

配置电缆调制解调器 remote-query 命令

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简介

cable modem remote-query命令在Cisco IOS介绍[?] 软件版本12.0(7)XR和12.1(2)T。此命令允许您查询有线调制解调器性能统计数据直接地从UBR有线调制解调器终端系统(CMTS)。

想法是周期地轮询CMs使用简单网络管理协议(SNMP)和对缓存信息，例如IP地址、MAC地址、S/N比率和上行传输功率在CMTS ([请参阅输出](#))。这帮助您认识单个调制解调器的状态，并且有工厂的总体状态。

先决条件

要求

本文档没有任何特定的要求。

使用的组件

本文档中的信息基于以下软件版本：

- IOS软件版本12.0(7)XR和12.1(2)T

规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

配置

在有线调制解调器上，必须配置SNMP团体字符串。使用这些方法之一，这执行：

- 手动配置：添加snmp-server community <string>全局配置命令
- 强制CM通过有线电视数据服务接口规范(DOCSIS)配置文件下载IOS配置文件
- 通过在DOCSIS配置文件(OIDs)配置CM社区定义的SNMP对象标识符

在CMTS，请配置这些全局配置命令：

1. snmp-server community <community string>
2. snmp-server manager

注意：在12.2(33)SC中，您不能在配置电缆调制解调器remote-query命令<community string>以后配置snmp-server community <community string> RO。因为IOS自动地添加在有线调制解调器远程<community string>注释的社区作为SNMP RO <community string>社区，它冗余。当您设法配置，您将收到说%Error 错误消息<name>remote-querySNMP

电缆调制解调器remote-query命令[polling interval] [Community string]是[polling interval]定义了查询执行的时间间隔的地方。例如，30意味着查询执行每30秒。[Community string]定义了社区字符串。

当配置cable remote-query时，所有社区字符串必须配比：

- 在CM配置的SNMP服务器属性字段
- 在CMTS配置的SNMP服务器属性字段
- 在cable modem remote-query [polling interval] [Community string]命令配置的SNMP团体字符串

Current configuration : 3473 bytes

```

!
version 12.1
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname big-cmts
!
!
cable modem remote-query 30 test

!--- This configures the CMTS to perform the remote !--- query every 30 seconds with a community
string of test. no cable qos permission create no cable qos permission update cable qos
permission modems cable time-server ip subnet-zero no ip finger no ip domain-lookup ip dhcp
relay information option no ip dhcp relay information check ! interface Ethernet2/0 ip address
10.200.68.3 255.255.255.0 ! interface Cable3/0 ip address 10.200.71.17 255.255.255.240 secondary
ip address 10.200.71.1 255.255.255.240 no keepalive cable downstream annex B cable downstream
modulation 64qam cable downstream interleave-depth 32 cable upstream 0 frequency 20000000 cable
upstream 0 power-level 0 no cable upstream 0 shutdown cable dhcp-giaddr policy cable helper-
address 10.200.68.200 ! ip classless ip route 0.0.0.0 0.0.0.0 10.200.68.1 no ip http server !
snmp-server community test RO !--- The community string has to match the one !--- set on the CM
and the one configured above in the cable modem remote-query !--- command.

```

```
snmp-server manager
```

```
!--- Needed to configure the CMTS as SNMP manager !--- so that is is able to generate requests  
to the SNMP agents on the CM. line con 0 transport input none line aux 0 line vty 0 4 login !  
end
```

对于CMs，请配置出厂默认设置增加global命令snmp-server community测验RO。

验证

这是收集的信息的输出：

```
big-cmts#show cable modem remote-query
```

IP address	MAC address	S/N Ratio	US Power	DS Power	Tx Time Offset	Micro (dB) Reflection	Modem State
10.200.71.8	0001.9659.47af	36.6	31.0	0.0	12352	17	online
10.200.71.4	0001.9659.47c7	36.6	37.0	0.0	12352	17	online
10.200.71.6	0001.9611.b9a3	36.6	37.0	0.0	12353	15	online
10.200.71.3	0001.9659.47a9	36.6	37.0	0.0	12351	16	online
10.200.71.2	0001.9659.47c1	0.0	0.0	0.0	0	0	online

```
!--- This modem does not answer to the SNMP query.
```

如果调制解调器不应答对SNMP查询，您需要一些调试验证：

```
big-cmts#debug cable remote-query
```

```
CMTS remote-query debugging is on
```

```
*Sep 26 01:30:41.677:
```

```
For IP address 10.200.71.2
```

```
!--- The IP address of the modem showing all 0s in the show cable modem remote-query !---  
command output.
```

```
*Sep 26 01:30:41.677:
```

```
!--- SNMP proxy exec got event, but the queue is empty.
```

消息指示调制解调器被查询了，但是答案未接收。要接收更详细的资料，请查看SNMP级别：

```
big-cmts#show snmp sessions
```

```
Destination: 10.200.71.2.161, V1 community: test
```

```
!--- "V1": SNMP version - "test": community string used to query the modem. Round-trip-times:  
0/0/0 (min/max/last) packets output 2147 Gets, 0 GetNexts, 0 GetBulks, 0 Sets, 0 Informs !---  
Number of SNMP GETS issued to the modem. 2146 Timeouts, 0 Drops !--- All the SNMP GETS timed  
out. packets input 0 Traps, 0 Informs, 0 Responses (0 errors)
```

这是回答对远程询问的调制解调器的debug cable remote-query命令输出：

```
big-cmts#show snmp sessions
```

Destination: 10.200.71.2.161, V1 community: test

```
!--- "V1": SNMP version - "test": community string used to query the modem. Round-trip-times:
0/0/0 (min/max/last) packets output 2147 Gets, 0 GetNexts, 0 GetBulks, 0 Sets, 0 Informs !---
Number of SNMP GETS issued to the modem. 2146 Timeouts, 0 Drops !--- All the SNMP GETS timed
out. packets input 0 Traps, 0 Informs, 0 Responses (0 errors)
```

这是同样调制解调器的SNMP会话详细信息。注意获得数量等于答复数量没有超时或丢包：

```
big-cmts#show snmp sessions
```

Destination: 10.200.71.2.161, V1 community: test

```
!--- "V1": SNMP version - "test": community string used to query the modem. Round-trip-times:
0/0/0 (min/max/last) packets output 2147 Gets, 0 GetNexts, 0 GetBulks, 0 Sets, 0 Informs !---
Number of SNMP GETS issued to the modem. 2146 Timeouts, 0 Drops !--- All the SNMP GETS timed
out. packets input 0 Traps, 0 Informs, 0 Responses (0 errors)
```

此输出显示一不匹配在为远程询问定义的社区字符串和在CMTS snmp-server community线路：

```
big-cmts#sh snmp
```

Chassis: 6888364

0 SNMP packets input

0 Bad SNMP version errors

30 Unknown community name

```
!--- Community string mismatch. 0 Illegal operation for community name supplied 0 Encoding
errors 0 Number of requested variables 0 Number of altered variables 0 Get-request PDUs 0 Get-
next PDUs 0 Set-request PDUs 3944 SNMP packets output 0 Too big errors (Maximum packet size
1500) 0 No such name errors 0 Bad values errors 0 General errors 0 Response PDUs 0 Trap PDUs
```

故障排除

最常见的问题是更改cable modem remote-query [polling interval] [Community string]命令参数造成它发生故障。推荐执行这些步骤：

1. 删除命令没有**电缆调制解调器remote-query命令**。
2. 复原命令。

另一问题是，当更改社区字符串定义与snmp-server community <string>命令时。推荐执行这些步骤：

1. 删除cable modem remote-query [polling interval] [Community string]命令。
2. 更改社区字符串。
3. 复原cable modem remote-query [polling interval] [Community string]命令。

相关信息

- [有线网络的\(仅限注册用户\) SNMP常见问题](#)
- [技术支持和文档 - Cisco Systems](#)