

Configuring a Cisco 6130 NI-2 DSLAM Supporting a Cisco 6400 NSP and a Cisco NRP

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Introduction

Before You Begin

Conventions

Prerequisites

Components Used

Configure

Network Diagram

Configurations

Verify

Troubleshoot

Related Information

Introduction

This sample configuration shows a Cisco 6400 Universal Access Concentrator (UAC) that has one Node Route Processor (NRP) installed.

Two Cisco 827 Digital Subscriber Line (DSL) Routers terminate on a single Cisco 6400 NRP adapter. The Cisco 827 Routers pass traffic from one to the other via a Cisco 6400 UAC-NRP.

An end-to-end configuration includes a Cisco 6130 NI-2 Digital Subscriber Line Access Multiplexer (DSLAM), a Cisco 6400 Network Service Point (NSP), and a Cisco 6400 NRP.

Before You Begin

Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

Prerequisites

There are no specific prerequisites for this document.

Components Used

The information in this document is based on the software and hardware versions below.

- Cisco 827-4V CPE IOS® Software Release 12.1(1.3)T
- Cisco 6400 UAC-NRP IOS Software Release 12.0(7)DC
- Cisco 6400 UAC-NSP IOS Software Release 12.0(4)DB
- Cisco 6130 NI-2 DSLAM IOS Software Release 12.1(1)DA

The information presented in this document was created from devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If you are working in a live network, ensure that you understand the potential impact of any command before using it.

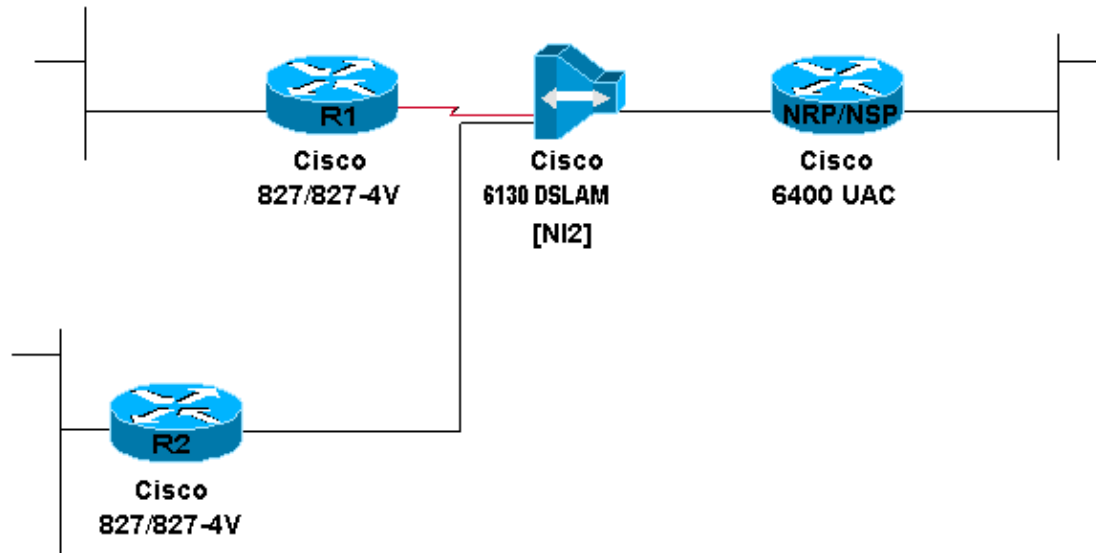
Configure

In this section, you are presented with the information to configure the features described in this document.

Note: To find additional information on the commands used in this document, use the Command Lookup Tool (registered customers only).

Network Diagram

This document uses the network setup shown in the diagram below.



Configurations

This document uses the configurations shown below.

- Cisco 827 (R1)
- Cisco 827 (R2)
- Cisco 6130 NI-2
- Cisco 6400-NSP
- Cisco 6400-NRP

```
Cisco 827 (R1)
Current configuration:
!
version 12.0
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
hostname R1
!
ip subnet-zero
!
interface Ethernet0
 ip address 172.18.0.1 255.255.0.0
 no ip directed-broadcast
!
interface ATM0
 ip address 172.16.0.1 255.255.0.0
 no ip directed-broadcast
```

```
no atm ilmi-keepalive
pvc 3/100
  protocol ip 172.16.0.2
  encapsulation aal5snap
!
bundle-enable
hold-queue 224 in
!
ip classless
ip route 0.0.0.0 0.0.0.0 172.16.0.2
!
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 827 (R2)

```
Current configuration:
!
version 12.0
service timestamps debug datetime msec
service timestamps log datetime msec
hostname R2
!
ip subnet-zero
!
interface Ethernet0
 ip address 172.19.0.1 255.255.0.0
 no ip directed-broadcast
 no ip mroute-cache
!
interface ATM0
 ip address 172.17.0.1 255.255.0.0
 no ip directed-broadcast
 no atm ilmi-keepalive
 pvc 4/100
  protocol ip 172.17.0.2
  encapsulation aal5snap
!
 bundle-enable
 hold-queue 224 in
!
 ip classless
 ip route 0.0.0.0 0.0.0.0 172.17.0.2
!
 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 6130 NI-2

```
Current configuration:
!
version 12.1
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname ni2
!
dsl-profile default
dmt training-mode quick
!
ip subnet-zero
!
!
atm address 47.0091.8100.0000.0075.2b3f.4d01.0075.2b3f.4d01.00
atm router pnni
  no aesa embedded-number left-justified
  node 1 level 56 lowest
  redistribute atm-static
!
interface ATM0/0
  no ip address
  atm cac service-category abr deny
  atm maxvp-number 0
  atm maxvc-number 4096
  atm maxvci-bits 12
!
interface Ethernet0/0
  no ip route-cache
!
interface ATM0/1
  no ip address
  atm ilmi-keepalive
!
interface ATM0/2
  no ip address
  no atm ilmi-keepalive
!
interface ATM1/1
  no ip address
  no atm ilmi-keepalive
!
interface ATM1/2
  no ip address
  no atm ilmi-keepalive
!
interface ATM1/3
  !-- R1 connects to this interface (incoming)
  !-- and to ATM0/1 (outgoing to 6400-NSP).
  no ip address
  dsl profile fast
  no atm ilmi-keepalive
  atm pvc 3 100 interface ATM0/1 3 100
!
interface ATM1/4
```

```
!--- R2 connects to this interface (incoming)  
!--- and to ATM0/1 (outgoing to 6400-NSP).
```

```
no ip address  
no atm ilmi-keepalive  
atm pvc 4 100 interface ATM0/1 4 100  
!  
ip classless  
!  
end
```

Cisco 6400-NSP

```
Current configuration:
```

```
!  
version 12.0  
no service pad  
service timestamps debug datetime msec  
service timestamps log datetime msec  
!  
hostname NSP  
!  
ip subnet-zero  
!  
atm address 47.0091.8100.0000.0030.8027.7501.0030.8027.7501.00  
atm router pnni  
no aesa embedded-number left-justified  
node 1 level 56 lowest  
redistribute atm-static  
!  
interface ATM0/0/0  
no ip address  
no ip directed-broadcast  
atm maxvp-number 0  
!  
interface Ethernet0/0/0  
no ip directed-broadcast  
!  
interface ATM1/0/0  
  
!--- Interface ATM1/0/0 handles outgoing traffic to 6400-NRP.  
  
no ip address  
no ip directed-broadcast  
no atm ilmi-keepalive  
!  
interface ATM2/0/0  
no ip address  
no ip directed-broadcast  
no atm ilmi-keepalive  
!  
interface ATM8/0/0  
no ip address  
no ip directed-broadcast  
no atm ilmi-keepalive  
!  
interface ATM8/0/1  
  
!--- Interface ATM8/0/1 handles incoming traffic from 6130 NI-2.  
  
no ip address  
no ip directed-broadcast  
no atm ilmi-keepalive  
atm pvc 3 100 interface ATM1/0/0 3 100  
atm pvc 4 100 interface ATM1/0/0 4 100
```

```
!  
ip classless  
!  
end
```

Cisco 6400-NRP

```
Current configuration:  
!  
version 12.0  
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 ATM0/0/0  
  
!--- This interface connects to Cisco-NRP ATM1/0/0.  
  
  no ip address  
  no ip directed-broadcast  
  no atm ilmi-keepalive  
!  
interface ATM0/0/0.3 point-to-point  
  
!--- R1 terminates on this interface.  
  
  ip address 172.16.0.2 255.255.0.0  
  no ip directed-broadcast  
  pvc 3/100  
  protocol ip 172.16.0.1  
  encapsulation aal5snap  
!  
interface ATM0/0/0.4 point-to-point  
  
!--- R2 terminates on this interface.  
  
  ip address 172.17.0.2 255.255.0.0  
  no ip directed-broadcast  
  pvc 4/100  
    protocol ip 172.17.0.1  
    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  
ip route 172.19.0.1 255.255.255.255 172.17.0.1
```

```
ip route 172.18.0.1 255.255.255.255 172.16.0.1
!
end
```

Verify

There is currently no verification procedure available for this configuration.

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

Related Information

- [Configuring the Cisco 827 Router](#)
 - [Cisco 6400 Software Setup Guide](#)
 - [DSL Support Page](#)
 - [Cisco Product Support](#)
 - [Technical Support – Cisco Systems](#)
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