

US Internetworking Inc.



US INTERNETWORKING INC. (USI) IS A LEADING APPLICATION SERVICE PROVIDER THAT OUTSOURCES BUSINESS APPLICATIONS OVER THE INTERNET FOR A FLAT MONTHLY FEE. THE COMPANY OFFERS A WIDE RANGE OF SERVICES TO HELP COMPANIES QUICKLY DEPLOY ENTERPRISE SOFTWARE APPLICATIONS WITHOUT THE ASSOCIATED COST AND BURDEN OF OWNING, MANAGING OR SUPPORTING THE APPLICATIONS AND THE UNDERLYING INFRASTRUCTURE. USI'S CISCO POWERED NETWORK HAS BEEN ENGINEERED TO PROVIDE HIGH-PERFORMANCE DELIVERY OF WEB-BASED CONTENT AND INFORMATION TO USERS WORLDWIDE.

Challenge

As business software becomes more and more complex, the overall IT infrastructure must grow in tandem. Companies must continually invest a substantial portion of their operating income in information technology just to keep up. Small and mid-size companies often have a hard time justifying the outlay for enterprise-scale systems. Yet operating without the best technology can put their firms at a competitive disadvantage. "A license for some of the best-of-breed financial applications can cost as much as a million dollars," points out Eric Madison, Director of Network Engineering at USi in Annapolis, Maryland. "A significant support staff is also needed for an application of that size. Many companies cannot afford this level of investment."

USi has been doing application hosting since February 1998, seizing the high ground in a market that's predicted to reach \$21 billion by 2001. Its partnerships with leading software vendors give companies large and small the means to lead their industries with the best business tools available. USi predominantly targets mid-size companies that have a wish to deploy enterprise applications but don't have the resources to purchase or support them in-house. "In many cases, these companies don't want to be concerned about the technical

details of their network," says Madison. "They would rather stay focused on the types of business that make them unique. We provide end to end solutions for these firms—not just application hosting, but software customization, conversion,

integration, performance tuning, 24 hour monitoring, load balancing, and many other services."

Solution

USi's Internet Managed Application Provider Portfolio incorporates market-leading packaged software applications and custom hosting solutions for business functions such as customer relationship management, electronic commerce, human resources, data warehousing, and finance.

The company has staff to handle implementation, customization, and ongoing operation and support of a wide range of hardware and software solutions. It has established application hosting partnerships with industry leaders such as PeopleSoft, Siebel Systems, BroadVision, Sagent Technology, Microsoft, and Netscape. "These relationships enable our customers to obtain premier packaged software functionality without the burden of ownership," adds Madison. "They can obtain rights to the software on a flat monthly fee, making large initial investments and ongoing in-house support efforts unnecessary."

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Eric Madison
Director of Network Engineering
 USI



In these situations, USi handles complete end-to-end deployment, monitoring, and support of the business applications—right down to installing software on employee’s laptops. Core services, such as 24-hour support, network monitoring, and data backups, are all part of its standard application hosting package. “All our customers have to do is input their data,” Madison says.

USi’s Global Enterprise Data Centers are strategically located to connect the Internet backbones of North America, Europe, and Asia. Featuring redundant server capacity and end to end disaster recovery, each data center is continuously monitored on a 24x7x365 basis.

USi uses Cisco routers, switches and access devices throughout the Cisco Powered Network, an infrastructure that was engineered to provide premium-performance delivery of Web-based content and information to users worldwide, with high levels security. Redundant hardware systems ensure reliable transit from multiple Internet backbone providers for on-net delivery of client data, bypassing congested public exchange points.

“Our Enterprise Data Centers are connected through a redundant, private co-carrier backbone to accomplish 100% mirroring of customer sites across dispersed geographies,” Madison explains. “This maximizes the points of presence available for customer access.”

Results

By outsourcing their business applications to USi, companies stand to reduce their operating costs and increase efficiency. “Enterprises needing electricity don’t need to build their own power plant,” suggests Madison. “This is true because of the extensive distribution network for electricity and its ease of transport.”

Similarly, because of the explosion of the Internet and the ease of transporting digital bits, companies don’t need to build their own IT power plants either. Sunburst Hospitality is a prime example. As a company poised for future growth, Sunburst discovered that it would be more cost-effective to outsource its financial applications to the experts at USi than to maintain them in house. With USi’s Internet Managed Application Provider (iMAPSM) solutions, Sunburst gained rapid implementation, round-the-clock applications management and customer care, increased security, real-time data replication and disaster recovery.

USi is implementing three PeopleSoft financial software modules to manage Sunburst’s General Ledger, Accounts Payable and Asset Management business processes. Once live, USi will provide on-going enterprise management and CLIENT Care services to support Sunburst’s growing

business needs. The applications will be hosted on Compaq and Hewlett-Packard hardware. The servers will reside in the USi Enterprise Data Center East in Annapolis, MD and the users, Sunburst’s financial team, will work from their corporate headquarter in Silver Spring, Maryland.

PeopleSoft data will be transmitted over a private T1 frame relay circuit connecting the facilities. An additional set of servers will be deployed in the USi Enterprise Data Center West in Milpitas, California to ensure application availability and information integrity. USi will provide 24x7x365 enterprise management, ongoing PeopleSoft updates and a dedicated CLIENT Assistance Team to serve as Sunburst’s single point of contact for complete support of their systems. USi is also providing the consulting that Sunburst needs to complete a successful upgrade to PeopleSoft Financials 7.5.

Technology



Sunburst and other clients were attracted to USi’s PriorityPeering architecture, a global network that has been optimized to provide a high level of service for intranets, extranets, and Internet commerce sites. “Our co-carrier backbone with multi-transit segments is inherently reliable,” says Madison. “Other ISPs and WANs rely on a single Internet carrier; consequently one faulty line can halt business. But we provide alternate routes, using the existing Internet infrastructure in a logical manner to ensure that our client’s data will always reach its destination.”

USi’s PriorityPeering network architecture features building blocks that enable data to circumvent blockages. Those building blocks include:

- Co-Carriers (redundant backbone carriers)
- Multi-Transit Segments—backbone connections leased from multiple Tier-1 carriers
- SONET rings to supply redundant connectivity between USi’s data centers and RBOC routers, allowing long-distance direct connections at high bandwidth speeds

- Multi-Homed Routers—All USi routers are connected to each other, providing a full mesh throughout the PriorityPeering network
- VPOPs, or Virtual Points of Presence—Destination backbone routers providing a regional “on-net” presence

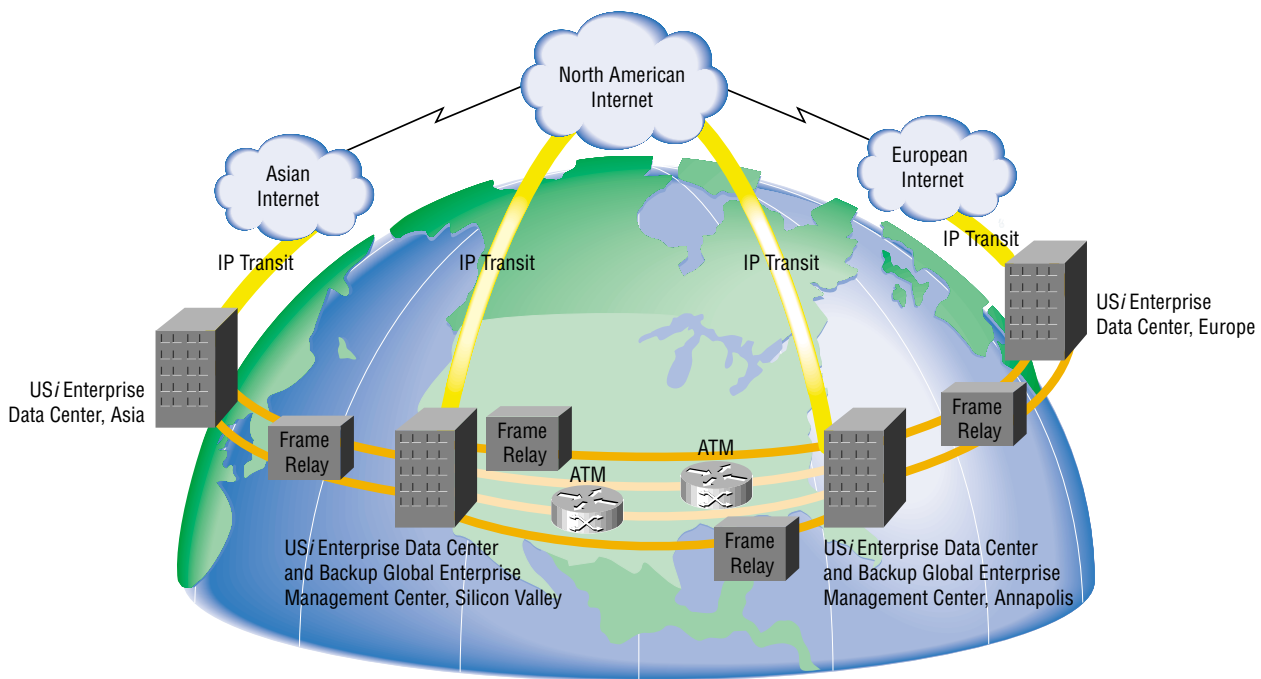
Additionally, USi is making use of Cisco IOS software features such as Netflow switching to streamline the overall topology of the network. “We use Cisco Netflow data to find out which service providers we are sending traffic to so we can find out if we should buy connections from them directly,” explains Madison. “Right now we have connections to the top six ISPs in the United States in both U.S. data centers. As Netflow gives us data, we find that some of those service providers have connections to other service providers that are working at the end point of the traffic. Netflow gives us an overall traffic analysis based on many different options. This lets us see exactly where we should buy our next port.”

Looking Ahead

USi intends to roll out new Cisco IOS services including enhanced traffic shaping, caching technologies, and connection-based load balancing to improve scalability. “We are co-developing some new technologies with Cisco as well,” adds Madison. “For example, we’ll be doing more geographic load balancing between sites to make it easier for our customers set up Web hosting operations in multiple locations.”

As USi continues to expand and enhance its operations, its business and technology relationship with Cisco will grow in importance. “Cisco has been with us at each critical juncture of our service rollout, from design to deployment,” Madison concludes. “When we were designing our network, we knew that Cisco could provide us with the entire package, from our service provider connectivity all the way to the front end of the server. They gave us a way to guarantee that we had a completely redundant, transparent architecture from one end of the network to the other.”

Figure 1 Need Caption





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