

Dyband Case Study: PNI Internet Services

PNI Internet Services is a leading provider of dial-up access services for corporate users and residential customers in North Eastern Pennsylvania. Founded in 1998, PNI has quickly grown its dial-up business. The company offers 56 Kb/s services through a leased T-1 line and plans to offer Frame Relay, ISDN and xDSL later this year.

As a new entrant to the market, PNI counts on a strong customer service orientation to help it continue attracting new subscribers. This means offering commitments to customers that they will not experience busy signals on the company's dial-up circuits during peak periods. To help meet these commitments, PNI guarantees a maximum customer-to-modem ratio of eight to one and customer support seven days a week.

Limited Management Tools

Today's management and monitoring tools are limited in their ability to accurately measure traffic patterns and bandwidth usage. Until now, PNI had no insight into customer bandwidth needs or consumption. The only way to guarantee that subscribers received the capacity they needed was to lease additional bandwidth from carriers. Even then, the Internet's notorious tendency to creak and groan under heavy use could result in a flood of customer complaints about inadequate service and heavy customer churn.

Meeting Customer Needs

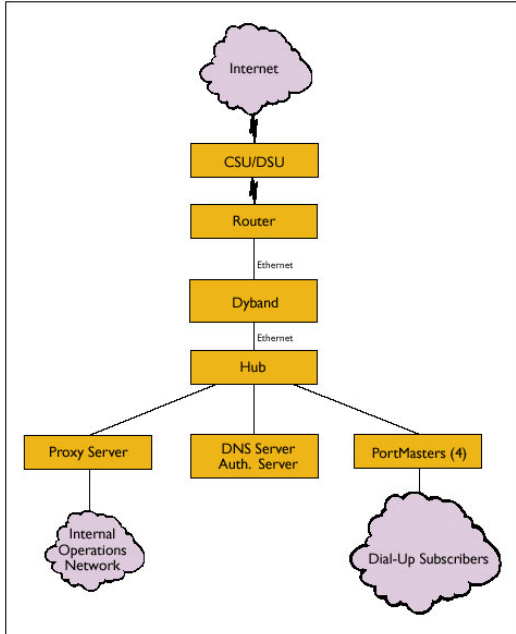
PNI wanted to ensure that available capacity would meet customer needs without investing substantial funds to continually over-provision the network. An effective

solution would need to provide accurate, real-time statistics on bandwidth usage patterns across all circuits, while minimizing congestion through efficient packet handling. Crisp graphical reports would provide verification of customer bandwidth usage and total available capacity. PNI also needed a software solution that worked across all Internet access technologies to efficiently manage the company's future broadband services such as ISDN, Frame Relay and xDSL.

The Solution for PNI

PNI installed the Dyband software suite in early 2000 to monitor bandwidth usage on its dial-up network and maximize investment returns on the company's T-1 connection. "Dyband is one of the most important and the most valuable components of our network. It allows us to properly scale the business so that we're not spending money unnecessarily on extra T-1 capacity that's not used," says Ian Reilly, system administrator at PNI Internet Services in Tannersville, Pennsylvania. "Just by not having to prematurely add any extra bandwidth, we've been able to allocate our funds to additional hardware to keep a very low user-to-modem ratio and ensure no one gets a busy signal."





By using Dyband to monitor its dial-up network, PNI can ensure that available capacity will meet customer needs without investing heavily to continually over-provision the network.

The installation of Dyband allows PNI to better respond to customer concerns about whether bandwidth capacity is sufficient by clearly demonstrating that congestion is related to Internet behavior rather than PNI's operations. Reilly estimates that PNI has saved \$800 in monthly lease costs and \$2,000 in additional installation and hardware charges since the beginning of the year by better understanding that PNI's available capacity had not been exceeded.

With Dyband, PNI has been able to:

- Avoid purchasing additional unneeded bandwidth and add more users to existing capacity by understanding how many subscribers can be accommodated on a single T-1
- Accurately pinpoint and trouble shoot network congestion and problems

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through the collection of real-time traffic statistics

- Establish service tiers to allocate bandwidth according to how it is purchased; and, ensure that future broadband customers will receive the bandwidth they need and pay for

Dyband

Dyband is a scalable software solution for managing broadband services. It solves the growing problem of providing consistent high-speed Internet access service to subscribers, while enabling profitable service operation for providers by dynamically managing bandwidth consumption at multiple points in the distribution network, from the backbone to individual users. Dyband also enables unlimited service tiers across all broadband networks and provides comprehensive monitoring, reporting and alerting.

Dyband improves service profitability by utilizing existing broadband Internet connections more efficiently and enabling the addition of more sub-scribers per broadband connection, while equitably distributing bandwidth to subscribers, guaranteeing consistent, reliable service performance and customer satisfaction.

Unlike other broadband bandwidth management solutions that provide only basic functionality such as static bandwidth allocation, rate limits and prioritized traffic, Dyband dynamically manages bandwidth consumption according to changing individual and aggregate usage patterns, predetermined service levels, dynamic priorities and the changing second-by-second network load status – a combination of critical capabilities no other solution can offer.

