



# CommuniGate Pro and BlueArc to Deliver Next Generation Internet Messaging Services for Bresnan Communications

**“The Titans have just plain run and all the complexity has been removed from the situation. BlueArc came in, helped us do the configuration and now it’s all no-maintenance, minimal troubles.”**

**“We know guys working with technology from the other players and they spend massive amounts of time just configuring the Fibre channel and managing their storage. With Titan, BlueArc takes care of everything.”**

- Jim Boelter, Director of IP Engineering  
Bresnan Communications

## Summary

Bresnan Communications is a broadband telecommunications provider founded in 1984 with the goal of providing leading-edge technology, entertainment and advanced services supported by outstanding customer service to small and medium-sized markets. The nation’s thirteenth largest MSO, Bresnan currently serves over 300,000 customers in Colorado, Montana, Wyoming, and Utah.

## The Background

Bresnan Communications entered into its current market footprint in the American Mountain West through a purchase of selected cable properties in 2003 from Comcast which included 25,000 High speed internet customers. The deal complete, Bresnan faced a stiff new challenge — integrate these new customers and rapidly build a datacenter infrastructure to support growth in subscribers and services to drive their business plan.

Today, Bresnan delivers advanced products and services such as high-speed Internet access, high-definition television, video-on-demand, digital video recorder, and telephone to residential and business customers across an upgraded fiber-optic coaxial network that reaches across 95% of its footprint. Bresnan Business Services, the company’s commercial sales division, recently passed its 1000th customer marker, delivering custom data, voice, and video solutions to businesses and institutions of all sizes.

## The Challenge

As Bresnan’s web services offerings expanded and the company grew its subscriber base to hundreds of thousands of individual accounts - both through acquisitions from Comcast and through organic growth - the company designed a new datacenter and application set capable of handling unprecedented data demands. Bresnan sought the flexibility and control that could only come from an integrated in-house solution built on a powerful application platform. Bresnan has continuously envisioned their Internet Services as a long-term profitable and scalable business unit that drives customer loyalty and overall satisfaction.

## The Solution

Bresnan implemented a unique network topology based on multiple datacenters, supporting a rapid scale out of Internet Services offerings focused on e-mail, with ultimate reliability and near-instant back up and recovery capabilities. As Bresnan’s main competition consisted primarily of slower dial-up services and traditional phone lines, the company believed their superior cable infrastructure would give them a competitive advantage in terms of speed, so long as they could continually scale to meet demand. The web mail environment was personalized to provide easy access to user member services and support.

Bresnan’s datacenter is comprised of a Unix-based server cluster. Bresnan leverages CommuniGate Pro version 5.1 built on a 4+3 Dynamic Cluster (4 Frontends, 3 Backends) running on FreeBSD. The company also selected BlueArc’s Titan 2000 network storage systems to ensure they have the performance and scale to maintain a superior service offering for years to come.

## The Results

The process of building out a datacenter infrastructure from scratch with the goal of doing a “hot switch” of thousands of customer accounts overnight presented a daunting challenge for the Bresnan team. In fact—as the management team notes—the act of even hiring an entirely new, highly trained staff to build and manage the new infrastructure was a challenge.

Of all of the different aspects of Bresnan’s challenge, though, the most pressing need they decided to tackle was scalability and performance in their e-mail and storage system. After all, the team understood that when faced with building a datacenter to enable new services, growing the customer base and increasing revenue, the company needed to build for the long term, making performance and scale the hallmarks of their design.

Bresnan evaluated several potential partners, in terms of hardware. Bresnan’s decision returned to their goal of driving business growth and the return on investment demanded by their aggressive business plan. Drilling down into storage details, their decision came down to scalability, performance, density and I/O. BlueArc and CommuniGate Pro were the hands-down winner on all fronts.

“The choice to select CommuniGate System’s messaging solution was based on proven industry performance, great value and CommuniGate Pro’s well designed highly available cluster architecture. The task of migrating email services off of the ATT e-mail cluster in a single cut went very well and the system performed as designed. Their customer support organization is truly top shelf and knowing this team is available 24x7 helps improve my sleep quality. I have had a number of instances where I have engaged the CGS support team and they consistently go the extra mile beyond where they are required,” stated Jim Boelter, Director of IP Engineering.

Since deployment, the results have been impressive. Having grown from 25,000 e-mail accounts to well over 300,000 in less than three years, Bresnan’s growth is unquestioned. Boelter explains, “With everything we throw at the Titan from e-mail, to network management systems and numerous databases, the NFS and CIFS I/O is excellent and we’re still in a real position to continue scaling without any potential problems.”

BlueArc has extended Bresnan’s flexibility and ability to manage operations for peak performance across multiple datacenters by enabling the company’s internal performance management system. This open-source system, which Bresnan implemented and customized to ensure operations would be as a reliable and cost-effective as possible, continuously tracks the performance of every switch, router, and piece of hardware in the infrastructure, showing trends and potential problems within and across their datacenters and headends so that Bresnan can identify problems,