# Huawei MA5600 DSL存取多工器線路培訓組態範 例

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# 簡介

本檔案介紹華為MA5600數位使用者線路存取多工器(DSLAM)上允許超高位速率數位使用者線路 (VDSL)在思科使用者端裝置(CPE)上進行培訓所需的最低組態步驟。

# 必要條件

## 需求

思科建議您在嘗試此設定之前符合以下要求:

•電纜緊密連線在CPE的VDSL埠和DSLAM配線面板上的正確埠上

• CPE和DSLAM/線卡必須啟動並運行

### 採用元件

本文檔中的資訊基於充當CPE的Cisco 887VA路由器和Huwei 5600 DSLAM。但是本檔案所述內容 不限於特定軟體和硬體版本。

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除(預設))的組態來啟動。如果您的網路正在作用,請確保您已瞭解任何指令可能造成的影響。

## 背景

本文檔旨在幫助工程師在背對背/實驗室環境中設定Cisco CPE和華為DSLAM,並瞭解DSL的中央辦 公室(CO)端的基本配置檔案。

## 設定

完成以下部分以配置您的裝置:

- 線路配置檔案配置
- 通道設定檔組態
- 線路模板(線路配置檔案和通道配置檔案的組合)配置
- 將線路模板應用於連線CPE的各個DSLAM埠

附註:使用<u>命令查詢工具(</u>僅供<u>已註冊</u>客戶使用)可獲取本節中使用的命令的更多資訊。

### 線路配置檔案配置

#### 1. 檢查已建立的行配置檔案。

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)

    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. 配置線路配置檔案。

MA5600#config

MA5600(config)#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
通道設定檔組態
  1. 檢查已建立的通道配置檔案。
    MA5600#display vdsl channel-profile
    { <cr> | profile-index<U><1,128> }:
    Command:
          display vdsl channel-profile
     _____
                         MinDw MaxDw
    Profile Profile
                                      MinUp
                                               MaxUp
                                                     Data Path
    Index
           Name
                         Rate
                                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
  附註:速率的單位是Kbps。
2. 配置通道配置檔案。
  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

Profile Index	Profile Name		 MinDw Rate	MaxDw Rate	MinUp Rate	MaxUp Rate	Data Path Mode
60 <b>61</b> 99	test_vdsl <b>ZONE_TEST</b> VDSL CHANNEL FILE 99	128 <b>128</b> PRO	100000 <b>10000</b> 128	128 0 128 100000	100000 <b>3 10000</b> 128	Both 0 <b>РТМ</b> 100000	PTM

Total: 3

**附註**:速率的單位是Kbps。

### 線路模板配置

```
1. 檢查已建立的行模板。
```

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			

Total: 5

### 2. 配置線路模板。

MA5600(config)#vdsl line-template add 61

Start adding template

Press 'Q' to quit the current configuration and new configuration will be

neglected								
> Do you w	> Do you want to name the template $(y/n)$ [n]:y							
> Please	<pre>&gt; Please input template name:ZONE_TEST</pre>							
> Please s	et the line-profi	le index (1~12	8) [1]:61 >>>>>	>>>>>>>>Line Profile				
we added a	we added above							
> Will you	> Will you set channel configuration parameters? (y/n) [n]:y							
> Please	e set the channel	number (1~2) [	1]:					
> Channe	ell configuration	parameters:						
> Please	e set the channel-	profile index	(1~128) [1]:61	>>>>>> Channel Profile				
we added a	bove							
Add temp	late 61 successfu	11y						
MA5600# <b>dis</b>	play vdsl line-te	mplate						
{ <cr> tem</cr>	plate-index <u>&lt;1,</u>	128> }:						
_								
Command:								
d	lisplay vdsl line-	template						
Template	Template	Line Profile	Channell	Channnel?				
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							
61	ZONE_TEST	61	61	-				

Total: 6

## 將線路模板應用於DSLAM埠

在本例中,CPE連線到華為DSLAM的插槽5埠0。

```
MA5600(config)#display board 0
_____
               SubType0 SubType1
SlotID BoardName Status
  Failed
0
    H563ADGE
1
    H565ADBF Normal >>>>>>ADBF - Here 'A' means that this card supports ADSL
2
    ADG
          Failed
    H569SHEB Failed
3
4
5
    H565VDBD Normal >>>> >>>VDBD - Here 'V' means that this card supports VDSL
6
7
    8
    H561SCU Active_normal 02GS 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

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

### 將線路模板(61)分配給埠(0/5/0)

MA5600(config-if-vdsl-0/5)# <b>activate 0 template-index 61</b> >>>>>>We are already in board 0 slot 5, hence need to activate port 0 with Line Template 61						
MA5600(	config-if-vds	1-0/5)# <b>disp1</b>	ay port state 0			
Port	Status	Loopback	Line Template	Alarm Template		
0	Activating	Disable	61	1	>>>>Check t	he status
MA5600(	config-if-vds	l-0/5)#displ	ay port state O			
Port	Status	Loopback	Line Template	Alarm Template		
0	Activated	Disable	61	1	>>Status is	activated

## 驗證

使用本節內容,驗證您的組態。

<u>輸出直譯器工具</u>(僅供<u>已註冊</u>客戶使用)支援某些show命令。使用輸出直譯器工具來檢視show命令輸 出的分析。

## DSLAM驗證

### 檢查已建立的線路配置檔案

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

### 檢查已建立的管道配置檔案

#### 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 <b>61</b> 99	test_vdsl <b>ZONE_TEST</b> VDSL CHANNEL FILE 99	128 <b>128</b> PRO	100000 <b>100000</b> 128	128 0 128 100000	100000 <b>3 10000</b> 128 1	Both <b>0 PTM</b> 100000	PTM

Total: 3

**附註**:速率的單位是Kbps。

### 檢查已建立的行模板

#### 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	-

1

Total: 6

## 檢查DSLAM埠狀態

為此,您需要處於DSLAM的介面配置模式。

MA5600(c	onfig-if-vdsl-	-0/5)# <b>display</b>	port state 0	
Port	Status	Loopback	Line Template	Alarm Template
0	Activated	Disable	61	1

### 驗證CPE

## 在CPE上輸入show controller vdsl 0命令以檢查控制器狀態。

### /snip

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

Daemon Status:	Up
	XTU-R (DS) XTU-C (US)
Chip Vendor ID:	'BDCM' 'BDCM'
Chip Vendor Specific:	0x0000 0x939B
Chip Vendor Country:	0xB500 0xB500
Modem Vendor ID:	'CSCO'
Modem Vendor Specific:	0x4602 0x0000
Modem Vendor Country:	0xB500 0x0000
Serial Number Near:	FTX162580HZ 887VA-M 15.2(4)M
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:	G.993.2 (VDSL2) Profile 12a
TC Mode:	PTM

# 疑難排解

目前尚無適用於此組態的具體疑難排解資訊。

# 相關資訊

- <u>寬頻論壇 技術報告</u>
- 技術支援與文件 Cisco Systems