

使用未整形 VP 隧道的 LANE 和 CES (使用 PVC)

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简介

本文为LAN仿真(LANE)提供一配置示例和电路仿真服务(CES)以使用永久虚电路(PVC)在未整形的虚拟路径通道。

先决条件

要求

这些配置示例根据这些前提条件：

- 您需要传输CES和LANE在广域网间。所以，思科推荐在LS1010的ASP-PFQ保证好时钟操作。思科由于同样的原因也推荐在8540-MSR的RP-NetClock-3。
- 此示例使用未整形的VP隧道。
- 由于LANE使用未指明的比特率(UBR) SVC，CES使用恒定比特率(CBR) PVC。并且，因为此配置使用正常VP隧道，您必须有两个VP隧道(一每个服务类别的：CBR和UBR)。如果使用了分层的类型，您只也许使用一个VP隧道。
- 因为未整形的隧道可以是任何服务类别，此示例有能只包含CBR VC的一个CBR VP隧道。它使用CES CBR PVC (被标记VPI1在[网络图中](#))。注意：VPI编号是局部重要的对交换机端口。所以，您能有在同一交换机的同一个VPI编号，但是两不同的交换机端口。

- 由于CBR VP隧道不能传输非CBR VC，您必须创建(另一个VP隧道使用UBR服务类别VC)的LANE的。所以，第二个VP隧道(被标记VPI2在[网络图中](#))是与穿过它的UBR LANE SVC的一个UBR VP隧道。
- 您需要采购两VPs从服务提供商。这些是CBR和UBR。
- 在本例中，假设，CBR VP有10 Mbps峰值信元速率和500个信元信元延迟变化容限。
- 设备5500-asp-f是为VP交换。服务提供商典型地执行此功能。
- LANE服务在8540-MSR定义。LAN仿真客户端(LEC)是在8540-MSR和5500 aspe。注意：LANE服务在ATM交换机安置在本例中为了简化的。然而，那不是LANE服务的最佳位置。
- 两个专用分支交换(PBX)在本图中使用CES CBR电路。关于关于怎样的详细信息配置电路仿真，参考[CES文档](#)。

使用的组件

本文档不限于特定的软件和硬件版本。

规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

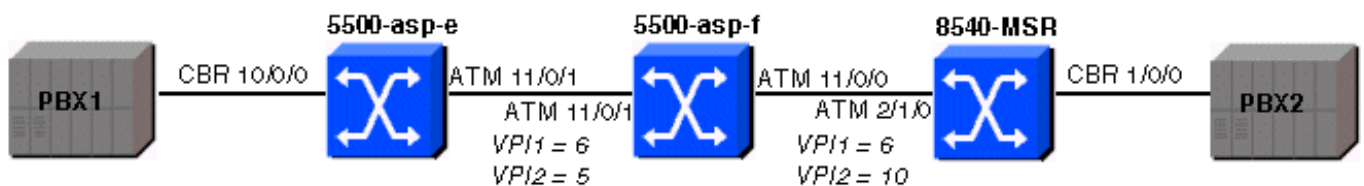
配置

本部分提供有关如何配置本文档所述功能的信息。

注意：要查找本文档所用命令的其他信息，请使用[命令查找工具](#)（[仅限注册用户](#)）。

网络图

本文档使用以下网络设置：



配置

本文档使用以下配置：

- [5500 aspe](#)
- [5500-asp-f](#)
- [8540-MSR](#)

5500 aspe

```
5500-asp-e# show running-config
Building configuration...

Current configuration:

!
version 11.3
no service pad
service timestamps debug datetime msec
service timestamps log uptime
no service password-encryption
!
hostname 5500-asp-e
!
boot system flash slot0:ls1010-wp-mz.120-3c.W5.9.bin
!
ip host-routing
!
atm connection-traffic-table-row index 64000 cbr pcr
10240 cdvt 500
atm lecs-address-default
47.0091.8100.0000.0090.2144.8401.0090.2144.8405.00 1
atm address
47.0091.8100.0000.0050.537e.1401.0050.537e.1401.00
atm router pnni
  no aesa embedded-number left-justified
  node 1 level 56 lowest
  redistribute atm-static
!
!
!
interface CBR10/0/0
  no ip address
  ces circuit 0 circuit-name test
  ces pvc 0 interface ATM11/0/1.6 vpi 6 vci 100
!
interface ATM11/0/1
  no atm signalling enable
  no ip address
  atm pvp 5
  atm pvp 6 rx-cttr 64000 tx-cttr 64000
!
interface ATM11/0/1.5 point-to-point
!
interface ATM11/0/1.6 point-to-point
!
interface ATM13/0/0
  no ip address
  atm maxvp-number 0
!
interface ATM13/0/0.1 multipoint
  ip address 100.100.100.2 255.255.255.0
  lane client ethernet test
!
interface Ethernet13/0/0
  no ip address
!
no ip classless
!
logging buffered 16000 debugging
!
line con 0
line aux 0
line vty 0 4
```

```
login
!  
end
```

5500-asp-f

```
!--- The switch is configured for VP switching. 5500-  
asp-f# show running-config
```

```
Building configuration...
```

```
Current configuration:
```

```
!  
version 11.3  
no service pad  
service timestamps debug uptime  
service timestamps log uptime  
no service password-encryption  
  
!  
hostname 5500-asp-f  
!  
!  
!  
atm connection-traffic-table-row index 64000 cbr pcr  
10240 cdvt 500  
atm address  
47.0091.8100.0000.0050.5308.2401.0050.5308.2401.00  
atm router pnni  
no aesa embedded-number left-justified  
node 1 level 56 lowest  
redistribute atm-static  
!  
!  
!  
interface ATM11/0/0  
no ip address  
!  
interface ATM11/0/1  
no ip address  
atm pvp 5 interface ATM11/0/0 10  
atm pvp 6 rx-cttr 64000 tx-cttr 64000 interface  
ATM11/0/0 6  
!  
interface ATM13/0/0  
no ip address  
atm maxvp-number 0  
!  
interface Ethernet13/0/0  
no ip address  
!  
ip classless  
!  
!  
line con 0  
line aux 0  
line vty 0 4  
login  
!  
end
```

8540-MSR

```
8540-MSR# show running-config

Building configuration...

Current configuration:
!
version 12.0
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname 8540-MSR
!
logging buffered 4096 debugging
!
redundancy
  main-cpu
    sync config startup
    sync config running
facility-alarm core-temperature major 53
facility-alarm core-temperature minor 45
ip subnet-zero
!
atm connection-traffic-table-row index 63999 cbr pcr
10240 cdvt 500
atm lecs-address-default
47.0091.8100.0000.0090.2144.8401.0090.2144.8405.00 1
atm address
47.0091.8100.0000.0090.2144.8401.0090.2144.8401.00
atm router pnni
  no aesa embedded-number left-justified
  node 1 level 56 lowest
  redistribute atm-static
!
!
lane database PVP
  name test server-atm-address
47.009181000000009021448401.009021448403.01
!
!
interface CBR1/0/0
  no ip address
  no ip directed-broadcast
  ces circuit 0 circuit-name test
  ces pvc 0 interface ATM2/1/0.6 vpi 6 vci 100
!
interface ATM2/1/0
  no atm signalling enable
  no ip address
  no ip directed-broadcast
  atm pvp 6 rx-cttr 63999 tx-cttr 63999
  atm pvp 10
!
interface ATM2/1/0.6 point-to-point
  no ip directed-broadcast
!
interface ATM2/1/0.10 point-to-point
  no ip directed-broadcast
!
interface ATM0
  no ip address
```

```

no ip directed-broadcast
atm maxvp-number 0
lane config auto-config-atm-address
lane config database PVP
!
interface ATM0.1 multipoint
ip address 100.100.100.1 255.255.255.0
no ip directed-broadcast
lane server-bus ethernet test
lane client ethernet test
!
interface Ethernet0
no ip address
no ip directed-broadcast
!
!
ip classless
!
!
line con 0
transport input none
line aux 0
line vty 0 4
!
end

```

验证

验证5500 aspe

本部分所提供的信息可用于确认您的配置是否正常工作。

[命令输出解释程序工具](#) ([仅限注册用户](#)) 支持某些 **show** 命令，使用此工具可以查看对 **show** 命令输出的分析。

- **show atm vp** —用于验证VP隧道是UP。

```
5500-asp-e# show atm vp
```

Interface	VPI	Type	X-Interface	X-VPI	Status
ATM11/0/1	5	PVP	TUNNEL		
ATM11/0/1	6	PVP	TUNNEL		

```
5500-asp-e#
```

- **show atm vc interface atmx/y/z.n** —用于验证LANE SVC通过UBR VP隧道设立。

```
5500-asp-e# show atm vc interface atm11/0/1.5
```

Interface	VPI	VCI	Type	X-Interface	X-VPI	X-VCI	Encap	Status
ATM11/0/1.5	5	3	PVC	ATM13/0/0	0	68	SNAP	UP
ATM11/0/1.5	5	4	PVC	ATM13/0/0	0	69	SNAP	UP
ATM11/0/1.5	5	5	PVC	ATM13/0/0	0	67	QSAAL	UP
ATM11/0/1.5	5	16	PVC	ATM13/0/0	0	66	ILMI	UP
ATM11/0/1.5	5	18	PVC	ATM13/0/0	0	72	PNNI	UP
ATM11/0/1.5	5	43	SVC	ATM13/0/0	0	94	LANE	UP
ATM11/0/1.5	5	44	SVC	ATM13/0/0	0	95	LANE	UP
ATM11/0/1.5	5	45	SVC	ATM13/0/0	0	96	LANE	UP
ATM11/0/1.5	5	46	SVC	ATM13/0/0	0	97	LANE	UP
ATM11/0/1.5	5	47	SVC	ATM13/0/0	0	103	LANE	UP

- **show atm pnni neighbor** —如果LANE SVC不通过VP隧道出现，请使用此命令验证PNNI邻居是在FULL状态。

```
5500-asp-e# show atm pnni neighbor
```

```
Neighbors For Node (Index 1, Level 56)
Neighbor Name: 8540-MSR, Node number: 9
Neighbor Node Id: 56:160:47.00918100000009021448401.009021448401.00
Neighboring Peer State: Full
Link Selection Set To: minimize blocking of future calls
Port          Remote Port Id  Hello state
ATM11/0/1.6   ATM2/1/0.6     2way_in
ATM11/0/1.5   ATM2/1/0.10    2way_in    (Flooding Port)
```

```
5500-asp-e#
```

- **show lane client** —用于验证LEC是可操作的。

```
5500-asp-e# show lane client
```

```
LE Client ATM13/0/0.1 ELAN name: test Admin: up State: operational
Client ID: 2          LEC up for 1 hour 7 minutes 39 seconds
ELAN ID: 0
Join Attempt: 17
Last Fail Reason: Config VC being released
HW Address: 0050.537e.1402 Type: ethernet Max Frame Size: 1516
ATM Address: 47.009181000000050537E1401.0050537E1402.01
VCD  rxFrames  txFrames  Type      ATM Address
  0      0          0  configure 47.00918100000009021448401.009021448405.00
 94      1          6  direct  47.00918100000009021448401.009021448403.01
 95      9          0  distribute 47.00918100000009021448401.009021448403.01
 96      0          70 send      47.00918100000009021448401.009021448404.01
 97      5          0  forward  47.00918100000009021448401.009021448404.01
103     11         14  data     47.00918100000009021448401.009021448402.01
```

```
5500-asp-e#
```

- **show atm vc interface atm x/y/z.n** —用于验证CES PVC通过CBR VP隧道。

```
5500-asp-e# show atm vc interface atm11/0/1.6
```

Interface	VPI	VCI	Type	X-Interface	X-VPI	X-VCI	Encap	Status
ATM11/0/1.6	6	3	PVC	ATM13/0/0	0	100	SNAP	UP
ATM11/0/1.6	6	4	PVC	ATM13/0/0	0	101	SNAP	UP
ATM11/0/1.6	6	5	PVC	ATM13/0/0	0	99	QSAAL	UP
ATM11/0/1.6	6	16	PVC	ATM13/0/0	0	98	ILMI	UP
ATM11/0/1.6	6	18	PVC	ATM13/0/0	0	102	PNNI	UP
ATM11/0/1.6	6	100	PVC	ATM-P10/0/3	0	16		UP

```
5500-asp-e#
```

[VP 中 VP 和 VC 的显示命令](#)

请使用**show in**命令此部分查看关于每个VP和VC的详细信息在VP内。

在本例中，为了保证信令VC通过两VPs，信令在主接口禁用。用于的命令执行此是**没有ATM信令 enable (event)**。同样是完成在8540-MSR。

著名的VC更换他们的从零的VPI编号到VP隧道的VPI编号。著名的VC也是服务类别和VP隧道一样。所以，为了一个VP隧道发信号的VC是UBR和其他是CBR。请使用**show atm vp interface atm x/y/z n m**和**show atm vc interface atm x/y/z.n n m**命令查看关于服务类别的信息。

```
5500-asp-e# show atm vp interface atm11/0/1 5
```

```
Interface: ATM11/0/1, Type: oc3suni
VPI = 5
```

Status: TUNNEL
Time-since-last-status-change: 01:15:49
Connection-type: PVP
Cast-type: point-to-point
Usage-Parameter-Control (UPC): pass
Wrr weight: 2
Number of OAM-configured connections: 0
OAM-configuration: disabled
OAM-states: Not-applicable
Threshold Group: 5, Cells queued: 0
Rx cells: 0, Tx cells: 0
Tx Clp0:0, Tx Clp1: 0
Rx Clp0:0, Rx Clp1: 0
Rx Upc Violations:0, Rx cell drops:0
Rx Clp0 q full drops:0, Rx Clp1 qthresh drops:0
Rx connection-traffic-table-index: 1
Rx service-category: **UBR (Unspecified Bit Rate)**
Rx pcr-clp01: 7113539
Rx scr-clp01: none
Rx mcr-clp01: none
Rx cdvt: 1024 (from default for interface)
Rx mbs: none
Tx connection-traffic-table-index: 1
Tx service-category: **UBR (Unspecified Bit Rate)**
Tx pcr-clp01: 7113539
Tx scr-clp01: none
Tx mcr-clp01: none
Tx cdvt: none
Tx mbs: none

5500-asp-e# **show atm vp interface atm11/0/1 6**

Interface: ATM11/0/1, Type: oc3suni
VPI = 6
Status: TUNNEL
Time-since-last-status-change: 00:06:25
Connection-type: PVP
Cast-type: point-to-point
Usage-Parameter-Control (UPC): pass
Wrr weight: 2
Number of OAM-configured connections: 0
OAM-configuration: disabled
OAM-states: Not-applicable
Threshold Group: 1, Cells queued: 0
Rx cells: 0, Tx cells: 0
Tx Clp0:0, Tx Clp1: 0
Rx Clp0:0, Rx Clp1: 0
Rx Upc Violations:0, Rx cell drops:0
Rx Clp0 q full drops:0, Rx Clp1 qthresh drops:0
Rx connection-traffic-table-index: 64000
Rx service-category: **CBR (Constant Bit Rate)**
Rx pcr-clp01: 10240
Rx scr-clp01: none
Rx mcr-clp01: none
Rx cdvt: 500
Rx mbs: none
Tx connection-traffic-table-index: 64000
Tx service-category: **CBR (Constant Bit Rate)**
Tx pcr-clp01: 10240
Tx scr-clp01: none
Tx mcr-clp01: none

Tx cdvt: 500
Tx mbs: none

5500-asp-e# show atm vc interface atm11/0/1.6 6 5

Interface: ATM11/0/1.6, Type: oc3suni
VPI = 6 VCI = 5
Status: UP
Time-since-last-status-change: 00:10:22
Connection-type: PVC
Cast-type: point-to-point
Packet-discard-option: enabled
Usage-Parameter-Control (UPC): pass
Wrr weight: 15
Number of OAM-configured connections: 0
OAM-configuration: disabled
OAM-states: Not-applicable
Cross-connect-interface: ATM13/0/0, Type: ATM Swi/Proc
Cross-connect-VPI = 0
Cross-connect-VCI = 99
Cross-connect-UPC: pass
Cross-connect OAM-configuration: disabled
Cross-connect OAM-state: Not-applicable
Encapsulation: AALQSAAL
Threshold Group: 6, Cells queued: 0
Rx cells: 131, Tx cells: 134
Tx Clp0:134, Tx Clp1: 0
Rx Clp0:65, Rx Clp1: 66
Rx Upc Violations:0, Rx cell drops:0
Rx pkts:131, Rx pkt drops:0
Rx connection-traffic-table-index: 2
Rx service-category: **CBR (Constant Bit Rate)**
Rx pcr-clp01: 424
Rx scr-clp01: none
Rx mcr-clp01: none
Rx cdvt: 1024 (from default for interface)
Rx mbs: none
Tx connection-traffic-table-index: 2
Tx service-category: **CBR (Constant Bit Rate)**
Tx pcr-clp01:

424
Tx scr-clp01: none
Tx mcr-clp01: none
Tx cdvt: none
Tx mbs: none
Crc Errors:0, Sar Timeouts:0, OverSizedSDUs:0
BufSzOvfl: Small:0, Medium:0, Big:0, VeryBig:0, Large:0

5500-asp-e# show atm vc interface atm11/0/1.5 5 5

Interface: ATM11/0/1.5, Type: oc3suni
VPI = 5 VCI = 5
Status: UP
Time-since-last-status-change: 01:09:56
Connection-type: PVC
Cast-type: point-to-point
Packet-discard-option: enabled

```
Usage-Parameter-Control (UPC): pass
Wrr weight: 15
Number of OAM-configured connections: 0
OAM-configuration: disabled
OAM-states: Not-applicable
Cross-connect-interface: ATM13/0/0, Type: ATM Swi/Proc
Cross-connect-VPI = 0
Cross-connect-VCI = 67
Cross-connect-UPC: pass
Cross-connect OAM-configuration: disabled
Cross-connect OAM-state: Not-applicable
Encapsulation: AALQSAAL
Threshold Group: 6, Cells queued: 0
Rx cells: 917, Tx cells: 921
Tx Clp0:921, Tx Clp1: 0
Rx Clp0:449, Rx Clp1: 468
Rx Upc Violations:0, Rx cell drops:0
Rx pkts:909, Rx pkt drops:0
Rx connection-traffic-table-index: 6
Rx service-category: UBR (Unspecified Bit Rate)
Rx pcr-clp01: 424
Rx scr-clp01: none
Rx mcr-clp01: none
Rx      cdvt: 1024 (from default for interface)
Rx      mbs: none
Tx connection-traffic-table-index: 6
Tx service-category: UBR (Unspecified Bit Rate)
Tx pcr-clp01: 424
Tx scr-clp01: none
Tx mcr-clp01: none
Tx      cdvt: none
Tx      mbs: none
Crc Errors:0, Sar Timeouts:0, OverSizedSDUs:0
BufSzOvfl: Small:2, Medium:0, Big:0, VeryBig:0, Large:0
```

请使用**show atm interface resource atmx/y/z.n**命令发现什么资源是可用的在每个通道，并且哪些资源由通过通道的VC保留。

```
5500-asp-e# show atm interface resource atm11/0/1.5
```

```
Resource Management configuration:
  Service Categories supported: ubr
  Link Distance: 0 kilometers
  Best effort connection limit: disabled 0 max connections
  Max traffic parameters by service (rate in Kbps, tolerance in cell-times):
    Peak-cell-rate RX: none ubr
    Peak-cell-rate TX: none ubr
    Minimum-cell-rate RX: none ubr
    Minimum-cell-rate TX: none ubr
    CDVT RX: none ubr
    CDVT TX: none ubr
Resource Management state:
  Best effort connections: 5 pvcs, 5 svcs
```

```
5500-asp-e# show atm interface resource atm11/0/1.6
```

```
Resource Management configuration:
  Service Categories supported: cbr
  Link Distance: 0 kilometers
  Best effort connection limit: disabled 0 max connections
```

```
Max traffic parameters by service (rate in Kbps, tolerance in cell-times):
Peak-cell-rate RX: none cbr,
Peak-cell-rate TX: none cbr,
Minimum-cell-rate RX:
Minimum-cell-rate TX:
CDVT RX: none cbr,
CDVT TX: none cbr,
Resource Management state:
```

Available bit rates (in Kbps):

```
7986 cbr RX, 7986 cbr TX, 0 vbr RX, 0 vbr TX,
0 abr RX, 0 abr TX, 0 ubr RX, 0 ubr TX
```

Allocated bit rates:

```
1741 cbr RX, 1741 cbr TX, 0 vbr RX, 0 vbr TX,
0 abr RX, 0 abr TX, 0 ubr RX, 0 ubr TX
```

[验证5500-asp-f](#)

本部分所提供的信息可用于确认您的配置是否正常工作。

[命令输出解释程序工具](#) ([仅限注册用户](#)) 支持某些 **show** 命令，使用此工具可以查看对 **show** 命令输出的分析。

- **show atm vp** —用于验证VP是可操作的。

```
5500-asp-f# show atm vp
```

Interface	VPI	Type	X-Interface	X-VPI	Status
ATM11/0/0	6	PVP	ATM11/0/1	6	UP
ATM11/0/0	10	PVP	ATM11/0/1	5	UP
ATM11/0/1	5	PVP	ATM11/0/0	10	UP
ATM11/0/1	6	PVP	ATM11/0/0	6	UP

```
5500-asp-f#
```

- **show atm interface resource atmx/y/z** —用于发现这两保留的资源在接口的VPs。

```
5500-asp-f# show atm interface resource atm11/0/1
```

```
Resource Management configuration:
```

```
Service Classes:
```

```
Service Category map: c1 cbr, c2 vbr-rt, c3 vbr-nrt, c4 abr, c5 ubr
```

```
Scheduling: RS c1 WRR c2, WRR c3, WRR c4, WRR c5
```

```
WRR Weight: 8 c2, 1 c3, 1 c4, 1 c5
```

```
Pacing: disabled 0 Kbps rate configured, 0 Kbps rate installed
```

```
Service Categories supported: cbr,vbr-rt,vbr-nrt,abr,ubr
```

```
Link Distance: 0 kilometers
```

```
Controlled Link sharing:
```

```
Max aggregate guaranteed services: none RX, none TX
```

```
Max bandwidth: none cbr RX, none cbr TX, none vbr RX, none vbr TX,
```

```
none abr RX, none abr TX, none ubr RX, none ubr TX
```

```
Min bandwidth: none cbr RX, none cbr TX, none vbr RX, none vbr TX,
```

```
none abr RX, none abr TX, none ubr RX, none ubr TX
```

```
Best effort connection limit: disabled 0 max connections
```

```
Max traffic parameters by service (rate in Kbps, tolerance in cell-times):
```

```
Peak-cell-rate RX: none cbr, none vbr, none abr, none ubr
```

```
Peak-cell-rate TX: none cbr, none vbr, none abr, none ubr
```

```
Sustained-cell-rate: none vbr RX, none vbr TX
```

```
Minimum-cell-rate RX: none abr, none ubr
```

```
Minimum-cell-rate TX: none abr, none ubr
```

```
CDVT RX: none cbr, none vbr, none abr, none ubr
```

```
CDVT TX: none cbr, none vbr, none abr, none ubr
```

```
MBS: none vbr RX, none vbr TX
```

```
Resource Management state:
```

```
Available bit rates (in Kbps):
```

```
137503 cbr RX, 137503 cbr TX, 137503 vbr RX, 137503 vbr TX,
```

```

137503 abr RX, 137503 abr TX, 137503 ubr RX, 137503 ubr TX
Allocated bit rates:
10240 cbr RX, 10240 cbr TX, 0 vbr RX, 0 vbr TX,
0 abr RX, 0 abr TX, 0 ubr RX, 0 ubr TX
Best effort connections: 1 pvcs, 0 svcs

```

5500-asp-f#

8540-MSR

本部分所提供的信息可用于确认您的配置是否正常工作。

[命令输出解释程序工具](#) ([仅限注册用户](#)) 支持某些 **show** 命令，使用此工具可以查看对 **show** 命令输出的分析。

- **show atm vp** —用于验证VP隧道是UP。

8540-MSR# **show atm vp**

Interface	VPI	Type	X-Interface	X-VPI	Status
ATM2/1/0	6	PVP	TUNNEL		
ATM2/1/0	10	PVP	TUNNEL		

- **show atm vc interface atmx/y/z.n** —用于验证CES PVC通过CBR VP隧道。

8540-MSR# **show atm vc interface atm2/1/0.10**

Interface	VPI	VCI	Type	X-Interface	X-VPI	X-VCI	Encap	Status
ATM2/1/0.10	10	3	PVC	ATM0	0	140	SNAP	UP
ATM2/1/0.10	10	4	PVC	ATM0	0	141	SNAP	UP
ATM2/1/0.10	10	5	PVC	ATM0	0	139	QSAAL	UP
ATM2/1/0.10	10	16	PVC	ATM0	0	138	ILMI	UP
ATM2/1/0.10	10	18	PVC	ATM0	0	142	PNNI	UP
ATM2/1/0.10	10	43	SVC	ATM0	0	149	LANE	UP
ATM2/1/0.10	10	44	SVC	ATM0	0	132	LANE	UP
ATM2/1/0.10	10	45	SVC	ATM0	0	150	LANE	UP
ATM2/1/0.10	10	46	SVC	ATM0	0	136	LANE	UP

8540-MSR# **show atm vc interface atm2/1/0.6**

Interface	VPI	VCI	Type	X-Interface	X-VPI	X-VCI	Encap	Status
ATM2/1/0.6	6	3	PVC	ATM0	0	153	SNAP	UP
ATM2/1/0.6	6	4	PVC	ATM0	0	154	SNAP	UP
ATM2/1/0.6	6	5	PVC	ATM0	0	152	QSAAL	UP
ATM2/1/0.6	6	16	PVC	ATM0	0	151	ILMI	UP
ATM2/1/0.6	6	18	PVC					
ATM0	0	155	PNNI	UP				
ATM2/1/0.6	6	100	PVC	ATM-P1/0/3	0	16		UP

- **show atm vp interface atmx/y/z n m** —用于查看服务类别信息。

8540-MSR# **show atm vp interface atm2/1/0 10**

```

Interface: ATM2/1/0, Type: oc3suni
VPI = 10
Status: TUNNEL
Time-since-last-status-change: 01:25:46
Connection-type: PVP
Cast-type: point-to-point
Usage-Parameter-Control (UPC): pass
Wrr weight: 2
Number of OAM-configured connections: 0

```

```

OAM-configuration: disabled
OAM-states: Not-applicable
Threshold Group: 5, Cells queued: 0
Rx cells: 0, Tx cells: 0
Tx Clp0:0, Tx Clp1: 0
Rx Clp0:0, Rx Clp1: 0
Rx Upc Violations:0, Rx cell drops:0
Rx Clp0 q full drops:0, Rx Clp1 qthresh drops:0
Rx connection-traffic-table-index: 1
Rx service-category: UBR (Unspecified Bit Rate)
Rx pcr-clp01: 7113539
Rx scr-clp01: none
Rx mcr-clp01: none
Rx      cdvt: 1024 (from default for interface)
Rx      mbs: none
Tx connection-traffic-table-index: 1
Tx service-category: UBR (Unspecified Bit Rate)
Tx pcr-clp01: 7113539
Tx scr-clp01: none
Tx mcr-clp01: none
Tx      cdvt: none
Tx      mbs: none

```

8540-MSR# **show atm vp interface atm2/1/0 6**

```

Interface: ATM2/1/0, Type: oc3suni
VPI = 6
Status: TUNNEL
Time-since-last-status-change: 01:04:52
Connection-type: PVP
Cast-type: point-to-point
Usage-Parameter-Control (UPC): pass
Wrr weight: 2
Number of OAM-configured connections: 0
OAM-configuration: disabled
OAM-states: Not-applicable
Threshold Group: 1, Cells queued: 0
Rx cells: 0, Tx cells: 0
Tx Clp0:0, Tx Clp1: 0
Rx Clp0:0, Rx Clp1: 0
Rx Upc Violations:0, Rx cell drops:0
Rx Clp0 q full drops:0, Rx Clp1 qthresh drops:0
Rx connection-traffic-table-index: 63999
Rx service-category: CBR (Constant Bit Rate)
Rx pcr-clp01: 10240
Rx scr-clp01: none
Rx mcr-clp01: none
Rx      cdvt: 500
Rx      mbs: none
Tx connection-traffic-table-index: 63999
Tx service-category: CBR (Constant Bit Rate)
Tx pcr-clp01: 10240
Tx scr-clp01: none
Tx mcr-clp01: none
Tx      cdvt: 500
Tx      mbs: none

```

- **show atm interface resource atm x/y/z.n** —用于发现什么资源是可用的在每个通道，并且哪些资源由通过通道的VC保留。

8540-MSR# **show atm interface resource atm 2/1/0.6**

```

Resource Management configuration:
  Service Categories supported: cbr
  Link Distance: 0 kilometers
  Best effort connection limit: disabled 0 max connections
  Max traffic parameters by service (rate in Kbps, tolerance in cell-times):
    Peak-cell-rate RX: none cbr,
    Peak-cell-rate TX: none cbr,
    Minimum-cell-rate RX:
    Minimum-cell-rate TX:
    CDVT RX: none cbr,
    CDVT TX: none cbr,
Resource Management state:
  Available bit rates (in Kbps):
    7986 cbr RX, 7986
cbr
TX, 0 vbr RX, 0 vbr TX,
    0 abr RX, 0 abr TX, 0 ubr RX, 0 ubr TX
  Allocated bit rates:
    1741 cbr RX, 1741 cbr TX, 0 vbr RX, 0 vbr TX,
    0 abr RX, 0 abr TX, 0 ubr RX, 0 ubr TX

```

8540-MSR# **show atm interface resource atm 2/1/0.10**

```

Resource Management configuration:
  Service Categories supported: ubr
  Link Distance: 0 kilometers
  Best effort connection limit: disabled 0 max connections
  Max traffic parameters by service (rate in Kbps, tolerance in cell-times):
    Peak-cell-rate RX: none ubr
    Peak-cell-rate TX: none ubr
    Minimum-cell-rate RX: none ubr
    Minimum-cell-rate TX: none ubr
    CDVT RX: none ubr
    CDVT TX: none ubr
Resource Management state:
  Best effort connections: 5 pvcs, 4 svcs

```

- **show atm pnni neighbor** —用于验证PNNI邻居是在FULL状态。

8540-MSR# **show atm pnni neighbor**

```

Neighbors For Node (Index 1, Level 56)
  Neighbor Name: 5500-asp-e, Node number: 10
  Neighbor Node Id: 56:160:47.0091810000000050537E1401.0050537E1401.00
  Neighboring Peer State: Full
  Link Selection Set To: minimize blocking of future calls
  Port                Remote Port Id      Hello state
  ATM2/1/0.6          ATM11/0/1.6         2way_in
  ATM2/1/0.10         ATM11/0/1.5         2way_in (Flood Port)

```

- **显示通道**—用于显示在仿真LAN (ELAN)配置的在接口或任何其子接口，在一指定的子接口，或者所有LANE组件的详细信息。

8540-MSR# **show lane**

```

LE Config Server ATM0 config table: PVP
Admin: up State: operational
LECS Mastership State: active master
list of global LECS addresses (23 seconds to update):
47.009181000000009021448401.009021448405.00 <----- me
ATM Address of this LECS: 47.009181000000009021448401.009021448405.00 (auto)
 vcd rxCnt txCnt callingParty
 128    3    3 47.009181000000009021448401.009021448403.01 LES test 0 active
cumulative total number of unrecognized packets received so far: 0

```

cumulative total number of config requests received so far: 6
cumulative total number of config failures so far: 0

LE Server ATM0.1, Elan name: test, Admin: up, State: operational
Type: ethernet, Max Frame Size: 1516
locally set elan-id: not set
elan-id obtained from LECS: not set
ATM address: 47.009181000000009021448401.009021448403.01
LECS used: 47.009181000000009021448401.009021448405.00 connected, vcd 126
control distribute: vcd 132, 2 members, 17 packets
proxy/ (ST: Init, Conn, Waiting, Adding, Joined, Operational, Reject, Term)

lecid ST

vcd	pkts	Hardware Addr	ATM Address
1P O 131	9	0090.2144.8402	47.009181000000009021448401.009021448402.01
2P O 149	9	0050.537e.1402	47.0091810000000050537E1401.0050537E1402.01

LE BUS ATM0.1 ELAN name: test Admin: up State: operational
type: ethernet Max Frame Size: 1516
ATM address: 47.009181000000009021448401.009021448404.01
data forward: vcd 136, 2 members, 34 packets, 3 unicasts

lecid	vcd	pkts	ATM Address
1	135	93	47.009181000000009021448401.009021448402.01
2	150	79	47.0091810000000050537E1401.0050537E1402.01

LE Client ATM0.1 ELAN name: test Admin: up State: operational
Client ID: 1 LEC up for 1 hour 28 minutes 44 seconds
ELAN ID: 0
Join Attempt: 8
Last Fail Reason: Locally deactivate
HW Address: 0090.2144.8402 Type: ethernet Max Frame Size: 1516
ATM Address: 47.009181000000009021448401.009021448402.01

VCD	rxFrames	txFrames	Type	ATM Address
0	0	0	configure	47.009181000000009021448401.009021448405.00
130	1	9	direct	47.009181000000009021448401.009021448403.01
VCD	rxFrames	txFrames	Type	ATM Address
133	17	0	distribute	47.009181000000009021448401.009021448403.01
134	0	93	send	47.009181000000009021448401.009021448404.01
137	17	0	forward	

47.009181000000009021448401.009021448404.01

- **显示ces circuit** —用于显示CBR接口的详细的电路信息。

8540-MSR# **show ces circuit**

Interface	Circuit	Circuit-Type	X-interface	X-vpi	X-vci	Status
CBR1/0/0	0	HardPVC	ATM2/1/0.6	6	100	UP

5500-asp-e# **show ces circuit**

Interface	Circuit	Circuit-Type	X-interface	X-vpi	X-vci	Status
CBR10/0/0	0	HardPVC	ATM11/0/1.6	6	100	UP

- **show atm connection-traffic-table** —请使用连接流量表指定不同的服务类别和流量参数。一旦指定参数，请使用索引配置VC和VP类别和流量参数。要查看连接流量表设置，请使用**show**

atm connection-traffic-table命令。

8540-MSR# show atm connection-traffic-table

Row	Service-category	pcr	scr/mcr	mbs	cdvt
1	ubr	7113539	none		none
2	cbr	424			none
3	vbr-rt	424	424	50	none
4	vbr-nrt	424	424	50	none
5	abr	424	0		none
6	ubr	424	none		none
63999	cbr	10240			500
64000	cbr	1741			none
2147483637	ubr	149760	none		none
2147483638	ubr	149760	none		none
2147483639	ubr	149760	none		none
2147483640	ubr	149760	none		none
2147483645*					
ubr	0	none		none	
2147483646*	ubr	1	none		none
2147483647*	ubr	7113539	none		none

5500-asp-e# show atm connection-traffic-table

Row	Service-category	pcr	scr/mcr	mbs	cdvt
1	ubr	7113539	none		none
2	cbr	424			none
3	vbr-rt	424	424	50	none
4	vbr-nrt	424	424	50	none
5	abr	424	0		none
6	ubr	424	none		none
63999	cbr	1741			none
64000	cbr	10240			500
2147483637	ubr	149760			
none		none			
2147483638	ubr	149760	none		none
2147483639	ubr	149760	none		none
2147483640	ubr	149760	none		none
2147483645*					
ubr	0	none		none	
2147483646*	ubr	1	none		none
2147483647*	ubr	7113539	none		none

5500-asp-f# show atm connection-traffic-table

Row	Service-category	pcr	scr/mcr	mbs	cdvt
1	ubr	7113539	none		none
2	cbr	424			none
3	vbr-rt	424	424	50	none
4	vbr-nrt	424	424	50	none
5	abr	424	0		none
6	ubr	424			

none		none		
64000	cbr	10240		500
2147483645*	ubr	0	none	none
2147483646*	ubr	1	none	none
2147483647*	ubr	7113539	none	none

[故障排除](#)

目前没有针对此配置的故障排除信息。

[相关信息](#)

- [ATM技术支持](#)
- [技术支持&说明文件Cisco系统](#)