

CSCF Application Shutting Down

Call Session Control Function

OPERATING INSTRUCTIONS

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CSCF Application Shutting Down



1 Alarm Description

This alarm is raised 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 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.

When the S-CSCF is in shutting down mode, it is possible to configure the S-CSCF to limit the intensity of the redirection of registrations from users without INVITE dialogues. Registrations from users that have active INVITE dialogues are rejected or accepted, depending on the configuration of the shutting down behavior. For how to configure the shutting down behavior of the S-CSCF, refer to [CSCF Configuration Management](#).

Stateless CSCF applications are directly able to shut down and then automatically enter the administrative state **LOCKED**, while stateful CSCF applications stay in **SHUTTINGDOWN** until all INVITE dialogues are ended and all users are de-registered.

It is possible to configure the S-CSCF to enter the administrative state **LOCKED** automatically after a shutting down period expires. For how to configure the shutting down period of the S-CSCF, refer to [CSCF Configuration Management](#).

The same administrative state applies for all enabled CSCF applications in a collocated node. The enabled applications are configured by `cscfISPBbehavior`, `ecscfEnabled`, `eatfEnabled`, and `bcfEnabled`. When the last collocated 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.

If the alarm is not solved, the CSCF node is taken out of service and is likely to be blacklisted by neighboring SIP nodes.



Table 1 CSCF Application Shutting down 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 (through the attribute <code>cscfAdministrativeState</code>), typically for maintenance purposes. This can be, for example, to remove a new network port to the CSCF, or reduce the traffic during a system upgrade.	The attribute <code>cscfAdministrativeState</code> in the MOC CSCF-Application is set to SHUTTINGDOWN .	<p>The CSCF application slowly decreases the amount of traffic and number of registered users by moving users when they re-REGISTER. When no users are registered, the administrative state automatically changes to LOCKED.</p> <p>For information about how to configure the intensity and gracefulness, refer to CSCF Configuration Management.</p>

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

Table 2 CSCF Application Shutting down Alarm Attributes

Attribute Name	Attribute Value
Major Type	193
Minor Type	6684675
Managed Object Class	CSCF-Application
Managed Object Instance	ManagedElement=<node_name>, CscfFunction=1, CSCF-Application=CSCF
Specific Problem	CSCF Application Shutting Down
Event Type	processingErrorAlarm (4)



Attribute Name	Attribute Value
Probable Cause	x736OutOfService (414)
Additional Text	-
Perceived Severity	warning (6)

2 Procedure

2.1 Handle Alarm CSCF Application Shutting Down

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

Prerequisites

- This instruction references the following documents:
 - CSCF Configuration Management
 - Managed Object Model (MOM)
- No tools are required.
- The following condition must apply:
 - The alarm is raised.

Steps

1. Is a reconfiguration planned on the node that requires to take the node out of service?

Yes: Ignore this alarm until the reconfiguration has been completed and proceed to Step 3.

No: Continue to the next step.
2. If this alarm does not cease, select the appropriate action:
 - To graceful shutdown, see Section 2.1.1 on page 3
 - To force shutdown, see Section 2.1.2 on page 4
 - To undo shutdown, see Section 2.1.3 on page 4
3. Job is completed.



2.1.1 Handle Graceful Shutdown

Steps

1. Wait and let the active dialogues end.

Result:

No new registrations or re-registrations for users without already established INVITE dialogues are accepted by the node, so the traffic typically fades out within the period of the maximum registration refresh time configured by `cscfRegistrationRefreshMax`.

Note: Ongoing INVITE dialogues are not ended by the CSCF.

2. Wait until `cscfAdministrativeState` automatically changes to **LOCKED**.

Result:

No dialogues are active and no users are registered in the node.

3. Has this alarm ceased and is the alarm **CSCF Application Locked For Maintenance** raised?

Yes: Proceed to Step 5.

No: Continue to the next step.

4. If the alarm is not ceased, consult the next level of maintenance support.

Further actions are outside the scope of this instruction.

5. Job is completed.

2.1.2 Handle Force Shutdown

Steps

1. Manually lock the node by setting `cscfAdministrativeState` to **LOCKED**.

Result:

The active dialogues close and the users de-REGISTER.

2. Has this alarm ceased and is the alarm **CSCF Application Locked For Maintenance** raised?

Yes: Proceed to Step 4.

No: Continue to the next step.

3. If the alarm is not ceased, consult the next level of maintenance support.

Further actions are outside the scope of this instruction.

4. Job is completed.



2.1.3 Handle Undo Shutdown

Steps

1. Unlock the node by setting `cscfAdministrativeState` to **UNLOCKED**.

Result:

Dialogues continue and new registrations are accepted.

2. Has the alarm ceased?

Yes: Proceed to Step 4.

No: Continue with the next step.

3. If the alarm is not ceased, consult the next level of maintenance support.

Further actions are outside the scope of this instruction.

4. Job is completed.