

*Service Management Delivery Services*

**ZTE Integration**

**Link Broken Policy**

**Low Level Design Documentation (LLD)**

**Prepared for:**

****

**V1.01**

**Final**

© Innovise ESM 2011Document Control

Version History

|  |  |  |  |
| --- | --- | --- | --- |
| Version  Number | Revision  Date | Summary of Changes  (List the reason for each version of the document) | Author(s) |
| V1.0 |  | Original |  |
| V1.01 | 22 December 2011 | Updated to show new Hibernation requirement | Chris Janes |
|  |  |  |  |

Table of Contents

[1 Introduction 4](#_Toc311206015)

[1.1 Document Objective 4](#_Toc311206016)

[2 High Level Algorithm 5](#_Toc311206017)

[2.1 Describe function 5](#_Toc311206018)

[3 Pre-requisites 6](#_Toc311206019)

[3.1 Rules File 6](#_Toc311206020)

[3.2 TSRM Classification 6](#_Toc311206021)

[3.3 Data Sources 6](#_Toc311206022)

[3.4 Customized Functions 6](#_Toc311206023)

[4 Policy Details 7](#_Toc311206024)

[4.1 Event Reader 7](#_Toc311206025)

[4.2 Synthetic Event 7](#_Toc311206026)

[4.3 Low Level Algorithm **Error! Bookmark not defined.**](#_Toc311206027)

[4.3.1 Processing A Link Broken Event 8](#_Toc311206028)

[4.4 Low Level Flow Chart 9](#_Toc311206029)

[4.4.1 ML\_ZTE\_LinkBroken 9](#_Toc311206030)

# Introduction

## Document Objective

This Low Level Design intends to describe the requirements for ZTE Link Down Policy

# High Level Algorithm

## Describe function

* The following are events that indicate ‘The link between the Server and the NE Agent is broken’.
* These Network events should be suppressed from Synthetic Event generation for a specified period of time
* If the event clears within this period then no further action is required.
* These Network events should create a Synthetic Event for each ‘BSC Location’
* The Synthetic Event should have a summary “<Number of NEs having alarm> of <Location> in disconnected state from EMS”
* The Synthetic Event should have a JournalText field detailing the associated Network Events
* A Incident record should be generated for each Synthetic Event

# Pre-requisites

## Rules File

The EventId is based on the event Summary, as shown in the table below.

|  |  |
| --- | --- |
| **EventId** | **Summary** |
| NET\_ZTE\_LINKBROKEN\_001 | The link between the Server and the NE Agent is broken’ |

The following Fields will be populated by the rules file

ExtendedAttr = AMOID extracted from token ‘AI\_VS\_OTHER\_TOPOLOGICAL\_ID’

SiteCode = BSC Code extracted from ‘AMOID’

SourceNode = BSC Location extracted from ‘AMOID’

=

## TSRM Classification

The following classification should be added in TSRM

|  |  |
| --- | --- |
| **EventId** | **Classification** |
| NET\_ZTE\_LINKBROKEN\_001 | TBA |

## Data Sources

The following Netcool/Impact data types are required for this policy:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Impact Data Source** | **Impact Data Type** | **Data Base Name** | **Table Name** | **Fields** |
| defaultobjectserver | OS\_Status | Object Server | Alerts.status | **Not required** |
|  |  |  |  |  |

## Customized Functions

This policy used 2 customized functions:

* MobiLib.getSleepTime ()
* MobiLib.AddGenericJournal ()

# Policy Details

## Event Reader

**EventReader Name:** ml\_defaulteventreader

**Policy name:** ML\_ZTE\_LinkBroken

**Filter:** ImpactFlag = 4 and EventId = ’NET\_ZTE\_LINKBROKEN\_001' and HibernateFlag = 0 and Agent != 'Netcool Impact' and MaintFlag in (1,2)

## Synthetic Event

The synthetic event to be raised should be populated with data as shown in the table below

|  |  |
| --- | --- |
| **Field Name** | **Value** |
| Node | @SiteCode |
| Summary | “<Number of NEs having alarm> of <Location> in disconnected state from EMS” |
| AlertGroup | ZTE Link Broken |
| AlertKey | @BSC\_Name |
| Severity | 4 |
| Type | 1 |
| FirstOccurrence | Current Time |
| LastOccurrence | CurrentTime |
| Class | tba |
| Domain | @Domain |
| ManCity | @ ManCity |
| CovCity | @ CovCity |
| BSC\_Name | @ BSC\_Name |
| Region | @ Region |
| Site | @Site |
| Network | @Network |
| LogTicket | 0 |
| ImpactFlag | 2 |
| OutsourceContractor | @ OutsourceContractor |
| BusImportance | @ BusImportance |
| OmcEms | @ OmcEms |
| MaintFlag | @MaintFlag |
| AdvCorrServerSerial | @ServerSerial |
| EventId | SYN\_ZTE\_LINKBROKEN\_001 |
| OwnerUID | 65534 |
| Agent | Netcool Impact |
| TTHibernate | 60 |
| SourceNode | BSC Location |
| JournalText | ‘Details of Associated Network Events’ |
|  |  |
|  |  |
|  |  |

## Hibernation Period

|  |  |
| --- | --- |
| **Count of NEs having link broken alarms** | **Hibernation Time** |
| Single BSC | 20 Minutes |
| Multiple BSCs of same location with event time within 5Mins Time Window | 10 Minutes |
| Multiple BSCs of different location but event time is within 5Mins Time Window | 10 Minutes |

## Low Level Algorithm

### Processing A Link Broken Event

* Event Enters Policy as defined by Event Reader
* Set @ImpactFlag = 5
* Look for associated Synthetic Event
* If there is no associated Synthetic Event
* Calculate Hibernation Period
* Hibernate
* Check that the Network Event still exists
* Create Synthetic Event
* Update Synthetic Event.JournalText with Network Event Details
* Update Network Event with Synthetic Event Details
* Update Network Event with Incident Record Details
* Get the number of Network Events associated with this Synthetic Event with a distinct BSC Code
* Update Synthetic Event with the number of associated Distinct Network Events
* Set @ImpactFlag = 6

## Low Level Flow Chart

### ML\_ZTE\_LinkBroken

