

LOTC Disk Replication Communication

OPERATING INSTRUCTIONS

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1 Introduction

This document is the Operating Instruction (OPI) for the alarm **LOTIC Disk Replication Communication**.

Scope

This document covers the following topics:

- Alarm description
- Alarm handling procedure

Target Groups

This document is intended for personnel involved in alarm handling.

1.1 Prerequisites

This section describes the possible documents, tools, and conditions needed before performing steps to cease the alarm.

1.1.1 Documents

Not applicable.

1.1.2 Tools

Not applicable.

1.1.3 Conditions

Not applicable.

1.2 Related Information

The definition and explanation of acronyms and terminology, information about trademarks used, and typographic conventions can be found in the following documents:

- *LDE Glossary of Terms and Acronyms*, Reference [1]



- *LDE Trademark Information*, Reference [2]
- *Typographic Conventions*, Reference [3]

1.3 Revision Information

Other than editorial changes, this document has been revised from revision B to revision C according to the following:

- Update alarm and product naming to match LDEwS product



2 Alarm Description

This alarm is issued if the control node pair has been operating in a non-redundant mode for more than 20 minutes. Non-redundant in this context refers to the situation where the control nodes has lost connection to each other (the Distributed Replicated Block Device (DRBD) state is not in connected mode). If this happens, both controllers will take the primary role and no data will be transferred in between the nodes. If one of the nodes is down this situation is not immediately dangerous, it indicates that the cluster will not have a controller node with consistent data to fail over to.

The following is a list of the alarm attributes:

Note: This view of the alarm attributes will be presented to the user from Common Operation and Maintenance (COM), only when the LDE adaptations for Component Based Architecture (CBA) have been installed and the LDE alarm model has been registered to COM.

Attribute Name	Attribute Value/Interpretation
Major Type	193
Minor Type	3341942788
Managed Object Class	SafNode
Specific Problem	LOTC Disk Replication Communication
Event Type	6 ⁽¹⁾
Additional Information	Not applicable.
Perceived Severity	Major

(1) *Environmental*

The possible causes are as follows:

- Hardware failure on the secondary control node.
- Network failure leading to communication problems between the control nodes.

Note: This alarm can be triggered during initial installation and replacement of a control node. In these situations a complete disk synchronization is performed, which practically can take up to 5 hours to complete. The time to complete a synchronization depends on disk size, disk performance and network performance. During disk synchronization the control nodes are not redundant.





3 Procedure

To clear the alarm, perform the following steps:

1. If this alarm is **not** issued during initial installation or replacement of a control node, consult the next level of maintenance support. Further actions are outside the scope of this OPI.
2. If this alarm is issued during initial installation or replacement of a control node, then wait for the disk synchronization to complete. When the disk synchronization is completed the alarm normally ceases automatically.
3. If the alarm does not cease automatically within 5 hours (the practical maximum time for disk synchronization to complete), then consult the next level of maintenance support. Further actions are outside the scope of this Operating Instruction.

Note: The actual time it takes to complete a disk synchronization depends on how much data that has not been synchronized and hardware properties (disk size, disk speed, and network speed). On each control node the `/proc/drbd` file provides detailed information about the disk synchronization progress.





Reference List

- [1] *LDE Glossary of Terms and Acronyms*
TERMINOLOGY, 1/0033-APR 901 0551/1
- [2] *LDE Trademark Information*
LIST, 1/006 51-APR 901 0551/1
- [3] *Typographic Conventions*
DESCRIPTION, 1/1551-FCK 101 05