

# Storage Engine, Memory Usage Too High In DS, Full Threshold Reached

Ericsson Centralized User Database

---

## OPERATING INSTRUCTION

**Copyright**

© Ericsson AB 2016. All rights reserved. No part of this document may be reproduced in any form without the written permission of the copyright owner.

**Disclaimer**

The contents of this document are subject to revision without notice due to continued progress in methodology, design and manufacturing. Ericsson shall have no liability for any error or damage of any kind resulting from the use of this document.

**Trademark List**

All trademarks mentioned herein are the property of their respective owners. These are shown in the document Trademark Information.



# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Alarm Description	1
1.2	Prerequisites	2
<b>2</b>	<b>Procedure</b>	<b>5</b>
	<b>Glossary</b>	<b>7</b>
	<b>Reference List</b>	<b>9</b>



Storage Engine, Memory Usage Too High In DS, Full Threshold Reached



# 1 Introduction

This instruction concerns alarm handling for the *Storage Engine, Memory Usage Too High In DS, Full Threshold Reached* alarm.

## 1.1 Alarm Description

The alarm is issued when the memory use of the Data Store (DS) cluster reaches the level configured for the *Full* threshold. The alarm is cleared after the memory use drops below the level configured for the *Full* threshold, and the *Storage Engine, Memory Usage Too High In DS, Warning Threshold Reached*, Reference [1] alarm is raised.

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 DS cluster reached the <i>Full</i> threshold level.	The amount of subscriber data stored in the DS results in a level of memory use which reaches the level configured for the <i>Full</i> threshold.	The DS cluster contains too much subscriber data, and is close to reaching its maximum capacity.	Affected DS cluster.	Newly provisioned subscriber data may be rejected.

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	9
Timestamp First	Date and time when the alarm was raised for the first time.
Repeated Counter	Number which indicates how many times the alarm was raised.
Timestamp Last	Date and time of the most recent alarm raise.
Resource ID	.1.3.6.1.4.1.193.169.1.2.8.<DG>
Alarm Model Description	Memory usage at <i>Full</i> level, Storage Engine.
Alarm Active Description	Storage Engine (DS-group #<DG>): memory usage at <i>Full</i> level.
ITU Alarm Event Type	processingErrorAlarm (4)
ITU Alarm Probable Cause	storageCapacityProblem (151)



Attribute Name	Attribute Value
ITU Alarm Perceived Severity	(4) - Major
Originating Source IP	Node IP where the alarm was raised.
Sequence Number	Number which indicates the order in which alarms were raised.

In Table 2, the indicated variables are as follows:

- `<DG>` is the Data Store Unit Group (DSG) the DS cluster belongs to.

Refer to the following documents for more information:

- For further information about the `Full` threshold level, refer to the section of the `cudbReallocate` command in *CUDB Node Commands and Parameters*, Reference [2].
- 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 `cudbDsgProvisioningManage` and `cudbReallocate` commands in *CUDB Node Commands and Parameters*, Reference [2].
- *CUDB Node Fault Management Configuration Guide*, Reference [3], regarding alarm configuration.
- The “Running Defragmentation” section of *CUDB System Administrator Guide*, Reference [4].
- *System Safety Information*, Reference [6].
- *Personal Health and Safety Information*, Reference [7].

### 1.2.2 Tools

Not applicable.

**1.2.3****Conditions**

Not applicable.



Storage Engine, Memory Usage Too High In DS, Full Threshold Reached





## 2 Procedure

In case the alarm is raised, do the following:

1. Perform a defragmentation in the affected DSG. Refer to *CUDB System Administrator Guide*, Reference [4] for more information.
2. Check if the alarm is cleared. If not, continue with the below steps.
3. Use the `cudbDsgProvisioningManage` command with the `--disable` option to prevent the newly distributed data from being added to the referred DSG. For more information, refer to *CUDB Node Commands and Parameters*, Reference [2].
4. Move the distributed data out of the referred DSG to decrease memory use with the `cudbReallocate` command. Either specify the percentage of distributed data to be moved with the `--entriespercentage` option, or export the data and use the `--list` option. Refer to *CUDB Node Commands and Parameters*, Reference [2] for more information on the `cudbReallocate` command and its options.
5. Perform a defragmentation again in the affected DSG. Refer to *CUDB System Administrator Guide*, Reference [4] for more information.
6. Check if the alarm is cleared, and depending on the result, perform one of the below steps:
  - a. If the alarm is cleared, then use the `cudbDsgProvisioningManage` command with the `--enable` option to allow the newly distributed data to be added to the referred DSG again. For more information, refer to *CUDB Node Commands and Parameters*, Reference [2].
  - b. If the alarm remains, then consult the next level of maintenance support. Further actions are outside the scope of this instruction.



Storage Engine, Memory Usage Too High In DS, Full Threshold Reached



## Glossary

For the terms, definitions, acronyms and abbreviations used in this document, refer to *CUDB Glossary of Terms and Acronyms*, Reference [5].



Storage Engine, Memory Usage Too High In DS, Full Threshold Reached



## Reference List

### **CUDB Documents**

- [1] *Storage Engine, Memory Usage Too High In DS, Warning Threshold Reached*
- [2] *CUDB Node Commands and Parameters*
- [3] *CUDB Node Fault Management Configuration Guide*
- [4] *CUDB System Administrator Guide*
- [5] *CUDB Glossary of Terms and Acronyms*

### **Other Ericsson Documents**

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