

配置带RBE和DHCP的Cisco 6400 ATM接口

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简介

本文为连接的Cisco 827数字用户线路DSL路由器在Cisco 6400通用接入集中器(UAC)提供一配置示例给Cisco 6130数字用户线路访问多路复用器，那终止。

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和硬件版本：

- Cisco 827-4V客户端前置设备(CPE)用IOS®软件版本12.1(1)XB。
- Cisco 6400 UAC-NRP IOS软件版本12.1(1)DC1 (外部DHCP服务器)或12.2(2)B (IOS DHCP服务器)。
- Cisco 6400 UAC-NSP IOS软件版本12.0(4)DB。
- Cisco 6130 DSLAM-NI2 IOS软件版本12.1(1)DA。

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。

规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

背景信息

Cisco 827配置与RFC1483桥接和集成路由和桥接(IRB)。Cisco 827允许在以太网段的PCs得到地址从在6400后的一个DHCP服务器，或者从6400个IOS DHCP服务器。另外，BVI地址也配置从DHCP服务器得到地址和默认路由。Cisco 6400异步传输模式(ATM)接口配置与路由的网桥封装(RBE)和配置运行与一个外部DHCP服务器或IOS DHCP服务器在NRP。

对Cisco 6400，在Cisco 6400节点路由处理器(NRP)的ATM RBE功能寻址在跨接的从末端桥接LAN的RFC1483以太网流量的IP。在ATM接口接收的桥接的IP数据包配置在路由桥接的模式通过IP报头路由。接口利用残余部分LAN结构的特性常用为DSL访问和提供更完善的性能和灵活性在IRB。

并且，当实施，DHCP客户端的主机路由自动地被添加到6400路由表IP地址。当DHCP地址发布时，主机路由从路由表删除。

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

本文在表1和2使用表示的网络设置：

图1 - 方案1

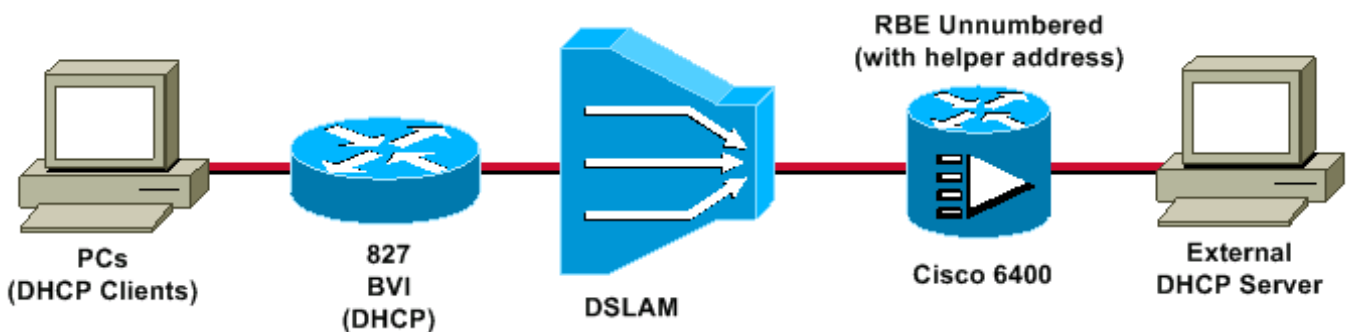
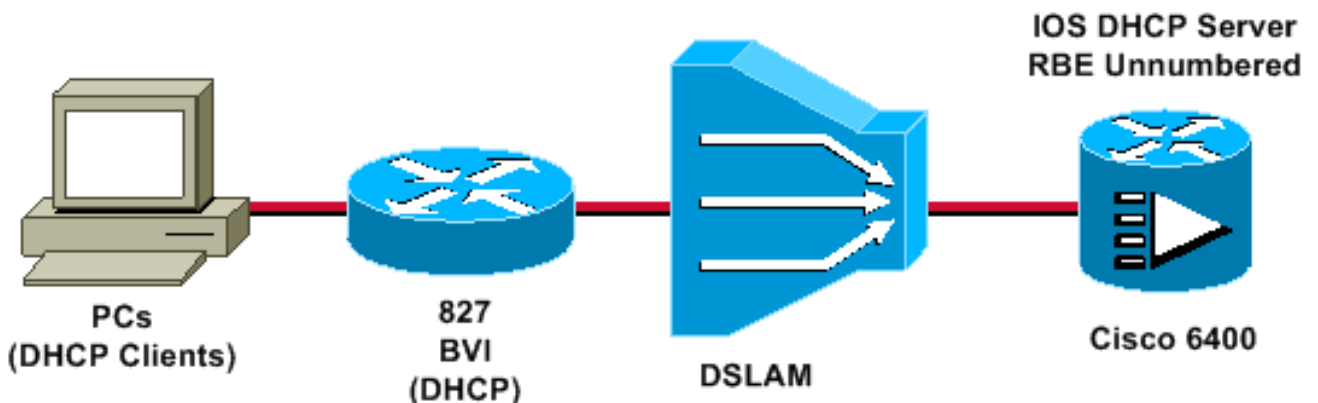


图2 - 方案2



配置

本文档使用以下配置：

- Cisco 827
- Cisco 6400 NRP
- 6400调试(使用与外部DHCP服务器的RBE)
- 6400调试(使用与IOS DHCP服务器的RBE)

Cisco 827

```
Current configuration:
!
version 12.0
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname R1
!
ip subnet-zero
!
bridge irb
!
interface Ethernet0
 no ip address
 bridge-group 1
!--- Because the Ethernet0 is bridged to the WAN
interface, !--- PCs behind the ethernet0 can be setup as
DHCP clients. !--- They get their addresses from the
DHCP server behind the 6400, !--- or from the IOS DHCP
server on the 6400. ! interface ATM0 no ip address no ip
directed-broadcast no ip mroute-cache no atm ilmi-
keepalive pvc 4/100 encapsulation aal5snap ! bundle-
enable bridge-group 1 hold-queue 224 in ! interface BVI1
ip address dhcp client-id Ethernet0 !--- This command
tells the BVI interface to get the address !--- from
DHCP, and also to get the default route from DHCP. ! ip
classless !--- Note: The default route will be inserted
into !--- the routing table automatically from the DHCP
server, and !--- no static routing statement is
required.

no ip http server
!
bridge 1 protocol ieee
 bridge 1 route ip
!
voice-port 1
 timing hookflash-in 0
!
voice-port 2
 timing hookflash-in 0
!
voice-port 3
 timing hookflash-in 0
!
voice-port 4
 timing hookflash-in 0
!
end
```

Cisco 6400 NRP

```

Current configuration:
!
version 12.1
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname NRP

!
redundancy
  main-cpu
  no auto-sync standard
  no secondary console enable
ip subnet-zero
!
interface Loopback1
  ip address 198.1.1.1 255.255.255.0
  no ip directed-broadcast
!--- This address and mask must match the intended !---
scope and network configured on the external DHCP
server. ! interface ATM0/0/0 no ip address no ip
directed-broadcast no ip mroute-cache no ATM ilmi-
keepalive ! interface ATM0/0/0.4 point-to-point !--- The
interface ATM0/0/0.4 point-to-point uses IP !---
unnumbered Loopback1 for its IP address requirements. ip
unnumbered Loopback1 ip helper-address <dhcp server ip
address> atm route-bridged ip PVC 4/100 encapsulation
aal5snap ! interface Ethernet0/0/1 no ip address no ip
directed-broadcast ! interface Ethernet0/0/0 no ip
directed-broadcast ! interface FastEthernet0/0/0 no ip
address no ip directed-broadcast full-duplex ! ip
classless !--- Note: For every DHCP client that is
relayed an address, !--- a host route will be
automatically inserted in the routing !--- table, and no
host route statement for a DHCP client is required.

end

```

6400调试(使用与外部DHCP服务器的RBE)

```

Current configuration:
!
version 12.1
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname NRP

!
redundancy
  main-cpu
  no auto-sync standard
  no secondary console enable
ip subnet-zero
!
interface Loopback1
  ip address 198.1.1.1 255.255.255.0
  no ip directed-broadcast
!--- This address and mask must match the intended !---
scope and network configured on the external DHCP
server. ! interface ATM0/0/0 no ip address no ip
directed-broadcast no ip mroute-cache no ATM ilmi-
keepalive ! interface ATM0/0/0.4 point-to-point !--- The

```

```
interface ATM0/0/0.4 point-to-point uses IP !---  
unnumbered Loopback1 for its IP address requirements. ip  
unnumbered Loopback1 ip helper-address <dhcp server ip  
address> atm route-bridged ip PVC 4/100 encapsulation  
aal5snap ! interface Ethernet0/0/1 no ip address no ip  
directed-broadcast ! interface Ethernet0/0/0 no ip  
directed-broadcast ! interface FastEthernet0/0/0 no ip  
address no ip directed-broadcast full-duplex ! ip  
classless !--- Note: For every DHCP client that is  
relayed an address, !--- a host route will be  
automatically inserted in the routing !--- table, and no  
host route statement for a DHCP client is required.  
  
end
```

6400调试(使用与IOS DHCP服务器的RBE)

```
Current configuration:  
!  
version 12.1  
no service pad  
service timestamps debug datetime msec  
service timestamps log datetime msec  
!  
hostname NRP  
  
!  
redundancy  
  main-cpu  
  no auto-sync standard  
  no secondary console enable  
ip subnet-zero  
!  
interface Loopback1  
  ip address 198.1.1.1 255.255.255.0  
  no ip directed-broadcast  
!--- This address and mask must match the intended !---  
scope and network configured on the external DHCP  
server. ! interface ATM0/0/0 no ip address no ip  
directed-broadcast no ip mroute-cache no ATM ilmi-  
keepalive ! interface ATM0/0/0.4 point-to-point !--- The  
interface ATM0/0/0.4 point-to-point uses IP !---  
unnumbered Loopback1 for its IP address requirements. ip  
unnumbered Loopback1 ip helper-address <dhcp server ip  
address> atm route-bridged ip PVC 4/100 encapsulation  
aal5snap ! interface Ethernet0/0/1 no ip address no ip  
directed-broadcast ! interface Ethernet0/0/0 no ip  
directed-broadcast ! interface FastEthernet0/0/0 no ip  
address no ip directed-broadcast full-duplex ! ip  
classless !--- Note: For every DHCP client that is  
relayed an address, !--- a host route will be  
automatically inserted in the routing !--- table, and no  
host route statement for a DHCP client is required.  
  
end
```

验证

当前没有可用于此配置的验证过程。

故障排除

目前没有针对此配置的故障排除信息。

[相关信息](#)

- [配置 Cisco 827 路由器，使之通过 RFC1483 桥接以 RBE 模式在 Cisco 6400 上终止](#)
- [Cisco 6400 软件设置指南](#)
- [Cisco 6400 命令参考](#)
- [ADSL 技术支持页](#)
- [DSL 产品支持页](#)
- [技术支持 - Cisco Systems](#)