

CSCF Charging Request Transmission Problem

Call Session Control Function

OPERATING INSTRUCTIONS

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1 Introduction

This instruction concerns alarm handling.

1.1 Alarm Description

The threshold alarm CSCF Charging Request Transmission Problem is issued when there is a problem in sending charging requests (ACRs) from the CSCF to the charging system. The charging requests are backed up locally in the CSCF file system until the charging transmission is working.

The alarm is associated to the Performance Management counter gauge `cscfCurrentStoredRecords`.

The alarm is raised when the number of charging records 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 `cscfCurrentStoredRecords` 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=cscfCurrentStoredRecordsMeasReader`, `PmThresholdMonitoring=cscfCurrentStoredRecords`.

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 gauge counter <code>cscfCurrentStoredRecords</code> has reached or exceeded its configured upper threshold value.	The average number of charging records in the backup has reached or exceeded the configured threshold.	Communication problems with the external charging system results in storing charging records.	Communication problems between the CSCF and the Charging Data Function (CDF). This can either be caused by a charging request transmission problem or a charging configuration problem.	Charging information is buffered on persistent media until communication to CDF is re-established.

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

The following is the consequence for the node if the alarm is not solved:

- There is a limited amount of memory reserved (in the range of a few days) to store the charging information temporarily. When this buffer is full, subsequent charging information is lost, and the alarm `CSCF Charging Backup File System Unavailable` is also raised.

The alarm attributes are shown in Table 2.

Table 2 Alarm Attributes

Attribute Name	Attribute Value
Major Type	193
Minor Type	6684681
Managed Object Class	MeasurementReader
Managed Object Instance	ManagedElement=<node_name>, SystemFunctions=1, Pm=1, PmJob=CscfChargingStatisticsThreshold, MeasurementReader=cscfCurrentStoredRecordsMeasReader
Specific Problem	CSCF Charging Request Transmission Problem.
Event Type	communication (2)



Attribute Name	Attribute Value
Probable Cause	x733ThresholdCrossed (351)
Additional Text	cscfCurrentStoredRecords, charging information sent to backup. Check connection to charging system
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 documents:

- *Performance Management*
- [RFC 3588 Diameter Base Protocol](#)
- *vDicos, Diameter Link Failure*
- *Managed Object Model (MOM)*

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 that the charging server is operational. If not, contact the charging service support.
2. If the alarm `vDicos, Diameter Link Failure` is raised, refer to *vDicos, Diameter Link Failure*.
3. Use the latest site configuration to verify the Diameter routing configuration, that is, compare what is configured in the CSCF node with what is stated in the configuration file.
4. If the cause is that the alarm threshold is set too low, adjust the alarm threshold.
5. Confirm that the alarm has ceased. If the alarm remains, consult the next level of maintenance support. Further actions are outside the scope of this instruction.
6. Job is completed.