



Operation Process Reengineering of Mobile Network based on Incidents Management and Event Management

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ABSTRACT-

Analysis of performance monitoring process of Mobile communication network operation

I. Introduction

Mobile communication network operation process study, analysis, observation of performance criteria, investigation of performance factors, root cause analysis of process failures, resolution, and evaluation based on alarms and event management.

Context- As 5G and network application virtualisation adds new layers of technical and operational complexity to the network and the number of physical and virtual network elements grows significantly more operational automation capability is required to sustainably deliver the promised levels of efficiency, agility, and new service support to the customers.

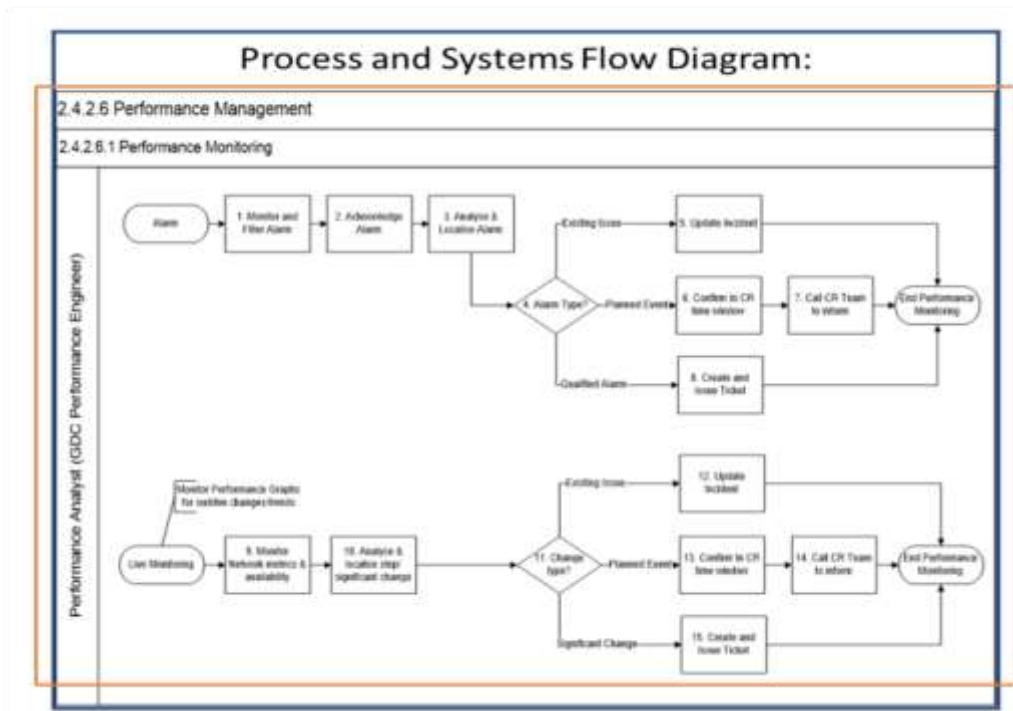
The Research focuses on:

- *The optimisation and automation of operational tasks, aimed at increased consistency, efficiency, and accuracy, leading to improved network performance.*
- *Finding opportunities / use cases to reduce TCO of the network for the benefit of Telecom Operator (e.g., energy savings)*
- *The automation of E2E service practice provisioning, leading to improved network agility, shorter service deployment times and optimized resource usage.*

The Research initial scope comprises of Three Use Case initiatives:

- *UC04 – Alarm Monitoring and Ticket Creation*
- *UC05 - Auto Incident Creation for Environmental Alarms*
- *UC09 - Auto incident creation for Performance Degradation*

The research related to network monitoring and incident id creation, process flow of incident tracking, performance degradation and resolution with feedback.



II. Literature Review

A) Project Charter

i-Business Justification

ii- Process Engineering

iii-Purpose and scope

iv-Domain Analysis

B)-Out of Scope Documents

C)-Assumption Documents

D) Constraints Documents

E) Stakeholders Analysis

F) Meeting and Governance

G) Change Management

III. Research Objectives

Research problem to address.

- i) Analysis on alarm monitoring process
- ii) Analysis on performance monitoring Process
- iii) Analysis on alarms monitoring resolution with feedback.
- iv) Analysis on Performance monitoring process and improvement

IV. Research Questions or Hypotheses

>The Facility Domain accounts for 22% of all incidences created across all Domains. The fifteen environmental alarms targeted for auto incident creation in UC05 account for 99% of all alarm events within this Domain.

>The 16 Radio alarms targets for auto incident creation in UC04 account for 97% of all alarm events within this Domain

