# BNSI equipment alarms

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| **Version** | **Date** | **Author** | **Description** |
| 0.0 | 16th Nov 2011 | Chris Janes | Original |
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## Description

This policy deals with equipment alarms from the BNSI domain.

DIMM related alarms are a special case and require aggregation using a synthetic event. DIMM alarms do not receive clearance alarms, and the related trouble ticket is manually cleared from TSRM itself.

## HLD:

Certain BNSI Critical Hardware alarms are generated when particular memory module (DIMM) errors are detected. Where the event relates to multiple DIMM failures, the underlying individual failures should be associated as child events of the parent multiple failure event. The child events will be identified by Mobilink to store in the ccmdb.

As there is no clearing event for these, these events should be cleared when the associated TT is closed. This is the opposite action to all other events.  
 For non-DIMM related critical hardware related event, TTs should be created after a specified wait time, to allow short-term events to clear without TT generation.



## Pre-requisite

1. Map added into TSRM between EventId “SYN\_IN\_EQP\_01” and classification xxx
2. Map added into TSRM between EventId “NET\_IN\_EQP\_02” and classification xxy

## Event Filter:

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| --- | --- | --- | --- |
| **Alarm description** | **Field** | **Value** | **EventId** |
| BNSI equipment alarm DIMM alarm | Summary | OEM:in3ce2:secondary error from DVMA read transaction  Location = ??? | NET\_IN\_EQP\_001 |
| BNSI equipment alarm DIMM alarm | Summary | OEM:in13ce1:in13ce1:FJSVmadm:A:Cabinet#0-SB#00-SLOT#C01:kern:Memory Correctable error  Location = ??? | NET\_IN\_EQP\_001 |
| BNSI equipment alarm DIMM alarm | Summary | OEM:in11ce1:Memory Intermittent single bit error from COS02-SLOT#AOO(1663 Times/hour)"  Location = “COS02-SLOT” | NET\_IN\_EQP\_001 |
| BNSI equipment alarm | Summary | OEM:in8ce1:Critical on Host in8ce1: S80 #020, S80 #070, Enclosure disconnected, | NET\_IN\_EQP\_002 |
| BNSI equipment alarm | Summary | OEM:in6ce1:Information\* on Host Information\* on Host in6ce1: S80 #020, Temperature is above working limit (ctlr, enclosure, unit) = (1, 0, 2) - Event Code: 327: S80 #, Temperature is above working limit (ctlr, enclosure, unit) = (, , ) - Event Code: | NET\_IN\_EQP\_002 |
| BNSI equipment alarm | Summary | OEM:in6ce1:Information\* on Host Information\* on Host in6ce1: S80 #010, Controller entered conservative cache mode (ctlr, param) = (2, 0) - Event Code: 411: S80 , Controller entered conservative cache mode (ctlr, param) = (, ) - Event Code: | NET\_IN\_EQP\_002 |
| BNSI equipment alarm | Summary | OEM:in5ce1:WARNING: /pci@WARNING: /pci@81,2000/fibre-channel@1/sd@1,0 (sd370):  Error | NET\_IN\_EQP\_002 |
| BNSI equipment alarm | Summary | OEM:in14ce1:WARNING: lpfc3:1305:LKe:Link Down Event x22 received Data: x22 x20 x20000000 | NET\_IN\_EQP\_002 |
| BNSI equipment alarm | Summary | OEM:in11ce2:Mirror vdisk11: 1 online piece left - this mirror disk is now NOT-MIRRORED, | NET\_IN\_EQP\_002 |
| BNSI equipment alarm | Summary | OEM:in6ce1:Mirror vdisk41: Piece 0 disabled | NET\_IN\_EQP\_002 |

## Data Types:

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| --- | --- |
| **Name** | **Contents** |
| OS\_Status | Object Server |
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## Logic:

### BNSI Critical Hardware alarm received

1. Assign @EventID of “NET\_IN\_EQP\_001” or NET\_IN\_EQP\_002 to the network events defined in event filter section

### Use parent/child relationship logic to correlate multiple DIMM failure alarms with individual DIMM failures

* + - 1. For events with EventId NET\_IN\_EQP\_001 (DIMM related), extract the ‘location’ from the event as specified in event filter section.
      2. Check for existing synthetic event for the extracted ‘location’ for the current @NodeAlias.
      3. If synthetic event is found, add the current network event as child of the synthetic event (into journal). Populate @SyntheticServerSerial of the network event with serial of the synthetic event.
      4. If synthetic event not found, create a new synthetic event with the current event added as a child (journal entry). Populate @SyntheticServerSerial of the network event with serial of the synthetic event.

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| **Field Name** | **Value** |
| Node | @Node [if applicable] |
| NodeAlias | @NodeAlias [if applicable] |
| Summary | Equipment Alarm (DIMM related) |
| AlertGroup | @AlertGroup |
| Agent | Netcool Impact |
| Manager | Netcool Impact |
| Severity | 5 |
| Type | 1 |
| LogTicket | 1 |
| ImpactFlag | 6 |
| MaintFlag | @MaintFlag |
| EventId | SYN\_IN\_EQT\_001 |
| Class | 200036 |
| Site | @Site |
| SiteCode | @SiteCode |
| Identifier | Node + Summary + Type + EventId + <@LastOccurrence from network event> |
| FirstOccurrence/ LastOccurrence | getdate() |
| Domain | @Domain |
| Region | @Region |
| ManCity | @ManCity |
| CovCity | @CovCity |
| OutsourceContractor | @OutsourceContractor |
| BusImportance | @BusImportance |
| Vendor | @Vendor |
| BSC\_Name | @BSC\_Name |
| BTS\_Name | @BTS\_Name |
| AdvCorrServerSerial | @Serial |
| OmcEms | @OmcEms |

### Lookup time to wait

1. For events with EventId NET\_IN\_EQP\_002 (non-DIMM related), sleep for hard-coded period of 5 minutes
2. If NET\_IN\_EQP\_002 network event still exists after hibernate, then update @LogTicket =1 in order to raise a trouble ticket.

### Clear event in when TT closes

Event clearance is dependent of resolution of related ticket.

## Resolution of events

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| **EventId** | **Resolution mechanism** |
| NET\_IN\_EQP\_002 | Clearance of the network event is managed by the TSRM gateway when the related ticket is RESOLVED |
| SYN\_IN\_EQP\_001 | Clearance of the synthetic event is managed by the TSRM gateway when the related ticket is RESOLVED. |
| NET\_IN\_EQP\_001 | The ClearNetworkEvents policy is used to clear the child network events from the parent synthetic event.  This policy checks for current network events with relevant EventId where the alarm specified in @SyntheticServerSerial has severity 0 (or has already been deleted from the Object Server). The policy will then clear the matching network events. |