

Server Platform, Storage Performance Degradation Detected

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

1	Introduction	1
1.1	Alarm Description	1
1.2	Prerequisites	3
2	Procedure	5
2.1	Procedure for CUDB System Deployed on Native BSP 8100 Hardware	5
2.2	Procedure for CUDB System Deployed on Cloud Infrastructure	5
	Glossary	7
	Reference List	9



Server Platform, Storage Performance Degradation Detected



1 Introduction

This instruction concerns alarm handling for the Server Platform, Storage Performance Degradation Detected alarm.

1.1 Alarm Description

The alarm is issued when a Ericsson Centralized User Data Base (CUDB) application detects that application components are impacted by a degradation of storage performance.

The alarm is issued in the following situations:

- A monitored I/O heavy process gets stuck uninterruptedly due to missing storage system response.
- Storage system responds to file system probe request with I/O error or timeout.

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
File system probe detected an error.	Monitored partition could not be written for a longer period of time (preset timeout) due to I/O error.	Most probably faulty infrastructure.	Storage system.	Performance degradation in the CUDB system.
Lightweight process state check detected an error.	Monitored I/O heavy process got stuck in uninterruptible sleep ("disk sleep").	Most probably faulty infrastructure.	Storage system.	Performance degradation in the CUDB system.

The following are the consequences for the node if the alarm is not solved:

- In case the alarm is raised in a payload blade or Virtual Machine (VM):
 - Performance degradation for the impacted Data Store/Processing Layer Database (DS/PLDB).
 - Lost local redundancy for the impacted DS/PLDB.
 - Lost DS/PLDB geographical redundancy in case both DS or all PLDB blades or VMs fail in a node.
 - Lost node in case all PLDB blades or VMs fail.
- In case the alarm is raised in a System Controller (SC):



- Service degradation in controlling processes running on the impacted SC.
 - Possible node reboots.
- Unplanned mastership changes which can cause data durability issues.

The alarm attributes are listed and explained in Table 2.

Table 2 Alarm Attributes

Attribute Name	Attribute Value
Auto Cease	No
Module	SERVER-PLATFORM
Error Code	2
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 raised.
Resource ID	.1.3.6.1.4.1.193.169.4.2.<Blade ID>
Alarm Model Description	Storage performance degradation detected, Server Platform
Alarm Active Description	Server Platform: Storage performance degradation detected on host <Blade>. <Additional info>
ITU Alarm Event Type	equipmentAlarm (5)
ITU Alarm Probable Cause	replaceableUnitProblem (69)
ITU Alarm Perceived Severity	Major (4)
Originating Source IP	Node IP where the alarm was raised.
Sequence Number	Number which indicates order in which alarms are raised.

In Table 2, the indicated variables are as follows:

- <Blade ID> is the LDE or LOTC node ID for the blade or VM.
- <Blade> is the LDE or LOTC hostname for the blade or VM.
- <Additional info> is different depending on the CUDB system deployment and blade type:
 - In case the CUDB system is deployed on native BSP 8100 hardware and payload blade: Automatic shutdown was performed.
 - In all other cases: The variable has no value.

The possible cause is a failure in the storage system.



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:

- *System Safety Information*, Reference [4]
- *Personal Health and Safety Information*, Reference [5]

1.2.2 Tools

Not applicable.

1.2.3 Conditions

Not applicable.



Server Platform, Storage Performance Degradation Detected



2 Procedure

This section describes the procedure to follow when this alarm is received.

2.1 Procedure for CUDB System Deployed on Native BSP 8100 Hardware

- Only in case of a payload blade, perform the following procedure:
 - Lock the blade. For the blade position, refer to the “Identifying the Faulty Blade” section of *Server Platform, Blade Replacement*, Reference [1], and for the blade lock, refer to the “Manage Blade” document in the BSP 8100 CPI.
 - Perform the procedure described in the “Preparing Payload Blade (PLDB or DSG Blade) Replacement” section of *Server Platform, Blade Replacement*, Reference [1].

Warning!

The steps above must be performed immediately, even if the blade replacement (the next step) can be performed later.

- Perform the blade replacement (refer to the “Replacing a Blade” section of *Server Platform, Blade Replacement*, Reference [1]) or contact the next level of maintenance support.

2.2 Procedure for CUDB System Deployed on Cloud Infrastructure

In case the `Storage Performance Degradation Detected` alarm is raised, check the following in the cloud infrastructure:

- Check if there is any ongoing maintenance activity (for example, maintenance of the file systems used by the cloud infrastructure).
- Check if there is a problem with the cloud infrastructure software.
- Check if the cloud infrastructure hardware is hosting a faulty virtual machine.

If everything is working correctly, manually delete the alarm.



In case problems in the cloud infrastructure are identified, make sure that they are fixed according to the *Virtualized CUDB Virtual Machine Recovery*, Reference [2].



Glossary

For the terms, definitions, acronyms, and abbreviations used in this document, refer to *CUDB Glossary of Terms and Acronyms*, Reference [3].



Server Platform, Storage Performance Degradation Detected



Reference List

CUDB Documents

- [1] *Server Platform, Blade Replacement*
- [2] *Virtualized CUDB Virtual Machine Recovery*
- [3] *CUDB Glossary of Terms and Acronyms*

Other Ericsson Documents

- [4] *System Safety Information*
- [5] *Personal Health and Safety Information*