

CMTS配置常见问题

目录

[简介](#)

[Cisco uBR7200 系列电缆接口的基本配置示例是什么样的？](#)

[Cisco uBR7100 系列电缆接口的基本配置示例是什么样的？](#)

[如何将CMTS配置为一起运行时间\(ToD\)、简单文件传输协议\(TFTP\)和动态主机配置协议\(DHCP\)?](#)

[能否将Cisco CMTS配置为网桥？](#)

[Cisco CMTS 是否支持 PPPoE？](#)

[如何在DOCSIS 1.0中配置基线隐私？](#)

[如何在Cisco CMTS上配置捆绑？](#)

[相关信息](#)

简介

本文档回答了有关电缆调制解调器端接系统(CMTS)的一些常见问题。

问：Cisco uBR7200系列电缆接口的基本配置示例是什么？

答：以下是配置示例：

```
interface Cable4/0
 ip address 10.1.1.1 255.255.0.0
  !--- For the cm to talk to the CMTS. Usually this address is private. ! ip address 200.1.1.1
  255.255.0.0 secondary !--- For the PCs to talk to the CMTS. Usually this address is public so !-
  -- that the PCs can go to the Internet. ! load-interval 30 no ip directed-broadcast cable
  helper-address 200.1.162.170 !--- Specify the IP address of the DHCP server. no keepalive cable
  downstream annex B !--- Default. cable downstream modulation 64qam !--- Default. cable
  downstream interleave-depth 32 !--- Default. cable downstream frequency 525000000 !--- This is
  cosmetic on uBR7200 but must match the upconverter for the !--- uBR7200 platforms so that you
  know the exact value on the upconverter. Cable upstream 0 power-level 0 !--- Default. no cable
  upstream 0 shutdown !--- Enables port Upstream 0. Enter this command to turn the port on. Cable
  upstream 0 frequency 37008000 !--- Upstream frequency. Make sure that this frequency is set to a
  clean !--- part of the spectrum and is set after careful analysis of your cable !--- plant.
  cable upstream 1 shutdown cable upstream 2 shutdown cable upstream 3 shutdown cable upstream 4
  shutdown cable upstream 5 shutdown cable dhcp-giaddr policy !--- Enable cable DHCP giaddr
  functionality so that primary addresses !--- are assigned to cable modems and secondary
  addresses are assigned !--- to remote hosts.
```

问：Cisco uBR7100系列电缆接口的基本配置示例是什么？

答：以下是配置示例：

```
interface Cable1/0
 ip address 111.111.111.111 255.255.255.0 secondary
  !--- For the PCs to communicate with the CMTS. Usually this address !--- is public so that the
```

PCs can go to the Internet. ip address 10.4.1.1 255.255.255.0 !--- For the cm to talk to the CMTS. Usually this address is private. cable downstream annex B !--- Default. cable downstream modulation 64qam !--- Default. cable downstream interleave-depth 32 !--- Default. cable downstream frequency 525000000 !--- Needs to be set to the center frequency of the downstream channel. no cable downstream rf-shutdown !--- Enables the integrated upconverter. cable downstream rf-power 51 !--- Sets the RF power output level on the integrated upconverter !--- (default=50dBmV). cable upstream 0 frequency 32000000 !--- Upstream frequency, you need to make sure that this frequency is set !--- to a clean part of the spectrum and is set after careful analysis !--- of your cable plant. cable upstream 0 power-level 0 !--- Default. cable upstream 0 timing-adjust threshold 0 !--- Default. cable upstream 0 timing-adjust continue 0 !--- Default. no cable upstream 0 shutdown !--- Enables port upstream 0. Must enter this command to turn the port on. Cable upstream 1 timing-adjust threshold 0 cable upstream 1 timing-adjust continue 0 cable upstream 1 shutdown cable upstream 2 timing-adjust threshold 0 cable upstream 2 timing-adjust continue 0 cable upstream 2 shutdown cable upstream 3 timing-adjust threshold 0 cable upstream 3 timing-adjust continue 0 cable upstream 3 shutdown cable dhcp-giaddr policy !--- Enable cable DHCP giaddr functionality so that primary addresses !--- are assigned to cable modems and secondary addresses are assigned !--- to remote hosts. !

问：如何将CMTS配置为一体运行时间(ToD)、简单文件传输协议(TFTP)和动态主机配置协议(DHCP)?

答：首先，在使用本节中的配置时，请确保您拥有最新的12.x EC版本。

您无需在配置中 `cable helper address`，因为DISCOVER数据包不需要“帮助”到另一台计算机。DISCOVER数据包驻留在CMTS上。

以下是在uBR7200配置内创建的两个配置文件。一个配置文件称为 **platinum.cm**，另一个文件称为 **disable.cm**。如果在CMTS中创建DOCSIS配置文件，则无需将文件复制到闪存或使用TFTP。使用此配置时，您无需拥有外部docsis配置文件。

```
cable config-file disable.cm
access-denied
service-class 1 max-upstream 1
service-class 1 max-downstream 1600
cpe max 1
timestamp
!
cable config-file platinum.cm
service-class 1 max-upstream 128
service-class 1 guaranteed-upstream 10
service-class 1 max-downstream 10000
service-class 1 max-burst 1600
cpe max 10
timestamp
```

注意：如果接口下的IP帮助地址命令指向您配置的外部DHCP服务器，则电缆调制解调器从外部DHCP服务器获取配置。

以下是动态提取platinum.cm配置文件的电缆调制解调器的策略：

```
ip dhcp pool cm-platinum
network 10.1.4.0 255.255.255.0
bootfile platinum.cm
next-server 10.1.4.1
default-router 10.1.4.1
option 7 ip 10.1.4.1
option 4 ip 10.1.4.1
option 2 hex ffff.8f80
lease 7 0 10
```

以下是PC获取地址的策略：

```
ip dhcp pool pcs-c4
  network 172.16.29.0 255.255.255.224
  next-server 172.16.29.1
  default-router 172.16.29.1
  dns-server 172.16.30.2
  domain-name cisco.com
  lease 7 0 10
```

以下是映射到disable.cm的特定电缆调制解调器的MAC地址的静态绑定：

```
ip dhcp pool cm-0010.7bed.9b45
  host 10.1.4.65 255.255.255.0
  client-identifier 0100.107b.ed9b.45
  bootfile disable.cm
```

以下是映射到闪存中的silver.cm配置文件的特定电缆调制解调器的MAC地址的静态绑定：

```
ip dhcp pool cm-0010.7bed.9b23
  host 10.1.4.66 255.255.255.0
  client-identifier 0100.107b.ed9b.23
  bootfile silver.cm
```

当.cm文件位于闪存中而不在TFTP服务器上时，请使用tftp server slot0:silver.cm alias silver.cm语句。

要将DOCSIS配置文件放入uBR72xx的闪存中，请完成以下步骤：

1. 在uBR7200上，键入copy tftp slot:0:命令并按ENTER。解析器会提示您输入远程主机的名称。
2. 指定.cm文件所在的TFTP服务器的地址。解析器会提示您输入源文件名。
3. 键入.cm文件名，然后按ENTER键。
4. 键入show slot0:命令，以验证DOCSIS配置文件是否存在，并检查大小是否与TFTP服务器中的大小匹配。

问：能否将Cisco CMTS配置为网桥？

答：您不能将uBR72xx系列配置为网桥。但是，专为酒店业设计的uBR7100系列支持桥接，因此，如果您想在笔记本电脑上使用静态IP地址，您可以在出差时连接到互联网。有关详细信息，[请参阅在网桥模式下配置UBR 7100。](#)

问：Cisco CMTS是否支持PPPoE？

答：Cisco uBR7200系列路由器支持以太网点对点协议(PPPoE)终止，但不支持PPPoE转发。PPPoE终端目前在Cisco IOS®软件版本12.1(5)T中可用。

PPPoE允许直接连接到电缆接口。PPPoE提供服务提供商数字用户线路(DSL)支持。在Cisco uBR7200系列路由器的电缆接口上支持PPPoE，使电缆调制解调器后面的客户端设备(CPE)能够使用PPP作为获取IP地址的机制，并将其用于所有后续数据流量，就像拨号PPP客户端一样。在PPP拨号会话中，PPPoE会话经过身份验证，PPPoE客户端和服务器之间协商IP地址。服务器可以是Cisco uBR7200系列路由器或家庭网关。有关详细信息，[请参阅在uBR7100 CMTS上使用L2TP隧道配置PPPoE终端。](#)

问：如何在Cisco CMTS上配置捆绑？

A. 以下是基本捆绑配置：

```
hostname 7246VXR
!
interface Ethernet2/0
 ip address 172.16.135.11 255.255.255.128
 no ip mroute-cache
 half-duplex
!

interface Cable4/0
 ip address 172.16.30.1 255.255.255.0
!--- IP address configured. ip helper-address 172.16.135.20
!--- IP address of DHCP server. no ip route-cache cef no keepalive cable bundle 1 master
!--- Master interface in bundle 1. cable downstream rate-limit token-bucket shaping cable
downstream annex B cable downstream modulation 64qam cable downstream interleave-depth 32 cable
downstream frequency 555000000 cable upstream 0 frequency 400000000 cable upstream 0 power-level
0 no cable upstream 0 shutdown cable upstream 1 shutdown cable upstream 2 shutdown cable
upstream 3 shutdown cable upstream 4 shutdown cable upstream 5 shutdown cable dhcp-giaddr policy
! interface Cable5/0 no ip address load-interval 30 no keepalive cable bundle 1
!--- Slave interface in bundle 1. cable downstream rate-limit token-bucket shaping cable
downstream annex B cable downstream modulation 64qam cable downstream interleave-depth 32 cable
downstream frequency 620000000 cable upstream 0 frequency 250080000 cable upstream 0 power-level
0 cable upstream 0 channel-width 1600000 3200000 no cable upstream 0 shutdown no cable upstream
1 shutdown no cable upstream 2 shutdown cable upstream 3 shutdown cable upstream 4 shutdown
cable upstream 5 shutdown cable dhcp-giaddr policy
```

有关如何验证和排除此配置故障的详细信息，请参阅[捆绑电缆接口示例配置和验证](#)。

相关信息

- [技术支持和文档 - Cisco Systems](#)