华为MA5600 DSL接入复用器线路培训配置示例

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简介

本文档介绍华为MA5600数字用户线路接入复用器(DSLAM)上为了允许极高比特率数字用户线路 (VDSL)在思科用户驻地设备(CPE)上进行培训而需要的最低配置步骤。

先决条件

要求

思科建议您在尝试此配置之前满足以下要求:

- CPE的VDSL端口和DSLAM配线面板的正确端口上紧密连接的电缆
- CPE和DSLAM/线卡必须启动并运行

使用的组件

本文档中的信息基于用作CPE的Cisco 887VA路由器和Huwei 5600 DSLAM。但是,本文档不限于 特定软件和硬件版本。

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。如果您使用的是真实网络,请确保您已经了解所有命令的潜在影响。

背景

本文档旨在帮助工程师在背对背/实验室环境中设置Cisco CPE和Huawei DSLAM,并了解DSL中心 办公室(CO)端的基本配置文件。

配置

要配置设备,请完成以下部分:

- 线路配置文件配置
- 通道配置文件配置
- •行模板(行配置文件和通道配置文件的组合)配置
- 在CPE连接的相应DSLAM端口上应用线路模板

注意:使用命令查找工具(仅限注册用户)可获取有关本部分所使用命令的详细信息。

线路配置文件配置

1.	. 检查已创建的行配置文件。 MA5600# display vdsl line-profile					
	<pre>{ <cr> profile-index<u><1,128> }:</u></cr></pre>					
Command: display vdsl line-profile						
	Profile	Profile	Transmission			
	Index	Name	Mode			
	60	Test_vdsl	VDSL (G993.2)			
	82	VDSL LINE PROFILE 82	VDSL (G993.2)			
	88	VDSL LINE PROFILE 88	VDSL (G993.2)			
	103	VDSL LINE PROFILE 103	VDSL (G993.2)			
	Total: 4					
2.	配置线路 MA5600# co	配置文件。 ^{nfig}				
	MA5600(co	nfiq)#vdsl line-profile add 60				

Failure: The profile has existed

```
MA5600(config)#vdsl line-profile add 61
Start adding profile
```

Press 'Q' to quit the current configuration and new configuration will be > Do you want to name the profile (y/n) [n]:y > Please input profile name:ZONE_TEST Transmission mode: > 0: Custom > 1: All (G992.1~5,T1.413,G993.2) > 2: Full rate(G992.1/3/5,T1.413,G993.2) > 3: G.DMT (G992.1/3/5,G993.2) > 4: G.HS (G992.1~5,G993.2) > 5: ADSL (G.992.1~5,T1.413) > 6: VDSL (G993.2) > > Bit swap downstream 1-disable 2-enable (1~2) [2]:1 > Bit swap upstream 1-disable 2-enable (1~2) [2]:1 > Please select the form of transmit rate adaptation downstream: > 1-fixed 2-adaptAtStartup 3-AdaptAtRuntime (1~3) [2]: > Please select the form of transmit rate adaptation upstream: > 1-fixed 2-adaptAtStartup 3-AdaptAtRuntime (1~3) [2]: > Will you set SNR margin parameters? (y/n) [n]: > Will you set DPBO parameters? (y/n)[n]: > Will you set UPBO parameters? (y/n)[n]: > Will you set RFI notch configuration parameter? (y/n) [n]: > Will you set VDSL tone blackout configuration parameter? (y/n) [n]: > Will you set mode-specific parameters? (y/n) [n]: Add profile 61 successfully MA5600#display vdsl line-profile { <cr> | profile-index<U><1,128> }: Command: display vdsl line-profile Profile Profile Transmission

Index	Name	Mode
60	Test_vdsl	VDSL (G993.2)
61	ZONE_TEST	VDSL (G993.2)
82	VDSL LINE PROFILE 82	VDSL (G993.2)
88	VDSL LINE PROFILE 88	VDSL (G993.2)
103	VDSL LINE PROFILE 103	VDSL (G993.2)

Total: 5

通道配置文件配置

1. 检查已创建的通道配置文件。

```
MA5600#display vdsl channel-profile
```

```
{ <cr> | profile-index<U><1,128> }:
```

Command: display vdsl channel-profile Profile Profile MinDw MaxDw MinUp MaxUp Data Path Index Name Rate Rate Rate Mode 60 test_vdsl 128 100000 128 100000 Both 99 VDSL CHANNEL PRO 128 100000 128 100000 PTM FILE 99

Total: 2

注意:速率单位为Kbps。

2. 配置信道配置文件。

```
MA5600(config)#vdsl channel-profile add 60
Failure: The profile has existed
MA5600(config)#vdsl channel-profile add 61
Start adding profile
Press 'Q' to quit the current configuration and new configuration will be
neglected
> Do you want to name the profile (y/n) [n]:y
> Please input profile name:ZONE_TEST
> Will you set the minimum impulse noise protection? (y/n) [n]:
> Will you set interleaving delay parameters? (y/n) [n]:
> Will you set parameters for rate? (y/n) [n]:
> Will you set rate thresholds? (y/n) [n]:
Add profile 61 successfully
MA5600#display vdsl channel-profile
{ <cr> | profile-index<U><1,128> }:
Command:
      display vdsl channel-profile
_____
                    MinDw MaxDw MinUp MaxUp Data Path
Profile Profile
Index Name
                   Rate Rate Rate Mode
 ----->
    60test_vdsl128100000128100000Both61ZONE_TEST128100000128100000PTM
    99 VDSL CHANNEL PRO 128 100000 128 100000 PTM
      FILE 99
_____
Total: 3
```

注意:速率单位为Kbps。

线路模板配置

```
1. 检查已创建的行模板。
```

MA5600#display vdsl line-template
{ <cr> | template-index<U><1,128> }:

Command:

```
display vdsl line-template
```

Index	Name	Index	Profile Index	Profile Index
 12	ios_test	 10	11	
16	DT-17a	18	18	-
17	profile_17a	17	17	-
18	aj_3M_US	17	5	-
60	VDSL LINE TEMPLA	60	60	-
	TE 60			

MA5600(config)#vdsl line-template add 61

Start adding template

 $\ensuremath{\mbox{Press}}$ 'Q' to quit the current configuration and new configuration will be neglected

> Do you want to name the template (y/n) [n]:y

> Please input template name:ZONE_TEST

Index	Name	Index	Profile Index	Profile Index	
12	ios_test	10			
16	DT-17a	18	18	-	
17	profile_17a	17	17	-	
18	aj_3M_US	17	5	-	
60	VDSL LINE TEMPLA	60	60	-	
	TE 60				
61	ZONE_TEST	61	61	-	

Total: 6

将线路模板应用于DSLAM端口

在这种情况下,CPE连接到Huawei DSLAM的插槽5端口0。

```
MA5600(config)#display board 0
```

```
_____
SlotID BoardName Status
                  SubType0 SubType1
_____
   H563ADGE Failed
0
1
    H565ADBF Normal >>>>>>>>>>>ADBF - Here 'A' means that this card supports ADSL
2
    ADG
          Failed
   H569SHEB Failed
3
4
   H565VDBD Normal >>>> >>>VDBD - Here 'V' means that this card supports VDSL
5
6
7
    H561SCU
          8
    H561SCU
          Active_normal O2GS
                       02GS >>>>>>> Processor Cards
9
10
   H565VDBD Failed
11
   H569SHEB Failed
12
13
14
   H561SHEA Failed
15
 _____
```

MA5600(config)#interface vdsl 0/5 (Board/ slot)

Check the port status: Status is deactivated and currently assigned to

Line Template 1 (default)

```
MA5600(config-if-vdsl-0/5)#display port state 0
```

Port	Status	Loopback	Line Template	Alarm Template
0	Deactivated	Disable	1	1

将线路模板(61)分配给端口(0/5/0)

MA5600(config-if-vdsl-0/5)#activate 0 template-index 61 >>>>>>We are already in board 0 slot 5, hence need to activate port 0 with Line Template 61 MA5600(config-if-vdsl-0/5)#display port state 0 Status Loopback Line Template Alarm Template Port _____ 0 Activating Disable 1 >>>>Check the status 61 _____ MA5600(config-if-vdsl-0/5)#display port state 0 _____ Line Template Alarm Template Status Port Loopback -----0 Activated Disable 61 1 >>Status is activated _____

验证

使用此部分以验证配置。

<u>命令输出解释程序工具(仅限注册用户)支持某些 show</u> 命令。使用输出解释器工具来查看 show 命令输出的分析。

DSLAM的验证

检查创建的线路配置文件

MA5600#display vdsl line-profile

{ <cr> | profile-index<U><1,128> }:

Command:

display vdsl line-profile

Profile	Profile	Transmission
Index	Name	Mode
60	Test_vdsl	VDSL (G993.2)
61	ZONE_TEST	VDSL (G993.2)
82	VDSL LINE PROFILE 82	VDSL (G993.2)
88	VDSL LINE PROFILE 88	VDSL (G993.2)
103	VDSL LINE PROFILE 103	VDSL (G993.2)

检查创建的信道配置文件

MA5600#display vdsl channel-profile

{ <cr> |profile-index<U><1,128> }:

```
Command:
```

```
display vdsl channel-profile
```

Profile	Profile		MinDw	MaxDw	MinUp	MaxUp	Data Path
Index	Name		Rate	Rate	Rate	Rate	Mode
60	test_vdsl	128	100000	128	100000	Both	
61	ZONE_TEST	128	10000	0 12 8	B 10000	0 PTM	
99	VDSL CHANNEL FILE 99	PRO	128 2	100000	128	100000	PTM

Total: 3

注意:速率单位为Kbps。

检查创建的行模板

MA5600#display vdsl line-template

{ <cr> template-index<U><1,128> }:

Command:

```
display vdsl line-template
```

Template Index	Template Name	Line Profile Index	Channell Profile Index	Channnel2 Profile Index
12	ios_test	10	11	-
16	DT-17a	18	18	-
17	profile_17a	17	17	-
18	aj_3M_US	17	5	-
60	VDSL LINE TEMPLA	60	60	-
	TE 60			
61	ZONE_TEST	61	61	-

Total: 6

检查DSLAM端口状态

为此,您需要处于DSLAM的接口配置模式。

MA5600(config-if-vdsl-0/5)#display port state 0

Port	Status	Loopback	Line Template	Alarm Template
0	Activated	Disable	61	1

CPE验证

在CPE上输入show controller vdsl 0命令以检查控制器状态。

/snip

C887VA-M#show controller vdsl 0 Controller VDSL 0 is UP

Daemon Status:	Up	
	XTU-R (DS) XTU	J-C (US)
Chip Vendor ID:	'BDCM '	BDCM '
Chip Vendor Specific:	0x0000 0	x939B
Chip Vendor Country:	0xB500 0	xB500
Modem Vendor ID:	'CSCO'	1
Modem Vendor Specific:	0x4602 0	0000x0
Modem Vendor Country:	0xB500 0	0000x0
Serial Number Near:	FTX162580HZ 887VA-M 15.2(4)	М
Serial Number Far:		
Modem Version Near:	15.2(4)M	
Modem Version Far:	0x939b	
Modem Status:	TC Sync (Showtime!)	
DSL Config Mode:	AUTO	
Trained Mode: TC Mode:	G.993.2 (VDSL2) Profile 1 PTM	.2a

故障排除

目前没有针对此配置的故障排除信息。

相关信息

- 宽带论坛 技术报告
- <u>技术支持和文档 Cisco Systems</u>