**3GPP TSG-SA5 Meeting #141-e *S5-221402***

**e-meeting, 17 - 26 January 2022**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | 28.622 | **CR** | **0138** | **rev** | - | **Current version:** | 17.0.0 |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Rel-17 CR 28.622 Add data type to enable operations such as threshold monitoring or data collection according to a schedule | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | adNRM | | | | |  | ***Date:*** | | | 2021-01-07 |
|  |  | | | |  | |  | | |  |
| ***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-15 (Release 15) Rel-16 (Release 16)*  *Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Add data type to enable operations based on a time schedule | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add choice Scheduler to enable operations according to a time schedule | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | No option to activate/deactive operations according to a time schedule | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.3.A, 4.3.B, 4.4.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 28.623 CR 0143 | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

***First change***

4.3.A Scheduler <<choice>>

4.3.A.1 Definition

This <<choice>> defines a method to activate or deactivate a functionality according to a schedule. It is a choice between the control parameter required for the scheduling methods, whose presence select the scheduling methods as follows:

If the attributes startTime and endTime are present, the MnS producer shall start and stop the functionality according to these configured parameter values.

If the attribute timeIntervals is present, a repetitive functionality is requested. Several intervals per day can be configured. The periodicity is determined either by attribute daysOfWeek in case of weekly periodicity, daysOfMonth in case of monthly periodicity or specialDays in case of yearly periodicity. If none of these three attributes are present the periodicity is daily.

4.3.A.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **S** | **isReadable** | **isWritable** | **isInvariant** | **isNotifyable** |
| CHOICE 1.1 startTime | CM | T | T | F | T |
| CHOICE 1.2 endTime | CO | T | T | F | T |
| CHOICE 2.1 timeIntervals | CM | T | T | F | T |
| CHOICE 3.1 timeIntervals | CM | T | T | F | T |
| CHOICE 3.2 daysOfWeek | CM | T | T | F | T |
| CHOICE 4.1 timeIntervals | CM | T | T | F | T |
| CHOICE 4.2 daysOfMonth | CM | T | T | F | T |
| CHOICE 5.1 timeIntervals | CM | T | T | F | T |
| CHOICE 5.2 specialDays | CM | T | T | F | T |

4.3.A.3 Attribute constraints

|  |  |
| --- | --- |
| Name | Definition |
| CHOICE 1.1 startTime CHOICE 1.2 endTime | These attributes shall be supported, when the MnS producer supports a service for a configured one-time interval. |
| CHOICE 2.1 timeIntervals | This attribute shall be supported, when the MnS producer supports daily repetitive interval-based functionality. |
| CHOICE 3.1 timeIntervals CHOICE 3.2 daysOfWeek | This attribute shall be supported, when the MnS producer supports weekly repetitive interval-based functionality. |
| CHOICE 4.1 timeIntervals CHOICE 4.2 daysOfMonth | This attribute shall be supported, when the MnS producer supports monthly repetitive interval-based functionality. |
| CHOICE 5.1 timeIntervals CHOICE 5.2 specialDays | This attribute shall be supported, when the MnS producer supports yearly repetitive interval-based functionality. |

4.3.A.4 Notifications

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

4.3.B TimeInterval <<dataType>>

4.3.B.1 Definition

This data type defines a time interval within one day. If the whole day shall be selected, intervalStart shall be set to 00:00 and intervalEnd shall be set to 24:00.

4.3.B.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute Name** | **S** | **isReadable** | **isWritable** | **isInvariant** | **isNotifyable** |
| intervalStart | M | T | T | F | T |
| intervalEnd | M | T | T | F | T |

4.3.B.3 Attribute constraints

None

4.3.B.4 Notifications

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

***Next change***

4.4.1 Attribute properties

The following table defines the properties of attributes specified in the present document.

| **Attribute Name** | **Documentation and Allowed Values** | **Properties** |
| --- | --- | --- |
| startTime | It indicates the time (in "date-time" format) when the service shall be started.  AllowedValues: N/A. | type: DateTime  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| endTime | It indicates the time (in "date-time" format) when the service shall be stopped.  AllowedValues: N/A. | type: DateTime  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| timeIntervals | List of intervals within one day for which the service shall be active. | type: TimeInterval  multiplicity: \*  isOrdered: True  isUnique: True  defaultValue: No value  isNullable: False |
| intervalStart | It indicates the time (in "full-time" format) when the service shall be started.  Editor's Note: Type FullTime needs to be specified in common definitions.  AllowedValues: N/A. | type: FullTime  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| intervalEnd | It indicates the time (in "full-time" format) when the service shall be stopped.  AllowedValues: N/A. | type: FullTime  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| daysOfWeek | It indicates the days on which the service shall be scheduled in case of weekly repetition. The intervals per day are configured by attribute timeIntervals.  AllowedValues:  - Monday  - Tuesday  - Wednesday  - Thursday  - Friday  - Saturday  - Sunday | type: ENUM  multiplicity: \*  isOrdered: False  isUnique: True  defaultValue: None  isNullable: False |
| daysOfMonths | It indicates the days in a month on which the service shall be scheduled in case of monthly repetition. Value 0 presents the last day of the month. The intervals per day are configured by attribute timeIntervals.  AllowedValues: 0,1,…31 | type: Integer  multiplicity: \*  isOrdered: True  isUnique: True  defaultValue: No value  isNullable: False |
| specialDays | It indicates the days in a year on which the service shall be scheduled in case of yearly repetition. The intervals per day are configured by attribute timeIntervals. Possible allowed values are 'NewYear', 'EasterMonday', 'LabourDay'. | type: string  multiplicity: \*  isOrdered: False  isUnique: True  defaultValue: None  isNullable: False |
| NOTE 1: The value of this attribute is identical to that of the same attribute in clause 9.4.2 of ETSI GS NFV-IFA 008 [16].  NOTE 2: The value of this attribute is identical to that of the same attribute included in vnfConfigurableProperty in clause 9.4.2 of ETSI GS NFV-IFA 008 [16].  NOTE 3: The presence of the attribute vnfParametersList, whose vnfInstanceId with a string length of zero, in createMO operation can trigger the instantiation of the related VNF/VNFC instances.  NOTE 4: The GP defines the measurement data production rate. The supported rates are dependent on the capacity of the producer involved (e.g. the processing power of the producer, the complexity of the measurement type involved etc) and therefore, it cannot be standardized for all producers involved. The supported GPs reflects the agreement between producer and the consumer involved.  NOTE 5: The monitoring granularity period defines the measurements monitoring period. The supported monitoring periods are dependent on the capacity of the producer involved (e.g. the processing power of the producer, the complexity of the measurement type involved etc) and therefore, it cannot be standardized for all producers involved. The supported monitoring GPs reflect the agreement between producer and the consumer involved.  NOTE 6: The supported threshold levels are dependent on the capacity of the producer involved (e.g. the processing power of the producer, number of measurements being measured by the producer at the time, the complexity of the measurement type involved etc) and therefore, it cannot be standardized for all producers involved. The supported levels can only reflect the negotiated agreement between producer and the consumer involved. | | |

4.4.2 Constraints

None

***End of changes***