**S5-241993**

**3GPP TSG-SA5 Meeting #154 *revision of* S5-241419**

**15 - 19 April 2024, Changsha, Hunan, China**

**Source: Nokia**

**Title: CCL scope management**

**Document for: Approval**

**Agenda Item: 6.19.4**

# 1 Decision/action requested

**Discuss and agree on the text**

# 2 References

[1] 3GPP TR 28.867-010 “Closed control loop management”.

# 3 Rationale

CCLs automate the management of network resources thereby taking control away from operators, so CCLs need to be managed including the scope for which the CCL may collect data or which the CCL’s actions may impact. This pCR introduces the use cases for management of Closed Control Loops scopes.

# 4 Detailed proposal

***Start of First change***

# 5. Use Cases

5.Y3 Use case X3: CCL control-scope management

5.Y3.1 Description

Each CCL should have a specific control-scope for which it is responsible. The whole network may be assumed to be a p-dimensional space *Sp* from which subregions d*p* Є D maybe created. Accordingly, *Sp* is the full scope space whose dimension may include time, geography, etc. as showed in Table 1 while d*p* Є D can be CCL’s control-scope. In that respect, scope assignment is the mapping of CCLs to regions dЄD that are part of the network’s full scope S. There may be 2 types of scopes – the measurement scope where related measurements are collected and the impact scope which is the scope to which the CCLs actions may have impact. The scopes for the different CCLs can be configured by the Mns consumer.

The CCL MnS producer should enable the MnS consumer to configure the control-scopes of the CCL.

Table 1: Example scope-space map from which the control-scope of CCL may be derived. Note that some of these are nit modelled in the NRM. They may either be added to the NRM or left out in the slution

|  |  |  |
| --- | --- | --- |
| Scope dimension | Granularity | Example values to be assigned |
| Time | Seconds, minutes, days | * Every hour,
* Every Saturday at 2:00 hours
 |
| Network domains |  | * Radio,
* Core,
 |
| Geography | Area | * City x
* Street y in City x
 |
| Network Elements  | gNB | * gNB X
 |
| Cells | * Cell A on gNB X
 |
| Terminals  | * users
 |
|  |  |
| Resources | slices |  |
| Network Function | * Virtual Network Function A
* Physical Network Function B
 |
| Virtual Machine |  |
| Transport containers (links, flows, …) | * an identifiable link,
* a specific flow
 |
| : |  |  |

5.Y3.2 Potential Requirements

5.Y3.3 Potential Solutions

TBD

5.Y3.4 Evaluation of solutions

TBD

|  |
| --- |
| **End of modifications** |