**3GPP TSG-SA5 Meeting #143-e *S5-223416***

**e-meeting, 9- 17May 2022**

**Source: CMCC, Huawei**

**Title: pCR TR 28.830 Add solution of key issue service outage**

**Document for: Approval**

**Agenda Item: 6.5.7.2**

# 1 Decision/action requested

***The group is asked to discuss and approve the proposal.***

# 2 References

[1]  [[SP-220153](C:\\Users\\gwx350375\\Downloads\\Docs\\SP-220153.zip" \t "_blank)](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3693): "New SID on Fault Supervision Evolution"

[2] S5-222733: "draft TR 28.830 Fault supervision evolution"; v0.1.0

# 3 Rationale

This document describes how to use anomaly event management service to automatically process and correlate multi-dimensional data to quickly identify and generate batch service outage anomaly event of wireless base stations and eliminate manual information check.

It is proposed to add solution of key issue service outage in draft TR 28.830.

# 4 Detailed proposal

This document proposes the following changes in TR 28.830.

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| **1st Change** |

# 5 Key Issues and potential solutions

## 5.X Key Issue #1: Service outage

### 5.X.1 Description

Editor’s note: This clause provides a description of the key issue.

### 5.X.2 Potential solutions

#### 5.X.2.a Potential solution #<1>: <Service outage>

##### 5.X.2.a.1 Introduction

Editor's Note: This clause describes briefly the potential solution at a high-level.

This section describes how to identify and resolve service outage anomaly events.

##### 5.X.2.a.2 Description

Editor's Note: This clause further details the potential solution and any assumptions made.

An example of of service outage anomaly event processing is as follows:

(1) Awareness: Collects data such as gNB out of service alarms, resource utilization information, network topology data, etc.

(2) Analytics:

- Anomaly event identification: performs service outage anomaly event feature matching according to policy or AI/ML method. The gNB out-of-service alarms are correlated and analyzed, e.g., based on time window correlation. The service outage anomaly event is generated if the feature matching succeeds.

- Anomaly event diagnosis, demarcation, and solution recommendation: performs alarm correlation to find the root cause of the gNB service outage anomaly event, and recommend recovery solutions.

(3) Decision: provides service outage anomaly event evaluation, and resolution decision.

(4) Execution: delivers corresponding recovery measures according to the diagnosis result and selected solution.

### 5.X.3 Conclusion - Impact on normative work

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| **End of change** |