

Troubleshoot Internet Browsing Issues with the Use of DSL Connection

Contents

[Introduction](#)

[Requirements](#)

[Prerequisites](#)

[Components Used](#)

[Troubleshoot Methodology](#)

Introduction

This document describes how to troubleshoot the problem that occurs when the end customer fails to browse the internet through the dialer interface that has an IP from the ISP.

Requirements

Prerequisites

Cisco recommends that you have knowledge of a DSL router which has an IP from the ISP and an end customer machine.

Components Used

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

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.

Troubleshoot Methodology

Step 1. Do pings from PC to 4.2.2.2 work? If the pings from the PC do not go through, follow this:

a. Do a traceroute from Windows with the command **tracert 4.2.2.2**.

If the router is reachable, try b., if not, then check the connectivity of the router with the laptop .

b. If the **tracert** command shows that the router is reachable but not able to go beyond it, run the command **debug ip nat** on the router. After this, check in the debugs in the NAT transactions fail and check for NAT: translation failed (A), dropping packet.

If you observe that these messages are there, check your NAT configuration and configure it to allow the IP's to be NATed. Check the NAT translations with the help of the command **show ip**

nat translation. This shows if the NAT works correctly.

Step 2. If the pings from the PC are successful but the browsing fails, follow this:

- a. Check the router configuration to find if https/https is explicitly denied by any configured Access Control List (ACL).
- b. If no ACL is configured, check the value of **mtu** that is configured on the dialer.
- c. Change the value to 1492 with the use of the command **ip mtu 1492** on the dialer interface. Check the browsing.
- d. If browsing still fails, try to adjust the mss value with the command **ip tcp adjust-mss 1400**.

Note: The TCP MSS Adjustment feature enables the configuration of the Maximum Segment Size (MSS) for transient packets that traverse a router, specifically TCP segments in the SYN bit set, when Point-to-Point Protocol over Ethernet (PPPoE) is used in the network. PPPoE truncates the Ethernet Maximum Transmission Unit (MTU) 1492, and if the effective MTU on the hosts (PCs) is not changed, the router in between the host and the server can terminate the TCP sessions. The **ip tcp adjust-mss** command specifies the MSS value on the intermediate router of the SYN packets to avoid truncation.