

排除CUCM中完全公共分区的故障

目录

[简介](#)

[先决条件](#)

[要求](#)

[使用的组件](#)

[背景信息](#)

[验证公用分区空间](#)

[常见分区清理方法](#)

[验证虚拟化存储需求](#)

[日志分区监视工具](#)

[执行可用空间COP文件](#)

[通过CLI删除日志](#)

[删除cm/trace日志](#)

[删除核心转储](#)

[修改呼叫详细信息记录\(CDR\)低/高水位线值](#)

[清除CDR分析和报告\(CAR\)数据库](#)

[已删除未使用的电话固件文件](#)

[故障排除](#)

[相关信息](#)

简介

本文档介绍如何对Unified Communications Manager (CUCM)服务器中的完全公共分区进行故障排除，以及如何清理存储。

先决条件

要求

Cisco 建议您了解以下主题：

- 实时监控工具(RTMT)
- CUCM GUI界面和CLI会话

使用的组件

本文档中的信息基于以下软件和硬件版本：

- CUCM 版本 12.5.1.16900-48

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原

始 (默认) 配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

背景信息

CUCM有三个主磁盘分区：

- Disk/active：包含当前CUCM版本及其配置。
- Disk/inactive：包含早期版本，以防您因任何原因需要在升级后进行切换。
- 磁盘/日志记录：这也称为通用分区，它保存所有已启用的日志/跟踪文件，还用于在升级期间临时存储升级ISO文件。

在以下两种情况下需要执行常见分区清理：

- 日志循环已中断，并且日志不会被删除，导致日志记录(/common)分区在没有绑定的情况下增长。这可能会导致性能问题，因为无法记录会影响不同命令的执行。
- CUCM升级需要在通用分区下提供更多空间。[升级前准备COP文件](#)在执行升级之前验证集群的不同方面，其中一个模块是磁盘空间检查，因为CUCM升级在通用分区中至少需要25 GB的可用空间。

验证公用分区空间

要验证磁盘空间，请使用show status命令，并在命令末尾显示磁盘使用情况。

```
<#root>
```

```
admin:
```

```
show status
```

```
Host Name       : xxxxxxxx-cucm1
Date            : Fri Sep 29, 2023 17:20:40
Time Zone      : Central Daylight Time (America/Mexico_City)
Locale         : en_US.UTF-8
Product Ver    : 12.5.1.16900-48
Unified OS Version : 7.0.0.0-4
```

```
Uptime:
```

```
17:20:42 up 141 days, 1:12, 1 user, load average: 2.22, 0.98, 0.82
```

```
CPU Idle: 85.86% System: 07.58% User: 05.56%
IOWAIT: 00.51% IRQ: 00.00% Soft: 00.51%
```

```
Memory Total: 7990056K
Free: 130848K
Used: 3963172K
Cached: 3232656K
Shared: 484376K
Buffers: 3896036K
```

	Total	Free	Used
Disk/active	19805412K	6240536K	13345948K (69%)
Disk/inactive	19805412K	6601928K	12984556K (67%)

Disk/logging 69234984K 5315340K 60379628K (92%) <--- Used common partition space

用于验证存储的另一个命令是show tech runtime disk，通过此命令，我们可以验证每个分区的文件系统，磁盘/活动分区挂载到/，磁盘/非活动分区挂载到/partB，磁盘/日志记录分区挂载到/common。

<#root>

admin:

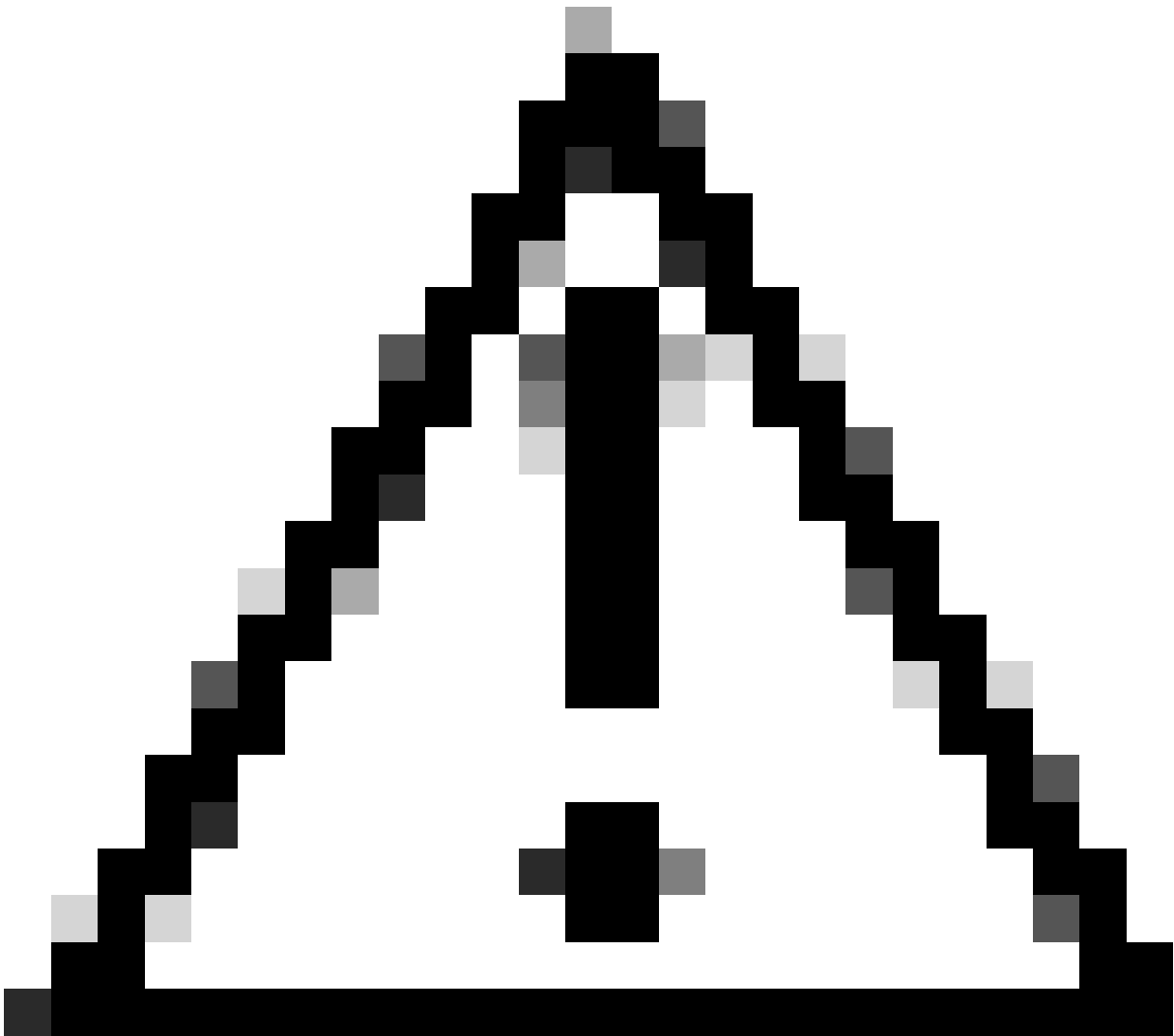
show tech runtime disk

----- show platform runtime -----

The disk usage:

Filesystem	Size	Used	Avail	Use%	Mounted on	
devtmpfs	3.8G	0	3.8G	0%	/dev	
tmpfs	3.9G	85M	3.8G	3%	/dev/shm	
tmpfs	3.9G	402M	3.5G	11%	/run	
tmpfs	3.9G	0	3.9G	0%	/sys/fs/cgroup	
/dev/sda2	19G	13G	6.0G	69%	/	<--- Active partition
/dev/sda1	19G	13G	6.3G	67%	/partB	<--- Inactive partition
/dev/sda3	240M	9.5M	214M	5%	/grub	
/dev/sda6	67G	58G	5.1G	92%	/common	<--- Logging partition
none	128M	0	128M	0%	/var/log/ramfs/cm/trace/ccm/sdi	
none	128M	1.6M	127M	2%	/var/log/ramfs/cm/trace/ccm/sdl	
none	128M	32K	128M	1%	/var/log/ramfs/cm/trace/ccm/calllogs	
none	128M	0	128M	0%	/var/log/ramfs/cm/trace/ccm/dntrace	
none	128M	1.4M	127M	2%	/var/log/ramfs/cm/trace/lbm/sdl	
none	128M	0	128M	0%	/var/log/ramfs/cm/trace/cti/sdi	
none	128M	556K	128M	1%	/var/log/ramfs/cm/trace/cti/sdl	
tmpfs	781M	0	781M	0%	/run/user/504	
tmpfs	781M	0	781M	0%	/run/user/1000	
tmpfs	781M	0	781M	0%	/run/user/0	

常见分区清理方法



注意：如果不对整个集群执行DRS恢复，则无法恢复已删除的文件，请确保您了解所有已删除文件的影响。Cisco建议您在删除任何文件之前进行备份。

验证虚拟化存储需求

根据您的版本，CUCM实施必须符合磁盘虚拟化要求，请参阅[CUCM虚拟化指南](#)。使用show hardware命令验证虚拟机上的存储。

```
<#root>
```

```
admin:
```

```
show hardware
```

```
HW Platform      : VMware Virtual Machine
Processors       : 2
Type             : Intel(R) Xeon(R) CPU E5-2699A v4 @ 2.40GHz
```

CPU Speed : 2400
Memory : 8192 MBytes
Object ID : 1.3.6.1.4.1.9.1.1348
OS Version : UCOS 7.0.0.0-4.i386
Serial Number : VMware-42 16 9b c5 f6 08 da f9-36 d7 72 7c 01 41 52 62

RAID Version :
No RAID controller information is available

BIOS Information :
PhoenixTechnologiesLTD 6.00 11/12/2020

RAID Details :
No RAID information is available

Physical device information

Number of Disks : 1 <--- # of vdisks
Hard Disk #1
Size (in GB) : 110 <--- disk size

Partition Details :

Disk /dev/sda: 14359 cylinders, 255 heads, 63 sectors/track
Units: sectors of 512 bytes, counting from 0

Device	Boot	Start	End	#sectors	Id	System
/dev/sda1	*	2048	40511487	40509440	83	Linux
/dev/sda2		40511488	81020927	40509440	83	Linux
/dev/sda3		81020928	81545215	524288	83	Linux
/dev/sda4		81545216	230686719	149141504	5	Extended
/dev/sda5		81547264	89739263	8192000	82	Linux swap / Solaris
/dev/sda6		89741312	230686719	140945408	83	Linux



注意：不支持添加vDisk，因为它需要由应用重新分区。如果存储配置不符合要求，则必须使用正确的OVA模板重建VM。

日志分区监视工具

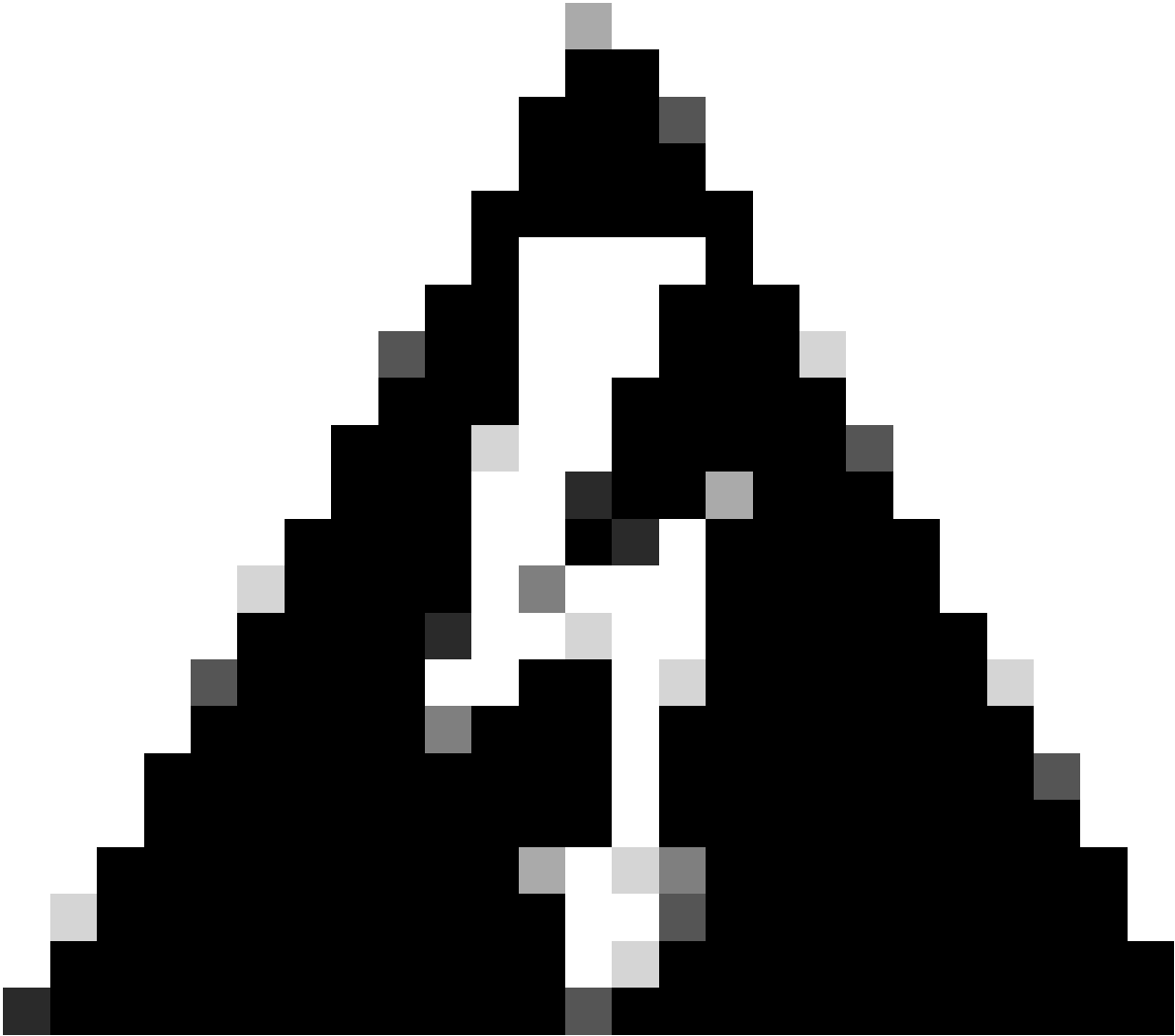
日志分区监控工具(LPM)使用配置的阈值每5分钟监控一次服务器上日志分区的磁盘使用情况。您可以在RTMT上配置两个警报，以修改此阈值：

- LogPartitionLowWaterMarkExceeded (% disk space) -当磁盘使用率高于您指定的百分比时，LPM向系统日志发送警报消息，并向RTMT警报中心发送警报。要保存日志文件并重新获得磁盘空间，可以在RTMT中使用trace and log central选项。
- LogPartitionHighWaterMarkExceeded (% disk space) -当磁盘使用率高于您指定的百分比时，LPM将警报消息发送到syslog和警报发送到RTMT警报中心。当达到此阈值时，将清除旧的日志文件，这会在日志分区中创建额外的磁盘空间。

要清除文件，请参阅[Call Manager的RTMT中的调整水位线过程指南](#)。

执行可用空间COP文件



如果在调整High/Low WaterMark值后公共分区空间不足，请继续安装最新的Cisco Free Common Space COP文件。




警告：必须在维护时段安装补丁程序，因为正常工作时间的安装会暂时影响系统性能。确保在系统上没有其他CLI或GUI活动时安装修补程序，因为该修补程序将终止所有CLI和GUI会话并重新启动Tomcat服务。


-
1. 从[软件下载](#)下载最新的Cisco Free Common Space COP文件。查看[ReadMe](#)文件，以了解运行此COP文件的影响。
 2. 要安装COP文件，请导航到Cisco Unified OS Administration > Software Upgrades > Install/Upgrade，并验证软件位置设置，然后单击Next。


Software Installation/Upgrade

 Cancel
  Next

Status

 Before upgrading the cluster Cisco recommends installing the latest Upgrade Readiness COP file. Refer to the Upgrade Guide on cisco.com for details.

 Status: Ready

 Below are the configurations used for the upgrade of current node. To review/modify the configuration, navigate to Software Upgrades -> Cluster Software Location on publisher.

Software Location

Source*

Directory*

Server*

User Name*

User Password*

Transfer Protocol*


SMTP Server

Email Destination

Upgrade Options


continue with upgrade after download

switch-version server after upgrade(valid only for ISO)

 *- indicates required item.



安装/升级软件位置屏幕

3. 选择可用公共空间COP文件，然后单击下一步。



Cisco Unified Operating System Administration
 For Cisco Unified Communications Solutions

Show ▾ Settings ▾ Security ▾ Software Upgrades ▾ Services ▾ Help ▾

Software Installation/Upgrade

 Cancel
  Next

Status

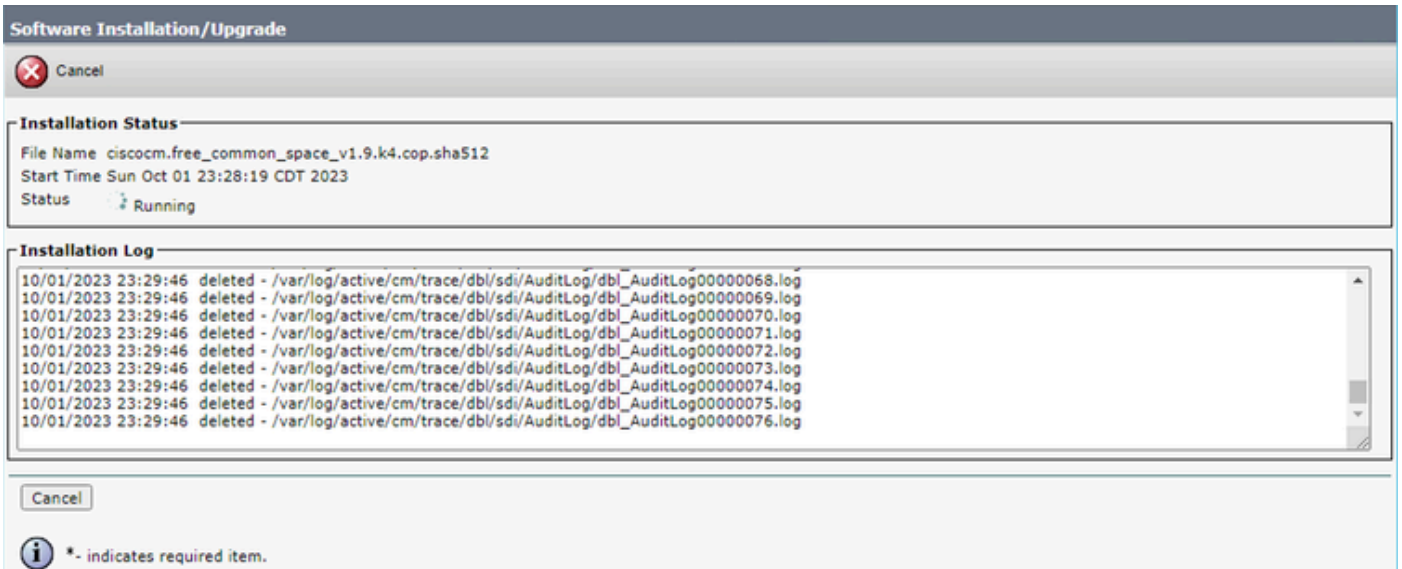
 Status: Ready

Software Location

Options/Upgrades*

软件文件选择屏幕

4. COP文件开始执行并释放公共分区空间。



COP File Installation in Progress屏幕

通过CLI删除日志

当日志记录分区已满(100%)时，COP安装将失败，对于此情况，可以从CLI手动删除日志。运行 `show diskusage common sort` 命令识别消耗大量空间的大文件。

```
<#root>
```

```
admin:
```

```
show diskusage common sort
```

This command can take significantly long time, and can also effect the system wide IOWAIT on your system. Continue (y/n)?y

```
Filesystem      1K-blocks      Used Available Use% Mounted on
/dev/sda6        69234984 60388736   5306232  92% /common
60305892         /common/
60239612         /common/log
37020784         /common/log/taos-log-b
23209092         /common/log/taos-log-a
13585228         /common/log/taos-log-b/cm
9506060 /common/log/taos-log-b/car_db
9506016 /common/log/taos-log-a/car_db
9379480 /common/log/taos-log-b/cm/trace
8764376 /common/log/taos-log-a/cm
6222036 /common/log/taos-log-b/car_db/cardbpace
6222004 /common/log/taos-log-a/car_db/cardbpace
5998244 /common/log/taos-log-b/tomcat
5281404 /common/log/taos-log-a/cm/trace
4458320 /common/log/taos-log-b/tomcat/logs
4159960 /common/log/taos-log-b/core
4159952 /common/log/taos-log-b/core/core.jvm.core
2923152 /common/log/taos-log-b/cm/trace/dbl
2921840 /common/log/taos-log-b/cm/trace/dbl/sdi
2002008 /common/log/taos-log-b/car_db/cartempdb
```

```
2002004 /common/log/taos-log-a/car_db/cartempdbs
1935008 /common/log/taos-log-b/cm/bin
1932000 /common/log/taos-log-a/cm/bin
1928508 /common/log/taos-log-a/cm/trace/ccm
1928424 /common/log/taos-log-a/cm/trace/ccm/sdl
1806628 /common/log/taos-log-b/cm/tftpdata
```

删除cm/trace日志

以下是save命令，用于从cm/trace路径删除日志文件（一次运行一个）：

- file delete activelog cm/trace/ccm/sdl/* noconfirm
- file delete activelog cm/trace/cti/sdl/* noconfirm
- file delete activelog cm/trace/*/*/*/* noconfirm
- file delete activelog cm/trace/*/*/* noconfirm
- file delete activelog cm/trace/*/* noconfirm
- file delete activelog cm/trace/* noconfirm
- file delete inactivelog cm/trace/*/*/*/* noconfirm
- file delete inactivelog cm/trace/*/*/* noconfirm
- file delete inactivelog cm/trace/*/* noconfirm
- file delete inactivelog cm/trace/* noconfirm
- file delete activelog cm/log/tris/csv/*
- file delete activelog tomcat/logs/ccmservice/log4j/*
- file delete activelog /platform/snmp/*/*

删除核心转储

核心转储通常占用大量磁盘空间，可以使用**utils core active list**和**utils core inactive list**命令识别这些转储。

<#root>

admin:

```
utils core active list
```

Size	Date	Core File Name
=====	2023-03-02 22:03:11	core.jvm.core

```
admin:
admin:

utils core inactive list
```

Size	Date	Core File Name
292616 KB	2022-02-20 00:02:37	core.62556.6.ccm.1645336926

根据分区，使用file delete activelog core/filename删除Core转储或file delete inactivelog core/filename并确认未再列出任何内核。

```
<#root>
```

```
admin:

file delete activelog core/core.jvm.core
```

```
Delete the File core/core.jvm.core?
Enter "y" followed by return to continue: y
files: found = 1, deleted = 1
admin:
admin:
```

```
file delete inactivelog core/core.62556.6.ccm.1645336926
```

```
Delete the File core/core.62556.6.ccm.1645336926?
Enter "y" followed by return to continue: y
files: found = 1, deleted = 1
admin:
admin:
```

```
utils core active list
```

```
No core files found
admin:
```

```
utils core inactive list
```

```
No core files found
```

修改呼叫详细信息记录(CDR)低/高水位线值

CDR存储库管理器的文件管理器组件每小时运行一次。当文件管理器运行时，它会删除日期超过所配置的保留持续时间的文件。它还会检查磁盘使用率是否已超过高水位线。如果是，系统会删除已处理的CDR文件，直到达到低水位线，从最早的文件开始。

- 导航到Cisco Unified Serviceability > Tools > CDR Management，然后单击General Parameters部分下的第一个值。



CDR Management

+ Add new X Delete Selected

General Parameters

Disk Allocation (MB)	High Water Mark (%)	Low Water Mark (%)	CDR / CMR Files Preservation Duration (Days)	Disable CDR/CMR Files Deletion Based on HWM	CDR Repository Manager Host Name	CDR Repository Manager Host Address
3000	80	40	30	<input type="checkbox"/>	cucm1.	10.

Click on any of the above parameters to update the General Parameters

Billing Application Server Parameters

Server Number	Host Name / IP Address*	User Name*	Protocol*	Directory Path*	Resend on Failure	Generate New Key
---------------	-------------------------	------------	-----------	-----------------	-------------------	------------------

Add new Delete Selected

- Click on the Add New button to add a new Billing Application Server
- Click on the corresponding Server Name to Update the Billing Application Server details
- Select corresponding Checkbox and click on Delete Selected button to Delete Billing Application Server details. For the SFTP Billing server, the Authentication keys will be deleted.
- Click on the Reset Button to Generate new Keys and reset the connection to the SFTP server.

CDR管理屏幕

- 修改高水位线(%)和低水位线(%)。



CDR Management



General Parameters

Disk Allocation (MB)

High Water Mark (%)

Low Water Mark (%)

CDR / CMR Files Preservation
Duration (Days)

Disable CDR/CMR Files Deletion
Based on HWM

Update

Set Default

Cancel

CDR管理修改常规参数屏幕

清除CDR分析和报告(CAR)数据库

如果CAR数据库占用大量空间，您可以执行清除数据库并释放日志记录空间。任务：

- 访问CAR网页，导航到Cisco Unified Serviceability > Tools > CDR Analysis and Reporting。
- 禁用加载程序，导航到System > Scheduler > CDR Load，选中Disable Loader复选框并单击Update。

Cisco Unified CM CDR Analysis and Reporting
For Cisco Unified Communications Solutions

Navigation **Cisco Unified CM Administration** GO
Logged in | admin

User Reports System Reports Device Reports CDR System Report Config Help Logout

CDR Load

Disable Loader
 Continuous Loading 24/7
 Load CDR only

Load CDR & CMR

Time* Hr Min
 Time to start loading of CDRs & CMRs

Loading interval*
 Loading interval

Duration* Min
 Duration of a loading cycle

Uninhibited Loading

From* Hr Min
 To* Hr Min
 Time range for uninhibited loading of CDRs & CMRs

Status: Ready
 Note: Changes made, will take effect at midnight. Restart the Cisco CDR Analysis and Reporting Scheduler service, for the changes to take effect immediately. If defaults are restored or Continuous Loading 24/7 is updated, the service will be automatically restarted and changes will take effect immediately.

* indicates required item

禁用加载程序屏幕

- 要使更改生效，请导航到Cisco Unified Serviceability > Tools > Control Center - Network Services > Cisco CAR Scheduler，然后重新启动服务。
- 要清除CAR DB，请导航到System > Database > Manual Purge，点击Table Information以验证每种表类型的最早记录。

Table Information

Database Name	Table Name	Total No. of Records	Latest Record	Oldest Record
CAR	Tbl_Billing_Data	1	17-08-2023	17 Aug 2023
CAR	Tbl_Billing_Error	9	17 Aug 2023	31 Jul 2023
CAR	Tbl_Purge_History	2	01 Oct 2023 01:00:10	31 Jul 2023 17:01:44

CAR表信息屏幕

- 单击Close，然后选择日期范围以清除选定表中的文件。

Cisco Unified CM CDR Analysis and Reporting
For Cisco Unified Communications Solutions

Navigation **Cisco Unified CM Administration** **GO**
Logged in | admin

User Reports System Reports Device Reports CDR System Report Config Help Logout

Manual Database Purge

Select Database* **CAR**

Select Table* **Tbl_Billing_Data** **Table Information**

Delete Records*

Older than **Oct** **1** **2023**

Between **May** **1** **2023** and **Sep** **1** **2023**

Purge

Status: Ready
Warning: Please disable the loader before starting the purging process.
* indicates required item

Reload All Call Detail Records

Manual Database Purge 屏幕

已删除未使用的电话固件文件

对于升级方案，如果公共分区中没有足够的空间，请从TFTP中删除旧/未使用的固件。任务：

- 导航到 **Cisco Unified OS Administration > Software Upgrades > Device Load Management**。
- 应用过滤器查找设备加载，其中 > Status > is exactly > **Not In Use** > Find。
- 删除状态为 **Not In Use** 的所有设备加载。

Cisco Unified Operating System Administration
For Cisco Unified Communications Solutions

Navigation Cisco Unified OS Administration Go
admin | About | Logout

Show Settings Security Software Upgrades Services Help

Device Load Management

Select All Clear All Delete Selected Loads

i This page allows deletion of selected unused device loads on this server for most endpoint models. Unused device loads must be deleted separately for each server in the cluster.

Status

i 1 records found

Device Loads (1 - 1 of 1) Rows per Page 50

Find Device Loads where Status is exactly Not in Use Find Clear Filter

<input type="checkbox"/>	Load Name ^	Status	Date
<input checked="" type="checkbox"/>	ATA191.12-0-1SR2-3.loads	Not In Use	25/07/2019

Select All Clear All Delete Selected Loads

Device Load Management 屏幕

故障排除

如需进一步帮助，请向思科TAC提交支持请求并收集以下命令：

- show version active
- show network cluster
- show status
- show tech runtime disk
- show hardware
- show diskusage common sort

相关信息

- [升级就绪性检查 CUCM 和 IMPS 的 COP 文件](#)
- [在Call Manager过程的RTMT中调整水印](#)
- [Cisco Unified Real-Time Monitoring工具管理指南](#)
- [Cisco Unified CDR分析和报告管理指南](#)
- [《呼叫详细信息记录管理指南》](#)

- [思科技术支持和下载](#)

关于此翻译

思科采用人工翻译与机器翻译相结合的方式将此文档翻译成不同语言，希望全球的用户都能通过各自的语言得到支持性的内容。

请注意：即使是最好的机器翻译，其准确度也不及专业翻译人员的水平。

Cisco Systems, Inc. 对于翻译的准确性不承担任何责任，并建议您总是参考英文原始文档（已提供链接）。