**3GPP TSG-SA5 Meeting #156S5-244625**

**Maastricht, Netherlands, 19 – 23 August 2024** revision of S5-243774

**Source: Nokia, Nokia Shanghai Bell**

**Title: TR28.866 pCR add NF Scaling & dimensioning use case in MDA management data correlation analytics**

**Document for: Approval**

**Agenda Item: 6.19.2**

# 1 Decision/action requested

***The group is*** ***asked to discuss and agree on the proposal.***

# 2 References

[1] 3GPP TR 28.866-020 “Study on Management Data Analytics (MDA) – Phase 3”.

# 3 Rationale

The data from different aspects of the network are correlated, that in many cases real analytics value comes from leveraging the correlation among the data. This pCR is to add an MDA use cases on correlation of data for different uses and from different sources.

# 4 Detailed proposal

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| **1st Change** |

## 5.3 Data correlation analytics

### 5.3.x Use case x: correlation analytics for NF Scaling and dimensioning

#### 5.3.x.1 Description

Performance metrics (performance measurements, KPIs) generated by a Network Function (NF) or related NFs may exhibit correlation and association patterns. These patterns can be leveraged to derive NF correlation or dependency relationships, which are valuable inputs for network performance optimization scenarios such as scaling and dimensioning.

- For performance optimization scenarios (e.g., NF scaling, dimensioning), correlation/association analysis of NF measurement data can yield NF dependency/correlation patterns related to NF scaling and network resource utilization. The analysis output may include recommendations for performance opimization (e.g., optimizing NF scaling and dimensioning).

- Correlation analytics may be refreshed regularly as correlation relationships can vary across different locations and time periods.

##### 5.3.x.2 Potential requirements

**REQ-MDA-CORE-X:** MDA capability for correlation analytics for NF scaling and dimensioning should include the capability for NF dependency/correlation pattern recognition with respect to NF scaling or NF resource usage for dimensioning, and predict recommendations of NF scaling and dimensioning optimization in a coordinated manner.

#### 5.3.x.3 Potential solution #1

* Introduce new information attributes in MDA analytics output (e.g., RecommendedAction) to encapsulate recommendations for NF scaling and dimensioning optimization. The solution may include the following attributes:
	+ Information Attributes indicating the proportional information among the NF for scaling or dimentioning optimization.
	+ Optional information attribute indicating the ordering information for NF scaling
* The information elements can be included within the analytics report generated by the MDA.
	+ The information elements may be contained a set of recommendations for both 3GPP and non-3GPP NFs.

#### 5.3.x.4 Evaluation of solutions

Potential solution #1 is proposed, the requirement is satisfied and this solution is feasible for normative work.

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| **Next Change** |

## 6.x Data correlation analytics

The use case, requirements and solution for Use case: correlation analytics for NF Scaling and dimensioning in clause 5.3.x. It is recommended to add new information elements in the MDA analytics output for NF Scaling and dimensioning correlation analytics in TS 28.104 [2] to support providing NF Scaling and dimentioning information in the analytics output. The detailed solution is described in clause 5.3.x.3.

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| **End Change** |