Pluribus NETWORKS

Case Study

TIBCO®

Company

TIBCO Software Inc (www.tibco.com), the company that digitized Wall Street in the 90's, is a provider of misson critical messaging software for over 10,000 customers. Whether it's optimizing claims, processing trades, cross-selling products based on real-time customer behavior, or averting a crisis before it happens, TIBCO provides companies the two-second advantage® – the ability to capture the right information at the right time and act on it preemptively for a competitive advantage.

A Better Appliance,
A Better Platform for TIBCO

Challenge

TIBCO had developed two enterprise messaging systems, EMS, the Enterprise Messaging Service™, a standards-based messaging middleware system and FTL, a robust high performance messaging middleware platform. Both solutions are sophisticated and simplify and accelerate the integration and management of data distribution in high-performance, enterprise environments. This enables real-time decision-making and event-driven execution of business operations.

As you would expect, performance and connectivity are key to the performance of the entire suite of enterprise applications integrated with these solutions. As a software product, both require the underlying infrastructure of server, storage, and networking to be properly installed, configured and tuned. For example, EMS typically needs fault tolerance and as such the infrastructure it runs on usually involves a high-availability SAN, a cluster of servers, and clustering software to keep EMS running. If disaster recovery is also needed, then the SAN must replicate to the DR site where again server and storage must be configured and EMS installed. All of this pre-EMS configuration effort takes time, adds risk, complexity and cost, and is difficult to monitor and performance optimize.

Enter the High Performance Network Appliance

With solutions such as EMS and FTL, a high performance converged network appliance makes sense. In terms of deployment, having sophisticated solutions such as EMS and FTL preinstalled on the appliance ready to drop in to the network saves time, accelerating deployment and reducing risk and uncertainty. Using compact (2RU) integrated appliances like the Pluribus F64 saves precious data center rack space, while the integrated nature of the appliance reduces the complexity of deployments, eliminating the need for storage area networks or network attached storage, minimizing power and cooling requirements while reducing management and administrative overhead.

However, the benefits extend beyond just simplicity and speed of deployment. A positive side effect of using the integrated Pluribus platform, with network, compute and storage fused in a single appliance, is performance. With a non-blocking, ultra-low latency, scalable Virtualization-Centric Fabric (VCF™) running Pluribus Netvisor®, the platform provides 1.2 Tbps of full Layer 2/3 performance with average latencies of less than 315 nanoseconds for intra-host communication using shared memory.

About Pluribus Networks

Pluribus Networks provides data center solutions that allow your business to run unconstrained. Our software-defined, open networking, fabric-based solutions transform existing network infrastructures into flexible and strategic assets fully aligned with today's digital business needs. Our Virtualization-Centric Fabric (VCF™) architecture provides unprecedented insight, agility and security to customers seeking to simplify operations, run more cost effectively and bring new applications online faster.

Learn more at
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Fault Tolerant High Availability

The Pluribus appliance with the TIBCO EMS and FTL platforms together deliver fault tolerance and high availability with software features including full synchronous fault tolerance and asynchronous replication of data to remote data centers or disaster recovery sites combined with redundant, hot swappable power supplies, fans and discs.

A full-featured highly available and disaster-resistant TIBCO appliance facility can consist of two 2RU devices at the production location and a duplicate pair of devices at a DR site. Using technologies including multi-chassis clustered synchronous writes, distributed clustered control plane, multi-chassis link aggregation and Fusion-IO PCIe-based solid state storage, the solution provides 10Gbps line rate persistent messaging. The result is a fast, event driven, enterprise-wide, distributed, fault-tolerant, messaging system that doesn't rely on additional third-party software or a Storage Area Network. It also supports direct connection of critical applications, providing higher throughput and lower latency.

Production DC   **DR DC**

Production Fabric Cluster   Failover Fabric Cluster
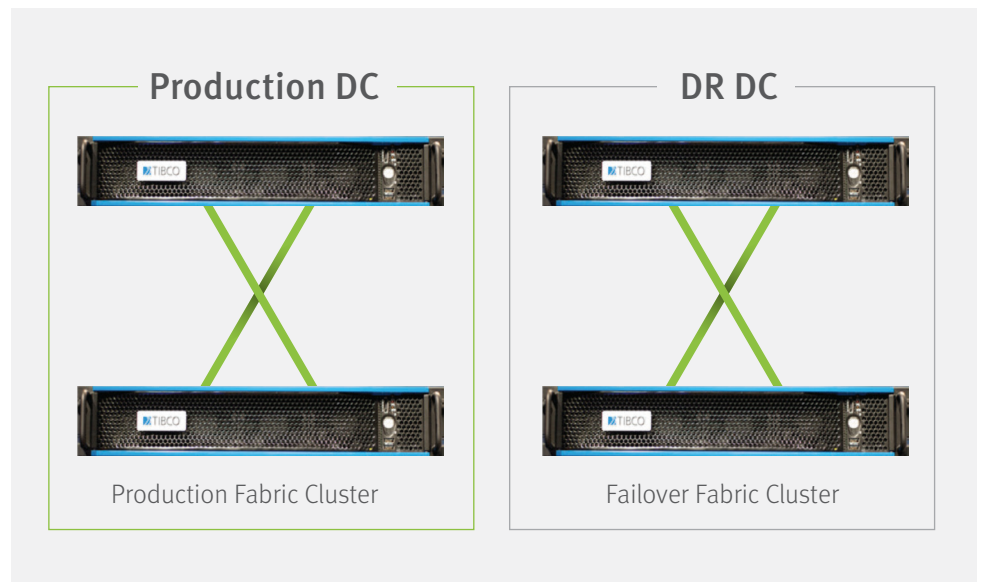
TIBCO Leverages Pluribus to provide HA messaging in a convenient appliance form factor

To deliver the breakthrough features and functions of these two TIBCO products, TIBCO used the SDN programmability of the Pluribus Networks Netvisor — the industry's first distributed controller network operating system, to provide never-before-seen performance and features to their customers. These features include integrated high-performance storage, de-duplication of replicated data to the disaster recovery site, and in-network optimization of network flows. Deployment of these new solutions can be done in hours, rather than the usual software-deployment cycles of days or weeks.