

CSCF Credit Control Answers Indicate Permanent Failures

Call Session Control Function

OPERATING INSTRUCTIONS

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





1 Introduction

This instruction concerns alarm handling.

1.1 Alarm Description

The threshold alarm `CSCF Credit Control Answers Indicate Permanent Failures` is issued when it is not possible to send Credit Control charging requests from the Call Session Control Function (CSCF) to the charging system.

The alarm is associated to the Performance Management counter `cscfCCAPermanentFailures`.

The alarm is raised when the number of Diameter Credit Control Answer (CCA) messages including the error codes for permanent errors (5xxx) received through Diameter has reached or exceeded its configured `thresholdHigh` within the time period configured by `thresholdRateOfVariation` and `granularityPeriod`.

The alarm is automatically ceased when it reaches or goes below the configured `thresholdLow` value.

The default values related to this alarm are: `thresholdRateOfVariation=PER_GP`, `granularityPeriod=FIVE_MIN`, `thresholdHigh=2`, and `thresholdLow=0`. This means that when the counter value is 2 or higher, the alarm is raised when the granularity period is ended. The alarm is ceased when the counter `cscfCCAPermanentFailures` has reached a value of 0 at the end of a granularity period.

Note: The thresholds for raising and ceasing this alarm are configurable. The default distinguished name for the thresholds is `ManagedElement=<node_name>`, `SystemFunctions=1`, `Pm=1`, `PmJob=CscfChargingStatisticsThreshold`, `MeasurementReader=cscfCCAPermanentFailuresMeasReader`, `PmThresholdMonitoring=cscfCCAPermanentFailures`.

It is not possible to change threshold values once they have been set. To change a threshold, first the `PmThresholdMonitoring` instance must be deleted and recreated with required `thresholdHigh` and `thresholdLow`.

For more information, refer to *Performance Management*.

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 PM counter <code>cscfCCAPermanentFailures</code> has reached or exceeded its configured upper threshold value.	The number of CCAs with permanent failure (5xxx) during a granularity period has reached or exceeded the configured threshold.	<ul style="list-style-type: none">• The charging server is down• The physical connection between the CSCF and the charging server has been cut off• The NFS daemon on the charging server is down• The mounted directory has been deleted from the charging server	The charging server or the communication between CSCF and the charging server.	Sessions receiving these error codes from the charging server is terminated.

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

The alarm attributes are listed and explained in Table 2.

Table 2 Alarm Attributes

Attribute Name	Attribute Value
Major Type	193
Minor Type	6684684
Managed Object Class	MeasurementReader
Managed Object Instance	ManagedElement=<node_name>, SystemFunctions=1, Pm=1, PmJob=CscfChargingStatisticsThreshold, MeasurementReader=cscfCCAPermanentFailuresMeasReader



Attribute Name	Attribute Value
Specific Problem	CSCF Credit Control Answers Indicate Permanent Failures
Event Type	communication (2)
Probable Cause	x733ThresholdCrossed (351)
Additional Text	cscfCCAPermanentFailures, check connection to the charging system, possibly caused by configuration problem
Perceived Severity	major (4)

1.2 Prerequisites

This section provides information on the documents, tools, and conditions that apply to the procedure.

1.2.1 Documents

This instruction references the following document:

- *Performance Management*
- [RFC 3588 Diameter Base Protocol](#)
- *Managed Object Model (MOM)*
- *CSCF Configuration Management*

1.2.2 Tools

Before starting this procedure, ensure that the following tool is available:

- A Diameter protocol sniffer, refer to [RFC 3588 Diameter Base Protocol](#)

1.2.3 Conditions

No conditions.





2 Procedure

Note: If the reason for the alarm has disappeared after the granularity period, the alarm automatically ceases.

Do the following:

1. Check the details of the alarm issued to get the following information:
 - Subsystem affected.
 - Detailed specific cause provided.

2. Log on and check that the System Controller (SC) is the primary processor:

```
cat/proc/drdb
```

```
Primary printout: 0:cs:Connected st:Primary/Secondary  
id:Consistent
```

or

```
Secondary printout: 0:cs:Connected st:Secondary/Primary  
id:Consistent
```

3. Check the log file and **grep** on error 5xxx, permanent failures:

```
grep "Result-Code= [50]" /storage/no-backup/cdclsv/log  
/lpmsv/*
```

4. If the Result Code is 5003, 5010, or 5012:

- Go to the user interface and view the application configuration parameters and validate all the parameters.

For more information, refer to *CSCF Configuration Management*.

5. If the Result Code is 5001, 5002, 5004, 5005, 5006, 5007, 5008, 5009, 5011, 5013, 5014, 5015, 5016, or 5017: contact the next level of support.
6. If the cause is that the alarm threshold is set too low, adjust the alarm threshold.
7. If Result Code = 50 is not found, check the log file and **grep** on internal errors:

```
grep "ErrorCause= [errEncDec]" /storage/no-backup/cdc  
lsv/log/lpmsv/*
```



8. Confirm that the alarm has ceased. If the alarm remains, consult the next level of maintenance support and send the extracted information with result-code. Further actions are outside the scope of this instruction.
9. Job is completed.