

Configuring a Cisco 827 Router With IP Unnumbered E0, PPPoA, PPP-PAP, and Manually Configured Local LAN Devices

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Introduction

This sample configuration shows a Cisco 827 digital subscriber line (DSL) Router connecting to a Cisco 6130 Digital Subscriber Line Access Multiplexer (DSLAM) and terminating on a Cisco 6400 Universal Access Concentrator (UAC). The Cisco 827 has been configured with PPP over ATM (PPPoA).

The Internet Service Provider (ISP) has given the subscriber a range of IP addresses, 10.0.0.1 to 10.0.0.254, with a mask of 255.255.255.0. IP address "10.0.0.1" will be manually configured on the Ethernet interface of the Cisco 827. The subscriber will manually configure the remaining IP addresses on the local LAN devices. Each local device should be configured with a default gateway IP address of 10.0.0.1 (the IP address of the Cisco 827 Ethernet interface).

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 Customer Premises Equipment (CPE) IOS® Software Release 12.1(1)XB
- Cisco 6400 UAC-Node Route Processor (NRP) IOS Software Release 12.0(7)DC
- Cisco 6400 UAC-Node Switch Processor (NSP) IOS Software Release 12.0(4)DB
- Cisco 6130 DSLAM-NI2 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.

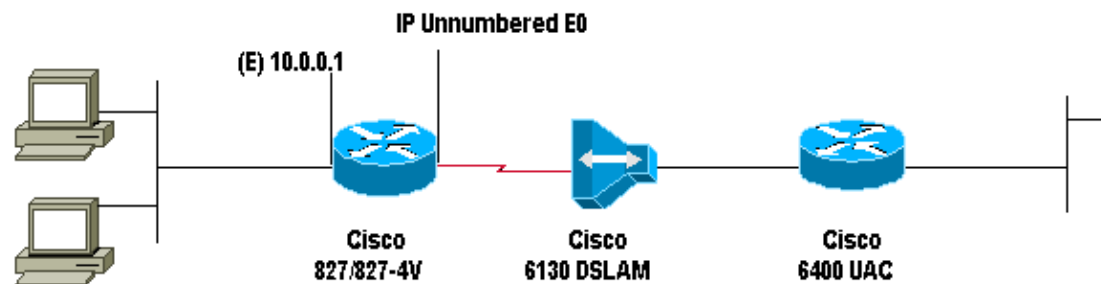
Configure

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 configuration shown below.

```
Cisco 827
!
version 12.1
service timestamps debug datetime msec
service timestamps datetime msec
!
hostname R1
!
ip subnet-zero
!
interface Ethernet0
 ip address 10.0.0.1 255.255.255.0
 no ip directed-broadcast
 no ip mroute-cache
!
interface ATM0
 no ip address
 no ip directed-broadcast
 no ip mroute-cache
 no atm ilmi-keepalive
 pvc 1/150
  encapsulation aal5mux ppp dialer
  dialer pool-member 1
!
 hold-queue 224 in
!
interface Dialer0
 ip unnumbered Ethernet0
```

```
no ip directed-broadcast
encapsulation ppp
dialer pool 1
dialer-group 1
ppp pap sent-username username password password
!
ip classless
ip route 0.0.0.0 0.0.0.0 Dialer0
no ip http server
!
dialer-list 1 protocol ip permit
!
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
```

Verify

There is currently no verification procedure available for this configuration.

Troubleshoot

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

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