

CSCF Application Shutting Down

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	4
2.1	Analyze the Alarm	4
2.2	Actions to Clear the Alarm	4





1 Introduction

This instruction concerns alarm handling.

1.1 Alarm Description

The alarm is issued when the operator sets the administrative state of the Call Session Control Function (CSCF) to **SHUTTINGDOWN**. When this alarm is active, ongoing INVITE dialogues are not affected and the CSCF generally only accepts registration traffic from users that have active INVITE dialogues. Registrations from users without ongoing INVITE dialogues are rejected, with the aim to register the users in another CSCF.

Stateless CSCF applications will directly be able to shut down, and will then automatically enter the administrative state **LOCKED**, while stateful CSCF applications will stay in **SHUTTINGDOWN** until all INVITE dialogues are ended and all users are de-registered. It shall be noted that the same administrative state applies for all enabled CSCF applications in a co-located node. The enabled applications are configured by `cscfISPBehavior`, `ecscfEnabled`, `eatfEnabled` and `bcfEnabled`. When the last co-located node has completed its shutting down activities, the entire CSCF network element is set to **LOCKED**. However, at any time during the **SHUTTINGDOWN**, the operator can manually change the administrative state to **LOCKED** or **UNLOCKED** by command.

The alarm is issued when the CSCF application is locked for maintenance on operator request. To be more specific, the alarm is issued in the following situation:

- The attribute `cscfAdministrativeState` has been set to **SHUTTINGDOWN**.

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 operator has ordered the CSCF application to be shut down.	The CSCF application is ordered to be gracefully taken out of service by the operator.	The CSCF application is manually set to SHUTTINGDOWN , typically for maintenance purposes. This can be, for example, to remove a new network port to the CSCF, or reduce the traffic in connection with a system upgrade.	The attribute <code>cscfAdministrativeState</code> in the MOC CSCF-Application is set to SHUTTINGDOWN .	The CSCF application rejects all new initial and re-registration requests for users without ongoing INVITE dialogues. Ongoing and new non-registered sessions are accepted, so the traffic will slowly decrease until no more users are registered. When all INVITE dialogues are terminated and no users are longer registered, the administrative state will automatically be changed to LOCKED .

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

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

- The CSCF is taken out of service and is likely to be blacklisted by neighboring SIP nodes.

The alarm attributes are listed and explained in Table 2.



Table 2 Alarm Attributes

Attribute Name	Attribute Value
Major Type	193
Minor Type	6684675
Managed Object Class	CSCF-Application
Managed Object Instance	ManagedElement=<node_name>, C scfFunction=1, CSCF-Applicat ion=CSCF
Specific Problem	CSCF Application Shutting Down
Event Type	processingErrorAlarm (4)
Probable Cause	x736OutOfService (414)
Additional Text	-
Perceived Severity	warning (6)

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:

- *CSCF Configuration Management*
- *Managed Object Model (MOM)*

1.2.2 Tools

No tools are required.

1.2.3 Conditions

No conditions.



2 Procedure

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

2.1 Analyze the Alarm

Do the following at the maintenance center:

- Check if there is a reconfiguration planned on the node, requiring that the node must be taken out of service. If so, ignore this alarm until the reconfiguration has been completed.

2.2 Actions to Clear the Alarm

If `cscfAdministrativeState` has been set to **SHUTTINGDOWN**, this alarm indicates that there are still active INVITE dialogues in the node.

If the alarm does not cease, do one of these procedures depending on the situation:

- Graceful shutdown, see Section 2.2.1 on page 4
- Force shutdown, see Section 2.2.2 on page 5
- Undo shutdown, see Section 2.2.3 on page 5

2.2.1 Graceful Shutdown

Do the following:

1. Wait and let the active dialogues end. No new registrations or re-registrations for users without already established INVITE dialogues are accepted by the node, so the traffic will typically fade out within the period of the maximum registration refresh time configured by `cscfRegistrationRefreshMax`.

Note: Ongoing INVITE dialogues will not be ended by the CSCF.

2. Wait until the `cscfAdministrativeState` changes to **LOCKED** automatically. No dialogues are active and no users are registered in the node.
3. Confirm that the alarm has ceased and that the alarm *CSCF Application Locked For Maintenance* is raised.



4. If the alarm remains, consult the next level of maintenance support. Further actions are outside the scope of this instruction.
5. Job is completed.

2.2.2 Force Shutdown

Do the following:

1. Force the active dialogues to close and deregister the users by locking the node manually by setting `cscfAdministrativeState` to **LOCKED**.
2. Confirm that the alarm has ceased and that a new alarm is raised with specific problem CSCF Application Locked For Maintenance.
3. If the alarm remains, consult the next level of maintenance support. Further actions are outside the scope of this instruction.
4. Job is completed.

2.2.3 Undo Shutdown

Do the following:

1. Unlock the node and allow dialogues to continue. Accept new registrations by setting `cscfAdministrativeState` to **UNLOCKED**.
2. Confirm that the alarm has ceased.
3. If the alarm remains, consult the next level of maintenance support. Further actions are outside the scope of this instruction.
4. Job is completed.