

Storage Engine, Automatic Handling of Network Isolation not Completed for DS Ericsson Centralized User Database

OPERATING INSTRUCTION

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1 Introduction

This document provides the description and troubleshooting steps to take for the Storage Engine, Automatic Handling of Network Isolation not Completed for DS alarm.

1.1 Alarm Description

This alarm is raised when the Automatic Handling of Network Isolation process has failed to repair a Data Store (DS) cluster inconsistency between former and current master replica servers.

The alarm is issued in the following situations:

- Selective Replica Check task was not completed.
- Data Repair task was not completed.
- Triggering Reconciliation task was not completed.

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
Selective Replica Check task was not completed.	Automatic Handling of Network Isolation process was unsuccessful in repairing DS cluster inconsistency between former and current master replica servers.	<ul style="list-style-type: none">• Any issue preventing LDAP queries to be performed on the invoked DS Cluster.• Any other issue preventing access to the operational logs results in a failed execution.	Slave (Selective Replica Check) replica server.	Rescuing non-replicated data from former master has failed.



Alarm Cause	Description	Fault Reason	Fault Location	Impact
Data Repair task was not completed.	Automatic Handling of Network Isolation process was unsuccessful in repairing DS cluster inconsistency between former and current master replica servers.	<ul style="list-style-type: none">Any issue preventing LDAP queries to be performed on the invoked DS Cluster.Any other issue resulting in a failed execution.	Master (Data Repair) replica server.	Rescuing non-replicated data from former master has failed.
Triggering Reconciliation task was not completed.	Automatic Handling of Network Isolation process was unsuccessful in adding local DS unit that was elected master for its DSG to the Reconciliation Pending Task List.	<ul style="list-style-type: none">Any issue preventing an update of the Reconciliation Pending Task List.	Master replica server.	No data reconciliation process.

Note: An alarm can appear as a result of a maintenance activity.

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

- Non-replicated data transactions residing on former master (due to mastership change) are lost.
- Possible unresolved inconsistencies between PLDB and DSG (DS Unit Group) data.

The alarm attributes are listed and explained in Table 2.

Table 2 Alarm Attributes

Attribute Name	Attribute Value
Auto Cease	No
Module	STORAGE-ENGINE
Error Code	29
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	.1.3.6.1.4.1.193.169.1.2.29.<DG>.<Timestamp>
Alarm Model Description	Automatic Handling of Network Isolation not Completed, Storage Engine.
Alarm Active Description	Storage Engine (DS-group #<DG>): Automatic Handling of Network Isolation task <add_info> was not completed <add_info2> (task <taskid>, blade <Blade>), uuid: <uuid>
ITU Alarm Event Type	processingErrorAlarm (4)
ITU Alarm Probable Cause	softwareError (163)



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 the alarms are raised.

In Table 2, the indicated variables are as follows:

- `<Timestamp>` is the Unix time representing the time of the incident, that is, the time stamp used to determine which events from the operational logs of the former master were analyzed.
- `<DG>` is the DSG this cluster belongs to.
- `<add_info>` is a variable description: “Selective Replica Check”, “Data Repair”, or “trigger Reconciliation”.
- `<add_info2>` is an optional additional description field showing up when the Automatic Handling of Network Isolation process has terminated a Selective Replica Check or a Data Repair task due to too long execution duration. Its value is: “due to time limit exceeded”.
- `<taskid>` is a Selective Replica Check or a Data Repair task identifier based on the Automatic Handling of Network Isolation activity start time.
- `<Blade>` is the host name of the blade or Virtual Machine (VM) where repair was executed and the logs are stored.
- `<uuid>` is the universally unique identifier of the computing resource (blade or VM). It is blank if it is not possible to figure out its value.

For more information about attribute descriptions, refer to *CUDB Node Fault Management Configuration Guide*, Reference [1].

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 [7].
- *Personal Health and Safety Information*, Reference [8].



1.2.2

Tools

Not applicable.

1.2.3

Conditions

Not applicable.



2 Procedure

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

2.1 Actions for Selective Replica Check Task Was Not Completed

Do the following:

1. If the *Storage Engine, Unable to Synchronize Cluster in DS, Major* alarm is raised when the Self-Ordered Backup and Restore function is not enabled or fails to restore the replication automatically, follow the procedure described in *Storage Engine, Unable to Synchronize Cluster in DS, Major*, Reference [2].
2. Cease the alarm manually.

Note: The procedure is to fix data inconsistency among master and slave replicas, but it cannot guarantee the full repair of system data.

2.2 Actions for Data Repair Task Was Not Completed

Do the following:

Cease the alarm manually.

Note: Full repair of system data cannot be guaranteed in this case.

2.3 Actions for Triggering Reconciliation Task Was Not Completed

Do the following:

1. Run the following command to establish an admin "CUDB CLI" session towards the CUDB node where the master for this DSG is:

```
ssh <admin_user>@<CUDB_Node_OAM_IP_Address>
```

Refer to *CUDB System Administrator Guide*, Reference [3] on how to list all master DSG replicas.

2. Run the following command to check if there is any pending or ongoing reconciliation task for the specific DSG from Step 1:

```
cudbReconciliationMgr -l
```



This command returns the DSG in an affirmative case. Otherwise, it returns nothing. In an affirmative case, exit this procedure. In a negative case, follow with the next step. Refer to *CUDB Node Commands and Parameters*, Reference [4] for further information about this command.

3. Schedule reconciliation for the specific DSG from Step 1:

```
cudbReconciliationMgr -a <dsId>
```

If the task for DSG identified with *<dsId>* is added, the command has no output. Otherwise, the output provides the error(s) fetched from the database. Refer to *CUDB Data Storage Handling*, Reference [5] for further information about the reconciliation process.



Glossary

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





Reference List

CUDB Documents

- [1] *CUDB Node Fault Management Configuration Guide*
- [2] *Storage Engine, Unable to Synchronize Cluster in DS, Major*
- [3] *CUDB System Administrator Guide*
- [4] *CUDB Node Commands and Parameters*
- [5] *CUDB Data Storage Handling*
- [6] *CUDB Glossary of Terms and Acronyms*

Other Ericsson Documents

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