

CUCM版本9.x+中的许可证计算

目录

[简介](#)

[企业许可证管理器\(ELM\)/CUCM版本9.x+许可基础](#)

[用于计算CUCM版本9.x+中许可证要求的数据库表和机制](#)

[许可证计算方案](#)

[无电话，未配置用户](#)

[添加未分配的设备\(6941\)](#)

[添加未分配功能的其他用户](#)

[为用户启用分机移动\(EM\)](#)

[为用户启用即时消息\(IM\)](#)

[为用户启用移动](#)

[将设备分配给用户](#)

[添加第二个未分配的设备\(9971\)](#)

[将第二台设备分配给同一用户](#)

[分机移动注意事项](#)

简介

本文档介绍Cisco Unified Communications Manager(CUCM)9.1及更高版本（包括10.x）如何计算其许可证要求。

本文档旨在描述CUCM执行其许可证计算的方式，显示用于此的不同数据库表，并提供一系列不同方案，涵盖最常见的情况。

本文档中显示的所有输出和屏幕截图均基于CUCM版本9.1.1a。

企业许可证管理器(ELM)/CUCM版本9.x+许可基础

CUCM的所有许可现在都集中在ELM上。这些许可证使用俄罗斯玩偶层次结构，这意味着每种许可证类型都允许用户使用下一层的超集。更高层的许可证包括较低层许可证的所有功能。

如果需要，如果ELM有一定的许可证集可用，可以从较高层向较低层借用许可证。向较低层借用许可证时，在释放许可证之前无法再次分配许可证，例如，当添加了其他较低层许可证或所需许可证的数量减少时。每个产品向ELM通告所需的许可证计数，然后ELM根据可用许可证数量验证此要求，以查看其是否能满足该请求。

Cisco Unified Communications Manager功能和服务指南9.1(1)版的许可部分介绍了不同类型的统一通信(UC)许可证及其与CUCM相关的信息：

CUCM许可有三种不同方案：

- **仅用户** — 这适用于未分配设备的用户。在这种情况下，您会根据已配置的功能（例如，使用分机移动时必需）（仅适用于版本9.0.1/9.1.1，不适用于版本9.1.1a及更高版本）或移动/移动连接/一号通(SNR)的基本)来授权用户。
分机移动 — 设备配置文件与用户关联。移动连接 — 移动已启用，且远程目标配置文件(RDP)与用户关联。
- **仅设备** — 当电话未分配给用户时，将按设备类型授予许可。
如果设备配置页面的“所有者用户ID”(Owner User ID)字段中没有条目，则设备不与用户关联。
- **用户和设备** — 这适用于具有已分配设备的用户。然后，许可证按设备（当每个用户分配一台设备时）或按每个用户每台设备数(增强型/思科统一工作空间许可(CUWL)标准，而不管使用的设备类型如何)。

用于计算CUCM版本9.x+中许可证要求的数据库表和机制

许可证资源使用情况保留在LicensingResourceUsage CUCM数据库(DB)表中。

```
admin:run sql select * from LicensingResourceUsage
```

pkid	fkenduser	em	snr	tin	copper	bronze	silver	gold	telepresence	presence	unknowndevice
77a09a6c-ece7-4a20-b950-c2d04b361777	c44b6aa1-862a-2dda-bab3-326d8f88a51e	f	t	1	0	0	0	0	f	f	0
588ab1d8-c13d-4f51-a043-a4c6a80d0b91	a275f434-1190-56a8-be51-6ed3c08813c3	t	t	0	0	2	0	0	f	f	0
7a119168-ef8f-4d5a-95f0-abfa25d2415d	NULL	f	f	0	0	1	0	0	f	f	0
668d98c2-c73e-4cf1-a614-e718a012fc2f	fc5b1b05-1531-a51c-3879-6eed9099c6e3	f	t	0	0	1	0	0	f	f	0

admin:

此表在ELM（服务器端）每次与应用程序（客户端）联系时或在您单击CUCM中“许可证使用报告”下的“更新使用详细信息”时更新。

在TypeLicensedResource CUCM DB表中定义不同的设备许可证层。

```
admin:run sql select * from typelicensedresource
```

enum	moniker	name	description
1	LICENSEDRESOURCE_TIN	Tin	Tin
2	LICENSEDRESOURCE_COPPER	Copper	Copper
3	LICENSEDRESOURCE_BRONZE	Bronze	Bronze
4	LICENSEDRESOURCE_SILVER	Silver	Silver
5	LICENSEDRESOURCE_GOLD	Gold	Gold
6	LICENSEDRESOURCE_TELEPRESENCE	Telepresence	Telepresence
7	LICENSEDRESOURCE_NOCOST	Nocost	Nocost

admin:

这些层映射到不同设备的方式在此表中在CUCM上定义 — TypeLicenseResourceProductMap。

```

admin:run sql select * from typelicensedresourceproductmap
enum tklicensedresource tkproduct
=====
166 3 16
167 7 25
1 1 30065
29 3 30066
10 3 20
16 3 21
17 3 22
18 3 23
?

```

admin:

您可以将在TypeLicenseResourceProductMap表中找到的tkproduct与TypeProduct表关联，以便查看与此查询对应的项：

```
admin:run sql select * from typeproduct where enum = 'tkproduct'
```

有关映射到每台设备的LicenseResource的完整概述，请使用此CUCM DB查询以映射所有三个表：

```

admin:run sql select typeproduct.name, typelicensedresource.name from typeproduct,
typelicensedresource, typelicensedresourceproductmap where
typelicensedresource.enum = typelicensedresourceproductmap.tklicensedresource
and typelicensedresourceproductmap.tkproduct = typeproduct.enum

```

以下是在CUCM版本9.1.1a上执行的该命令的部分输出：

name	name
===== Analog Phone	Tin
Cisco 6901	Tin
Cisco 6911	Copper
Cisco 6921	Copper
H.323 Client	Bronze
Third-party SIP Device (Basic)	Bronze
Third-party SIP Device (Advanced)	Bronze
Cisco 7941	Bronze
Cisco 7945	Bronze
Cisco 7965	Bronze
Cisco 7975	Bronze
Cisco 9971	Bronze
Cisco VXC 6215	Bronze
Cisco 6945	Bronze
Cisco TelePresence EX90	Bronze
Cisco TelePresence EX60	Bronze
Cisco TelePresence	Telepresence
Cisco TelePresence MX300	Telepresence
CTI Port	Nocost

对于许可证要求计算，在连接到License Manager客户端后，应用端的ELM运行以下存储过程：

```

admin:run sql SELECT name,value FROM TABLE (FUNCTION LicenseTotals())
(pkid,name,value,UserValue,DeviceValue)

```

注意：要查看运行哪些查询以及查询如何计算许可证要求，可以使用此查询查看存储过程：
admin:run sql select * from sysprocody，其中procid = '901'。

存储过程的输出将发回ELM，ELM将验证应用程序的许可证要求并检查它们是否可以满足（是否需要从更高层借用许可证？）。完成此操作后，结果将发回客户端，客户端会相应地更新其DB（LicenseServer表）（合规与不合规）。

```
admin:run sql select * from licenseserver
```

```
pkid          name          priority
=====
234e7714-c87a-4054-a024-c10910123842 UCS1CUCM91P 1

fkprocessnode      description  gracestarttime  graceleftdays
=====
866516aa-120e-4ea0-9bd4-37e756597d1b          0                0

elmlastcontactts tklicensingstate tklicensingmode
=====
1369143814      2                5

lastresourceusagecalculations elmtime
=====
2013-05-16 16:41:32          UCS1CUCM91P.coluc.com
```

admin:

要解码许可状态值，可以从CUCM数据库查看TypeLicensingState表。对于此特定场景，值2表示符合。

```
admin:run sql select * from TypeLicensingState
```

```
enum moniker name description allow
provisioning
====
1 LICENSINGSTATE_DEMO Demo Demo t
2 LICENSINGSTATE_COMPLIANT compliant Compliant t
3 LICENSINGSTATE_OVERAGE Overage Overage t
4 LICENSINGSTATE_NO_CONTACT No Contact No Contact t
5 LICENSINGSTATE_SECURITY_FAILURE Security Failure Security Failure t
6 LICENSINGSTATE_NO_PROVISIONING No Provisioning No Provisioning f
7 LICENSINGSTATE_GRACE Grace Grace t
```

admin:

可以在TypeLicensingMode表中查看不同的许可模式。对于CUCM，许可模式始终为5，这意味着基于ELM。

```
admin:run sql select * from TypeLicensingMode
```

```
1 LICENSING_MODE_CAPACITY_NODES
System Capacity Licensing of Nodes in the cluster
This licensing mode is used to license SYSTEM CAPACITY
according to the nodes configured into a cluster.

2 LICENSING_MODE_UTILIZATION_DLU_BASED
System Utilization Licensing Per DLU Consumption
This licensing mode is used to license RESOURCE UTILIZATION LEVELS
within a cluster according to the devices, (phones), configured and the
associated Device License Units, (DLUs), consumed.

3 LICENSING_MODE_CAPABILITY_SW_SERVICES_AND_VERSIONS
System Capability Licensing by Software & Version
This licensing mode is used to license SYSTEM CAPABILITY
according to software and version in use on the cluster.
```

4 LICENSING_MODE_UTILIZATION_UCL_BASED

System Utilization Licensing Per UCL Consumption

This licensing mode is used to license RESOURCE UTILIZATION LEVELS within a cluster according to the user types configured and their feature and device associations. (User Connect Licensing)

5 LICENSING_MODE_ELM_BASED

System Utilization Licensing Per User Consumption

This licensing mode is used to license products in an Enterprise and License tracking is done by the Enterprise License Manager according to the Endusers configured and their feature and device type associations. (Enterprise Licensing)

6 LICENSING_MODE_HCS_BASED

System Utilization Licensing for HCS deployments

This licensing mode is used to license RESOURCE UTILIZATION LEVELS for Hosted Collaboration Systems(HCS) deployments. (Enterprise Licensing)

7 LICENSING_MODE_HCSLE_BASED

System Utilization Licensing for HCS Large Enterpr

This licensing mode is used to license RESOURCE UTILIZATION LEVELS for Hosted Collaboration Systems Large Enterprise (HCSLE) deployments. (Enterprise Licensing)

许可证计算方案


本文档的后面部分介绍CUCM的不同许可方案，并展示许可证计算如何受所执行的更改的影响，如添加新设备、新用户、用户功能或将设备分配给用户。

无电话，未配置用户

此示例显示没有电话或用户添加到CUCM的场景。

CallManager(CM)管理员的“许可证使用报告”页：

- License Usage Report

 Below is a summary of current license usage on the system. Current usage details for each type are available by pressing these data is a resource intensive process and may take several minutes to complete, depending on the size of your deployment. [View All License Type Descriptions And Device Classifications](#)

[Update Usage Details](#) Usage Details Last Updated: 2013-05-16 14:42:50

License Requirements by Type

License Type	Current Usage	Report
CUWL Standard	0	Users(0) Unassigned Devices(0)
Enhanced Plus	0	Users(0)
Enhanced	0	Users(0) Unassigned Devices(0)
Basic	0	Users(0) Unassigned Devices(0)
Essential	0	Users(0) Unassigned Devices(0)
TelePresence Room	0	Users(0) Unassigned Devices(0)

- Users and Unassigned devices

Users	0	View Usage Report
Unassigned Devices	0	View Usage Report

- Enterprise License Manager

The licenses for this system are managed by an Enterprise License Manager server.
Server Hostname / IP Address: [UCS1CUCM91P.coluc.com](#)
Last Successful Synchronization: 2013-05-16 00:30:08

以下是针对LicensingResourceUsage DB表的结构化查询语言(SQL)查询的输出：

```
admin:run sql select * from LicensingResourceUsage
pkid fkenduser em snr tin copper bronze silver gold telepresence presence unknowndevice
==== ===== == == == ===== ===== ===== ===== =====
admin:
```

添加未分配的设备(6941)

此示例显示在CUCM配置中添加单个6941电话类型的场景。

Phone Type

Product Type: Cisco 6941
Device Protocol: SIP


Device Information

Registration: Unknown
IP Address: Unknown
 Device is Active
 Device is trusted
MAC Address*:
Description:

Device Mobility Mode*: [View Current Device Mobility Settings](#)
Owner User ID:
Phone Personalization*:
Services Provisioning*:
Phone Load Name:

单击 **Update Usage Details** 以显示许可证使用报告，该报告将删除所有条目、重新计算它们并输入新的更新条目。

- License Usage Report

 Below is a summary of current license usage on the system. Current usage details for each type are available. These data is a resource intensive process and may take several minutes to complete, depending on the size.
[View All License Type Descriptions And Device Classifications](#)

Usage Details Last Updated: 2013-05-16 15:46:52

License Requirements by Type

License Type	Current Usage	Report
CUWL Standard	0	Users(0) Unassigned Devices(0)
Enhanced Plus	0	Users(0)
Enhanced	1	Users(0) Unassigned Devices(1)
Basic	0	Users(0) Unassigned Devices(0)
Essential	0	Users(0) Unassigned Devices(0)
TelePresence Room	0	Users(0) Unassigned Devices(0)

- Users and Unassigned devices

Users	0	View Usage Report
Unassigned Devices	1	View Usage Report

- Enterprise License Manager

The licenses for this system are managed by an Enterprise License Manager server.
Server Hostname / IP Address: [UCS1CUCM91P.coluc.com](#)
Last Successful Synchronization: 2013-05-16 00:30:08

以下是针对 LicensingResourceUsage DB表的SQL查询输出：

```
admin:run sql select * from LicensingResourceUsage
```

```
pkid                                fkenduser em snr tin
=====
0fd7659d-8faf-4054-8a80-a3e21b4abf4c NULL      f  f  0

copper bronze silver gold telepresence presence unknowndevice
=====
0      1      0      0      0              f      0
```

admin:

为未分配的设备插入了一个新条目：(fkenduser = NULL)，设备为铜级。

一个未分配的铜级设备需要一个增强的许可证，如下所示：

```
admin:run sql SELECT name,value FROM TABLE( FUNCTION LicenseTotals() )
(pkid,name,value,UserValue,DeviceValue)
name value
=====
CUWL Standard 0
EnhancedPlus 0
Enhanced 1
Basic 0
Essential 0
TelePresence Room 0
TotalUsers 0
TotalDevices 1
Timestamp 2013-05-16 15:46:52
ElmLastContact 1368657008
Elm UCS1CUCM91P.coluc.com
admin:
```

添加未分配功能的其他用户

此示例显示了在不分配任何附加功能的情况下添加单个用户的场景。

User Information

User Status: Active Local User

User ID*:

Password:

Confirm Password:

PIN:

Confirm PIN:

Last name*:

Extension Mobility

Available Profiles:

▼ ▲

Controlled Profiles:

▼ ▲

Default Profile:

BLF Presence Group*:

SUBSCRIBE Calling Search Space:

Allow Control of Device from CTI

Enable Extension Mobility Cross Cluster

Mobility Information

Enable Mobility

Enable Mobile Voice Access

Maximum Wait Time for Desk Pickup*:

Remote Destination Limit*:

Remote Destination Profiles:

[View Details](#)

单击 **Update Usage Details** 以显示“License Usage Report”页：

- License Usage Report



Below is a summary of current license usage on the system. Current usage details for each type are available. These data is a resource intensive process and may take several minutes to complete, depending on the size of the system.

[View All License Type Descriptions And Device Classifications](#)

[Update Usage Details](#)

Usage Details Last Updated: 2013-05-16 15:58:08

License Requirements by Type

License Type	Current Usage	Report
CUWL Standard	0	Users(0) Unassigned Devices(0)
Enhanced Plus	0	Users(0)
Enhanced	1	Users(0) Unassigned Devices(1)
Basic	0	Users(0) Unassigned Devices(0)
Essential	0	Users(0) Unassigned Devices(0)
TelePresence Room	0	Users(0) Unassigned Devices(0)

- Users and Unassigned devices

Users	0	View Usage Report
Unassigned Devices	1	View Usage Report

- Enterprise License Manager

The licenses for this system are managed by an Enterprise License Manager server.

Server Hostname / IP Address: [UCS1CUCM91P.coluc.com](#)

Last Successful Synchronization: 2013-05-16 00:30:08

对于此场景，没有更改，因为没有为此用户配置任何用户功能。DB表显示相同的情况：

```
admin:run sql select pkid from enduser where userid = 'jbardy'
```

```
pkid
```

```
=====  
dd420dcf-7bf8-206f-d8a3-5510aafaf254
```

```
admin:
```

```
admin:run sql select * from LicensingResourceUsage where  
fkenduser = 'dd420dcf-7bf8-206f-d8a3-5510aafaf254'
```

```
pkid fkenduser em snr tin
```

```
==== ===== == == ==
```

```
copper bronze silver gold telepresence presence unknowndevice
```

```
=====
```

```
admin:
```

总的来说，有一个条目对应于未分配的设备，如下所示：

```
admin:run sql select * from LicensingResourceUsage
```

```
pkid fkenduser em snr tin
```

```
=====
```

```
7d489860-2856-4868-8b7f-a52697621b59 NULL f f 0
```

```
copper bronze silver gold telepresence presence unknowndevice
```

```
=====
0      1      0      0      0      f      0
=====
```

admin:

根据以前的信息，您可以看到许可证要求保持不变：

```
admin:run sql SELECT name,value FROM TABLE( FUNCTION LicenseTotals() )
(pkid,name,value,UserValue,DeviceValue)
name value
=====
CUWL Standard 0
EnhancedPlus 0
Enhanced 1
Basic 0
Essential 0
TelePresence Room 0
TotalUsers 0
TotalDevices 1
Timestamp 2013-05-16 15:58:08
ElmLastContact 1368657008
Elm UCS1CUCM91P.coluc.com
admin:
```

为用户启用分机移动(EM)

此示例显示了为先前配置的用户添加EM功能的场景。

Extension Mobility

Available Profiles	psmeunin_dp1 psmeunin_dp2
▼ ▲	
Controlled Profiles	jbardy_dp
▼ ▲	
Default Profile	-- Not Selected --
BLF Presence Group*	Standard Presence group
SUBSCRIBE Calling Search Space	< None >
<input checked="" type="checkbox"/> Allow Control of Device from CTI <input type="checkbox"/> Enable Extension Mobility Cross Cluster	

单击Update Usage Details以显示“License Usage Report”：

注意：对于CUCM版本9.0/9.1，此功能需要基本许可证。

- License Usage Report



Below is a summary of current license usage on the system. Current usage details for each type are available. These data is a resource intensive process and may take several minutes to complete, depending on the size of the system.

[View All License Type Descriptions And Device Classifications](#)

[Update Usage Details](#)

Usage Details Last Updated: 2013-05-16 16:02:29

License Requirements by Type

License Type	Current Usage	Report
CUWL Standard	0	Users(0) Unassigned Devices(0)
Enhanced Plus	0	Users(0)
Enhanced	1	Users(0) Unassigned Devices(1)
Basic	0	Users(0) Unassigned Devices(0)
Essential	0	Users(0) Unassigned Devices(0)
TelePresence Room	0	Users(0) Unassigned Devices(0)

- Users and Unassigned devices

Users	0	View Usage Report
Unassigned Devices	1	View Usage Report

- Enterprise License Manager

The licenses for this system are managed by an Enterprise License Manager server.

Server Hostname / IP Address: [UCS1CUCM91P.coluc.com](#)

Last Successful Synchronization: 2013-05-16 00:30:08

许可证要求未更改。虽然思科不为EM许可，但为此用户添加了一个条目（功能）：

```
admin:run sql select * from LicensingResourceUsage where  
fkenduser = 'dd420dcf-7bf8-206f-d8a3-5510aafaf254'
```

```
pkid                                fkenduser                                em snr tin  
=====                               =====                               == === ===  
02e2222b-6cb2-4175-9129-ff7421292d58 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t f 0
```

```
copper bronze silver gold telepresence presence unknowndevice  
=====  =====  =====  =====  =====  =====  =====  
0         0         0         0         0         f         0
```

admin:

总共有两个条目：一个用于未分配的设备，一个用于启用了EM的用户：

```
admin:run sql select * from LicensingResourceUsage
```

```
pkid                                fkenduser                                em snr tin  
=====                               =====                               == === ===  
fe631c14-2889-4e14-8b89-a3c188b7d415 NULL                                f f 0  
02e2222b-6cb2-4175-9129-ff7421292d58 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t f 0
```

```
copper bronze silver gold telepresence presence unknowndevice  
=====  =====  =====  =====  =====  =====  =====  
0         1         0         0         0         f         0  
0         0         0         0         0         f         0
```

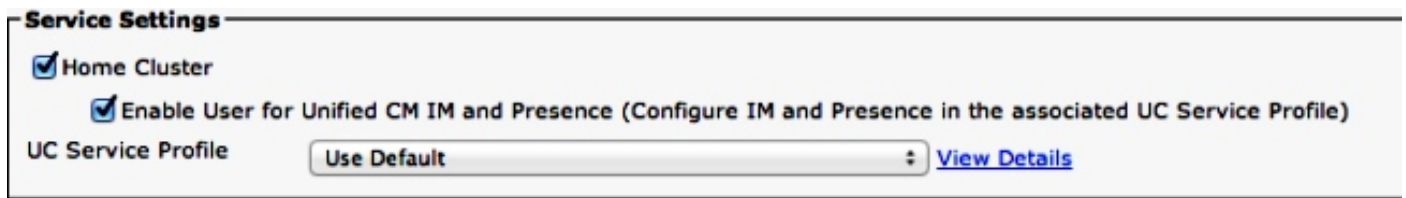
admin:

同样，您看不到许可证要求的任何更改：

```
admin:run sql SELECT name,value FROM TABLE( FUNCTION LicenseTotals() )
(pkid,name,value,UserValue,DeviceValue)
name value
=====
CUWL Standard 0
EnhancedPlus 0
Enhanced 1
Basic 0
Essential 0
TelePresence Room 0
TotalUsers 0
TotalDevices 1
Timestamp 2013-05-27 11:05:49
ElmLastContact 1369607564
Elm UCS1CUCM91P.coluc.com
admin:
```

为用户启用即时消息(IM)

此示例显示了为用户启用IM的场景。



The screenshot shows a configuration window titled "Service Settings". It contains the following elements:

- A checked checkbox labeled "Home Cluster".
- A checked checkbox labeled "Enable User for Unified CM IM and Presence (Configure IM and Presence in the associated UC Service Profile)".
- A dropdown menu for "UC Service Profile" with "Use Default" selected.
- A blue link labeled "View Details" next to the dropdown menu.

单击Update Usage Details以显示CUCM 9.1.1a及更高版本的许可证使用报告。

- License Usage Report



Below is a summary of current license usage on the system. Current usage details for each type are available. These data is a resource intensive process and may take several minutes to complete, depending on the size of the system.

[View All License Type Descriptions And Device Classifications](#)

[Update Usage Details](#)

Usage Details Last Updated: 2013-05-16 16:02:29

License Requirements by Type

License Type	Current Usage	Report
CUWL Standard	0	Users(0) Unassigned Devices(0)
Enhanced Plus	0	Users(0)
Enhanced	1	Users(0) Unassigned Devices(1)
Basic	0	Users(0) Unassigned Devices(0)
Essential	0	Users(0) Unassigned Devices(0)
TelePresence Room	0	Users(0) Unassigned Devices(0)

- Users and Unassigned devices

Users	0	View Usage Report
Unassigned Devices	1	View Usage Report

- Enterprise License Manager

The licenses for this system are managed by an Enterprise License Manager server.

Server Hostname / IP Address: [UCS1CUCM91P.coluc.com](#)

Last Successful Synchronization: 2013-05-16 00:30:08

许可证要求未更改。虽然思科不为EM和IM授权，但此用户有一个条目用于启用的两个用户功能(em和presence列,t = true值)。

```
admin:run sql select * from LicensingResourceUsage where  
fkenduser = 'dd420dcf-7bf8-206f-d8a3-5510aafaf254'
```

```
pkid                                fkenduser                                em snr tin  
=====                               =====                               == === ===  
63f29eb3-4f88-4a6d-8644-27e56caa3525 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t f 0
```

```
copper bronze silver gold telepresence presence unknowndevice  
===== ===== ===== =====  
0 0 0 0 0 t 0
```

admin:

总共有两个条目，一个用于未分配的设备，一个用于启用了EM/IM的用户：

```
admin:run sql select * from LicensingResourceUsage
```

```
pkid                                fkenduser                                em snr tin  
=====                               =====                               == === ===  
0e8accd0-bf1c-4f03-b394-20e95d1eec1b NULL f f 0  
63f29eb3-4f88-4a6d-8644-27e56caa3525 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t f 0
```

```
copper bronze silver gold telepresence presence unknowndevice  
===== ===== ===== =====  
0 1 0 0 0 f 0  
0 0 0 0 0 t 0
```

admin:

您看不到此修改导致的许可证要求的任何更改：

```
admin:run sql SELECT name,value FROM TABLE( FUNCTION LicenseTotals() )
(pkid,name,value,UserValue,DeviceValue)
name value
=====
CUWL Standard 0
EnhancedPlus 0
Enhanced 1
Basic 0
Essential 0
TelePresence Room 0
TotalUsers 0
TotalDevices 1
Timestamp 2013-05-27 11:05:49
ElmLastContact 1369607564
Elm UCS1CUCM91P.coluc.com
admin:
```

为用户启用移动

此示例显示了为同一用户启用移动性的场景，并了解它将如何影响CUCM中的许可证计算。

Mobility Information
 Enable Mobility
 Enable Mobile Voice Access
Maximum Wait Time for Desk Pickup*
Remote Destination Limit*
Remote Destination Profiles
[View Details](#)

单击Update Usage Details以显示CUCM 9.1.1a及更高版本的许可证使用报告：

- License Usage Report



Below is a summary of current license usage on the system. Current usage details for each type are available. These data is a resource intensive process and may take several minutes to complete, depending on the size.

[View All License Type Descriptions And Device Classifications](#)

[Update Usage Details](#)

Usage Details Last Updated: 2013-05-16 16:05:39

License Requirements by Type

License Type	Current Usage	Report
CUWL Standard	0	Users(0) Unassigned Devices(0)
Enhanced Plus	0	Users(0)
Enhanced	1	Users(0) Unassigned Devices(1)
Basic	1	Users(1) Unassigned Devices(0)
Essential	0	Users(0) Unassigned Devices(0)
TelePresence Room	0	Users(0) Unassigned Devices(0)

- Users and Unassigned devices

Users	1	View Usage Report
Unassigned Devices	1	View Usage Report

- Enterprise License Manager

The licenses for this system are managed by an Enterprise License Manager server.

Server Hostname / IP Address: [UCS1CUCM91P.coluc.com](#)

Last Successful Synchronization: 2013-05-16 00:30:08

许可证要求已更改，如上一映像所示，添加了一个基本许可证。数据库表显示，此最终用户仍只有一个条目；但是，SNR列现在标记为t。

```
admin:run sql select * from LicensingResourceUsage where
fkenduser = 'dd420dcf-7bf8-206f-d8a3-5510aafaf254'
```

```
pkid                                     fkenduser                               em snr tin
=====                               =====                               == == ==
fbb955fa-f633-4b5d-8064-f8ba67250831 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t t 0
```

```
copper bronze silver gold telepresence presence unknowndevice
=====
0 0 0 0 0 t 0
```

admin:

LicensingResourceUsage表中总共有两个条目：一个用于未分配的设备，一个用于用户：

```
admin:run sql select * from LicensingResourceUsage
```

```
pkid                                     fkenduser                               em snr tin
=====                               =====                               == == ==
86e2f48e-c395-4474-b039-cd842773ae93 NULL f f 0
fbb955fa-f633-4b5d-8064-f8ba67250831 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t t 0
```

```
copper bronze silver gold telepresence presence unknowndevice
=====
0 1 0 0 0 f 0
0 0 0 0 0 t 0
```


admin:

如网页中已经看到的，许可证要求会随一个Basic而增加，该Basic对应于启用了Mobility功能的此用户。

```
admin:run sql SELECT name,value FROM TABLE( FUNCTION LicenseTotals() )
(pkid,name,value,UserValue,DeviceValue)
name value
=====
CUWL Standard 0
EnhancedPlus 0
Enhanced 1
Basic 1
Essential 0
TelePresence Room 0
TotalUsers 1
TotalDevices 1
Timestamp 2013-05-27 11:39:46
ElmLastContact 1369607564
Elm UCS1CUCM91P.coluc.com
admin:
```

将设备分配给用户

此示例显示一个场景，在该场景中，您将先前添加的设备分配给用户，并查看CUCM如何计算许可证。

Phone Type	
Product Type:	Cisco 6941
Device Protocol:	SCCP
Device Information	
Registration	Unknown
IP Address	Unknown
<input checked="" type="checkbox"/> Device is Active	
<input checked="" type="checkbox"/> Device is trusted	
MAC Address*	<input type="text" value="111222333444"/>
Description	<input type="text" value="SEP111222333444"/>
Device Pool*	<input type="text" value="Default"/> View Details
Privacy*	<input type="text" value="Default"/>
Device Mobility Mode*	<input type="text" value="Default"/> View Current
Owner User ID	<input type="text" value="jbardy"/>
Phone Personalization*	<input type="text" value="Default"/>
Services Provisioning*	<input type="text" value="Default"/>
Phone Load Name	<input type="text"/>

单击Update Usage Details以显示CUCM 9.1.1a及更高版本的许可证使用报告：

- License Usage Report



Below is a summary of current license usage on the system. Current usage details for each type are available. These data is a resource intensive process and may take several minutes to complete, depending on the size of the system.

[View All License Type Descriptions And Device Classifications](#)

[Update Usage Details](#)

Usage Details Last Updated: 2013-05-16 15:58:08

License Requirements by Type

License Type	Current Usage	Report
CUWL Standard	0	Users(0) Unassigned Devices(0)
Enhanced Plus	0	Users(0)
Enhanced	1	Users(1) Unassigned Devices(0)
Basic	0	Users(0) Unassigned Devices(0)
Essential	0	Users(0) Unassigned Devices(0)
TelePresence Room	0	Users(0) Unassigned Devices(0)

- Users and Unassigned devices

Users	1	View Usage Report
Unassigned Devices	0	View Usage Report

- Enterprise License Manager

The licenses for this system are managed by an Enterprise License Manager server.

Server Hostname / IP Address: [UCS1CUCM91P.coluc.com](#)

Last Successful Synchronization: 2013-05-16 00:30:08

许可证要求已从一个增强版和一个基本版更改为一个增强版。DB表会相应更新。此最终用户仍有一个条目，但现在它还有一个铜级列值设置为1，该值对应于已分配的设备(1x6941)。

```
admin:run sql select * from LicensingResourceUsage where
fkenduser = 'dd420dcf-7bf8-206f-d8a3-5510aafaf254'
```

```
pkid                                fkenduser                                em snr tin
=====
95038f98-8967-4af8-aa61-1b86a1a7ba71 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t t 0
```

```
copper bronze silver gold telepresence presence unknowndevice
=====
0 1 0 0 0 t 0
```

admin:

您还可以看到，未分配的设备条目已从LicensingResourceUsage表中删除，在计算许可证使用情况时不再考虑。

```
admin:run sql select * from LicensingResourceUsage
```

```
pkid                                fkenduser                                em snr tin
=====
95038f98-8967-4af8-aa61-1b86a1a7ba71 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t t 0
```

```
copper bronze silver gold telepresence presence unknowndevice
=====
0 1 0 0 0 t 0
```

admin:

如网页前面所示，许可证要求从一个增强（最终用户）和一个基本(6941)更改为一个增强(现在包括移动功能和分配的设备（6941电话））。

```
admin:run sql SELECT name,value FROM TABLE( FUNCTION LicenseTotals() )
(pkid,name,value,UserValue,DeviceValue)
name value
=====
CUWL Standard 0
EnhancedPlus 0
Enhanced 1
Basic 0
Essential 0
TelePresence Room 0
TotalUsers 1
TotalDevices 0
Timestamp 2013-05-27 11:46:22
ElmLastContact 1369607564
Elm UCS1CUCM91P.coluc.com
admin:
```

添加第二个未分配的设备(9971)

此示例显示了在CUCM中添加第二台设备（9971电话）并检查其所作更改的场景。

Phone Type	
Product Type:	Cisco 9971
Device Protocol:	SIP

Device Information	
Registration	Unknown
IP Address	Unknown
<input checked="" type="checkbox"/> Device is Active	
<input checked="" type="checkbox"/> Device is trusted	
MAC Address*	<input type="text" value="222333444555"/>
Description	<input type="text" value="SEP222333444555"/>
Device Pool*	<input type="text" value="Default"/> View Details
Common Device Configuration	<input type="text" value="< None >"/> View Details

单击Update Usage Details以显示“License Usage Report”：

-License Usage Report-

Below is a summary of current license usage on the system. Current usage details for each type are available by pressing "Update Usage Details". Note that collecting these details may take some time. [View All License Type Descriptions And Device Classifications](#)

Update Usage Details Usage Details Last Updated: 2013-05-27 11:59:36

License Type	Current Usage	Report
CUWL Standard	0	Users(0) Unassigned Devices(0)
Enhanced Plus	0	Users(0)
Enhanced	2	Users(1) Unassigned Devices(1)
Basic	0	Users(0) Unassigned Devices(0)
Essential	0	Users(0) Unassigned Devices(0)
TelePresence Room	0	Users(0) Unassigned Devices(0)

-Users and Unassigned devices-

Users	1	View Usage Report
Unassigned Devices	1	View Usage Report

许可证要求已更新为两个增强版许可证。DB表显示已添加第二个条目，铜级列设置为1，与一部9971电话对应。您还可以看到设备未分配给任何用户(fkenduser = NULL)。

admin:run sql select * from LicensingResourceUsage

```

pkid                                fkenduser                                em snr tin
=====
39442ae8-8a5a-4a42-92be-4822e7ee8c53 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t t 0
6ba309b9-eb86-496b-8718-75b6f13878f1 NULL f f 0

```

```

copper bronze silver gold telepresence presence unknowndevice
=====
0 1 0 0 0 t 0
0 1 0 0 0 f 0

```

admin:

许可证要求现已更新为两个增强版 (一个用于启用了移动功能的用户/分配了6941电话的用户，另一个用于未分配的9971电话)。

admin:run sql SELECT name,value FROM TABLE(FUNCTION LicenseTotals()) (pkid,name,value,UserValue,DeviceValue)

```

name value
=====
CUWL Standard 0
EnhancedPlus 0
Enhanced 2
Basic 0
Essential 0
TelePresence Room 0
TotalUsers 1
TotalDevices 1
Timestamp 2013-05-27 11:59:36
ElmLastContact 1369607564
Elm UCS1CUCM91P.coluc.com
admin:

```

将第二台设备分配给同一用户

此示例演示了当9971电话分配给先前配置的用户时许可证计数如何变化；请记住，此用户已分配了6941电话。

Phone Type

Product Type: Cisco 9971
Device Protocol: SIP

Device Information

Registration: Unknown
IP Address: Unknown

Device is Active
 Device is trusted

MAC Address*:

Description:

Device Pool*: [View Details](#)

Common Device Configuration: [View Details](#)

Device Mobility Mode*: [View Current Devi](#)

Owner User ID:

Phone Personalization*:

单击Update Usage Details以显示“License Usage Report”：

- License Usage Report

Below is a summary of current license usage on the system. Current usage details for each type are available by pressing "Update Usage Details". Note that collecting these data may take some time. [View All License Type Descriptions And Device Classifications](#)

Usage Details Last Updated: 2013-05-27 12:04:25

License Type	Current Usage	Report
CUWL Standard	0	Users(0) Unassigned Devices(0)
Enhanced Plus	1	Users(1)
Enhanced	0	Users(0) Unassigned Devices(0)
Basic	0	Users(0) Unassigned Devices(0)
Essential	0	Users(0) Unassigned Devices(0)
TelePresence Room	0	Users(0) Unassigned Devices(0)

- Users and Unassigned devices

Users	1	View Usage Report
Unassigned Devices	0	View Usage Report

许可证要求已更新为一个增强型许可证。DB表显示，最终用户有一个条目，现在铜级列值设置为2，对应于两个已分配的电话（一个6941和一个9971）。

```
admin:run sql select * from LicensingResourceUsage where
fkenduser = 'dd420dcf-7bf8-206f-d8a3-5510aafaf254'
```

```
pkid                               fkenduser                               em snr tin
=====
5d759af1-5a38-4f6c-a7f9-ab818c2692e8 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t t 0

copper bronze silver gold telepresence presence unknowndevice
=====
0 2 0 0 0 t 0
```

admin:

您还可以看到，LicensingResourceUsage中总共有一个条目；已取消分配的设备（9971电话）的上一条目现在已删除。

admin:run sql select * from LicensingResourceUsage

```
pkid                                fkenduser                                em snr tin
=====
5d759af1-5a38-4f6c-a7f9-ab818c2692e8 dd420dcf-7bf8-206f-d8a3-5510aafaf254 t t 0

copper bronze silver gold telepresence presence unknowndevice
=====
0      2      0      0      0      t      0
```

admin:

许可证要求已更新为一个增强型（启用移动性并为用户分配两台设备）。

admin:run sql SELECT name,value FROM TABLE(FUNCTION LicenseTotals())
(pkid,name,value,UserValue,DeviceValue)

```
name value
=====
CUWL Standard 0
EnhancedPlus 1
Enhanced 0
Basic 0
Essential 0
TelePresence Room 0
TotalUsers 1
TotalDevices 0
Timestamp 2013-05-27 12:04:25
```

ElmLastContact 1369607564


Elm UCS1CUCM91P.coluc.com

admin:

分机移动注意事项

在CUCM 9.1.1a版之前，当设备上启用EM时，所有者用户ID呈灰色显示，如下所示。

EM已禁用（所有者用户ID处于活动状态）：



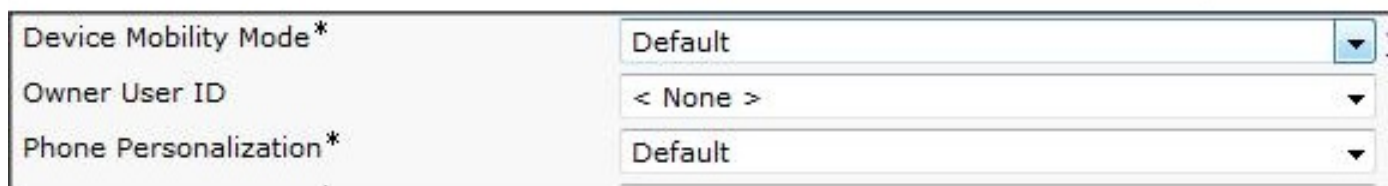
Extension Information

Enable Extension Mobility

Log Out Profile -- Use Current Device Settings --

Log in Time < None >

Log out Time < None >



Device Mobility Mode* Default

Owner User ID < None >

Phone Personalization* Default

EM已启用（所有者用户ID灰显）：

Extension Information
 Enable Extension Mobility
Log Out Profile -- Use Current Device Settings --
Log in Time < None >
Log out Time < None >

Device Mobility Mode* Default
Owner User ID < None >
Phone Personalization* Default

CUCM版本9.1.1a引入了许可证使用的一些更改。Cisco Bug ID [CSCue14471\(仅限注册用户\)](#)介绍了详细信息。

CSCue14471 — 更改分机移动许可证计算

在CUCM版本9.1.1a及更高版本中对CUCM到EM计算的修改：

- 更改LicenseTotals SQL，该SQL从使用基本许可证中忽略仅EM用户。这意味着没有关联任何物理设备或移动配置的用户不会使用任何基本许可证。
- 更改Essential user GUI子页面以不显示仅EM用户，因为用户不再使用许可证。
- 更改电话页面，使其不禁用所有者ID关联，即使存在EM配置文件。
- 删除用户许可证报告（摘要和详细信息）中的“已启用EM”信息文本，因为它不再适用（仅显示文本）。
- 在CUCM版本10.0之前，不对管理XML层(AXL)进行任何更改；没有预定义的许可查询。