

Storage Engine, Potential Data Inconsistency between Replicas Found in PLDB

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	2
2	Procedure	5
	Glossary	7
	Reference List	9





1 Introduction

This instruction concerns alarm handling for the Storage Engine, Potential Data Inconsistency between Replicas Found in PLDB alarm.

1.1 Alarm Description

The alarm is issued when potential data inconsistency is found in the Processing Layer Database (PLDB). The alarm is raised as a result of the `cudbCheckConsistency` command periodical execution. For further information, refer to *CUDB Node Commands and Parameters*, Reference [1].

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
Number of rows in some tables is different in the master and slave replicas.	The lightweight Consistency Check found the number of rows in one or more tables in CUDB to be different in the master and slave replicas by more than the specified margin (in %).	<ul style="list-style-type: none"> Wrong backup was restored on the slave replica. Slave replica addressed by faulty maintenance operation. Replication is down. A data-intensive operation (for example: massive provisioning, reallocation) is ongoing, and the replication delay between the slave replica and its master replica is high. 	Affected PLDB cluster	If this slave replica becomes the master replica, there might be a service impact for the subscribers affected by the data inconsistency.

The alarm attributes are listed and explained in Table 2.

Table 2 Alarm Attributes

Attribute Name	Attribute Value
Auto Cease	NO
Application Id	STORAGE-ENGINE
Error Code	19
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 raise.
Model Description	Potential data inconsistency between replicas found, Storage Engine.
Active Resource Id	1.3.6.1.4.1.193.169.1.1.19
Active Description	Storage Engine (PLDB): Potential data inconsistency between replicas found.
Alarm Event Type	processingErrorAlarm (4)
Probable Cause	databaseInconsistency (160)
Severity	major (4)
Originating source IP	Node IP where the alarm was raised.
Sequence Number	Number which indicates the order in which the alarms are 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:

- *CUDB Node Fault Management Configuration Guide*, Reference [3], regarding alarm configuration.
- The section on the `cudbCheckConsistency` command in *CUDB Node Commands and Parameters*, Reference [1].
- *CUDB Subscription Reallocation*, Reference [2], regarding the reallocation feature.
- *System Safety Information*, Reference [5].
- *Personal Health and Safety Information*, Reference [6].

1.2.2 Tools

Not applicable.

**1.2.3****Conditions**

Not applicable.





2 Procedure

In case the alarm is raised, do the following:

1. Check if the `Storage Engine, Replication Channels Down` in PLDB alarm is raised for this replica of PLDB. If it is, attend that alarm before attending this one.
2. If reallocation, import, or heavy provisioning operations are ongoing, wait until they finish execution.

Check that replication is working and check the replication delay for this replica of PLDB by executing the following command:

```
cudbSystemStatus -R
```

If the replication delay is higher than 10 seconds, check again until replication delay drops below 10 seconds.

3. Execute lightweight consistency check again.
4. Check the output and if the `CUDB_DE` or `CUDB_DN` table, or any table whose name starts with `IDEN` is mentioned, contact the next level of Ericsson support. Otherwise, proceed to Step 5.
5. Clear the alarm manually and order a CUDB consistency check by executing the following command:

```
cudbConsistencyMgr --max-replica-lag 10000
```





Glossary

For the terms, definitions, acronyms and abbreviations used in this document, refer to *CUDB Glossary of Terms and Acronyms*, Reference [4].





Reference List

Ericsson Documents

- [1] *CUDB Node Commands and Parameters*
- [2] *CUDB Subscription Reallocation*
- [3] *CUDB Node Fault Management Configuration Guide*
- [4] *CUDB Glossary of Terms and Acronyms*

Other Ericsson Documents

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