#### 6.5.10.2 NR DL-TDOA Assistance Data Request

#### – *NR-DL-TDOA-RequestAssistanceData*

The IE *NR-DL-TDOA-RequestAssistanceData* is used by the target device to request assistance data from a location server.

-- ASN1START

NR-DL-TDOA-RequestAssistanceData-r16 ::= SEQUENCE {

nr-PhysCellID-r16 NR-PhysCellID-r16 OPTIONAL,

nr-AdType-r16 BIT STRING { dl-prs (0),

posCalc (1) } (SIZE (1..8)),

...,

[[

nr-PosCalcAssistanceRequest-r17 BIT STRING { trpLoc (0),

beamInfo (1),

rtdInfo (2),

losNlosInfo (3),

trpTEG-Info (4),

integrityBounds-r18 (5),

pruInfo-r18 (6)

} (SIZE (1..8)) OPTIONAL,

nr-on-demand-DL-PRS-Request-r17 NR-On-Demand-DL-PRS-Request-r17 OPTIONAL,

nr-DL-PRS-ExpectedAoD-or-AoA-Request-r17

ENUMERATED { eAoD, eAoA } OPTIONAL,

pre-configured-AssistanceDataRequest-r17

ENUMERATED { true } OPTIONAL

]],

[[

nr-PeriodicAssistDataReq-r18 NR-PeriodicAssistDataReq-r18 OPTIONAL -- Cond PerADReq,

nr-IntegrityAssistanceParaRequest-r18 BIT STRING {

riskPara (0),

servicePara (1),

serviceAlert (2),

integrityParaTRP-Loc (3),

integrityParaBeamInfo (4),

integrityParaRTD-Info (5),

} (SIZE (1..8)) OPTIONAL

]]

}

-- ASN1STOP

| Conditional presence | Explanation |
| --- | --- |
| *PerADReq* | This field is mandatory present if the target device requests periodic NR assistance data delivery. This field may only be included if '*pruInfo*' bit in  *nr-PosCalcAssistanceRequest* is set to '1'. |

|  |
| --- |
| *NR-DL-TDOA-RequestAssistanceData* field descriptions |
| ***nr-PhysCellID***  This field specifies the NR physical cell identity of the current primary cell of the target device. |
| ***nr-AdType***  This field indicates the requested assistance data. *dl-prs* means requested assistance data is *nr-DL-PRS-AssistanceData*, *posCalc* means requested assistance data is *nr-PositionCalculationAssistance* for UE based positioning. |
| ***nr-PosCalcAssistanceRequest***  This field indicates the Position Calculation Assistance Data requested. This is represented by a bit string, with a one‑value at the bit position means the particular assistance data is requested; a zero‑value means not requested.  - bit 0 indicates whether the field *nr-TRP-LocationInfo* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 1 indicates whether the field *nr-DL-PRS-BeamInfo* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 2 indicates whether the field *nr-RTD-Info* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 3 indicates whether the field *nr-DL-PRS-Expected-LOS-NLOS-Assistance* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 4 indicates whether the field *nr-DL-PRS-TRP-TEG-Info* in IE *NR-PositionCalculationAssistance* is requested or not.  - bit 5 together with the bit 0 indicate whether the field *integrityTRP-LocationBounds* in IE *NR-TRP-LocationInfo* is requested or not. bit 5 together with the bit 1 indicate whether the field *integrityBeamInfoBounds* in IE *NR-DL-PRS-BeamInfo* is requested or not. bit 5 together with the bit 2 indicate whether the field *integrityRTD-InfoBounds* in IE *NR-RTD-Info* is requested or not.  - bit 6 indicates whether the field *nr-PRU-DL-Info* in IE *NR-PositionCalculationAssistance* is requested or not.  This field may only be present if the '*posCalc*' bit in *nr-AdType* is set to value '1'. |
| ***nr-on-demand-DL-PRS-Request***  This field indicates the on-demand DL-PRS requested for DL-TDOA. This field may be included when the *dl-prs* bit in *nr-AdType* is set to value '1'. |
| ***nr-DL-PRS-ExpectedAoD-or-AoA-Request***  This field, if present, indicates that the IE *NR-DL-PRS-ExpectedAoD-or-AoA* in *NR-DL-PRS-AssistanceData* is requested. Enumerated value '*eAoD*' indicates that expected AoD information is requested; value '*eAoA*' indicates that expected AoA information is requested.  This field may only be present if the '*dl-prs*' bit in *nr-AdType* is set to value '1'. |
| ***pre-configured-AssistanceDataRequest***  This field, if present, indicates that the target device requests pre-configured assistance data with area validity. |
| ***nr-PeriodicAssistDataReq***  This field indicates the Periodic Position Calculation Assistance Data requested. |
| ***nr-IntegrityAssistanceParaRequest***  This field indicates the Integrity Calculation Assistance Data requested. This is represented by a bit string, with a one‑value at the bit position means the particular assistance data is requested; a zero‑value means not requested.  - bit 0 indicates whether the field *nr-IntegrityServiceParameters* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 1 indicates whether the field *nr-IntegrityServiceAlert* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 2 indicates whether the field *nr-IntegrityRiskParameters* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 3 indicates whether the field *nr-IntegrityParametersTRP-LocationInfo* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 4 indicates whether the field *nr-IntegrityParametersDL-PRS-BeamInfo* in IE *NR-PositionCalculationAssistance* is requested or not.  - bit 5 indicates whether the field *nr-IntegrityParametersRTD-Info* in IE *NR-PositionCalculationAssistance* is requested or not. |

-------------------------------NEXT CHANGE-----------------------------------------------------------------------------

#### 6.5.11.2 NR DL-AoD Assistance Data Request

#### – *NR-DL-AoD-RequestAssistanceData*

The IE *NR-DL-AoD-RequestAssistanceData* is used by the target device to request assistance data from a location server.

-- ASN1START

NR-DL-AoD-RequestAssistanceData-r16 ::= SEQUENCE {

nr-PhysCellID-r16 NR-PhysCellID-r16 OPTIONAL,

nr-AdType-r16 BIT STRING { dl-prs (0),

posCalc (1) } (SIZE (1..8)),

...,

[[

nr-PosCalcAssistanceRequest-r17 BIT STRING { trpLoc (0),

beamInfo (1),

rtdInfo (2),

beamAntInfo (3),

losNlosInfo (4),

integrityBounds-r18 (5)

} (SIZE (1..8)) OPTIONAL,

nr-DL-PRS-ExpectedAoD-or-AoA-Request-r17 ENUMERATED { eAoD, eAoA } OPTIONAL,

nr-DL-PRS-BeamInfoRequest-r17 ENUMERATED { requested } OPTIONAL,

nr-on-demand-DL-PRS-Request-r17 NR-On-Demand-DL-PRS-Request-r17 OPTIONAL,

pre-configured-AssistanceDataRequest-r17 ENUMERATED { true } OPTIONAL,

]]

[[

nr-IntegrityAssistanceParaRequest-r18 BIT STRING {

riskPara (0),

servicePara (1),

serviceAlert (2),

integrityParaTRP-Loc (3),

integrityParaBeamInfo (4),

integrityParaRTD-Info (5),

integrityParaBeamAntInfo(6)

} (SIZE (1..8)) OPTIONAL

]]

}

-- ASN1STOP

|  |
| --- |
| *NR-DL-AoD-RequestAssistanceData* field descriptions |
| ***nr-PhysCellID***  This field specifies the NR physical cell identity of the current primary cell of the target device. |
| ***nr-AdType***  This field indicates the requested assistance data. *dl-prs* means requested assistance data is *nr-DL-PRS-AssistanceData*, *posCalc* means requested assistance data is *nr-PositionCalculationAssistance* for UE based positioning. |
| ***nr-PosCalcAssistanceRequest***  This field indicates the Position Calculation Assistance Data requested. This is represented by a bit string, with a one‑value at the bit position means the particular assistance data is requested; a zero‑value means not requested.  - bit 0 indicates whether the field *nr-TRP-LocationInfo* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 1 indicates whether the field *nr-DL-PRS-BeamInfo* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 2 indicates whether the field *nr-RTD-Info* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 3 indicates whether the field *nr-TRP-BeamAntennaInfo* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 4 indicates whether the field *nr-DL-PRS-Expected-LOS-NLOS-Assistance* in IE *NR-PositionCalculationAssistance* is requested or not.  - bit 5 together with the bit 0 indicate whether the field *integrityTRP-LocationBounds* in IE *NR-TRP-LocationInfo* is requested or not. bit 5 together with the bit 1 indicate whether the field *integrityBeamInfoBounds* in IE *NR-DL-PRS-BeamInfo* is requested or not. bit 5 together with the bit 2 indicate whether the field *integrityRTD-InfoBounds* in IE *NR-RTD-Info* is requested or not. bit 5 together with the bit 3 indicate whether the field *integrityBeamPowerBounds* in IE *NR-TRP-BeamAntennaInfo* is requested or not.  This field may only be present if the '*posCalc*' bit in *nr-AdType* is set to value '1'. |
| ***nr-DL-PRS-ExpectedAoD-or-AoA-Request***  This field, if present, indicates that the IE *NR-DL-PRS-ExpectedAoD-or-AoA* in *NR-DL-PRS-AssistanceData* is requested. Enumerated value '*eAoD*' indicates that expected AoD information is requested; value 'eAoA' indicates that expected AoA information is requested.  This field may only be present if the '*dl-prs*' bit in *nr-AdType* is set to value '1'. |
| ***nr-DL-PRS-BeamInfoRequest***  This field, if present, indicates that the IE *NR-DL-PRS-BeamInfo* is requested. |
| ***nr-on-demand-DL-PRS-Request***  This field indicates the on-demand DL-PRS requested for DL-AoD. This field may be included when the *dl-prs* bit in *nr-AdType* is set to value '1'. |
| ***pre-configured-AssistanceDataRequest***  This field, if present, indicates that the target device requests pre-configured assistance data with area validity. |
| ***nr-IntegrityAssistanceParaRequest***  This field indicates the Integrity Calculation Assistance Data requested. This is represented by a bit string, with a one‑value at the bit position means the particular assistance data is requested; a zero‑value means not requested.  - bit 0 indicates whether the field *nr-IntegrityServiceParameters* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 1 indicates whether the field *nr-IntegrityServiceAlert* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 2 indicates whether the field *nr-IntegrityRiskParameters* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 3 indicates whether the field *nr-IntegrityParametersTRP-LocationInfo* in IE *NR-PositionCalculationAssistance* is requested or not;  - bit 4 indicates whether the field *nr-IntegrityParametersDL-PRS-BeamInfo* in IE *NR-PositionCalculationAssistance* is requested or not.  - bit 5 indicates whether the field *nr-IntegrityParametersRTD-Info* in IE *NR-PositionCalculationAssistance* is requested or not.  - bit 6 indicates whether the field *nr-IntegrityParametersTRP-BeamAntennaInfo* in IE *NR-PositionCalculationAssistance* is requested or not. |