

Troubleshoot Memory Allocation Failed during Query Processing after SIP Trunk Fails to Be Added

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[Background Information](#)

[Troubleshoot](#)

[Log Analysis](#)

[Solution](#)

Introduction

This document describes how to troubleshoot the error message "Memory allocation failed during query processing" on CUCM when a SIP Trunk fails to be added.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- VOS (Voice Operating System)
- CUCM (Cisco Unified Communications Manager).
- SIP (Session Interface Protocol).
- Informix Database.
- CLI (Command Line Interface).

Components Used

This document is intended for CUCM and is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Background Information

When you add a SIP trunk to the CUCM server, there are times when the error shown in the image is displayed.

Trunk Configuration



Save

Status



Add failed. Memory allocation failed during query processing.

Perform the next steps before you reproduce the issue.

Step 1. Set the logs to detailed level in all the CUCM nodes

- CM Trace
- DB Layer Monitor
- CCMAAdmin Web Service
- CCMUser Web Service



Note: Keep in mind that some traces are already set to detailed level, this configuration depends on the version of CUCM that you have installed.

Step 2. Reproduce the issue. Attempt to add the SIP trunk and mark down the time when it fails to accomplish the task

Troubleshoot

Navigate to the RTMT (Real-Time Monitor Tool) and get these traces:

- CM Trace
- DB Layer Monitor
- CCMAAdmin Web Service
- CCMUser Web Service

- Event-Viewer Application Logs
- Event-Viewer System Logs

Log Analysis

From the **CCMAdmin Web Service** Logs

The SIP Trunk is inserted into the database

```
2024-03-14 09:51:12,487 DEBUG [http-nio-1027-exec-7] formhandlers.TrunkFormHandler - Insert Trunk
2024-03-14 09:51:12,570 DEBUG [http-nio-1027-exec-7] utilities.DbRead - reading from cache...
2024-03-14 09:51:12,573 DEBUG [http-nio-1027-exec-7] utilities.DbRead - reading from cache...
```

The SIP Trunk Device is updated with a unique ID

```
2024-03-14 09:51:12,590 DEBUG [http-nio-1027-exec-7] formhandlers.TrunkFormHandler - Updating SIP - dev
...
The SP Trunk starts to be configured within the database
2024-03-14 09:51:12,618 DEBUG [http-nio-1027-exec-7] formhandlers.Device - update initiated
2024-03-14 09:51:12,620 DEBUG [http-nio-1027-exec-7] formhandlers.Device - Insert/update device
...
2024-03-14 09:51:13,449 DEBUG [http-nio-1027-exec-7] utilities.DbRelatedUtil - 1 row(s) affected.
...
2024-03-14 09:51:13,910 DEBUG [http-nio-1027-exec-7] utilities.DbRelatedUtil - 1 row(s) affected.
2024-03-14 09:51:13,913 INFO [http-nio-1027-exec-7] utilities.SIPDeviceUtil - Entering checkSecurityPr
...
```

The insertion of the device fails, and the configuration commences its rollback

```
2024-03-14 09:51:14,294 ERROR [http-nio-1027-exec-7] formhandlers.Device - insert/update failed. Rollb
```

Handle Exception is thrown by the Database

```
2024-03-14 09:51:14,338 ERROR [http-nio-1027-exec-7] formhandlers.TrunkFormHandler - Exception: Memory
java.sql.SQLException: Memory allocation failed during query processing.
2024-03-14 09:51:14,360 INFO [http-nio-1027-exec-7] actions.BaseAction - SQLException :: -208::java.sql
2024-03-14 09:51:14,363 DEBUG [http-nio-1027-exec-7] actions.BaseAction - Db Error :: Memory allocation
2024-03-14 09:51:14,365 DEBUG [http-nio-1027-exec-7] actions.BaseAction - Error could not be mapped usi
java.lang.NumberFormatException: For input string: "Memory allocation failed during query processing."
2024-03-14 09:51:14,370 DEBUG [http-nio-1027-exec-7] actions.BaseAction - Error Code :: 0
2024-03-14 09:51:14,410 DEBUG [http-nio-1027-exec-7] actions.BaseAction - DBE Error code was not set ::
2024-03-14 09:51:14,412 DEBUG [http-nio-1027-exec-7] actions.BaseAction - Parsing Database Specific Err
2024-03-14 09:51:14,414 ERROR [http-nio-1027-exec-7] actions.BaseAction - Caller Specified DatabaseExce
```

In the **CCM Informix** logs it is possible to see several of these errors

```
ERROR Estimate FAILED for table 'ccm12_5_1_16900_48:"informix".'
```

There are certain scenarios when you can see an NTP error

Mar 14 09:51:23 FXSDCWCMFPUB user 4 platform: Response from 'ntpdate -q': server X.X.X.X, stratum 0, of

Solution



Warning: To clear the Memory Allocation, you need to restart the services off business hours as the restart of the services listed can impact the performance of your voice system.



Note: This process requires to be done only in CUCM Publisher node.

Step 1. Restart the Cisco Tomcat service (utils service restart Cisco Tomcat) through the CLI.

The Cisco Tomcat restart implies that features such as Extension Mobility, the Self-Care portal, the CUCM GUI and the log in of the users cannot be accessible while the service is down.

The GUI takes around 5 minutes to be available after the service restart, thus seen a 404 Not Found error is expected.

Step 2. Add the SIP Trunk device to the CUCM.

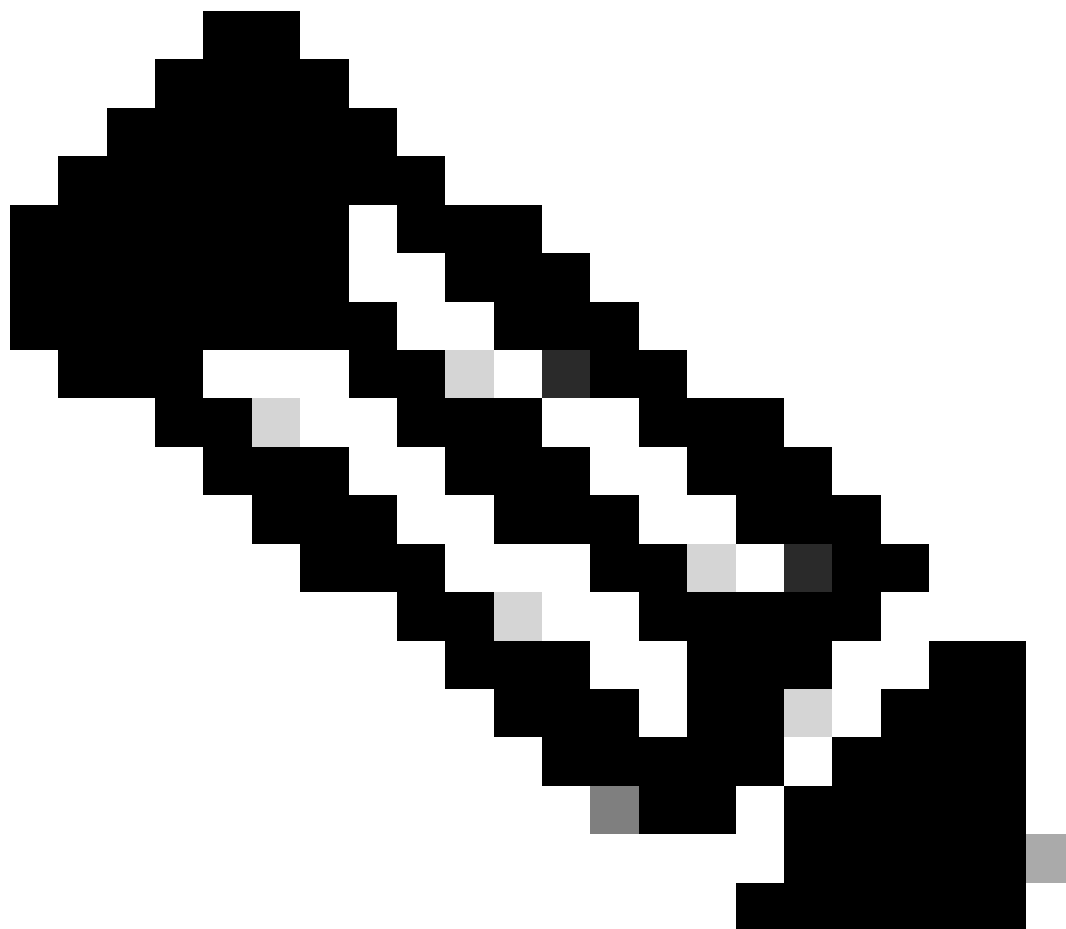
Step 3. If step 2 does not complete successfully, **restart the A Cisco DB service** in the CUCM publisher node via the CLI (utils service restart A Cisco DB),

Keep in mind that when you restart **A Cisco DB** in the publisher, all the databases are restarted, so you cannot configure or add features and configurations into the CUCM servers, and the attempt to add or configure anything in the servers can get lost after the service has come back and all the databases have set up again because all the subscribers' databases get into Read-Only while the A Cisco DB service is in restart mode.

However, you can make phone calls, since this information is stored in the **In-Memory Database** as Read-Only, you can configure Call Manager Groups specifically for failover purposes, which depends on the node you want to restart, so the phones are kept registered.

Step 4. Once you have restarted the A Cisco DB service in all the nodes, **wait** around 15 to 20 minutes and then **add** the SIP Trunk.

Step 5. If the problem persists after the restart of the Cisco Tomcat and A Cisco DB on the Publisher, restart those services on the Subscriber nodes that are meant for call-processing.



Note:

This issue can be also seen in these scenarios.

1. When the System has experienced or is still experiencing High CPU.
 2. When the Network Time Protocol (NTP) is not **synchronised**, which then provokes an **unsynchronization** between all the nodes' databases.
 3. When there are certificates expired.
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