Compatible Systems Tech Notes: Failover and Backup Modems

Document ID: 17663

Introduction

This document discusses how failover works so that when the main line goes down, a backup modem tries to get you a temporary backup link going.

Prerequisites

Requirements

There are no specific requirements for this document.

Affected Products

1200i, 1220i, 1250i, 1270i, 2600i, 2200R, 2220R, 2250R, 2270R, 3500R, VSR−2, and VSR−8

More Information

In general, it is required to have a Compatible router at either side that can do failover. The reason for this is that when the primary link goes down, the router immediately switches all of its routing out that port to the backup. The device on the other end of the link must also switch over all of its routes to the backup line.

Assume that you have a Frame on WAN 0 for an MR1250i and a backup modem on WAN 1. If the Frame goes down, the modem dials out and the router sends all traffic that was supposed to go out the Frame over to the WAN 1 port. If the router on the other end is another MR1250i, then it does the same thing and switches its routes and waits for the other side to dial in. This works great. The Frame comes back up, both routers realize that and hang up the modem and switch all routing back to the Frame link on WAN 0.

Now assume that the MR1250i is connected to a Cisco for its frame link. When the Frame goes down, where does the MR1250i dial to? Assume it dials into a normal dialup account at the same ISP. Now how is the ISP going to know to route all traffic that was supposed to go out the Frame over to the new dialin? If the ISP bends over backwards with a flip, then it might be able to do it. What happens when the Frame comes back up?

It is much easier to have Compatible routers at either side.

In order for the router to tell if the line has been lost or not, you need to set up echo packets for the main PPP link. Now for a Frame Relay link on WAN 0 you do not need to have echo packets on. Echo packets are for PPP links. When the echo packets fail, then the router knows that the link is down and switches to failover until the echoes succeed again.

With a Frame link, the polling on the maintenance line acts as the echo and lets the router know when the line has been lost and when it is back up. When the line comes back up, then the modem hangs up and all routing is switched back over to the Frame on WAN 0.

Related Information

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

Updated: Jun 19, 2007 Document ID: 17663