**3GPP TSG-CT WG3 Meeting #136 *C3-244503***

**Maastricht, NL, 19 - 23 August, 2024 (Revision of C3-244379)**

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| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **29.520** | **CR** | **0932** | **rev** | **1** | **Current version:** | **18.6.0** |  |
|  |
| *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:***  | Corrections to MovementBehaviour feature applicability |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | CT3 |
|  |  |
| ***Work item code:*** | eNetAE19 |  | ***Date:*** | 2024-07-08 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** |  Rel-19 |
|  | *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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | 🡪Missing the GeographicalCoordinate data type in the reuse data type table in clause 5.1.6.1.🡪Missing the "Movementbehaviour" feature applicability for the reused LocInfoGranularity and GeographicalArea data types in clause 5.2.6.1. |
|  |  |
| ***Summary of change:*** | * Clause 5.1.6.1: added the missing GeographicalCoordinate data type in the reuse data type table.
* Clause 5.2.6.1: added the missing "Movementbehaviour" feature applicability for the reused LocInfoGranularity and GeographicalArea data types.
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|  |  |
| ***Consequences if not approved:*** | Missing the needed "Movementbehaviour" feature applicability. |
|  |  |
| ***Clauses affected:*** | 5.1.6.1, 5.2.6.1 |
|  |  |
|  | **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 does not impact the OpenAPI file. |
|  |  |
| ***This CR's revision history:*** |  |

**Additional discussion(if needed):**

**Proposed changes:**

\*\*\* 1st Change \*\*\*

#### 5.1.6.1 General

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

Table 5.1.6.1-1 specifies the data types defined for the Nnwdaf\_EventsSubscription service based interface protocol.

Table 5.1.6.1-1: Nnwdaf\_EventsSubscription specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Section defined | Description | Applicability |
| AbnormalBehaviour | 5.1.6.2.15 | Represents the abnormal behaviour information. | AbnormalBehaviour |
| Accuracy | 5.1.6.3.5 | Represents the preferred level of accuracy of the analytics. |  |
| AccuracyInfo | 5.1.6.2.89 | The analytics accuracy information. | AnalyticsAccuracy |
| AccuracyReq | 5.1.6.3.88 | Represents the analytics accuracy requirement information. | AnalyticsAccuracy |
| AdditionalMeasurement | 5.1.6.2.26 | Represents additional measurement information. | AbnormalBehaviour |
| AddressList | 5.1.6.2.28 | Represents a list of IPv4 and/or IPv6 addresses. | AbnormalBehaviour |
| AnalyticsContextIdentifier | 5.1.6.2.43 | Contains information about available analytics contexts. | AnaSubTransfer |
| AnalyticsAccuracyIndication | 5.1.6.3.37 | Represents the analytics accuracy indication. | AnalyticsAccuracy |
| AnalyticsFeedbackInfo | 5.1.6.2.105 | Contains analytics feedback information. | AnalyticsAccuracy |
| AnalyticsMetadata | 5.1.6.3.14 | Represents the types of analytics metadata information that can be requested. | Aggregation |
| AnalyticsMetadataIndication | 5.1.6.2.36 | Contains analytics metadata values indicated to be used during analytics generation. | Aggregation |
| AnalyticsMetadataInfo | 5.1.6.2.37 | Contains analytics metadata information required for analytics aggregation. | Aggregation |
| AnalyticsSubscriptionsTransfer | 5.1.6.2.40 | Contains information about a request to transfer analytics subscriptions. | AnaSubTransfer |
| AnalyticsSubset | 5.1.6.3.18 | Analytics subset used to indicate the content of the analytics. | EneNA |
| AnySlice | 5.1.6.3.2 | Represents the any slices. |  |
| ApplicationVolume | 5.1.6.2.55 | Application data volume per application Id. | Dispersion |
| AppListForUeComm | 5.1.6.2.64 | Represents the analytics of the application list used by UE. | UeCommunicationExt |
| BwRequirement | 5.1.6.2.25 | Represents bandwidth requirement. | ServiceExperience |
| ClassCriterion | 5.1.6.2.51 | Disperion class criterion. | Dispersion |
| CircumstanceDescription | 5.1.6.2.29 | Contains the description of a circumstance. | AbnormalBehaviour |
| CongestionInfo | 5.1.6.2.18 | Represents the congestion information | UserDataCongestion |
| CongestionType | 5.1.6.3.8 | Identification congestion analytics type. | UserDataCongestion |
| ConsumerNfInformation | 5.1.6.2.49 | Represents the analytics consumer NF Information. | AnaSubTransfer |
| DatasetStatisticalProperty | 5.1.6.3.15 | Dataset statistical properties of the data used to generate the analytics. | Aggregation |
| DataVolume | 5.1.6.2.85 | Indicates a specific data volume transmitted once from UE to AF and/or from AF to UE | E2eDataVolTransTime |
| DataVolumeTransferTime | 5.1.6.2.90 | Indicates the E2E data volume transfer time and the data volume used to derive the transfer time. | E2eDataVolTransTime |
| DeviceType | 5.1.6.3.31 | The type of device. | QoSSustainabilityExt\_eNA |
| Direction | 5.1.6.3.39 | Heading directions of the UE flow in the target area. | MovementBehaviour |
| DirectionInfo | 5.1.6.2.75 | Represents the UE direction information. | UeMobilityExt2\_eNAMovementBehaviour |
| DispersionClass | 5.1.6.3.20 | Dispersion class. | Dispersion |
| DispersionCollection | 5.1.6.2.54 | Dispersion collections per UE location or or per slice. | Dispersion |
| DispersionInfo | 5.1.6.2.53 | Dispersion analytics information. | Dispersion |
| DispersionRequirement | 5.1.6.2.50 | Dispersion analytics requirement. | Dispersion |
| DispersionType | 5.1.6.3.19 | Dispersion type. | Dispersion |
| DispersionOrderingCriterion | 5.1.6.3.21 | Ordering criterion for the list of Dispersion. | Dispersion |
| DnPerf | 5.1.6.2.46 | Represents DN performance information. | DnPerformance |
| DnPerfInfo | 5.1.6.2.45 | Represents DN performances for the application. | DnPerformance |
| DnPerfOrderingCriterion | 5.1.6.3.25 | Ordering criterion for the list of DN performance analytics. | DnPerformance |
| DnPerformanceReq | 5.1.6.2.66 | Represents DN performance analytics requirement. | DnPerformance |
| E2eDataVolTransTimeCriterion | 5.1.6.3.35 | Ordering criterion for the list of E2E data volume transfer time. | E2eDataVolTransTime |
| E2eDataVolTransTimeInfo | 5.1.6.2.83 | Represents the E2E data volume transfer time Information. | E2eDataVolTransTime |
| E2eDataVolTransTimeReq | 5.1.6.2.82 | Represents the E2E data volume transfer time requirement. | E2eDataVolTransTime |
| E2eDataVolTransTimePerTS | 5.1.6.2.84 | Represents the E2E data volume transfer time requirement per Time slot. | E2eDataVolTransTime |
| E2eDataVolTransTimePerUe | 5.1.6.2.86 | Represents the E2E data volume transfer time per UE. | E2eDataVolTransTime |
| E2eDataVolTransTimeUeList | 5.1.6.2.87 | Represents the E2E data volume transfer time per UE list. | E2eDataVolTransTime |
| EventNotification | 5.1.6.2.5 | Describes Notifications about events that occurred. |  |
| EventReportingRequirement | 5.1.6.2.7 | Represents the type of reporting the subscription requires. |  |
| EventSubscription | 5.1.6.2.3 | Represents the subscription to a single event. |  |
| Exception | 5.1.6.2.16 | Describes the Exception information. | AbnormalBehaviour |
| ExceptionId | 5.1.6.3.6 | Describes the Exception Id. | AbnormalBehaviour |
| ExceptionTrend | 5.1.6.3.7 | Describes the Exception Trend. | AbnormalBehaviour |
| ExpectedAnalyticsType | 5.1.6.3.11 | Represents expected UE analytics type. | AbnormalBehaviour |
| FailureEventInfo | 5.1.6.2.35 | Contains information on the event for which the subscription is not successful. |  |
| GeoDistributionInfo | 5.1.6.2.76 | Represents the geographical distribution of the UEs. | UeMobilityExt\_AIML |
| GeoLocation | 5.1.6.2.95 | Represents a geographic location, using either standard or local coordinates and optionally including the altitude. | LocAccuracy |
| IpEthFlowDescription | 5.1.6.2.27 | Contains the description of an Uplink and/or Downlink Ethernet flow. | AbnormalBehaviour |
| LoadLevelInformation | 5.1.6.3.2 | Represents load level information of the network slice and the optionally associated network slice instance. |  |
| LocAccuracyInfo | 5.1.6.2.97 | Contains Location Accuracy information. | LocAccuracy |
| LocAccuracyPerMethod | 5.1.6.2.98 | Contains Location Accuracy information per Positioning Method. | LocAccuracy |
| LocAccuracyReq | 5.1.6.2.96 | Contains Location Accuracy analytics requirements. | LocAccuracy |
| LocationInfo | 5.1.6.2.11 | Represents UE location information. | UeMobility |
| LocInfoGranularity | 5.1.6.3.32 | Represents the preferred granularity of location information. | ServiceExperienceExt2\_eNAUeMobilityExt2\_eNADispersionExt\_eNAMovementBehaviour |
| LocationOrientation | 5.1.6.3.38 | Represents preferred orientation of location information. | MovementBehaviour |
| MatchingDirection | 5.1.6.3.12 | Defines the matching direction when crossing a threshold. | NfLoad, QoSSustainability, UserDataCongestion, NetworkPerformanceDispersionRedundantTransmissionExpWlanPerformanceServiceExperienceExtNsiLoadExtLocAccuracy |
| MLModelInfo | 5.1.6.2.69 | The information of the ML model. | AnaSubTransfer |
| ModelInfo | 5.1.6.2.42 | Contains information about an ML model. | AnaSubTransfer |
| MovBehav | 5.1.6.2.93 | Represents the Movement Behaviour information per time slot. | MovementBehaviour |
| MovBehavInfo | 5.1.6.2.92 | Represents the Movement Behaviour information. | MovementBehaviour |
| MovBehavReq | 5.1.6.2.91 | Represents the Movement Behaviour analytics requirements. | MovementBehaviour |
| NetworkPerfInfo | 5.1.6.2.23 | Represents the network performance information. | NetworkPerformance |
| NetworkPerfOrderCriterion | 5.1.6.3.30 | The ordering criterion for the list of network performance analytics. | NetworkPerformanceExt\_eNA |
| NetworkPerfRequirement | 5.1.6.2.22 | Represents a network performance requirement. | NetworkPerformance |
| NetworkPerfType | 5.1.6.3.10 | Represents the network performance types. | NetworkPerformance |
| NfLoadLevelInformation | 5.1.6.2.31 | Represents load level information of a given NF instance. | NfLoad |
| NfStatus | 5.1.6.2.32 | Provides the percentage of time spent on various NF states. | NfLoad |
| NnwdafEventsSubscription | 5.1.6.2.2 | Represents an Individual NWDAF Event Subscription resource. |  |
| NnwdafEventsSubscriptionNotification | 5.1.6.2.4 | Represents an Individual NWDAF Event Subscription Notification resource. |  |
| NumberAverage | 5.1.6.2.38 | Represents average and variance information. | NsiLoadExt |
| NwdafEvent | 5.1.6.3.4 | Describes the NWDAF Events. |  |
| NwdafFailureCode | 5.1.6.3.13 | Identifies the failure reason. |  |
| NotificationMethod | 5.1.6.3.3 | Represents the notification methods that can be subscribed. |  |
| NsiIdInfo | 5.1.6.2.33 | Represents the S-NSSAI and the optionally associated Network Slice Instance Identifier(s). | ServiceExperienceNsiLoadDnPerformance |
| NsiLoadLevelInfo | 5.1.6.2.34 | Represents the load level information for an S-NSSAI and the optionally associated network slice instance. | NsiLoad  |
| ObservedRedundantTransExp | 5.1.6.2.70 | Represents the observed Redundant Transmission Experience. | RedundantTransmissionExp |
| OutputStrategy | 5.1.6.3.16 | Represents the output strategy used for the reporting of the analytics. | Aggregation |
| PerfData | 5.1.6.2.47 | Represents DN performance information. | DnPerformance |
| PfdDeterminationInfo | 5.1.6.2.73 | Represents the PFD Determination information. | PfdDetermination |
| PrevSubInfo | 5.1.6.2.68 | Information of the previous subscription. | AnaCtxTransfer |
| QosRequirement | 5.1.6.2.20 | Represents the QoS requirements. | QoSSustainability |
| QosSustainabilityInfo | 5.1.6.2.19 | Represents the QoS Sustainability information. | QoSSustainability |
| RankingCriterion | 5.1.6.2.52 | Ranking criterion. | Dispersion |
| RatFreqInformation | 5.1.6.2.67 | Represents the RAT type and/or Frequency information. | ServiceExperienceExt |
| RedTransExpOrderingCriterion | 5.1.6.3.22 | Ordering criterion for the list of Redundant Transmission Experience. | RedundantTransmissionExp |
| RedundantTransmissionExpInfo | 5.1.6.2.57 | Redundant transmission experience analytics information. | RedundantTransmissionExp |
| RedundantTransmissionExpPerTS | 5.1.6.2.58 | Redundant Transmission Experience per Time Slot. | RedundantTransmissionExp |
| RedundantTransmissionExpReq | 5.1.6.2.56 | Redundant transmission experience analytics requirement. | RedundantTransmissionExp |
| RelProxInfo | 5.1.6.2.100 | Relative Proximity analytics information. | RelativeProximity |
| RelProxReq | 5.1.6.2.99 | Relative Proximity analytics requirements. | RelativeProximity |
| ResourceUsage | 5.1.6.2.48 | The current usage of the virtual resources assigned to the NF instances belonging to a particular network slice instance. | NsiLoadExt |
| ResourceUsageRequirement | 5.1.6.2.81 | Indicates more requirements when providing resource usage information for network performance. | NetworkPerformanceExt\_AIML |
| RetainabilityThreshold | 5.1.6.2.21 | Represents a QoS flow retainability threshold. | QoSSustainability |
| RoamingInfo | 5.1.6.2.106 | Contains information related to roaming analytics. | RoamingAnalytics |
| PduSessionInfo | 5.1.6.2.74 | Represents combination of PDU Session parameters. | ServiceExperienceExt2\_eNA |
| ServiceExperienceInfo | 5.1.6.2.24 | Represents the service experience information. | ServiceExperience |
| ServiceExperienceType | 5.1.6.3.24 | Represents the type of Service Experience Analytics. | ServiceExperienceExt |
| SessInactTimerForUeComm | 5.1.6.2.65 | Represents the N4 Session inactivity timer. | UeCommunicationExt |
| SliceLoadLevelInformation | 5.1.6.2.6 | Represents the slices and their load level information. |  |
| SpeedThresholdInfo | 5.1.6.2.94 | UEs information whose speed is faster than the speed threshold. | MovementBehaviour |
| SubscriptionTransferInfo | 5.1.6.2.41 | Contains information about subscriptions that are requested to be transferred. | AnaSubTransfer |
| SuggestedPfdInfo | 5.1.6.2.107 | Represents the suggested PFD information for the application identifier. | PfdDetermination |
| TargetUeInformation | 5.1.6.2.8 | Identifies the target UE information. | ServiceExperienceNfLoadNetworkPerformanceUserDataCongestionUeMobilityUeCommunicationAbnormalBehaviourQoSSustainabilityDispersionRedundantTransmissionExpWlanPerformanceDnPerformancePduSesTrafficE2eDataVolTransTime |
| TdTraffic | 5.1.6.2.78 | Represents traffic that matches or unmatches Traffic Descriptor over the established PDU Session(s). | PduSesTraffic |
| TermCause | 5.1.6.3.26 | Represents a cause for requesting to terminate an analytics subscription. | TermRequest |
| ThresholdLevel | 5.1.6.2.30 | Describes a threshold level. | UserDataCongestionNfLoadDnPerformanceServiceExperienceExtMovementBehaviour |
| TimestampedLocation | 5.1.6.2.103 | The timestamped locations of the trajectory of the UE. | RelativeProximity |
| TimeToCollisionInfo | 5.1.6.2.104 | Time To Collision (TTC) information. | RelativeProximity |
| TimeUnit | 5.1.6.3.9 | Represents the unit for the session active time. | QoSSustainability |
| TopApplication | 5.1.6.2.39 | Top application that contributes the most to the traffic. | UserDataCongestionExt |
| TrafficCharacterization | 5.1.6.2.14 | Identifies the detailed traffic characterization. | UeCommunication |
| TrafficDirection | 5.1.6.3.33 | The traffic direction for the resource usage information. | NetworkPerformanceExt\_AIML |
| TrafficInformation | 5.1.6.2.63 | Traffic information including UL/DL data rate and/or Traffic volume. | WlanPerformance |
| TransferRequestType | 5.1.6.3.17 | Represents the type of a request for analytics subscription transfer. | AnaSubTransfer |
| UeAnalyticsContextDescriptor | 5.1.6.2.44 | Contains information about available UE related analytics contexts. | AnaSubTransfer |
| UeCommunication | 5.1.6.2.13 | Represents UE communication information. | UeCommunication |
| UeCommOrderCriterion | 5.1.6.3.29 | The ordering criterion for the list of UE communication analytics. | UeCommunicationExt\_eNA |
| UeCommReq | 5.1.6.2.72 | UE communication analytics requirement. | UeCommunicationExt\_eNA |
| UeMobilityOrderCriterion | 5.1.6.3.28 | The ordering criterion for the list of UE mobility analytics. | UeMobilityExt2\_eNA |
| UeMobilityReq | 5.1.6.2.71 | UE mobility analytics requirement. | UeMobilityExt2\_eNA |
| UeMobility | 5.1.6.2.10 | Represents UE mobility information. | UeMobility |
| UeProximity | 5.1.6.2.101 | Observed or Predicted proximity information. | RelativeProximity |
| UeTrajectory | 5.1.6.2.102 | Relative timestamped UE positions. | RelativeProximity |
| PduSesTrafficInfo | 5.1.6.2.77 | Represents PDU Session traffic analytics information. | PduSesTraffic |
| PduSesTrafficReq | 5.1.6.2.79 | Represents PDU Session traffic analytics requirement. | PduSesTraffic |
| UserDataConOrderCrit | 5.1.6.3.27 | The ordering criterion for the list of User Data Congestion analytics. | UserDataCongestionExt2\_eNA |
| UserDataCongestionInfo | 5.1.6.2.17 | Represents the user data congestion information. | UserDataCongestion |
| ValueExpression | 5.1.6.3.34 | Indicates average or peak value of the resource usage for the network performance type | NetworkPerformanceExt\_AIML |
| WlanOrderingCriterion | 5.1.6.3.23 | Ordering criterion for the list of WLAN performance information. | WlanPerformance |
| WlanPerformanceReq | 5.1.6.2.59 | WLAN performance analytics requirement. | WlanPerformance |
| WlanPerformanceInfo | 5.1.6.2.60 | WLAN performance analytics information. | WlanPerformance |
| WlanPerSsIdPerformanceInfo | 5.1.6.2.61 | WLAN performance information per SSID of WLAN access points deployed in the Area of Interest. | WlanPerformance |
| WlanPerTsPerformanceInfo | 5.1.6.2.62 | WLAN performance information per Time Slot during the analytics target period. | WlanPerformance |
| WlanPerUeIdPerformanceInfo | 5.1.6.2.80 | WLAN performance information per UE ID of WLAN access points deployed in the Area of Interest. | WlanPerformanceExt\_AIML |

Table 5.1.6.1-2 specifies data types re-used by the Nnwdaf\_EventsSubscription 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 Nnwdaf service based interface.

Table 5.1.6.1-2: Nnwdaf\_EventsSubscription re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| 5Qi | 3GPP TS 29.571 [8] | Identifies the 5G QoS identifier | QoSSustainabilityE2eDataVolTransTime |
| AccessType | 3GPP TS 29.571 [8] | Identifies the access type. | ServiceExperienceExt2\_eNA |
| AddrFqdn | 3GPP TS 29.517 [22] | Represents the IP address or FQDN of the Application Server. | DnPerformanceServiceExperienceExt |
| ApplicationId | 3GPP TS 29.571 [8] | Identifies the application identifier. | ServiceExperience UeCommunicationAbnormalBehaviourDispersionDnPerformancePduSesTraffic |
| ArfcnValueNR | 3GPP TS 29.571 [8] | Integer value indicating the ARFCN applicable for a downlink, uplink or bi-directional (TDD) NR global frequency raster.Minimum = 0. Maximum = 3279165. | ServiceExperienceExt |
| BitRate | 3GPP TS 29.571 [8] | String representing a bit rate that shall be formatted as follows:pattern: "^\d+(\.\d+)? (bps|Kbps|Mbps|Gbps|Tbps)$"Examples: "125 Mbps", "0.125 Gbps", "125000 Kbps". | ServiceExperienceQoSSustainabilityWlanPerformanceDnPerformanceE2eDataVolTransTime |
| DateTime | 3GPP TS 29.571 [8] | Identifies the time. |  |
| Dnai | 3GPP TS 29.571 [8] | Identifies a user plane access to one or more DN(s). | ServiceExperienceDnPerformance |
| Dnn | 3GPP TS 29.571 [8] | Identifies the DNN. | ServiceExperienceAbnormalBehaviourUeCommunicationDnPerformanceSMCCEPduSesTrafficE2eDataVolTransTime |
| DomainNameProtocol | 3GPP TS 29.122 [19] | Indicates the additional protocol and protocol field for domain names to be matched. | PfdDetermination |
| DurationSec | 3GPP TS 29.571 [8] |  |  |
| EthFlowDescription | 3GPP TS 29.514 [21] |  | UeCommunicationAbnormalBehaviour |
| ExpectedUeBehaviourData | 3GPP TS 29.503 [23] |  | AbnormalBehaviour |
| Float | 3GPP TS 29.571 [8] |  |  |
| FlowDescription | 3GPP TS 29.514 [21] |  | UeCommunicationAbnormalBehaviourPduSesTraffic |
| FlowInfo | 3GPP TS 29.122 [19] |  | UserDataCongestionExt |
| GeographicalArea | 3GPP TS 29.522 [32] | Identifies the geographical location (longitude and latitude level). | UeMobilityExt2\_eNAServiceExperienceExt2\_eNAQoSSustainabilityExt\_eNAMovementBehaviour |
| GeographicalCoordinates | 3GPP TS 29.572 [30] | Represents the geographical coordinates. | MovementBehaviour |
| Gpsi | 3GPP TS 29.571 [8] | The GPSI for an UE. | UserDataCongestionExtUeMobilityExt\_AIML |
| GroupId | 3GPP TS 29.571 [8] | Identifies a group of UEs. | UeMobilityUeCommunication NetworkPerformance AbnormalBehaviourServiceExperienceDispersionRedundantTransmissionExpWlanPerformancePduSesTraffic |
| Ipv4Addr | 3GPP TS 29.571 [8] |  |  |
| Ipv6Addr | 3GPP TS 29.571 [8] |  |  |
| LocalOrigin | 3GPP TS 29.572 [30] | Represents a reference point for modelling locations in relation to it. | LocAccuracy |
| NetworkAreaInfo | 3GPP TS 29.554 [18] | Identifies the network area. | ServiceExperienceQoSSustainabilityAbnormalBehaviourUeMobilityUserDataCongestionNetworkPerformance NsiLoadExtNfLoadExtDispersionRedundantTransmissionExpWlanPerformanceUeCommunicationDnPerformancePduSesTrafficE2eDataVolTransTimeMovementBehaviour |
| NfInstanceId | 3GPP TS 29.571 [8] | Identifies an NF instance. | NfLoad |
| NfSetId | 3GPP TS 29.571 [8] | Identifies an NF Set instance. | NfLoad |
| NFType | 3GPP TS 29.510 [12] | Indentifies a type of NF. | NfLoad |
| NsiId | 3GPP TS 29.531 [24] | Identifies a Network Slice Instance. | ServiceExperienceNsiLoadDnPerformance |
| PacketDelBudget | 3GPP TS 29.571 [8] |  | QoSSustainabilityDnPerformanceRedundantTransExpExt\_eNA |
| PacketErrRate | 3GPP TS 29.571 [8] |  | QoSSustainability |
| PacketLossRate | 3GPP TS 29.517 [22] | Indicates Packet Loss Rate. | DnPerformanceRedundantTransExpExt\_eNA |
| PduSessionId | 3GPP TS 29.571 [8] | Identifies PDU Session |  |
| PduSessionType | 3GPP TS 29.571 [8] | Identifies the PDU Session Type. | ServiceExperienceExt2\_eNA |
| PlmnIdNid | 3GPP TS 29.571 [8] | PLMN identifier. | RoamingAnalytics |
| Point | 3GPP TS 29.572 [30] | Represents a location in geographical co-ordinates. | LocAccuracy |
| PointAltitude | 3GPP TS 29.572 [30] | Represents a location including an altitude in geographical co-ordinates. | LocAccuracy |
| PositioningMethod | 3GPP TS 29.572 [30] | Represents a positioning method. | LocAccuracy |
| ProblemDetails | 3GPP TS 29.571 [8] | Used in error responses to provide more detailed information about an error. |  |
| QosResourceType | 3GPP TS 29.571 [8] | Identifies the resource type in QoS characteristics. | QoSSustainability |
| RatType | 3GPP TS 29.571 [8] | Identifies the RAT type. | ServiceExperienceExt |
| RedirectResponse | 3GPP TS 29.571 [8] | Contains redirection related information. | ES3XX |
| RelativeCartesianLocation | 3GPP TS 29.572 [30] | Represents distances from a reference point. | LocAccuracy |
| ReportingInformation | 3GPP TS 29.523 [20] | Represents the type of reporting the subscription requires. |  |
| SamplingRatio | 3GPP TS 29.571 [8] |  |  |
| ScheduledCommunicationTime | 3GPP TS 29.122 [19] |  | UeMobility UeCommunication |
| SmcceInfo | 5.2.6.2.12 | Represents the analytics of Session Management Congestion Control Experience information. | SMCCE |
| Snssai | 3GPP TS 29.571 [8] | Identifies the S-NSSAI (Single Network Slice Selection Assistance Information). |  |
| SscMode | 3GPP TS 29.571 [8] | Identifies te SSC Mode of the PDU Session. | ServiceExperienceExt2\_eNA |
| Supi | 3GPP TS 29.571 [8] | The SUPI for an UE. | ServiceExperience,NfLoadNetworkPerformance,UserDataCongestionUeMobilityUeCommunicationAbnormalBehaviourDispersionRedundantTransmissionExpWlanPerformancePduSesTraffic |
| SupportedFeatures | 3GPP TS 29.571 [8] | Used to negotiate the applicability of the optional features defined in table 5.1.8-1. |  |
| SvcExperience | 3GPP TS 29.517 [22] |  | ServiceExperience |
| Tai | 3GPP TS 29.571 [8] | Tracking Area Information. | AnaSubTransfer |
| TimeWindow | 3GPP TS 29.122 [19] |  |  |
| Uinteger | 3GPP TS 29.571 [8] | Unsigned Integer, i.e. only value 0 and integers above 0 are permissible. |  |
| UpfInformation | 3GPP TS 29.508 [29] | The information of the UPF serving the UE. | ServiceExperienceExtDnPerformance |
| Uri | 3GPP TS 29.571 [8] |  |  |
| UserLocation | 3GPP TS 29.571 [8] |  | UeMobility Dispersion |
| VelocityEstimate | 3GPP TS 29.572 [30] | Velocity estimate | QoSSustainabilityExt\_eNA |
| Volume | 3GPP TS 29.122 [19] |  | UeCommunicationAbnormalBehaviourDispersionWlanPerformancePduSesTraffic |

\*\*\* 2nd Change \*\*\*

#### 5.2.6.1 General

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

Table 5.2.6.1-1 specifies the data types defined for the Nnwdaf\_AnalyticsInfo service based interface protocol.

Table 5.2.6.1-1: Nnwdaf\_AnalyticsInfo specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Section defined | Description | Applicability |
| AdditionInfoAnalyticsInfoRequest | 5.2.6.2.5 | Contains more details (not only the ProblemDetails) in case an Nnwdaf\_AnalyticsInfo request is rejected. | EneNA |
| AdrfDataType | 5.2.6.3.5 | Represents a type of data that is stored in the ADRF. | AnaCtxTransfer |
| AnalyticsAccuracyInfo | 5.2.6.2.18 | Analytics Accuracy related information needs to be transferred. | EnAnaCtxTransfer |
| AnalyticsData | 5.2.6.2.2 | Describes analytics with parameters indicated in the request. |  |
| ContextData | 5.2.6.2.6 | Contains context information related to analytics subscriptions corresponding with one or more context identifiers. | AnaCtxTransfer |
| ContextElement | 5.2.6.2.7 | Contains context information corresponding with a specific context identifier. | AnaCtxTransfer |
| ContextIdList | 5.2.6.2.8 | Contains list of context identifiers of context information of analytics subscriptions. | AnaCtxTransfer |
| ContextType | 5.2.6.3.4 | Identfies the type of analytics context information. | AnaCtxTransfer |
| EventFilter | 5.2.6.2.3 | Represents the event filters used to identify the requested analytics. |  |
| EventId | 5.2.6.3.3 | Describes the type of analytics. |  |
| GroundTruthInfo | 5.2.6.2.19 | The ground truth information used for the accuracy information computation. | EnAnaCtxTransfer |
| HistoricalData | 5.2.6.2.9 | Contains historical data related to an analytics subscription. | AnaCtxTransfer |
| MlModelAccuracyInfo | 5.2.6.2.20 | The ML Model Accuracy Subscription Information needs to be transferred. | EnAnaCtxTransfer |
| NetworkPerfReq | 5.2.6.2.16 | Represents a network performance requirement. | NetworkPerformanceExt\_eNA |
| ProblemDetailsAnalyticsInfoRequest | 5.2.6.4.1 | Data type that extends ProblemDetails. | EneNA |
| RequestedContext | 5.2.6.2.11 | Contains types of analytics context information. | AnaCtxTransfer |
| ResourceUsageRequPerNwPerfType | 5.2.6.2.17 | Indicates more requirements per network performance type when providing resource usage information for network performance. | NetworkPerformanceExt\_AIML |
| SmcceInfo | 5.2.6.2.12 | Represents the analytics of Session Management congestion control experience information. | SMCCE |
| SmcceUeList | 5.2.6.2.13 | Represents the List of UEs classified based on experience level of Session Management congestion control. | SMCCE |
| SpecificAnalyticsSubscription | 5.2.6.2.10 | Represents an existing subscription for a specific type of analytics to a specific NWDAF. | AnaCtxTransfer |
| SpecificDataSubscription | 5.2.6.2.14 | Represents an existing data collection subscription to a specific data source NF. | AnaCtxTransfer |
| UserDataCongestReq | 5.2.6.2.15 | Represents the user data congestion requirements. | UserDataCongestionExt2\_eNA |

Table 5.2.6.1-2 specifies data types re-used by the Nnwdaf\_AnalyticsInfo 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 Nnwdaf service based interface.

Re-used data types of clause 5.1.6 refer here to requests instead of subscriptions.

Table 5.2.6.1-2: Nnwdaf\_AnalyticsInfo re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| AbnormalBehaviour | 5.1.6.2.15 | Represents the abnormal behaviour information. | AbnormalBehaviour |
| AccuracyInfo | 5.2.6.2.83 | The analytics accuracy information. | AnalyticsAccuracy |
| AccuracyReq | 5.1.6.2.88 | Represents the analytics accuracy requirement information. | AnalyticsAccuracy |
| AnalyticsContextIdentifier | 5.1.6.2.43 | Contains information about the available analytics contexts. | AnaCtxTransfer |
| AnalyticsMetadataInfo | 5.1.6.2.37 | Contains analytics metadata information required for analytics aggregation. | Aggregation |
| AnalyticsSubset | 5.1.6.3.18 | Contains information about the analytics subsets provided in the subscription request. | EneNA |
| AnySlice | 5.1.6.3.2 |  |  |
| ApplicationId | 3GPP TS 29.571 [8] | Identifies the application. | ServiceExperience UeCommunicationAbnormalBehaviourDnPerformancePfdDeterminationE2eDataVolTransTime |
| BwRequirement | 5.1.6.2.25 |  | ServiceExperience |
| DataNotification | 3GPP TS 29.575 [27] | Describes Notifications about data collection events that occurred. | EneNA |
| DataSubscription | 3GPP TS 29.575 [27] | Represents data subscription from data source (e.g. AMF, SMF, UDM, NEF, AF). | EneNAEnAnaCtxTransfer |
| DateTime | 3GPP TS 29.571 [8] | Identifies the time. |  |
| DispersionRequirement | 5.1.6.2.50 | Dispersion analytics requirement. | Dispersion |
| DispersionInfo | 5.1.6.2.53 | Dispersion analytics information. | Dispersion |
| Dnai | 3GPP TS 29.571 [8] | Identifies a user plane access to one or more DN(s). | ServiceExperienceDnPerformance |
| Dnn | 3GPP TS 29.571 [8] | Identifies the DNN. | ServiceExperience AbnormalBehaviourUeCommunication SMCCEDnPerformancePfdDeterminationPduSesTrafficE2eDataVolTransTime |
| DnPerfInfo | 5.1.6.2.45 | Represents DN performance information | DnPerformance |
| DnPerformanceReq | 5.1.6.2.66 | Represents the DN performance requirements. | DnPerformance |
| DurationSec | 3GPP TS 29.571 [8] |  |  |
| EventNotification | 5.1.6.2.5 | Describes Notifications about analytics events that occurred. | AnaCtxTransfer |
| EventReportingRequirement | 5.1.6.2.7 |  |  |
| ExceptionId | 5.1.6.3.6 |  | AbnormalBehaviour |
| ExpectedUeBehaviourData | 3GPP TS 29.503 [23] |  | AbnormalBehaviour |
| ExpectedAnalyticsType | 5.1.6.3.11 |  | AbnormalBehaviour |
| GeographicalArea | 3GPP TS 29.522 [32] | Identifies the geographical location (longitude and latitude level). | UeMobilityExt2\_eNAServiceExperienceExt2\_eNAQoSSustainExt\_eNAMovementBehaviour |
| GeoLocation | 5.1.6.2.95 | Represents a geographic location, potentially using local coordinates and optionally including the altitude. | LocAccuracy |
| LocAccuracyInfo | 5.1.6.2.97 | Contains Location Accuracy information. | LocAccuracy |
| LocAccuracyReq | 5.1.6.2.96 | Contains Location Accuracy analytics requirements. | LocAccuracy |
| LocInfoGranularity | 5.1.6.3.32 | Represents the preferred granularity of location information. | ServiceExperienceExt2\_eNAUeMobilityExt2\_eNADispersionExt\_eNAMovementBehaviour |
| LocationOrientation | 5.1.6.3.38 | Represent preferred orientation of location information | MovementBehaviour |
| MatchingDirection | 5.1.6.3.12 | The matching direction. | UserDataCongestionExt2\_eNANetworkPerformanceExt |
| MLModelAccuracyInfo | 5.6.6.2.5 | Represents the subscription information for ML model accuracy information. | EnAnaCtxTransfer |
| ModelInfo | 5.1.6.2.42 | The information of the ML models. | AnaCtxTransfer |
| MovBehavInfo | 5.1.6.2.91 | Represents the Movement Behaviour information. | MovementBehaviour |
| MovBehavReq | 5.1.6.2.90 | Represents the Movement Behaviour analytics requirements | MovementBehaviour |
| NetworkAreaInfo | 3GPP TS 29.554 [18] | The network area information. | UeMobilityUeCommunicationNetworkPerformanceQoSSustainabilityServiceExperienceUserDataCongestionAbnormalBehaviour NsiLoadExtDispersionRedundantTransmissionExpWlanPerformanceDnPerformanceNfLoadExtE2eDataVolTransTimeMovementBehaviour |
| NetworkPerfInfo | 5.1.6.2.23 | Represents network performance information. | NetworkPerformance |
| NetworkPerfOrderCriterion | 5.1.6.3.30 | Represents a network performance requirement. | NetworkPerformanceExt\_eNA |
| NetworkPerfType | 5.1.6.3.10 | Represents the network performance types. | NetworkPerformance |
| NfLoadLevelInformation | 5.1.6.2.31  | Represents load level information of a given NF instance.  | NfLoad |
| NfInstanceId | 3GPP TS 29.571 [8] | Identifies an NF instance | NfLoad |
| NfSetId | 3GPP TS 29.571 [8] | Identifies an NF Set instance. | NfLoad |
| NFType | 3GPP TS 29.510 [12] | Indentifies a type of NF. | NfLoad |
| NsiIdInfo | 5.1.6.2.33 | Identify the S-NSSAI and the associated Network Slice Instance(s). | ServiceExperienceNsiLoadDnPerformance |
| NsiLoadLevelInfo | 5.1.6.2.34 | Represents the load level information for an S-NSSAI and the associated network slice instance. | NsiLoad |
| NnwdafEventsSubscription | 5.1.6.2.2 | Represents an Individual NWDAF Event Subscription resource. | AnaCtxTransfer |
| PfdDeterminationInfo | 5.1.6.2.73 | Represents PFD Determination information. | PfdDetermination |
| ProblemDetails | 3GPP TS 29.571 [8] | Used in error responses to provide more detailed information about an error. |  |
| QosRequirement | 5.1.6.2.20 |  | QoSSustainabilityE2eDataVolTransTime |
| QosSustainabilityInfo | 5.1.6.2.19 |  | QoSSustainability |
| RatFreqInformation | 5.1.6.2.67 | Represents the RAT type and/or Frequency information | ServiceExperienceExt |
| RedundantTransmissionExpInfo | 5.1.6.2.57 | Redundant transmission experience analytics information. | RedundantTransmissionExp |
| RedundantTransmissionExpReq | 5.1.6.2.56 | Redundant transmission experience analytics requirement. | RedundantTransmissionExp |
| PduSessionInfo | 5.1.6.2.74 | Represents combination of PDU Session parameters. | ServiceExperienceExt2\_eNA |
| RelProxInfo | 5.1.6.2.100 | Relative Proximity analytics information. | RelativeProximity |
| RelProxReq | 5.1.6.2.99 | Relative Proximity analytics requirements. | RelativeProximity |
| ResourceUsageRequirement | 5.1.6.2.81 | Indicates more requirements per network performance type when providing resource usage information for network performance. | NetworkPerformanceExt\_AIML |
| RoamingInfo | 5.1.6.2.106 | Contains information related to roaming analytics. | RoamingAnalytics |
| ServiceExperienceInfo | 5.1.6.2.24 |  | ServiceExperience |
| Supi | 3GPP TS 29.571 [8] | Identifies the UE. | ServiceExperience,NfLoadNetworkPerformanceUserDataCongestionUeMobilityUeCommunicationAbnormalBehaviour SMCCEDispersionRedundantTransmissionExpWlanPerformanceE2eDataVolTransTime |
| SupportedFeatures | 3GPP TS 29.571 [8] | Used to negotiate the applicability of the optional features defined in table 5.2.8-1. |  |
| Snssai | 3GPP TS 29.571 [8] |  |  |
| SliceLoadLevelInformation | 5.1.6.2.6 |  |  |
| TargetUeInformation | 5.1.6.2.8 | Identifies the target UE information. | ServiceExperienceNfLoadNetworkPerformanceUserDataCongestionUeMobilityUeCommunicationAbnormalBehaviourQoSSustainabilityDispersionRedundantTransmissionExpWlanPerformanceSMCCEDnPerformance |
| UeCommunication | 5.1.6.2.13 |  | UeCommunication |
| UeCommReq | 5.1.6.2.72 | UE communication analytics requirement. | UeCommunicationExt\_eNA |
| UeMobility | 5.1.6.2.10 |  | UeMobility |
| UeMobilityReq | 5.1.6.2.71 | UE mobility analytics requirement. | UeMobilityExt2\_eNA |
| Uinteger | 3GPP TS 29.571 [8] | Unsigned Integer, i.e. only value 0 and integers above 0 are permissible. |  |
| UpfInformation | 3GPP TS 29.508 [29] | The information of the UPF serving the UE. | ServiceExperienceExtDnPerformance |
| PduSesTrafficInfo | 5.1.6.2.77 | Represents PDU Session traffic analytics information. | PduSesTraffic |
| PduSesTrafficReq | 5.1.6.2.79 | Represents PDU Session traffic analytics requirement. | PduSesTraffic |
| UserDataCongestionInfo | 5.1.6.2.17 |  | UserDataCongestion |
| UserDataConOrderCrit | 5.1.6.2.15 | The ordering criterion for the list of User Data Congestion analytics. | UserDataCongestionExt2\_eNA |
| WlanPerformanceInfo | 5.1.6.2.60 | WLAN performance analytics information. | WlanPerformance |
| WlanPerformanceReq | 5.1.6.2.59 | WLAN performance analytics requirement. | WlanPerformance |
| E2eDataVolTransTimeInfo | 5.1.6.2.82 | E2E data volume transfer time | E2eDataVolTransTime |
| E2eDataVolTransTimeReq | 5.1.6.2.83 | E2E data volume transfer time requirement | E2eDataVolTransTime |

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