Cisco DSL Router Configuration and Troubleshooting Guide

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Introduction

This document helps you configure your Cisco Digital Subscriber Line (DSL) Customer Premise Equipment (CPE) Router for Asymmetric Digital Subscriber Line (ADSL) service. This document explains how to configure ADSL service on the Cisco SOHO series, 820 series, and ADSL WAN interface cards (WICs). Four service types are discussed, and a sample configuration is included for each service. These configurations were built from a Cisco 827 Series router.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

This document is not restricted to specific software and hardware versions.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Configuration and Troubleshooting

Note: When you configure an ADSL WIC, verify the labeling of your ATM interfaces so that it corresponds with ATM0 and the subinterface ATM0.1 on a Cisco DSL Router. Refer to the ADSL WIC section for more ADSL WIC cross−platform information such as hardware and software requirements.

If you are not familiar with the configuration of Cisco devices, the step−by−step configuration examples can be helpful in guiding you through the configuration process from start to finish.

The configuration instructions help you to perform these tasks:

- Gather required information from your Internet Service Provider (ISP).

  Important: You must have this information in order to correctly configure your Cisco DSL Router.

  The links to the ADSL services in the next section include forms for you to use in obtaining the required information.
- Configure your DSL Router.
- Troubleshoot your ADSL service if it does not work properly.
- Open a case with the Cisco Technical Assistance Center (TAC) online or by telephone. This step might be needed if you have used the troubleshooting procedure and your ADSL service still does not work.

Types of Service

Select a procedure based on the type of ADSL service your ISP provides.

- Point−to−Point Protocol over Ethernet (PPPoE)
- Point−to−Point Protocol over ATM (PPPoA)
- RFC1483 Bridging
- RFC1483 Routing

%IP−4−ZERO_ADDR: Zero MAC address for x.x.x.x in ARP cache

The `%IP-4-ZERO_ADDR: Zero MAC address for <x.x.x.x> in ARP cache` error message will appear when the router cannot read the MAC address stored from the serial EEPROM of the router.

Complete these steps in order to resolve this issue:

1. Enable the **IP routing** command on both ends of the connection.
2. Issue the **clear arp** command on the router.
3. Reload the router.

Related Information

- **Technical Support & Documentation − Cisco Systems**

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