU session contexts affected by a failure or restart of the SMF service instance (see clause 6.2 of 3GPP TS 23.527 [33]). |  |
| maPduSession | boolean | C | 0..1 | This IE shall be present if available. When present, this IE shall indicate whether it is an MA PDU session.true: indicates the PDU session is MA PDU session;false (default): the PDU session is not MA PDU session. |  |
| cnAssistedRanPara | CnAssistedRanPara | C | 0..1 | This IE shall be present if available.When present, this IE shall contain the PDU Session specific parameters received from the SMF and used by the AMF to derive the Core Network assisted RAN parameters tuning. |  |
| nrfManagementUri | Uri | C | 0..1 | If included, this IE shall contain the API URI of the NFManagement Service (see clause 6.1.1 of 3GPP TS 29.510 [29]) of the NRF or hNRF.It shall be present if it is returned from the NSSF or hNSSF (see clause 6.1.6.2.7 of 3GPP TS 29.531 [18]). |  |
| nrfDiscoveryUri | Uri | C | 0..1 | If included, this IE shall contain the API URI of the NFDiscovery Service (see clause 6.2.1 of 3GPP TS 29.510 [29]) of the NRF or hNRF.It shall be present if it is returned from the NSSF or hNSSF (see clause 6.1.6.2.7 of 3GPP TS 29.531 [18]). |  |
| nrfAccessTokenUri | Uri | C | 0..1 | If included, this IE shall contain the API URI of the Access Token Service (see clause 6.3.2 of 3GPP TS 29.510 [29]) of the NRF or hNRF.It shall be present if it is returned from the NSSF or hNSSF (see clause 6.1.6.2.7 of 3GPP TS 29.531 [18]). |  |
| smfBindingInfo | string | C | 0..1 | This IE shall be present if available, for a non-roaming PDU session. When present, this IE shall contain the Binding indications of the SMF's SM context resource and shall be set to the value of the 3gpp-Sbi-Binding header defined in clause 5.2.3.2.6 of 3GPP TS 29.500 [4], without the header name. |  |
| vsmfBindingInfo | string | C | 0..1 | This IE shall be present, if available. When present, this IE shall contain the Binding indications of the V-SMF's SM context resource and shall be set to the value of the 3gpp-Sbi-Binding header defined in clause 5.2.3.2.6 of 3GPP TS 29.500 [4], without the header name. |  |
| ismfBindingInfo | string | C | 0..1 | This IE shall be present if available. When present, this IE shall contain the Binding indications of the I-SMF's SM Context resource and shall be set to the value of the 3gpp-Sbi-Binding header defined in clause 5.2.3.2.6 of 3GPP TS 29.500 [4], without the header name. | DTSSA |
| interPlmnApiRoot | Uri | C | 0..1 | This IE shall be present if this information is available. When present, it shall contain the apiRoot of the SM context to be used in inter-PLMN signalling request targeting the SM context.(NOTE) |  |
| pgwFqdn | Fqdn | O | 0..1 | FQDN of the PGW in the PGW-C+SMF, to be included for interworking with EPS. |  |
| pgwIpAddr | IpAddress | O | 0..1 | IP Address of the PGW in the PGW-C+SMF, to be included for interworking with EPS. |  |
| plmnId | PlmnId | O | 0..1 | PLMN where the PGW-C+SMF is located. |  |
| NOTE: During an inter-PLMN mobility, the target AMF shall replace the apiRoot of the smContextRef with the interPlmnApiRoot if available and send the resulting smContextRef in the Create SM Context request towards the target V-SMF, I-SMF or anchor SMF. See 3GPP TS 29.502 [16]. |

\* \* \* Next Changes \* \* \* \*

# A.2 Namf\_Communication API

<..skip..>

 UeContextTransferRspData:

 description: Data within a successful response to the UE Context Transfer request

 type: object

 properties:

 ueContext:

 $ref: '#/components/schemas/UeContext'

 ueRadioCapability:

 $ref: '#/components/schemas/N2InfoContent'

 ueRadioCapabilityForPaging:

 $ref: '#/components/schemas/N2InfoContent'

 ueNbiotRadioCapability:

 $ref: '#/components/schemas/N2InfoContent'

 supportedFeatures:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/SupportedFeatures'

 required:

 - ueContext

 UeContext:

 description: Represents an individual ueContext resource

 type: object

 properties:

 supi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Supi'

 supiUnauthInd:

 type: boolean

 gpsiList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Gpsi'

 minItems: 1

 pei:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Pei'

 udmGroupId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfGroupId'

 ausfGroupId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfGroupId'

 pcfGroupId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfGroupId'

 routingIndicator:

 type: string

 hNwPubKeyId:

 type: integer

 groupList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/GroupId'

 minItems: 1

 drxParameter:

 $ref: '#/components/schemas/DrxParameter'

 subRfsp:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/RfspIndex'

 usedRfsp:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/RfspIndex'

 subUeAmbr:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Ambr'

 subUeSliceMbrList:

 type: object

 additionalProperties:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/SliceMbr'

 minProperties: 1

 description: A map(list of key-value pairs) where Snssai serves as key.

 smsfId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

 seafData:

 $ref: '#/components/schemas/SeafData'

 5gMmCapability:

 $ref: '#/components/schemas/5GMmCapability'

 pcfId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

 pcfSetId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfSetId'

 pcfAmpServiceSetId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfServiceSetId'

 pcfUepServiceSetId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfServiceSetId'

 pcfBinding:

 $ref: '#/components/schemas/SbiBindingLevel'

 pcfAmPolicyUri:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 amPolicyReqTriggerList:

 type: array

 items:

 $ref: '#/components/schemas/PolicyReqTrigger'

 minItems: 1

 pcfUePolicyUri:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 uePolicyReqTriggerList:

 type: array

 items:

 $ref: '#/components/schemas/PolicyReqTrigger'

 minItems: 1

 hpcfId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

 hpcfSetId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfSetId'

 restrictedRatList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/RatType'

 minItems: 1

 forbiddenAreaList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Area'

 minItems: 1

 serviceAreaRestriction:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/ServiceAreaRestriction'

 restrictedCoreNwTypeList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/CoreNetworkType'

 minItems: 1

 eventSubscriptionList:

 type: array

 items:

 $ref: '#/components/schemas/ExtAmfEventSubscription'

 minItems: 1

 mmContextList:

 type: array

 items:

 $ref: '#/components/schemas/MmContext'

 minItems: 1

 maxItems: 2

 sessionContextList:

 type: array

 items:

 $ref: '#/components/schemas/PduSessionContext'

 minItems: 1

 epsInterworkingInfo:

 $ref: 'TS29503\_Nudm\_UECM.yaml#/components/schemas/EpsInterworkingInfo'

 traceData:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/TraceData'

 serviceGapExpiryTime:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/DateTime'

 stnSr:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/StnSr'

 cMsisdn:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/CMsisdn'

 msClassmark2:

 $ref: '#/components/schemas/MSClassmark2'

 supportedCodecList:

 type: array

 items:

 $ref: '#/components/schemas/SupportedCodec'

 minItems: 1

 smallDataRateStatusInfos:

 type: array

 items:

 $ref: '#/components/schemas/SmallDataRateStatusInfo'

 minItems: 1

 restrictedPrimaryRatList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/RatType'

 minItems: 1

 restrictedSecondaryRatList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/RatType'

 minItems: 1

 v2xContext:

 $ref: '#/components/schemas/V2xContext'

 lteCatMInd:

 type: boolean

 default: false

 redCapInd:

 type: boolean

 default: false

 moExpDataCounter:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/MoExpDataCounter'

 cagData:

 $ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/CagData'

 managementMdtInd:

 type: boolean

 default: false

 immediateMdtConf:

 $ref: '#/components/schemas/ImmediateMdtConf'

 ecRestrictionDataWb:

 $ref: '#/components/schemas/EcRestrictionDataWb'

 ecRestrictionDataNb:

 type: boolean

 default: false

 iabOperationAllowed:

 type: boolean

 proseContext:

 $ref: '#/components/schemas/ProseContext'

 analyticsSubscriptionList:

 type: array

 items:

 $ref: '#/components/schemas/AnalyticsSubscription'

 minItems: 1

 pcfAmpBindingInfo:

 type: string

 pcfUepBindingInfo:

 type: string

 usedServiceAreaRestriction:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/ServiceAreaRestriction'

 praInAmPolicy:

 type: object

 additionalProperties:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/PresenceInfo'

 minProperties: 1

 description: A map(list of key-value pairs) where praId serves as key.

 praInUePolicy:

 type: object

 additionalProperties:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/PresenceInfo'

 minProperties: 1

 description: A map(list of key-value pairs) where praId serves as key.

 updpSubscriptionData:

 $ref: '#/components/schemas/UpdpSubscriptionData'

 smPolicyNotifyPduList:

 type: array

 items:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/PduSessionInfo'

 minItems: 1

 pcfUeCallbackInfo:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/PcfUeCallbackInfo'

 uePositioningCap:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/UePositioningCapabilities'

 astiDistributionIndication:

 type: boolean

 default: false

 tsErrorBudget:

 type: integer

 snpnOnboardInd:

 type: boolean

 default: false

 smfSelInfo:

 $ref: 'TS29507\_Npcf\_AMPolicyControl.yaml#/components/schemas/SmfSelectionData'

 pcfUeSliceMbrList:

 type: object

 additionalProperties:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/SliceMbr'

 minProperties: 1

 description: A map(list of key-value pairs) where Snssai serves as key.

<..skip..>

 NasSecurityMode:

 description: Indicates the NAS Security Mode

 type: object

 properties:

 integrityAlgorithm:

 $ref: '#/components/schemas/IntegrityAlgorithm'

 cipheringAlgorithm:

 $ref: '#/components/schemas/CipheringAlgorithm'

 required:

 - integrityAlgorithm

 - cipheringAlgorithm

 PduSessionContext:

 description: Represents a PDU Session Context in UE Context

 type: object

 properties:

 pduSessionId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/PduSessionId'

 smContextRef:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 sNssai:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Snssai'

 dnn:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Dnn'

 selectedDnn:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Dnn'

 accessType:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/AccessType'

 additionalAccessType:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/AccessType'

 allocatedEbiList:

 type: array

 items:

 $ref: 'TS29502\_Nsmf\_PDUSession.yaml#/components/schemas/EbiArpMapping'

 minItems: 1

 hsmfId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

 hsmfSetId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfSetId'

 hsmfServiceSetId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfServiceSetId'

 smfBinding:

 $ref: '#/components/schemas/SbiBindingLevel'

 vsmfId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

 vsmfSetId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfSetId'

 vsmfServiceSetId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfServiceSetId'

 vsmfBinding:

 $ref: '#/components/schemas/SbiBindingLevel'

 ismfId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

 ismfSetId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfSetId'

 ismfServiceSetId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfServiceSetId'

 ismfBinding:

 $ref: '#/components/schemas/SbiBindingLevel'

 nsInstance:

 $ref: 'TS29531\_Nnssf\_NSSelection.yaml#/components/schemas/NsiId'

 smfServiceInstanceId:

 type: string

 maPduSession:

 type: boolean

 default: false

 cnAssistedRanPara:

 $ref: 'TS29502\_Nsmf\_PDUSession.yaml#/components/schemas/CnAssistedRanPara'

 nrfManagementUri:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 nrfDiscoveryUri:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 nrfAccessTokenUri:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 smfBindingInfo:

 type: string

 vsmfBindingInfo:

 type: string

 ismfBindingInfo:

 type: string

 additionalSnssai:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Snssai'

 interPlmnApiRoot:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 pgwFqdn:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Fqdn'

 pgwIpAddr:

 $ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/IpAddress'

 plmnId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/PlmnId'

 required:

 - pduSessionId

 - smContextRef

 - sNssai

 - dnn

 - accessType

<..skip..>

\* \* \* End of Changes \* \* \* \*