

Configuring a Cisco 1700/2600/3600 ADSL WIC With IP Unnumbered E0, DHCP, PPPoA, and PPP-PAP

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Introduction

The Cisco 1700, 2600, and 3600 Series Routers support the asymmetric digital subscriber line (ADSL) WAN Interface Card (WIC). All three platforms are configured essentially the same, but there are differences in hardware and in the Cisco IOS® Software release required for each one. Throughout this document, the Cisco 1700/2600/3600 is referred to as the Cisco ADSL WIC.

This document shows a Cisco ADSL WIC connected to a Cisco 6130 DSL access multiplexer (DSLAM) and terminates on a Cisco 6400 Universal Access Concentrator (UAC). The Cisco ADSL WIC is configured as a Dynamic Host Configuration Protocol (DHCP) server with PPP over ATM (PPPoA).

The Internet Service Provider (ISP) gives the subscriber a range of IP addresses, 10.0.0.1 to 10.255.255.254, with a mask of 255.0.0.0. The IP address 10.0.0.1 is manually configured on the Ethernet interface of the Cisco ADSL WIC. The left over IP addresses is assigned to a DHCP pool and leased to the local LAN devices attached to the Ethernet network of the Cisco ADSL WIC.

Prerequisites

Requirements

Before attempting this configuration, ensure that you meet these requirements:

- Cisco 6400 UAC–NRP IOS Software Release 12.1(3)DC1
- Cisco 6400 UAC–NSP IOS Software Release 12.1(3)DB
- Cisco 6130 DSLAM–NI2 IOS Software Release 12.1(5)DA

Components Used

The information in this document is based on these software and hardware versions:

To support the ADSL WIC on the Cisco 2600/3600, these hardware products are required:

- 2600: Chassis WIC slots, NM-2W
- 3600: NM-1FE1R2W, NM-1FE2W, NM-2FE2W, NM-2W

Note: For the Cisco 3600, ADSL is not supported on WIC NM-1E1R2W, NM-1E2W, or NM-2E2W.

To support the ADSL WIC, these are the minimum Cisco IOS Software releases required:

- Cisco IOS Software Release 12.1(5)YB (Plus versions only) on the Cisco 2600/3600
- Cisco IOS Software Release IOS 12.1(3)XJ or later (Plus versions or ADSL feature set only) on the Cisco 1700. The ADSL feature set is identified by "y7" in the image name; for example, c1700-sy7-mz.121-3.XJ.bin.

Note: When you download the image for the Cisco 1700, make sure you select the image name of 1700. Do not download a 1720 or a 1750 image; the features does not support the ADSL WIC.

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

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

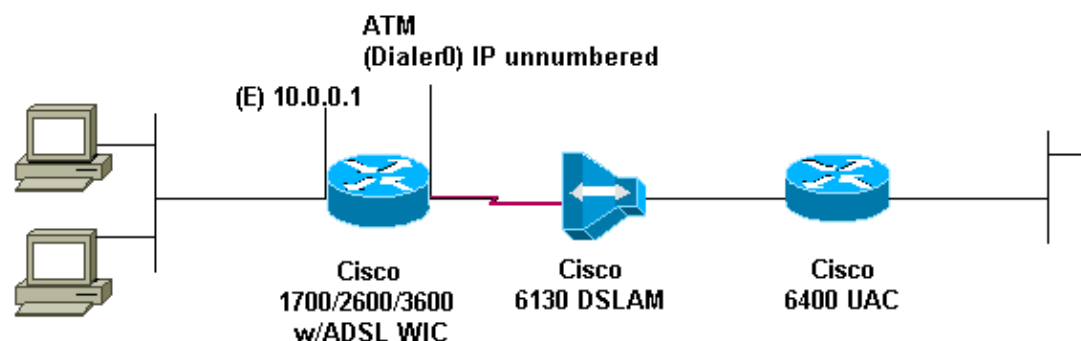
Configure

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.

Device Name 1

```

!
version 12.1
service timestamps debug datetime msec
service timestamps datetime msec
!
hostname R1
!
ip subnet-zero
!
ip dhcp excluded-address 10.0.0.1

!--- The DHCP pool does not lease this address;
!--- it is used by FastEthernet0.

!
ip dhcp pool<pool name>
network 10.0.0.0 255.0.0.0

!--- You need to adjust this for your range of addresses.

default-router 10.0.0.1

!--- The default gateway is assigned to the local devices.

!
interface FastEthernet0
ip address 10.0.0.1 255.0.0.0
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
!
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

- **Cisco DSL Technology Support Information**
 - **Cisco DSL Product Support Information**
 - **Technical Support – Cisco Systems**
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