

配置带RBE和DHCP的Cisco 6400 ATM接口

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[Introduction](#)

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

[Prerequisites](#)

[Requirements](#)

There are no specific requirements for this document.

[Components Used](#)

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。

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

[Conventions](#)

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配置有RFC1483桥接和集成路由和桥接(IRB)。Cisco 827允许在以太网段的个人计算机得到地址从在6400后的一个DHCP服务器，或者从6400 IOS DHCP服务器。另外，也配置BVI地址获得地址和默认路由从DHCP服务器。Cisco 6400异步传输模式(ATM)接口配置有路由的网桥封装(RBE)和被配置用一个外部DHCP服务器或IOS DHCP服务器运行在NRP。

对于Cisco 6400，在Cisco 6400节点路由处理器(NRP)的ATM RBE功能从末端桥接LAN路由在桥接的RFC1483以太网数据流的IP。在ATM接口收到的桥接IP信息包配置在路由桥接的模式下通过IP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。当发布时，主机路由从路由表被去除DHCP地址。

Configure

本部分提供有关如何配置本文档所述功能的信息。

Note: 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](#))。

Network Diagram

本文使用在表表示的网络建立1和2：

图1 -方案1

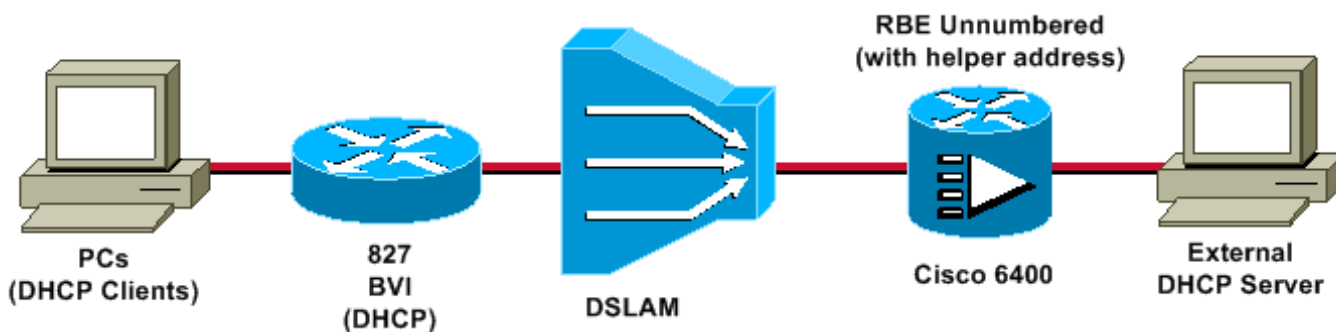
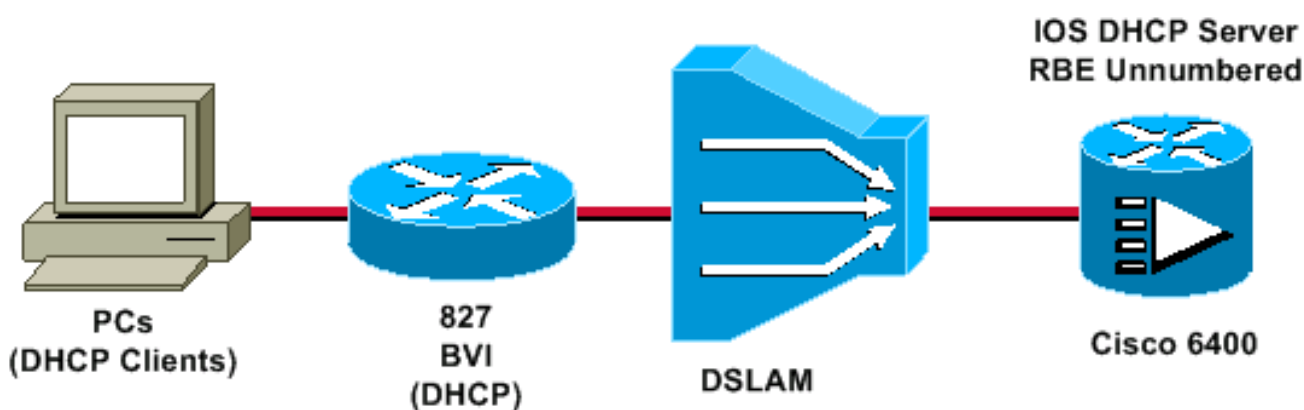


图2 -方案2



配置

本文档使用以下配置：

- Cisco 827
- Cisco 6400 NRP
- 6400调试(使用RBE用外部DHCP服务器)
- 6400调试(使用RBE用IOS DHCP服务器)

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RBE用外部DHCP服务器)

```
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RBE用IOS DHCP服务器)

```

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

```

[Verify](#)

当前没有可用于此配置的验证过程。

[Troubleshoot](#)

目前没有针对此配置的故障排除信息。

[Related Information](#)

- [在RBE模式下配置一台在Cisco 6400上终止的远端Cisco 828路由器使用RFC1483桥接](#)
- [DSL产品支持页面](#)