

## *Using RECOL® DSL for Additional Internet Bandwidth and Backup*

### *Introduction*

In recent years, Connecticut businesses and other organizations have achieved major productivity benefits through the adoption of Web, Email and other Internet applications such as VPN. Now as businesses become increasingly dependent on these valuable tools, the focus has moved towards engineering the necessary safety margins and redundancy to ensure availability in the event of high-usage or an Internet outage. Furthermore, it is not unusual that this redundancy needs to be provided in a cost-effective manner without the use of expensive hardware and high-end routing protocols such as BGP4. In response to this challenge, a growing number of RECOL Internet customers and their integration partners have chosen to implement cost-effective DSL circuits to provide both additional bandwidth and backup.

### *Objectives*

Principle goals include:

- Backup Internet connectivity for Web browsing and data transfers
- Backup for Email
- Backup for customer hosted services such as remote access and web serving
- Increased bandwidth by load balancing multiple DSL lines, or a T1 with DSL

DSL has proven itself to be a worthy, low cost means for adding bandwidth and redundancy. A typical ADSL line will support anywhere from 768 Kbps to 4 Mbps downstream and 256 Kbps to 600 Kbps upstream. Mail backup is achieved via multiple DNS records and/or smart host services provided by RECOL. In addition, we offer routable IP Blocks over DSL that facilitate backup of custom solutions such as VPN or web hosting.

The specifics of a DSL backup solution will vary depending on the customer's hardware and application environment. Although it is by no means comprehensive, the following is intended to give the reader an idea of some of the approaches being used today.

### *Router Solution*

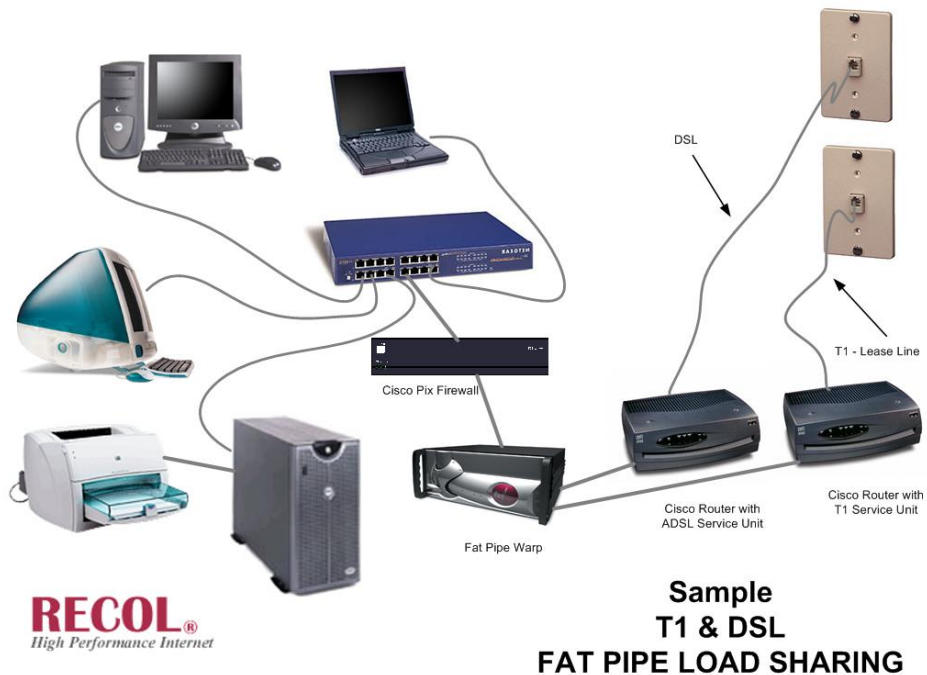
A Cisco modular router such as the 1700 and 2600 series supports leased line (T1) and ADSL interfaces. Special configurations using DNS and Cisco Policy Routing are used to control the flow of data. This solution will require fairly sophisticated router configuration. RECOL can provide referrals to firms that have implemented this solution.

## Router Solution (Continued)



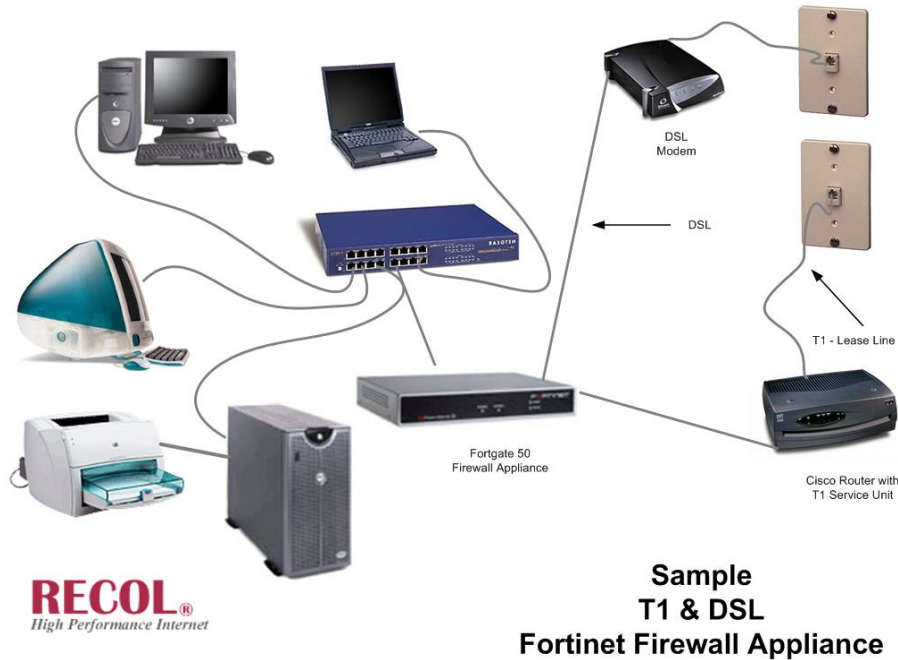
## Hardware Appliance Solution

A growing base of vendors offer load sharing solutions. RECOL customers have successfully implemented solutions from vendors such as Fat Pipe. Their web site is at [www.fatpipinc.com](http://www.fatpipinc.com). RECOL sales staff can provide referrals to Integrators and resellers supporting these solutions.



## Hybrid Solutions

Vendors such as Fortinet and Symantec offer broadband appliances that have multiple WAN (outside) ports. These devices can be configured to connect to DSL and to a LAN (inside) port of a leased line router. Configurations on both the leased line and the broadband appliance can be adjusted based on requirements.



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