



Case Study

Independent Case Study by Credit Union tech-talk *Providing High Availability Internet with Fat Pipe® WARP*

The Internet has become an integral part of many American's lives and continues to grow in importance for most American businesses. For Maryland-based NASA Federal Credit Union, high-speed reliable access to the Internet is more than a "nice to have" – it is critically important to their daily operations and their ability to serve their 70,000+ members. That is why they turned to InfoSys Networks – a company with over 15 years of networking experience – and InfoSys Networks' customized implementation of the FatPipe® WARP solution that delivers the highest levels of Wide Area Network (WAN) redundancy, reliability, and increased bandwidth.

Customer Profile

Name	NASA Federal Credit Union
Headquarters	Upper Marlboro, Maryland
Line of Business	Financial Services Thrift
Locations	Nine branches throughout Maryland, DC, and Virginia
Objectives	<ul style="list-style-type: none">• High Availability for Web Banking Applications• Load Balancing Inbound & Outbound Internet Traffic Over Multiple ISPs• Integrate Diverse Telecom Technologies• Eliminate Complicated BGP Routing
Challenges	<ul style="list-style-type: none">• Re-routing DNS Dynamically• Balancing Utilization Over Different Speed Connections and Technologies• Load Balancing Inbound Traffic
Solution	Dual FatPipe WARP appliances provide load-balancing and redundancy across three diverse ISP connections – including traditional T1 circuits and broadband cable.

NASA FCU was a pioneer in utilizing the Internet: their website came online in 1995 and they began offering online banking to their members a year later. Today their busy and highly educated members are active users of the Internet channel as evidenced by their high levels of usage: over 6 million hits on their website a month and over 350,000 logins to their online banking system. Tim Burch, Vice President of Technology Services at the credit union, explains that "we have over 20,000 active users of our in-house online banking system and they have little to no tolerance for downtime."

With the help of the experts in data network design and implementation at InfoSys Networks, Burch and his IT team have crafted a high speed redundant WAN. Not only does the credit union maintain two separate T1 (1.5 megabits per second) lines from two different major telecommunications carriers, but it also has a speedy – 8 megabits per second – business cable connection to the Internet. The problem, however, was that it was extremely time-consuming and technically difficult to re-route the credit union's crucial Internet traffic should any of these three circuits go down for any reason. Burch notes that "it is a very complex process to assign circuits and configure routers during an outage so we knew that we needed to put a straightforward process in place that would quickly address any outage."

This led Burch and his telecom specialists to perform a search for a way to tie all of these lines together in a seamless manner. Burch recalls that "we looked at quite a few

options and did our due diligence on a number of different vendors, but in the end they were all not quite feasible. They were either too expensive or too complicated, or both.”

In late 2007, he turned to InfoSys Networks for advice because they have been assisting the credit union with routing, switching, and network monitoring issues since 2003, and as Burch says “they have some real experts on staff.” They explained that they have had excellent experiences working with the FatPipe® WARP appliance with their other financial institution and government clients – and that it was quite affordable.

High-speed reliable access to the Internet is more than a “nice to have” – it is critically important

In action, FatPipe® WARP aggregates any combination of DS3, T1, DSL, wireless, and cable lines, thus enabling WAN fault tolerance utilizing any and all of these available paths. Regardless if it were a router, ISP, line, or backbone failure, the appliance has built-in algorithms that can automatically make adjustments and keep the WAN up and running. Not only does the WARP device provide redundant inbound line failover and load balancing, it also delivers bandwidth management and WAN optimization tools to increase the speed of data transmissions. According to Burch, “it takes all of the work out of maintaining WAN connectivity for my staff.”

It is important to point out that maintaining Internet connectivity is not just vitally important to NASA FCU’s members, but their staff relies on it heavily as well. Burch emphasizes that “our ATM and credit/debit card transactions flow over a secure VPN (virtual private network) Internet connection and our employees use the connections for all sorts of things such as check ordering, indirect lending and pulling credit reports, to name a few.” Additionally, vendors and IT employees need access to systems. Burch says that “without secure remote access over the Internet, my staff would be forced to drive in to our headquarters or to one of our 9 branches, and Washington, DC metropolitan traffic can be notoriously heavy.”

Burch describes the rollout of the FatPipe® WARP solution by InfoSys Networks’ experienced technicians as going “extremely well.” NASA FCU is currently using the system only at their data center, but is considering adding other appliances to their larger branches in the future. “It really is an amazing product that greatly simplifies all of our Wide Area Network connectivity issues,” states Burch. He concludes that “any downtime dramatically affects our public image and employee productivity, so we are seeing both soft and hard ROI on this system.”

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