**3GPP TSG-SA5 Meeting #137-e *S5-213423***

**electronic meeting,** **Online , 10th - 19th May 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **28.541** | **CR** | **0512** | **rev** | **-** | **Current version:** | **17.2.1** |  |
|  | | | | | | | | |
| *For* [***HELP***](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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **x** |

|  |  |  |  |  |  |  |  |  |  |  |
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|  | | | | | | | | | | |
| ***Title:*** | Enhance 5G Core AMF NRM fragment | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia Corporation | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNRM | | | | |  | ***Date:*** | | | 2021-04-30 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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 can be 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-12 (Release 12) Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Currently NRM cannot support fully the configuration of 5G Core AMF based on the TS 29.510. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Added missing attributes on AMF based on TS 29.510 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Lack of support for configuring AMF. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 5.3.1, 5.3.51, 5.3.52, 5.3.54, 5.3.60, 5.3, 5.4.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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's revision history:*** | |  | | | | | | | | |

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| **1st Modified Section** |

# 2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.501: "System Architecture for the 5G System".

[3] 3GPP TS 38.300: "NR; Overall description; Stage-2".

[4] 3GPP TS 38.401: "NG-RAN; Architecture description".

[5] 3GPP TS 38.413: "NG-RAN; NG Application Protocol (NGAP)".

[6] 3GPP TS 38.420: "NG-RAN; Xn general aspects and principles".

[7] 3GPP TS 38.470: "NG-RAN; F1 general aspects and principles".

[8] 3GPP TS 38.473: "NG-RAN; F1 application protocol (F1AP)".

[9] 3GPP TS 37.340: "NR; Multi-connectivity; Overall description; Stage 2".

[10] 3GPP TS 28.540: "Management and orchestration; 5G Network Resource Model (NRM);Stage 1".

[11] 3GPP TS 28.662: "Telecommunication management; Generic Radio Access Network (RAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS) ".

[12] 3GPP TS 38.104: "NR; Base Station (BS) radio transmission and reception".

[13] 3GPP TS 23.003: "Numbering, Addressing and Identification".

[14] 3GPP TS 36.410: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 general aspects and principles".

[15] 3GPP TS 36.423: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); X2 application protocol".

[16] 3GPP TS 36.425: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); X2 interface user plane protocol".

[17] 3GPP TS 28.625: "State Management Data Definition Integration Reference Point (IRP); Information Service (IS)".

[18] ITU-T Recommendation X.731: "Information technology - Open Systems Interconnection - Systems Management: State management function".

[19] 3GPP TS 28.658: "Telecommunications management; Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP): Information Service (IS)".

[20] 3GPP TS 28.702: "Core Network (CN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

[21] 3GPP TS 28.708: "Telecommunication management; Evolved Packet Core (EPC) Network Resource Model (NRM) Integration Reference Point (IRP): Information Service (IS)".

[22] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".

[23] 3GPP TS 29.510: "5G system; Network Function Repository Services; Stage 3".

[24] 3GPP TS 29.531: "5G System; Network Slice Selection Services Stage 3".

[25] Void.

[26] 3GPP TS 28.531: "Management and orchestration; Provisioning".

[27] 3GPP TS 28.554: "Management and orchestration; 5G End to end Key Performance Indicators (KPI)".

[28] 3GPP TS 22.261: "Service requirements for next generation new services and markets".

[29] ETSI GS NFV-IFA 013 V2.4.1 (2018-02) "Network Function Virtualisation (NFV); Management and Orchestration; Os-Ma-nfvo Reference Point - Interface and Information Model Specification".

[30] 3GPP TS 28.622: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

[31] Void.

[32] 3GPP TS 38.211: "NR; Physical channels and modulation".

[33] 3GPP TS 32.616: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Solution Set (SS) definitions".

[34] 3GPP TS 28.623: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".

[35] 3GPP TS 28.532: "Management and orchestration; Management services".

[36] Void.

[37] IETF RFC 791: "Internet Protocol".

[38] IETF RFC 2373: "IP Version 6 Addressing Architecture".

[39] IEEE 802.1Q: "Media Access Control Bridges and Virtual Bridged Local Area Networks".

[40] ETSI GR NFV-IFA 015 (V2.4.1): "Network Function Virtualisation (NFV) Release 2; Management and Orchestration; Report on NFV Information Model".

[41] 3GPP TS 38.213: "NR; Physical layer procedures for control".

[42] 3GPP TS 38.101-1: "NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1 Standalone".

[43] 3GPP TS 32.156: "Telecommunication management; Fixed Mobile Convergence (FMC) model repertoire".

[44] IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".

[45] IETF RFC 8528: "YANG Schema Mount".

[46] Void

[47] 3GPP TS 32.160: "Management and orchestration; Management Service Template".

[48] 3GPP TS 38.463: "NG-RAN; E1 application protocol (E1AP)".

[49] 3GPP TS 38.304: "NR; User Equipment (UE) procedures in Idle mode and RRC Inactive state".

[50] GSMA NG.116 - Generic Network Slice Template Version 3.0 (2020-05-22).

[51] 3GPP TS 22.104: "Service requirements for cyber-physical control applications in vertical domains; Stage 1".

[52] 3GPP TS 33.501: " Security architecture and procedures for the 5G System".

[53] 3GPP TS 38.901: "Study on channel model for frequencies from 0.5 to 100 GHz ".

[54] 3GPP TS 38.331: "NR; Radio Resource Control (RRC) protocol specification".

[55] 3GPP TS 38.215: "NR; Physical layer measurements".

[56] 3GPP TS 29.244: "Technical Specification Group Core Network and Terminals; Interface between the Control Plane and the User Plane Nodes; Stage 3".

[57] 3GPP TS 28.313: "Self-Organizing Networks (SON) for 5G networks".

[58] 3GPP TS 38.423: "NR; Xn application protocol (XnAP)".

[59] 3GPP TS 23.503: "Policy and Charging Control Framework for the 5G System; Stage 2".

[60] 3GPP TS 29.512: "5G System; Session Management Policy Control Service; Stage 3".

[61] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces; Stage 3".

[62] 3GPP TS 29.214: "Policy and Charging Control over Rx reference point".

[63] IETF RFC 7042: "IANA Considerations and IETF Protocol and Documentation Usage for IEEE 802 Parameters".

[64] IEEE 802.3-2015: "IEEE Standard for Ethernet".

[65] IEEE 802.1Q-2014: "Bridges and Bridged Networks".

[66] IETF RFC 4301: "Security Architecture for the Internet Protocol".

[67] 3GPP TS 29.514: "5G System; Policy Authorization Service; Stage 3".

[68] 3GPP TS 32.422: "Telecommunication management; Subscriber and equipment trace; Trace control and configuration management".

[69] 3GPP TS 28.552: " Management and orchestration; 5G performance measurements".

[70] 3GPP TS 28.530: "Management and orchestration; Concepts, use cases and requirements ".

[71] 3GPP TS 28.310: " Management and orchestration; Energy efficiency of 5G".

[x0] ECMA-262: "ECMAScript® Language Specification", <https://www.ecma-international.org/ecma-262/5.1/>.

[x1] 3GPP TS 29.500:  "5G System; Technical Realization of Service Based Architecture; Stage 3".

[x2] IANA: "SMI Network Management Private Enterprise Codes", <http://www.iana.org/assignments/enterprise-numbers>.

[x3] 3GPP TS 29.518: "5G System; Access and Mobility Management Services; Stage 3".

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| **2nd Modified Section** |

### 5.3.1 AMFFunction

#### 5.3.1.1 Definition

This IOC represents the AMF functionality in 5GC. For more information about the AMF, see 3GPP TS 23.501 [2].

#### 5.3.1.2 Attributes

The AMFFunction IOC includes attributes inherited from ManagedFunction IOC (defined in TS 28.622[30]) and the following attributes:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| pLMNInfoList | M | T | T | F | T |
| sNPNInfoList | CM | T | T | F | T |
| aMFIdentifier | M | T | T | F | T |
| aMFRegionId | M | T | T | F | T |
| aMFSet | M | T | T | F | T |
| sBIFQDN | M | T | T | F | T |
| interPlmnFQDN | M | T | T | F | T |
| cNSIIdList | CM | T | T | F | T |
| gUAMIdList | M | T | T | F | T |
| backupInfoAmfFailure | O | T | T | F | T |
| backupInfoAmfRemoval | O | T | T | F | T |
| managedNFProfile | M | T | T | F | T |
| commModelList | M | T | T | F | T |

#### 5.3.1.3 Attribute constraints

|  |  |
| --- | --- |
| Name | Definition |
| cNSIIdList Support Qualifier | Condition: Network slicing feature is supported. |
| sNPNInfoList Support Qualifier | Condition: Non-public network feature is supported |

#### 5.3.1.4 Notifications

The common notifications defined in subclause 5.5 are valid for this IOC, without exceptions or additions.

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| **3rd Modified Section** |

### 5.3.51 AMFSet

#### 5.3.51.1 Definition

This IOC represents the AMF Set which consists of some AMFs that serve a given area and Network Slice. For more information about the AMF Set, see 3GPP TS 23.501 [2].

#### 5.3.51.2 Attributes

The AMFSet IOC includes attributes inherited from ManagedFunction IOC (defined in TS 28.622[30]) and the following attributes:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| pLMNIdList | M | T | T | F | T |
| nRTAClist | M | T | T | F | T |
| taiList | O | T | T | F | T |
| taiRangeList | O | T | T | F | T |
| aMFSetId | M | T | T | F | T |
| sNSSAIList | CM | T | T | F | T |
| **Attribute related to role** |  |  |  |  |  |
| aMFRegion | M | T | T | F | T |
| aMFSetMemberList | M | T | T | F | T |

#### 5.3.51.3 Attribute constraints

|  |  |
| --- | --- |
| Name | Definition |
| sNSSAIList Support Qualifier | Condition: Network slicing feature is supported. |

#### 5.3.51.4 Notifications

The common notifications defined in subclause 5.5 are valid for this IOC, without exceptions or additions.

### 5.3.52 AMFRegion

#### 5.3.52.1 Definition

This IOC represents the AMF Region which consists one or multiple AMF Sets. For more information about the AMF Region, see 3GPP TS 23.501 [2].

#### 5.3.52.2 Attributes

The AMFRegion IOC includes attributes inherited from ManagedFunction IOC (defined in TS 28.622[30]) and the following attributes:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| pLMNIdList | M | T | T | F | T |
| nRTAClist | M | T | T | F | T |
| taiList | O | T | T | F | T |
| taiRangeList | O | T | T | F | T |
| aMFRegionId | M | T | T | F | T |
| sNSSAIList | CM | T | T | F | T |
| **Attribute related to role** |  |  |  |  |  |
| aMFSet | M | T | T | F | T |

#### 5.3.52.3 Attribute constraints

|  |  |
| --- | --- |
| Name | Definition |
| sNSSAIList Support Qualifier | Condition: Network slicing feature is supported. |

#### 5.3.52.4 Notifications

The common notifications defined in subclause 5.5 are valid for this IOC, without exceptions or additions.

|  |
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| **4th Modified Section** |

### 5.3.54 ManagedNFProfile <<dataType>>

#### 5.3.54.1 Definition

This data type represents a Profile definition of a Managed NF (See TS 23.501 [2]).

#### 5.3.54.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **Support Qualifier** | **isReadable** | **isWritable** | **isInvariant** | **isNotifyable** |
| nfInstanceID | M | T | F | T | F |
| nfType | M | T | F | F | F |
| nfStatus | M | T | F | F | F |
| heartBeatTimer | O | T | T | F | F |
| hostAddr | M | T | T | F | T |
| authzInfo | O | T | T | F | T |
| allowedPLMNs | O | T | T | F | T |
| allowedSNPNs | O | T | T | F | T |
| allowedNfTypes | O | T | T | F | T |
| allowedNfDomains | O | T | T | F | T |
| allowedNSSAIs | O | T | T | F | T |
| locality | O | T | T | F | T |
| capacity | O | T | T | F | T |
| load | O | T | F | F | T |
| loadTimeStamp | O | T | F | F | T |
| recoveryTime | O | T | T | F | T |
| nfServicePersistence | O | T | T | F | T |
| nfSetIdList | O | T | T | F | T |
| nfProfileChangesSupportInd | O | T | T | F | T |
| nfProfileChangesInd | O | T | F | F | T |
| defaultNotificationSubscriptions | O | T | T | F | T |
| servingScope | O | T | T | F | T |
| lcHSupportInd | O | T | T | F | T |
| olcHSupportInd | O | T | T | F | T |
| nfSetRecoveryTimeList | O | T | F | F | T |
| serviceSetRecoveryTimeList | O | T | F | F | T |
| scpDomains | O | T | T | F | T |
| scpInfo | O | T | T | F | T |
| seppInfo | O | T | T | F | T |
| vendorId | O | T | T | F | T |
| supportedVendorSpecificFeatures | O | T | F | F | T |
| aanfInfoList | O | T | T | F | T |
| nFInfo | M | T | T | F | T |

#### 5.3.54.3 Attribute constraints

None.

#### 5.3.54.4 Notifications

The subclause 4.5 of the <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

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| **5th Modified Section** |

### 5.3.60 Void



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| **6th Modified Section** |

### 5.3.x GUAMInfo <<dataType>>

#### 5.3.x.1 Definition

This <<dataType>> represents the GUAM identifier, a global unique identifier for the AMF.

#### 5.3.x.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| pLMNId | M | T | T | F | T |
| aMFIdentifier | M | T | T | F | T |

#### 5.3.x.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 5.3.x2 SNPNInfo <<dataType>>

#### 5.3.x2.1 Definition

This <<dataType>> represents the SNPN identifier and associated S-NSSAI.

#### 5.3.x2.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| sNPNId | M | T | T | F | T |
| sNSSAI | CM | T | T | F | T |

#### 5.3. x2.3 Attribute constraints

|  |  |
| --- | --- |
| Name | Definition |
| sNSSAI Support Qualifier | Condition: slicing feature is supported. |

#### 5.3. x2.4 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 5.3.x3 TaiRange <<dataType>>

#### 5.3. x3.1 Definition

This <<dataType>> represents the range of TAIs the AMF can serve.

#### 5.3.x3.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| sNPNId | M | T | T | F | T |
| nRTACRangeList | CM | T | T | F | T |

#### 5.3.x3.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 5.3.x4 nRTACRange <<dataType>>

#### 5.3.x4.1 Definition

This <<dataType>> represents the range of TACs the AMF can serve.

#### 5.3.x4.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| nRTACstart | O | T | T | F | T |
| nRTACend | O | T | T | F | T |
| nRTACpattern | O | T | T | F | T |

#### Either the start and end attributes, or the pattern attribute, shall be present.

#### 5.3.x4.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 5.3.x5 DefaultNotificationSubscription <<dataType>>

#### 5.3.x5.1 Definition

This <<dataType>> represents the range of default notification subscriptions.

#### 5.3.x5.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| notificationType | M | T | T | F | T |
| callbackURI | M | T | T | F | T |
| n1MessageClass | O | T | T | F | T |
| n2InfroamtionClass | O | T | T | F | T |
| versions | O | T | T | F | T |
| binding | O | T | T | F | T |

#### 5.3.x5.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 5.3.x6 SCPInfo <<dataType>>

#### 5.3.x6.1 Definition

This <<dataType>> represents the SCP.

#### 5.3.x6.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| scpDomainInfoList | O | T | T | F | T |
| scpPrefix | O | T | T | F | T |
| scpPorts | O | T | T | F | T |
| addressDomains | O | T | T | F | T |
| ipv4Addresses | O | T | T | F | T |
| ipv6Prefixes | O | T | T | F | T |
| ipv4AddrRanges | O | T | T | F | T |
| ipv6PrefixRanges | O | T | T | F | T |
| servedNfSetIdList | O | T | T | F | T |
| remotePlmnList | O | T | T | F | T |
| ipReachability | O | T | T | F | T |

#### 5.3. x6.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 5.3.x7 SCPDomainInfo <<dataType>>

#### 5.3.x7.1 Definition

This <<dataType>> represents the SCP domain specific information.

#### 5.3.x7.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| scpFQND | O | T | T | F | T |
| scpEndPoints | O | T | T | F | T |
| scpPorts | O | T | T | F | T |
| scpPrefix | O | T | T | F | T |

If any of these attributes is present for a given SCP domain, it shall apply instead of the attributes fqdn, Ipv4Addresses and Ipv4Addresses within the NFProfile data type for the corresponding SCP Domain.

If none of these attributes is present for a given SCP domain, the attributes fqdn, Ipv4Addresses, and Ipv4Addresses within the NFProfile data type shall apply for the corresponding SCP Domain.

If scpPorts attribute is present, it has precedence over the scpPorts attribute of ScpInfo.

#### 5.3.x7.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 5.3.x8 IpEndPoint <<dataType>>

#### 5.3.x8.1 Definition

This <<dataType>> represents the IP end points considering both IPv4 and IPv6 addresses.

#### 5.3.x8.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| hostAddr | M | T | T | F | T |
| transport | O | T | T | F | T |
| Port | O | T | T | F | T |

#### 5.3.x8.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 5.3.x9 IPv4AddressRange <<dataType>>

#### 5.3.x9.1 Definition

This <<dataType>> represents the range of IPv4 addresses.

#### 5.3.x9.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| IPv4AddrRangeStart | M | T | T | F | T |
| IPv4AddrRangeEnd | M | T | T | F | T |

#### 5.3.x9.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

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### 5.3.x10 IPv6PrefixRange <<dataType>>

#### 5.3.x10.1 Definition

This <<dataType>> represents the range of IPv6 address prefix.

#### 5.3.x10.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| IPv6PrefRangeStart | M | T | T | F | T |
| IPv6PrefRangeEnd | M | T | T | F | T |

#### 5.3.x10.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 5.3.x11 SEPPInfo <<dataType>>

#### 5.3.x11.1 Definition

This <<dataType>> represents the SEPP that enables secure interconnect between 5G networks. The attributes fqdn, ipv4Addresses and ipv6Addresses within the ManagedNFProfile data type shall be used to determine the SEPP address.

#### 5.3.x11.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| seppPorts | O | T | T | F | T |
| remotePlmnId | O | T | T | F | T |

If no SEPP port information is present in SeppInfo, the HTTP client shall use the default HTTP port number, i.e. TCP port 80 for "http" URIs or TCP port 443 for "https" URIs.

#### 5.3.x11.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

### 5.3.x12 VendorSpecificFeature <<dataType>>

#### 5.3.x12.1 Definition

This <<dataType>> represents the Vendor specific features.

#### 5.3.x12.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| featureName | M | T | T | F | T |
| featureVersion | M | T | T | F | T |

#### 5.3.x12.3 Notifications

The <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

|  |
| --- |
| **7th Modified Section** |

### 5.4.1 Attribute properties

The following table defines the attributes that are present in several Information Object Classes (IOCs) of the present document.

| Attribute Name | Documentation and Allowed Values | Properties |
| --- | --- | --- |
| aMFIdentifier | The AMFI is constructed from an AMF Region ID, an AMF Set ID and an AMF Pointer. The AMF Region ID identifies the region, the AMF Set ID uniquely identifies the AMF Set within the AMF Region, and the AMF Pointer uniquely identifies the AMF within the AMF Set. (Ref. 3GPP TS 23.003 [13]) | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| aMFSetId | It represents the AMF Set ID, which is uniquely identifies the AMF Set within the AMF Region.  allowedValues: defined in subclause 2.10.1 of 3GPP TS 23.003 [13]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| aMFSetMemberList | It is the list of DNs of AMFFunction instances of the AMFSet.  allowedValues: N/A | type: DN  multiplicity: 1  isOrdered: N/A  isUnique: True  defaultValue: None  isNullable: False |
| aMFRegionId | It represents the AMF Region ID, which identifies the region.  allowedValues: defined in subclause 2.10.1 of 3GPP TS 23.003 [13]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| gUAMIdList | List of supported Globally Unique AMF Ids (GUAMIs). | type: GUAMInfo  multiplicity: 1.. \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| backupInfoAmfFailure | List of GUAMIs for which the AMF acts as a backup for AMF failure. | type: GUAMInfo  multiplicity: 1.. \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| backupInfoAmfRemoval | List of GUAMIs for which the AMF acts as a backup for planned AMF removal. | type: GUAMInfo  multiplicity: 1.. \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| localAddress | This parameter specifies the localAddress including IP address and VLAN ID used for initialization of the underlying transport.  First string is IP address, IP address can be an IPv4 address (See RFC 791 [37]) or an IPv6 address (See RFC 2373 [38]).  Second string is VLAN Id (See IEEE 802.1Q [39]). | type: String  multiplicity: 2  isOrdered: True  isUnique: N/A  defaultValue: None  isNullable: False |
| remoteAddress | Remote address including IP address used for initialization of the underlying transport.  IP address can be an IPv4 address (See RFC 791 [37]) or an IPv6 address (See RFC 2373 [38]). | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| nfProfileList | It is a set of NFProfile(s) to be registered in the NRF instance. NFProfile is defined in 3GPP TS 29.510 [23]. | type: <<dataType>>  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| cNSIIdList | It is a set of NSI ID. NSI ID is an identifier for identifying the Core Network part of a Network Slice instance when multiple Network Slice instances of the same Network Slice are deployed, and there is a need to differentiate between them in the 5GC, see clause 3.1 of TS 23.501 [2] and subclause 6.1.6.2.7 of 3GPP TS 29.531 [24]. | type: String  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| sNSSAIList | See subclause 4.4.1. |  |
| snpnList | This parameter indicates the SNPN(s) of the Network Function. It shall be present if the NF pertains to one or more SNPNs. | type: SNPNInfo  multiplicity: 1.. \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| sBIFQDN | It is used to indicate the FQDN of the registered NF instance in service-based interface, for example, NF instance FQDN structure is:  nftype<nfnum>.slicetype<sliceid>.mnc<MNC>.mcc<MCC>.3gppnetwork.org | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| interPlmnFQDN | If the NF needs to be discoverable by other NFs in a different PLMN, then an FQDN that is used for inter-PLMN routing as specified in 3GPP TS 23.003 [13] shall be registered with the NRF. | type: String  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| sBIServiceList | It is used to indicate the all supported NF services registered on service-based interface. | type: String  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nRTACList | It is the list of Tracking Area Codes (either legacy TAC or extended TAC).  allowedValues:  Legacy TAC and Extended TAC are defined in clause 9.3.3.10 of TS 38.413 [5]. | type: Integer  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| taiList | The list of TAIs the AMF can serve. | type: TAI  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| taiRangeList | The range of TAIs the AMF can serve. | type: TAIRange  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nRTACRangeList | The range of TACs the AMF can serve. | type: TACRange  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nRTACstart | First value identifying the start of a TAC range, to be used when the range of TAC's can be represented as a hexadecimal range (e.g., TAC ranges). 3-octet string identifying a tracking area code, each character in the string shall take a value of "0" to "9" or "A" to "F" and shall represent 4 bits. The most significant character representing the 4 most significant bits of the TAC shall appear first in the string, and the character representing the 4 least significant bit of the TAC shall appear last in the string.  Pattern: "^([A-Fa-f0-9]{4}|[A-Fa-f0-9]{6})$" | type: String  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nRTACend | Last value identifying the end of a TAC range, to be used when the range of TAC's can be represented as a hexadecimal range (e.g. TAC ranges). 3-octet string identifying a tracking area code, each character in the string shall take a value of "0" to "9" or "A" to "F" and shall represent 4 bits. The most significant character representing the 4 most significant bits of the TAC shall appear first in the string, and the character representing the 4 least significant bit of the TAC shall appear last in the string.  Pattern: "^([A-Fa-f0-9]{4}|[A-Fa-f0-9]{6})$" | type: String  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nRTACpattern | Pattern (regular expression according to the ECMA-262 dialect [x0]) representing the set of TAC's belonging to this range. A TAC value is considered part of the range if and only if the TAC string fully matches the regular expression. | type: String  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| supportedBMOList | It is used to indicate the list of supported BMOs (Bridge Managed Objects) required for integration with TSN system. | type: String  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| managedNFProfile | This parameter defines profile for managed NF (See TS 23.501 [2]).  allowedValues: N/A | type: ManagedNFProfile  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nfInstanceID | This parameter defines unique identity of the NF Instance. The format of the NF Instance ID shall be a Universally Unique Identifier (UUID) version 4, as described in IETF RFC 4122 [44]  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| nfType | This parameter defines type of Network Function  allowedValues: See TS 23.501[2] for NF types | type: ENUM  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| nfStatus | This parameter defines the status of a NF Instance stored in NRF  allowedValues: "REGISTERED", "SUSPENDED", "UNDISCOVERABLE" | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| heartBeatTimer | Time between two consecutive heart-beat messages from an NF Instance to the NRF defined in seconds. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: 0  isNullable: False |
| fqdn | This parameter defines FQDN of the Network Function (See TS 23.003 [13])  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| ipAddress | This parameter defines IP Address of the Network Function. It can be IPv4 address (See RFC 791 [37]) or IPv6 address (See RFC 2373 [38]).  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| authzInfo | This parameter defines NF Specific Service authorization information. It shall include the NF type (s) and NF realms/origins allowed to consume NF Service(s) of NF Service Producer (See TS 23.501[2]).  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: True |
| allowedPLMNs | PLMNs allowed to access the NF instance.  If not provided, any PLMN is allowed to access the NF. | type: PLMNId  multiplicity: 1..\*  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: True |
| allowedSNPNs | SNPNs allowed to access the NF instance.  The absence of this attribute in the NF profile indicates that no SNPN, other than the SNPN(s) registered in the snpnList attribute of the NF Profile, is allowed to access the service instance. | type: SNPNInfo  multiplicity: 1..\*  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: True |
| allowedNfTypes | Type of the NFs allowed to access the NF instance.  If not provided, any NF type is allowed to access the NF.  allowedValues: See TS 23.501[2] for NF types | type: ENUM  multiplicity: 1..\*  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: True |
| allowedNfDomains | Pattern (regular expression according to the ECMA-262 dialect [x0]) representing the NF domain names within the PLMN of the NRF allowed to access the NF instance.  If not provided, any NF domain is allowed to access the NF. | type: String  multiplicity: 1..\*  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: True |
| allowedNSSAIs | S-NSSAI of the allowed slices to access the NF instance.  If not provided, any slice is allowed to access the NF. | type: S-NSSAI  multiplicity: 1..\*  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: True |
| locality | The parameter defines information about the location of the NF instance (e.g. geographic location, data center) defined by operator (See TS 29.510[23]).  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: True |
| capacity | This parameter defines static capacity information in the range of 0-65535, expressed as a weight relative to other NF instances of the same type; if capacity is also present in the nfServiceList parameters, those will have precedence over this value (See TS 29.510[23])  allowedValues: 0-65535 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| load | Dynamic load information that indicates the current load percentage of the NF.  allowedValues: 0-100 | type: Integer  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| loadTimeStamp | It indicates the point in time in which the latest load information (sent by the NF in the "load" attribute of the NF Profile) was generated at the NF Instance.  If the NF did not provide a timestamp, the NRF should set it to the instant when the NRF received the message where the NF provided the latest load information. | type: DateTime  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| recoveryTime | Timestamp when the NF was (re)started. The NRF shall notify NFs subscribed to receiving notifications of changes of the NF profile, if the NF recoveryTime is changed. | type: DateTime  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nfServicePersistence | This parameter indicates whether the different service instances of a same NF Service in the NF instance, supporting a same API version, are capable to persist their resource state in shared storage and therefore these resources are available after a new NF service instance supporting the same API version is selected by a NF Service Consumer (see 3GPP TS 29.510 [23]). | type: Boolean  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nfSetIdList | A NF Set Identifier is a globally unique identifier of a set of equivalent and interchangeable CP NFs from a given network that provide distribution, redundancy and scalability (see clause 5.21.3 of 3GPP TS 23.501 [2]).  An NF Set Identifier shall be constructed from the MCC, MNC, NID (for SNPN), NF type and a Set ID. A NF Set Identifier shall be formatted as the following string:  set<Set ID>.<nftype>set.5gc.mnc<MNC>.mcc<MCC> for a NF Set in a PLMN, or  set<Set ID>.<nftype>set.5gc.nid<NID>.mnc<MNC>.mcc<MCC> for a NF Set in a SNPN.  At most one NF Set ID shall be indicated per PLMN-ID or SNPN of the NF. | type: String  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nfProfileChangesSupportInd | This parameter indicates if the NF Service Consumer supports or does not support receiving NF Profile Changes. It may be present in the NFRegister or NFUpdate (NF Profile Complete Replacement) request and shall be absent in the response (see Annex B 3GPP TS 29.510 [23]). | type: Boolean  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nfProfileChangesInd | This parameter indicates if the NF Profile contains NF Profile changes or the complete NF profile. It may only be included by the NRF in NFRegister or NFUpdate (NF Profile Complete Replacement) response (see Annex B 3GPP TS 29.510 [23]). | type: Boolean  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: False  allowedValues: N/A  isNullable: False |
| defaultNotificationSubscriptions | Notification endpoints for different notification types.  This attribute may contain multiple default subscriptions for a same notification type; in that case, those default subscriptions are used as alternative notification endpoints. | type: DefaultNotificationSubscription  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| notificationType | This parameter indicates the types of notifications used in Default Notification URIs in the NF Profile of an NF Instance.  allowedValues:   * "N1\_MESSAGES", * "N2\_INFORMATION", * "LOCATION\_NOTIFICATION", * ”DATA\_REMOVAL\_NOTIFICATION”, * "DATA\_CHANGE\_NOTIFICATION", * "LOCATION\_UPDATE\_NOTIFICATION", * "NSSAA\_REAUTH\_NOTIFICATION", * "NSSAA\_REVOC\_NOTIFICATION" | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| callbackURI | This attribute contains a default notification endpoint to be used by a NF Service Producer towards an NF Service Consumer that has not registered explicitly a callback URI in the NF Service Producer (e.g. as a result of an implicit subscription). | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| n1MessageClass | This attribute (if it is present) identifies that class of N1 messages shall be notified as per TS 29.518 [x3]. | type: Boolean  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| n2InfroamtionClass | This attribute (if it is present) identifies that class of N2 messages shall be notified as per TS 29.518 [x3]. | type: Boolean  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| versions | This attribute identifies the API versions (e.g. "v1") supported for the default notification type. | type: String  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| binding | This attribute shall contain the value of the Binding Indication for the default subscription notification (i.e. the value part of "3gpp-Sbi-Binding" header), as specified in clause 6.12.4 of 3GPP TS 29.500 [x1]. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| servingScope | This parameter indicates the served geographical areas of a NF instance. | type: String  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| lcHSupportInd | This parameter indicates whether the NF supports or does not support Load Control based on LCI Header (see clause 6.3 of 3GPP TS 29.500 [x1]). | type: Boolean  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: False  allowedValues: N/A  isNullable: False |
| olcHSupportInd | This parameter indicates whether the NF supports or does not support Overload Control based on OCI Header (see clause 6.4 of 3GPP TS 29.500 [x1]). | type: Boolean  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: False  allowedValues: N/A  isNullable: False |
| nfSetRecoveryTimeList | This parameter contains the recovery time of NF Set(s) indicated by the NfSetId, where the NF instance belongs. | type: DateTime  multiplicity: 1.. \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| serviceSetRecoveryTimeList | This parameter contains the recovery time of NF Service Set(s) configured in the NF instance, which are indicated by the NfServiceSetId. | type: DateTime  multiplicity: 1.. \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| scpDomains | This parameter shall carry the list of SCP domains the SCP belongs to, or the SCP domain the NF (other than SCP) or the SEPP belongs to. | type: String  multiplicity: 1.. \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| scpInfo | Specific data for the SCP. | type: SCPInfo  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| scpDomainInfoList | SCP domain specific information of the SCP that differs from the common information in NFProfile data type. | type: SCPDomainInfo  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| scpFQND | FQDN of the SCP. | type: String  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| scpEndPoints | IP address(es) and port information of the SCP.  If port information is present in this attribute, it applies to any scheme (i.e. HTTP and HTTPS). | type: IpEndPoint  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| transport | Transport protocol  allowedValues: "TCP" | type: ENUM  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| port | This parameter indicates the port number.    allowedValues: 0 - 65535 | type: Integer  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: 80 or 443  allowedValues: N/A  isNullable: False |
| scpPrefix | Optional deployment specific string used to construct the apiRoot of the next hop SCP, as described in clause 6.10 of 3GPP TS 29.500 [x1]. | type: String  multiplicity: 0..1  Ordered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| scpPorts | SCP port number(s) for HTTP and/or HTTPS.  This attribute shall be present if the SCP uses non-default HTTP and/or HTTPS ports and if the SCP does not provision port information within ScpDomainInfo for each SCP domain it belongs to.  allowedValues: 0 - 65535 | type: Integer  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| addressDomains | Pattern (regular expression according to the ECMA-262 dialect [x0]) representing the address domain names reachable through the SCP.  Absence of this IE indicates the SCP can reach any address domain names in the SCP domain(s) it belongs to. | type: String  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| ipv4Addresses | List of IPv4 addresses reachable through the SCP.  If IPv4 addresses are reachable via the SCP, the absence of both this parameter and the ipv4AddrRanges one, indicates that the SCP can reach any IPv4 address in the SCP domain(s) it belongs to. | type: String  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| ipv6Prefixes | List of IPv6 prefixes reachable through the SCP.  If IPv6 addresses are reachable via the SCP, the absence of both this parameter and the ipv6PrefixRanges one indicates the SCP can reach any IPv6 prefixes in the SCP domain(s) it belongs to. | type: String  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| ipv4AddrRanges | List of IPv4 address ranges reachable through the SCP.  If IPv4 addresses are reachable via the SCP, the absence of both this parameter and the ipv4AddrRanges one, indicates that the SCP can reach any IPv4 address in the SCP domain(s) it belongs to. | type: IPv4AddressRange  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| IPv4AddrRangeStart | First value identifying the start of an IPv4 address range. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| IPv4AddrRangeEnd | Last value identifying the end of an IPv4 address range. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| ipv6PrefixRanges | List of IPv6 prefixes ranges reachable through the SCP.  If IPv6 addresses are reachable via the SCP, absence of both this parameter and the ipv6Prefixes one indicates the SCP can reach any IPv6 prefixes in the SCP domain(s) it belongs to. | type: IPv6PrefixRange  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| IPv6PrefRangeStart | First value identifying the start of an IPv6 prefix range. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| IPv6PrefRangeEnd | Last value identifying the end of an IPv6 prefix range. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| servedNfSetIdList | List of NF set ID of NFs served by the SCP.  Absence of this parameter indicates the SCP can reach any NF set in the SCP domain(s) it belongs to. | type: String  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| remotePlmnList | List of remote PLMNs reachable through the SCP.  Absence of this parameter indicates that no remote PLMN is reachable through the SCP. | type: PLMNId  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| ipReachability | Indicates the type(s) of IP addresses reachable via the SCP in the SCP domain(s) it belongs to.  allowedValues: "IPV4", "IPV6", "IPV4V6" | type: ENUM  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| seppPorts | SEPP port number(s) for HTTP and/or HTTPS  This attribute shall be present if the SEPP uses non-default HTTP and/or HTTPS ports. When present, it shall contain the HTTP and/or HTTPS ports.  allowedValues: 0 – 65535 | type: Integer  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: 80 or 443  allowedValues: N/A  isNullable: False |
| seppInfo | Specific data for the SEPP. | type: SEPPInfo  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| vendorId | Vendor ID of the NF instance, according to the IANA-assigned "SMI Network Management Private Enterprise Codes" [x2].  allowedValues: 6 decimal digits; if the SMI code has less than 6 digits, it shall be padded with leading digits "0" to complete a 6-digit string value. | type: String  multiplicity: 0..1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| supportedVendorSpecificFeatures | Vendor specific features identified by the IANA-assigned "SMI Network Management Private Enterprise Codes" [x2].  The value of each entry shall be a list (array) of VendorSpecificFeature objects. | type: supportedVendorSpecificFeature  multiplicity: 1.. \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| featureName | This parameter represents a proprietary feature specific to a given vendor. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| featureVersion | This parameter represents the version of the feature. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nFInfo | This parameter includes NF specific data in Managed NF profile  allowedValues: N/A | type: NFInfo  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| hostAddr | This parameter defines host address of a NF  allowedValues: N/A | type: HostAddr  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| priority | This parameter defines Priority (relative to other NFs of the same type) in the range of 0-65535, to be used for NF selection; lower values indicate a higher priority. If priority is also present in the nfServiceList parameters, those will have precedence over this value (See TS 29.510[23]).  allowedValues: 0-65535 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| supportedDataSetIds | This parameter defines list of supported data sets in the UDR instance (See TS 29.510[23]).  allowedValues: "SUBSCRIPTION", "POLICY", EXPOSURE", "APPLICATION" | type: ENUM  multiplicity: 1..\*  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| nFSrvGroupId | This parameter defines identity of the group that is served by the NF instance (See TS 29.510[23]).  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| smfServingAreas | This parameter defines the SMF service area(s) the UPF can serve (See TS 29.510[23]).  allowedValues: N/A | type: String  multiplicity: 1..\*  isOrdered: F  isUnique: True  defaultValue: None  isNullable: False |
| isESCoveredBy | This indicates whether the adjacentCell provides no, partial or full coverage for the cell which name-contains the NRCellRelation instance.  Adjacent cells with this attribute equal to "FULL" are recommended to be considered as candidate cells to take over the coverage when the original cell state is about to be changed to energySaving.  All adjacent cells with this attribute value equal to "PARTIAL" are recommended to be considered as entirety of candidate cells to take over the coverage when the original cell state is about to be changed to energySaving.  allowedValues: NO, PARTIAL, FULL | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| commModelList | The attribute specifies a list of commModel which is defined as a datatype (see clause 5.3.69). It can be used by NF and NF services to interact with each other in 5G Core network (see TS 23.501 [2]).  allowedValues: Not applicable | type: commModel  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| groupId | This parameter identiies a list of target NF services on which the same communication model is applied to.  allowedValues: N/A | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| commModelType | This parameter defines communication model used by a NF to interact with NF service(s) (See TS 23.501 [2]).  allowedValues:”DIRECT\_COMMUNICATION\_WO\_NRF”, “DIRECT\_COMMUNICATION\_WITH\_NRF”, “INDIRECT\_COMMUNICATION\_WO\_DEDICATED\_DISCOVERY”, “INDIRECT\_COMMUNICATION\_WITH\_DEDICATED\_DISCOVERY” | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| targetNFServiceList | This parameter lists target NF services sharing same communication model and configuration.  allowedValues: N/A | type: DN  multiplicity: 1..\*  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| commModelConfiguration | This parameter defines configuration parameters for specific communication model for a group of NF Services.  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| supportedFuncList | This parameter lists functionalities supported by a SCP. Refer to TS 23.501 [2]. | type: SupportedFunction  multiplicity: 1..\*  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| address | This parameter defines address of a SCP instance, it can be IP address (either IPv4 address (See RFC 791 [37]) or IPv6 address (See RFC 2373 [38])) or FQDN (See TS 23.003 [13]). | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| function | This parameter defines name of a functionality supported by a SCP. | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| policy | This parameter defines configuration policies of a functionality supported by a SCP. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| capabilityList | This parameter lists capabilities supported by a NEF. Refer to TS 23.501 [2].  allowedValues: N/A | type: String  multiplicity: 1..\*  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| isINEF | This parameter defines if the NEF is an Intermediate NEF.  allowedValues: TRUE, FALSE | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| isCAPIFSup | This parameter defines if the NEF support Common API Framework.  allowedValues: TRUE, FALSE | type: Boolean  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| sEPPType | This parameter defines the type of a SEPP entity. Refer to TS 33.501 [52].  allowedValues: “CSEPP”, “PSEPP” | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| sEPPId | This parameter is identifier of a SEPP, it is unique inside a PLMN.  allowedValues: N/A | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| remotePlmnId | This parameter defines PLMNId of the remote SEPP.  allowedValues: N/A | Type: PLMNId  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| remoteSeppAddress | This parameter defines address of the remote SEPP. It can be IP address (either IPv4 address (See RFC 791 [37]) or IPv6 address (See RFC 2373 [38])) or FQDN(See TS 23.003 [13]).  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| remoteSeppId | This parameter defines identifier of the remote SEPP. it is unique inside a PLMN.  allowedValues: N/A | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| n32cParas | This attribute is used to configure parameters to establish security link between two SEPPs.  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| n32fPolicy | This attribute is used to configure policies to protect the messages exchanged between SEPPs.  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| withIPX | This attribute defines if there’s an IPX interconnected between two SEPPs.  allowedValues: TRUE, FALSE | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| FiveQiDscpMappingList | It provides the list of mapping between 5QIs and DSCP.  allowedValues: N/A | type: FiveQiDscpMapping  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| fiveQIValues | It indicates a list of 5QI value.  allowedValues: 0 - 255 | type: Integer  multiplicity: \*  isOrdered: N/A  isUnique: Yes  defaultValue: None  isNullable: False |
| dscp | It indicates a DSCP.  allowedValues: 0 - 255 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: Yes  defaultValue: None  isNullable: False |
| configurable5QISetRef | This is the DN of Configurable5QISet.  allowedValues: DN of the Configurable5QISet MOI. | type: String  multiplicity: 0..1  isOrdered: False  isUnique: True  defaultValue: None  isNullable: True |
| configurable5QIs | It indicates the pre-configured 5QIs, including their QoS characteristics.  allowedValues: N/A | type: FiveQICharacteristics  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| dynamic5QISetRef | This is the DN of Dynamic5QISet MOI.  allowedValues: DN of the Dynamic5QISet MOI. | type: String  multiplicity: 0..1  isOrdered: False  isUnique: True  defaultValue: None  isNullable: True |
| dynamic5QIs | It indicates the dynamically assigned 5QIs, including their QoS characteristics.  allowedValues: N/A | type: FiveQICharacteristics  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| fiveQIValue | It identifies the 5QI value.  allowedValues: 0 - 255 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: Yes  defaultValue: None  isNullable: False |
| resourceType | It indicates the Resource Type of a 5QI, as specified in TS 23.501 [2].  allowedValues: “GBR”, “Non-GBR” | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| priorityLevel | It indicates the Priority Level of a 5QI, as specified in TS 23.501 [2].  allowedValues: 0 - 127 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| packetDelayBudget | It indicates the Packet Delay Budget (in unit of 0.5ms) of a 5QI, as specified in TS 23.501 [2].  allowedValues: 0 - 1023 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| packetErrorRate | It indicates the Packet Error Rate of a 5QI, as specified in TS 23.501 [2].  allowedValues: N/A | type: PacketErrorRate  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| averagingWindow | It indicates the Averaging Window (in unit of ms) of a 5QI, as specified in TS 23.501 [2].  allowedValues: 0 - 4095 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| maximumDataBurstVolume | It indicates the Maximum Data Burst Volume (in unit of Byte) of a 5QI, as specified in TS 23.501 [2].  allowedValues: 0 - 4095 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| scalar | The Packet Error Rate of a 5QI expressed as *Scalar* x 10-k where k is the *Exponent*.  This attriutes indicates the *Scalar* of this expression.  allowedValues: 0 - 9 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| exponent | The Packet Error Rate of a 5QI expressed as *Scalar* x 10-k where k is the *Exponent*.  This attriutes indicates the *Exponent* of this expression.  allowedValues: 0 - 9 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| gtpUPathQoSMonitoringState | It indicates the state of GTP-U path QoS monitoring for URLLC service.  allowedValues: "Enabled", "Disabled". | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: Enabled  isNullable: False |
| gtpUPathMonitoredSNSSAIs | It specifies the S-NSSAIs for which the GTP-U path QoS monitoring is to be performed.  allowedValues: See 3GPP TS 23.003 [13] | type: S-NSSAI  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| monitoredDSCPs | It specifies the DSCPs for which the GTP-U path QoS monitoring is to be performed.  allowedValues: See 3GPP TS 29.244 [56] | type: Integer  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| isEventTriggeredGtpUPathMonitoringSupported | It indicates whether the event triggered GTP-U path QoS monitoring reporting based on thresholds is supported, see 3GPP TS 29.244 [56].  allowedValues: “Yes”, “No”. | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: Yes  isNullable: False |
| isPeriodicGtpUMonitoringSupported | It indicates whether the periodic GTP-U path QoS monitoring reporting is supported, see 3GPP TS 29.244 [56].  allowedValues: “Yes”, “No”. | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: Yes  isNullable: False |
| isImmediateGtpUMonitoringSupported | It indicates whether the immediate GTP-U path QoS monitoring reporting is supported, see 3GPP TS 29.244 [56].  allowedValues: “Yes”, “No”. | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: Yes  isNullable: False |
| gtpUPathDelayThresholds | It specifies the thresholds for reporting the packet delay for the GTO-U path QoS monitoring, if the isEventTriggeredGtpUPathMonitoringSupported attribute of the same MOI is set to “yes”.  The packet delay will be reported to SMF when it exceeds the threshold (in milliseconds).  allowedValues: N/A. | type: GtpUPathDelayThresholdsType  multiplicity: 1  isOrdered: Y  isUnique: N/A  defaultValue: None  isNullable: False |
| gtpUPathMinimumWaitTime | It specifies the minimum waiting time (in seconds) between two consecutive reports for event triggered GTP-U path QoS monitoring reporting, if the isEventTriggeredGtpUPathMonitoringSupported attribute of the same MOI is set to “yes”.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| gtpUPathMeasurementPeriod | It specifies the period (in seconds) for reporting the packet delay for GTP-U path QoS monitoring, if the isPeriodicGtpUMonitoringSupported attribute of the same MOI is set to “yes”.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| n3AveragePacketDelayThreshold | It specifies the threshold for reporting the average packet delay of a GTP-U path on N3 interface.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| n3MinPacketDelayThreshold | It specifies the threshold for reporting the minimum packet delay of a GTP-U path on N3 interface.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| n3MaxPacketDelayThreshold | It specifies the threshold for reporting the maxinum packet delay of a GTP-U path on N3 interface.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| n9AveragePacketDelayThreshold | It specifies the threshold for reporting the average packet delay of a GTP-U path on N9 interface.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| n9MinPacketDelayThreshold | It specifies the threshold for reporting the minimum packet delay of a GTP-U path on N9 interface.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| n9MaxPacketDelayThreshold | It specifies the threshold for reporting the maxinum packet delay of a GTP-U path on N9 interface.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| qFQoSMonitoringState | It indicates the state of QoS monitoring per QoS flow per UE for URLLC service.  allowedValues: "Enabled", "Disabled". | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: Enabled  isNullable: False |
| qFMonitoredSNSSAIs | It specifies the S-NSSAIs for which the QoS monitoring per QoS flow per UE is to be performed.  allowedValues: See 3GPP TS 23.003 [13] | type: S-NSSAI  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| qFMonitored5QIs | It specifies the 5QIs for which the QoS monitoring per QoS flow per UE is to be performed.  allowedValues: See 3GPP TS 23.501[2] | type: Integer  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| isEventTriggeredQFMonitoringSupported | It indicates whether the event based QoS monitoring reporting per QoS flow per UE is supported, see 3GPP TS 29.244 [56].  allowedValues: “Yes”, “No”. | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: Yes  isNullable: False |
| isPeriodicQFMonitoringSupported | It indicates whether the periodic QoS monitoring reporting per QoS flow per UE is supported, see 3GPP TS 29.244 [56].  allowedValues: “Yes”, “No”. | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: Yes  isNullable: False |
| isSessionReleasedQFMonitoringSupported | It indicates whether the session release based QoS monitoring reporting per QoS flow per UE is supported, see 3GPP TS 29.244 [56].  allowedValues: “Yes”, “No”. | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: Yes  isNullable: False |
| qFPacketDelayThresholds | It specifies the thresholds for reporting the packet delay between PSA and UE for QoS monitoring per QoS flow per UE, if the isEventTriggeredQFMonitoringSupported attribute of the same MOI is set to “yes”.”.  The packet delay will be reported by PSA UPF to SMF when it exceeds the threshold (in milliseconds).  allowedValues: see 3GPP TS 29.244 [56]. | type: QFPacketDelayThresholdsType  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| qFMinimumWaitTime | It specifies the minimum waiting time (in seconds) between two consecutive reports for event triggered QoS monitoring reporting per QoS flow per UE, if the isEventTriggeredQFMonitoringSupported attribute of the same MOI is set to “yes”.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| qFMeasurementPeriod | It specifies the period (in seconds) for reporting the packet delay for QoS monitoring per QoS flow per UE, if the isPeriodicQFMonitoringSupported attribute of the same MOI is set to “yes”.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| thresholdDl | It specifies the threshold for reporting the DL packet delay between PSA UPF and UE.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| thresholdUl | It specifies the threshold for reporting the UL packet delay between PSA UPF and UE.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| thresholdRtt | It specifies the threshold for reporting the round-trip packet delay between PSA UPF and UE.  allowedValues: see 3GPP TS 29.244 [56]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| predefinedPccRules | It specifies the predefined PCC Rules, see TS 25.503 [59].  allowedValues: N/A | type: PccRule  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| pccRuleId | It identifies the PCC rule.  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| flowInfoList | It is a list of IP flow packet filter information.  allowedValues: N/A | type: FlowInformation  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| applicationId | A reference to the application detection filter configured at the UPF.  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| appDescriptor | It is the ATSSS rule application descriptor.  allowedValues: see TS 29.571 [61]. | type: BitString  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| contentVersion | Indicates the content version of the PCC rule.  allowedValues: N/A | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| precedence | It indicates the order in which this PCC rule is applied relative to other PCC rules within the same PDU session.  allowedValues: 0..255. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| afSigProtocol | Indicates the protocol used for signalling between the UE and the AF. The default value is "NO\_INFORMATION".  allowedValues: “NO\_INFORMATION”, “SIP”. | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: “NO\_INFORMATION”  isNullable: False |
| isAppRelocatable | It indicates the application relocation possibility. The default value is "FALSE.  allowedValues: “TRUE”, “FALSE”. | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| isUeAddrPreserved | It Indicates whether UE IP address should be preserved.  The default value is "FALSE".  allowedValues: “TRUE”, “FALSE”. | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: “FALSE”  isNullable: False |
| qosData | It contains the QoS control policy data for a PCC rule.  allowedValues: N/A | type: QoSData  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| altQosParams | It contains the QoS control policy data for the Alternative QoS parameter sets of the service data flow. Only the "qosId" attribute, "5qi" attribute, "maxbrUl" attribute, "maxbrDl" attribute, "gbrUl" attribute and "gbrDl" attribute are applicable within the QosData data type. This data type represents an ordered list, where the lower the index of the array for a given entry, the higher the priority.  allowedValues: N/A | type: QoSData  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| trafficControlData | It contains the traffic control policy data for a PCC rule.  allowedValues: N/A | type: TrafficControlData  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| conditionData | It contains the condition data for a PCC rule.  allowedValues: N/A | type: ConditionData  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| tscaiInputUl | It contains transports TSCAI input parameters for TSC traffic at the ingress interface of the DS-TT/UE (uplink flow direction).  allowedValues: N/A | type: TscaiInputContainer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| tscaiInputDl | It contains transports TSCAI input parameters for TSC traffic at the ingress of the NW-TT (downlink flow direction).  allowedValues: N/A | type: TscaiInputContainer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| flowDescription | It defines a packet filter for an IP flow.  allowedValues: see TS 29.214 [62]. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| ethFlowDescription | It defines a packet filter for an Ethernet flow.  allowedValues: see TS 29.514 [62]. | type: EthFlowDescription  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| destMacAddr | It specifies the destination MAC address formatted in the hexadecimal notation according to clause 1.1 and clause 2.1 of IETF RFC 7042 [63].  Pattern: '^([0-9a-fA-F]{2})((-[0-9a-fA-F]{2}){5})$'.  allowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| ethType | A two-octet string that represents the Ethertype, as described in IEEE 802.3 [64] and IETF RFC 7042 [63] in hexadecimal representation.  Each character in the string shall take a value of "0" to "9" or "A" to "F" and shall represent 4 bits. The most significant character representing the 4 most significant bits of the ethType shall appear first in the string, and the character representing the 4 least significant bits of the ethType shall appear last in the string.  allowedValues: see IEEE 802.3 [64] and IETF RFC 7042 [63]. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| fDesc | It contains the flow description for the Uplink or Downlink IP flow. It shall be present when the ethtype is IP.  allowedValues: see flowDescription in TS 29.214 [62]. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| fDir | It indicates the packet filter direction.  allowedValues: "DOWNLINK", "UPLINK". | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| sourceMacAddr | It specifies the source MAC address formatted in the hexadecimal notation according to clause 1.1 and clause 2.1 of IETF RFC 7042 [63].  Pattern: '^([0-9a-fA-F]{2})((-[0-9a-fA-F]{2}){5})$'.  allowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| vlanTags | It specifies the Customer-VLAN and/or Service-VLAN tags containing the VID, PCP/DEI fields as defined in IEEE 802.1Q [65] and IETF RFC 7042 [63]. The first/lower instance in the array stands for the Customer-VLAN tag and the second/higher instance in the array stands for the Service-VLAN tag.  Each field is encoded as a two-octet string in hexadecimal representation. Each character in the string shall take a value of "0" to "9" or "A" to "F" and shall represent 4 bits. The most significant character representing the PCP/DEI field shall appear first in the string, followed by character representing the 4 most significant bits of the VID field, and the character representing the 4 least significant bits of the VID field shall appear last in the string.  If only Service-VLAN tag is provided, empty string for Customer-VLAN tag shall be provided.  allowedValues: see IEEE 802.1Q [65] and IETF RFC 7042 [63]. | type: String  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| srcMacAddrEnd | It specifies the source MAC address end. If this attribute is present, the sourceMacAddr attribute specifies the source MAC address start. E.g. srcMacAddrEnd with value 00-10-A4-23-3E-FE and sourceMacAddr with value 00-10-A4-23-3E-02 means all MAC addresses from 00-10-A4-23-3E-02 up to and including 00-10-A4-23-3E-FE.  allowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| destMacAddrEnd | It specifies the destination MAC address end. If this attribute is present, the destMacAddr attribute specifies the destination MAC address start.  allowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| packFiltId | It is the identifier of the packet filter.  allowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| packetFilterUsage | It indicates if the packet shall be sent to the UE.  The default value is "FALSE".  allowedValues: TRUE, FALSE | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: “FALSE”  isNullable: False |
| tosTrafficClass | It contains the Ipv4 Type-of-Service and mask field or the Ipv6 Traffic-Class field and mask field.  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| spi | It is the security parameter index of the IPSec packet, see IETF RFC 4301 [66].  allowedValues: see IETF RFC 4301 [66]. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| flowLabel | It specifies the Ipv6 flow label header field.  AllowedValues: N/A | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| flowDirection | It indicates the direction/directions that a filter is applicable.  AllowedValues: “DOWNLINK”, “UPLINK”, “BIDIRECTIONAL”, “UNSPECIFIED”. | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| qosId | It identifies the QoS control policy data for a PCC rule.  AllowedValues: N/A | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| maxbrUl | It represents the maximum uplink bandwidth formatted as follows:  Pattern: '^\d+(\.\d+)? (bps|Kbps|Mbps|Gbps|Tbps)$', see TS 29.512 [60].  Examples:  "125 Mbps", "0.125 Gbps", "125000 Kbps"  AllowedValues: N/A | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| maxbrDl | It represents the maximum downlink bandwidth formatted as follows:  Pattern: '^\d+(\.\d+)? (bps|Kbps|Mbps|Gbps|Tbps)$', see TS 29.512 [60].  Examples:  "125 Mbps", "0.125 Gbps", "125000 Kbps".  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| gbrUl | It represents the guaranteed uplink bandwidth formatted as follows:  Pattern: '^\d+(\.\d+)? (bps|Kbps|Mbps|Gbps|Tbps)$', see TS 29.512 [60].  Examples:  "125 Mbps", "0.125 Gbps", "125000 Kbps".  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| gbrDl | It represents the guaranteed downlink bandwidth formatted as follows:  Pattern: '^\d+(\.\d+)? (bps|Kbps|Mbps|Gbps|Tbps)$', see TS 29.512 [60].  Examples:  "125 Mbps", "0.125 Gbps", "125000 Kbps".  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| extMaxDataBurstVol | It denotes the largest amount of data that is required to be transferred within a period of 5G-AN PDB, see TS 29.512 [60].  AllowedValues: 4096..2000000. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| arp | It indicates the allocation and retention priority.  AllowedValues: N/A. | type: ARP  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| ARP.priorityLevel | It defines the relative importance of a resource request.  AllowedValues: 1..15. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| preemptCap | It defines whether a service data flow may get resources that were already assigned to another service data flow with a lower priority level.  AllowedValues: "NOT\_PREEMPT", "MAY\_PREEMPT". | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| preemptVuln | It defines whether a service data flow may lose the resources assigned to it in order to admit a service data flow with higher priority level.  AllowedValues: "NOT\_PREEMPTABLE", "PREEMPTABLE". | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| qosNotificationControl | It indicates whether notifications are requested from 3GPP NG-RAN when the GFBR can no longer (or again) be guaranteed for a QoS Flow during the lifetime of the QoS Flow. The default value is "FALSE".  AllowedValues: "TRUE", "FALSE". | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: “FALSE”  isNullable: False |
| reflectiveQos | Indicates whether the QoS information is reflective for the corresponding non-GBR service data flow. The default value is "FALSE".  AllowedValues: "TRUE", "FALSE". | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: “FALSE”  isNullable: False |
| sharingKeyDl | It indicates, by containing the same value, what PCC rules may share resource in downlink direction.  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| sharingKeyUl | It indicates, by containing the same value, what PCC rules may share resource in uplink direction.  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| maxPacketLossRateDl | It indicates the downlink maximum rate for lost packets that can be tolerated for the service data flow.  AllowedValues: 0..1000. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| maxPacketLossRateUl | It indicates the uplink maximum rate for lost packets that can be tolerated for the service data flow.  AllowedValues: 0..1000. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: True |
| tcId | It univocally identifies the traffic control policy data within a PDU session.  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| flowStatus | It represents whether the service data flow(s) are enabled or disabled. The default value is "ENABLED". See TS 29.514 [67].  AllowedValues: “ENABLED-UPLINK”, “ENABLED-DOWNLINK”, “ENABLED”, “DISABLED”, “REMOVED”. | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: “ENABLED”  isNullable: False |
| redirectInfo | It indicates whether the detected application traffic should be redirected to another controlled address.  AllowedValues: N/A. | type: RedirectInformation  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: “ENABLED”  isNullable: False |
| addRedirectInfo | It contains the additional redirect information indicating whether the detected application traffic should be redirected to another controlled address.  AllowedValues: N/A. | type: RedirectInformation  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: “ENABLED”  isNullable: False |
| redirectEnabled | It indicates whether the redirect instruction is enabled.  AllowedValues: "TRUE", "FALSE". | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| redirectAddressType | It indicates the type of redirect address, see TS 29.512 [60].  AllowedValues: " IPV4\_ADDR", "IPV6\_ADDR", “URL”, “SIP\_URI”. | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| redirectServerAddress | It indicates the address of the redirect server.  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| muteNotif | It indicates whether applicat'on's start or stop notification is to be muted. The default value is "FALSE".  AllowedValues: "TRUE", "FALSE". | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: “FALSE”  isNullable: False |
| trafficSteeringPolIdDl | It references to a pre-configured traffic steering policy for downlink traffic at the SMF, see TS 29.512 [60].  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| trafficSteeringPolIdUl | It references to a pre-configured traffic steering policy for uplink traffic at the SMF, see TS 29.512 [60].  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| routeToLocs | It provides a list of location which the traffic shall be routed to for the AF request.  AllowedValues: N/A. | type: RouteToLocation  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| traffCorreInd | It indicates the traffic correlation.  AllowedValues: "TRUE", "FALSE". | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: “FALSE”  isNullable: False |
| dnai | It represents the DNAI (Data network access identifier), see 3GPP TS 23.501 [2].  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| routeInfo | It provides the traffic routing information.  AllowedValues: N/A. | type: RouteInformation  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| ipv4Addr | It defines the Ipv4 address of the tunnel end point in the data network, formatted in the "dotted decimal" notation.  Pattern: '^(([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.){3}([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])$'.  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| ipv6Addr | It defines the Ipv6 address of the tunnel end point in the data network.  Pattern: '^((:|(0?|([1-9a-f][0-9a-f]{0,3}))):)((0?|([1-9a-f][0-9a-f]{0,3})):){0,6}(:|(0?|([1-9a-f][0-9a-f]{0,3})))$'  and  Pattern: '^((([^:]+:){7}([^:]+))|((([^:]+:)\*[^:]+)?::(([^:]+:)\*[^:]+)?))$'.  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| portNumber | It defines the UDP port number of the tunnel end point in the data network, see TS 29.571 [61].  AllowedValues: N/A. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| routeProfId | It identifies the routing profile.  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| upPathChgEvent | It contains the information about the AF subscriptions of the UP path change.  AllowedValues: N/A. | type: UpPathChgEvent  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| notificationUri | It provides notification address (Uri) of AF receiving the event notification.  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| notifCorreId | It is used to set the value of Notification Correlation ID in the notification sent by the SMF, see TS 29.512 [60].  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| dnaiChgType | It indicates the type of DNAI change, see TS 29.512 [60].  AllowedValues: “EARLY”, “EARLY\_LATE”, “LATE”. | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| afAckInd | It identifies whether the AF acknowledgement of UP path event notification is expected.The default value is "FALSE".  AllowedValues: “TRUE”, “FALSE”. | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: “FALSE”  isNullable: False |
| steerFun | It indicates the applicable traffic steering functionality, see TS 29.512 [60].  AllowedValues: “MPTCP”, “ATSSS\_LL”. | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| steerModeDl | It provides the traffic distribution rule across 3GPP and Non-3GPP accesses to apply for downlink traffic.  AllowedValues: N/A. | type: SteeringMode  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| steerModeUl | It provides the traffic distribution rule across 3GPP and Non-3GPP accesses to apply for uplink traffic.  AllowedValues: N/A. | type: SteeringMode  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| mulAccCtrl | It indicates whether the service data flow, corresponding to the service data flow template, is allowed or not allowed. The default value is "NOT\_ALLOWED".  AllowedValues: "ALLOWED", "NOT\_ALLOWED". | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: "NOT\_ALLOWED"  isNullable: False |
| steerModeValue | It indicates the value of the steering mode, see TS 29.512 [60].  AllowedValues: “ACTIVE\_STANDBY”, “LOAD\_BALANCING”, “SMALLEST\_DELAY”, “PRIORITY\_BASED”. | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| active | It indicates the active access, see TS 29.571 [61].  AllowedValues: "3GPP\_ACCESS", "NON\_3GPP\_ACCESS". | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| standby | It indicates the Standby access, see TS 29.571 [61].  AllowedValues: "3GPP\_ACCESS", "NON\_3GPP\_ACCESS". | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| threeGLoad | It indicates the traffic load to steer to the 3GPP Access expressed in one percent.  AllowedValues: 0..100. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| prioAcc | It indicates the high priority access, see TS 29.571 [61].  AllowedValues: "3GPP\_ACCESS", "NON\_3GPP\_ACCESS". | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| condId | It uniquely identifies the condition data.  AllowedValues: N/A. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| activationTime | It indicates the time (in date-time format) when the decision data shall be activated, see TS 29.512 [60] and TS 29.571 [61].  AllowedValues: N/A. | type: DateTime  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| deactivationTime | It indicates the time (in date-time format) when the decision data shall be deactivated, see TS 29.512 [60] and TS 29.571 [61].  AllowedValues: N/A. | type: DateTime  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| accessType | It provides the condition of access type of the UE when the session AMBR shall be enforced, see TS 29.512 [60].  AllowedValues: "3GPP\_ACCESS", "NON\_3GPP\_ACCESS". | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| ratType | It provides the condition of RAT type of the UE when the session AMBR shall be enforced, see TS 29.512 [60] and TS 29.571 [61].  AllowedValues: "NR", "EUTRA", “WLAN”, “VIRTUAL”, “NBIOT”, “WIRELINE”, “WIRELINE\_CABLE”, “WIRELINE\_BBF”, “LTE-M”, “NR\_U”, “EUTRA\_U”, “TRUSTED\_N3GA”, “TRUSTED\_WLAN”, “UTRA”, “GERA”. | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| periodicity | It identifies the time period between the start of two bursts in reference to the TSN GM.  AllowedValues: see TS 29.571 [61]. | type: integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| burstArrivalTime | Indicates the arrival time (in date-time format) of the data burst in reference to the TSN GM.  AllowedValues: see TS 29.571 [61]. | type: DateTime  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |