

# Storage Engine, Memory Usage Too High In PLDB, Warning

Ericsson Centralized User Database

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## OPERATING INSTRUCTION

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# 1 Overview

This instruction concerns alarm handling for the Storage Engine, Memory Usage Too High In PLDB, Warning alarm.

## 1.1 Alarm Description

The alarm is issued in the following two scenarios for the Processing Layer Database (PLDB) in a CUDB node:

- The memory use of the PLDB reaches the `Warning` level (value of the `memoryWarningThreshold` attribute for the `CudbPlGroup` class, refer to *CUDB Node Configuration Data Model Description*, Reference [5], for more information). The alarm is cleared in case the memory use keeps increasing, and eventually reaches the level configured for the `Full` threshold (internal CUDB threshold). In this case, another alarm is issued: refer to *Storage Engine, Memory Usage Too High In PLDB, Major*, Reference [1] for more information.
- The memory use of the PLDB decreases below the level configured for the `Full` threshold. Later, once the memory use decreases below the `Warning` level (80%), the alarm is cleared.

The possible alarm causes and the corresponding fault reasons, fault locations, and impacts are described in Table 1.

*Table 1 Alarm Causes*

| Alarm Cause  | Description  | Fault Reason                                | Fault Location | Impact   |
|--|--|---|----------------|--|
| The memory use of the PLDB reached the <code>Warning</code> threshold level. | The amount of subscriber data stored in the PLDB results in a level of memory use which reaches the level configured for the <code>Warning</code> threshold. | The PLDB contains too much subscriber data. | PLDB           | The memory use of the PLDB may reach the <code>Full</code> threshold, resulting in the rejection of newly provisioned subscriber data in the PLDB. |

The alarm attributes are listed and explained in Table 2:

*Table 2 Alarm Attributes*

| Attribute Name  | Attribute Value   |
|-----------------|---|
| Auto Cease      | Yes   |
| Module          | STORAGE-ENGINE  |
| Error Code      | 8   |
| Timestamp First | Date and time when the alarm was raised for the first time. |



| Attribute Name               | Attribute Value   |
|------------------------------|---|
| Repeated Counter             | Number which indicates how many times the alarm was raised.   |
| Timestamp Last               | Date and time of the most recent alarm raised.                |
| Resource ID                  | .1.3.6.1.4.1.193.169.1.1.8                                    |
| Alarm Model Description      | Memory usage at Warning level, Storage Engine.                |
| Alarm Active Description     | Storage Engine (PLDB): memory usage too high.                 |
| ITU Alarm Event Type         | processingErrorAlarm (4)                                      |
| ITU Alarm Probable Cause     | storageCapacityProblem (151)                                  |
| ITU Alarm Perceived Severity | (6) - Warning   |
| Originating Source IP        | Node IP where the alarm was raised.                           |
| Sequence Number              | Number which indicates the order in which alarms were raised. |

For further information about attribute descriptions, refer to *CUDB Node Fault Management Configuration Guide*, Reference [3].

## 1.2 Prerequisites

This section provides information on the documents, tools, and conditions that apply to the procedure.

### 1.2.1 Documents

Before starting this procedure, ensure that you have read the following documents:

- The section on the `cudbManageStore` command in *CUDB Node Commands and Parameters*, Reference [2].
- *CUDB Node Fault Management Configuration Guide*, Reference [3], regarding alarm configuration.
- The “Defragmenting a Database Cluster” section of *CUDB System Administrator Guide*, Reference [4].
- *System Safety Information*, Reference [7].
- *Personal Health and Safety Information*, Reference [8].

### 1.2.2 Tools

Not applicable.

**1.2.3****Conditions**

Not applicable.



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## 2 Procedure

In case the alarm is raised, do the following:

1. Check if some of the subscriber data can be removed to free up space in the PLDB. If possible, then remove the data.
2. Perform a defragmentation in the PLDB. Refer to *CUDB System Administrator Guide*, Reference [4] for more information.
3. Confirm that the alarm has ceased. If the alarm remains, consult the next level of maintenance support. Further actions are outside the scope of this instruction.



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## Glossary

For the terms, definitions, acronyms, and abbreviations used in this document, refer to *CUDB Glossary of Terms and Acronyms*, Reference [6].



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## Reference List

### **CUDB Documents**

- [1] *Storage Engine, Memory Usage Too High In PLDB, Major*
- [2] *CUDB Node Commands and Parameters*
- [3] *CUDB Node Fault Management Configuration Guide*
- [4] *CUDB System Administrator Guide*
- [5] *CUDB Node Configuration Data Model Description*
- [6] *CUDB Glossary of Terms and Acronyms*

### **Other Ericsson Documents**

- [7] *System Safety Information*
- [8] *Personal Health and Safety Information*