

## Leading Freight Forwarder Maximizes Customer Service and Minimizes Costs with Windows Server 2003

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***By implementing two projects under Microsoft Windows Server 2003, one of the world's leading freight-forwarding companies is vastly extending the reach of its service and expertise. Using Windows Terminal Server to make a flagship enterprise resource planning (ERP) application universally available, Menlo Worldwide Forwarding is providing global process consistency to customers and a more productive environment to its users, as well as saving U.S.\$300,000 yearly. Using Windows Active Directory to implement branch-office domain controllers, the company is using limited network bandwidth in a highly cost-effective manner and reducing overall server and desktop management costs by 10 to 15 percent and desktop security management costs by 5 to 7 percent.***

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### **Situation**

From earth-moving equipment to high-tech components, automotive prototypes to printed matter, Menlo Worldwide Forwarding moves products and supplies great distances, for many customers, to virtually any location on the planet. Drawing on nearly six decades of freight-forwarding experience, the company provides expertise in supply chain logistics and transportation for commercial, industrial, and governmental customers and in 2002 generated revenues of U.S.\$2.7 billion. Formerly known as Emery Forwarding, Menlo Worldwide Forwarding is a business unit of Menlo Worldwide and a subsidiary of CNF, Inc., a global supply chain management company. Menlo Worldwide Forwarding has more than 500 offices spanning the globe.

To better deliver its complex services to every part of the world, Menlo Worldwide Forwarding is launching an enterprisewide Microsoft® Windows® Server 2003 deployment designed to benefit employees, agents, and customers. One project will use Windows Terminal Server, part of the Windows Server 2003 operating system, to extend access to the company's flagship enterprise resource planning (ERP) application to all users—staff and agency alike—worldwide. Another project will upgrade some 350 servers at the company's branch offices from the Microsoft Windows NT® Server operating system version 4.0 to Windows Server 2003 and outfit them with Active Directory® service domain-controller capabilities.

According to Ed Feitzinger, Senior Vice President for Menlo Worldwide Technologies, the motivation behind the Windows Server 2003 deployment stems from both a need and an opportunity provided by economic and security concerns. "Customers are asking us to drop our prices every day, and to do this we need to lower our technology costs," he says. "Customers



### Solution Overview

#### **Customer Profile**

Menlo Worldwide Forwarding provides a variety of value-added supply chain services focusing on moving heavyweight freight for commercial, industrial, and government customers worldwide.

#### **Business Situation**

Menlo Worldwide Forwarding wanted to extend a competitive ERP application to all its users and implement efficient domain controllers at branches.

#### **Solution**

A Windows® Terminal Server deployment delivers an ERP application. Branch-office servers were upgraded from Windows NT® Server 4.0 to Windows Server 2003 with Active Directory®.

#### **Benefits**

- Universal access to a line-of-business application
- Savings of U.S.\$300,000 yearly on remote management
- Extended value for customers
- Enhanced user productivity
- Bandwidth upgrade savings of \$100,000 yearly
- Cost reduction of 10–15 percent in overall IT management and 5–7 percent in desktop-security management

#### **Software and Services**

Microsoft® Windows Server 2003  
Microsoft Consulting Services  
Microsoft Premier Support Services

#### **Hardware**

Dell PowerEdge 600, 1650, 2550

#### **Scenario**

Terminal Services–based ERP application, Active Directory–based domain controllers

also are demanding an increased level of service in terms of security, and this presents an opportunity that we, as a large, established freight-forwarding operation, can meet. By moving to Windows Server 2003 in a strong infrastructure partnership with Microsoft, we will lower our technology costs while positioning ourselves to respond rapidly to changing demands in support services, particularly those enhancing the security of the supply chain.”

## **Solution**

### **Windows Terminal Server Deployment**

For Feitzinger, the selection of a Windows Terminal Server approach to extending the company’s ERP application was based on the principle of providing global process consistency to all Menlo Worldwide Forwarding customers. “Unlike parcel services, companies that move large freight depend on commercial transportation and receiving operations that may fall under the auspices of hundreds of different entities,” he points out. “Yet customers demand, and deserve, the ability to follow their product in shipment, and to understand and anticipate the entire, end-to-end process, just as if they were moving goods from one U.S. city to another.”

To meet this demand, Menlo Worldwide Forwarding information technology (IT) executives decided to extend access to the ERP application, known as EMCON 2000, to all entities—wherever they are situated—that work directly with customers. “For cost and logistical reasons, the application has been accessible only to employees and agents in locations where Menlo Worldwide Forwarding has a large enough presence to establish a full service-center infrastructure,” he explains. “Agents working in other sites have had to rely on a legacy application accessed through terminals connecting to an IBM 3270 mainframe over a leased-line SNA network.”

### **Windows Active Directory Deployment**

In this project, Menlo Worldwide Forwarding is deploying Windows Server 2003 and its Active Directory service to servers throughout the world that were formerly based on Windows NT Server 4.0. In many cases, these systems serve as a branch office’s single server resource, providing file and print, Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), File Transfer Protocol (FTP), and Microsoft Systems Management Server functionality. Now, with the help of the Windows Active Directory, they also will provide Active Directory domain-controller services.

## **Benefits**

### **Windows Terminal Server Deployment**

With the deployment of Windows Terminal Server, Menlo Worldwide Forwarding will make EMCON 2000 available to agents at any and all remote offices, as well as to employees servicing customers in similarly remote locations. “By installing this crucial ERP application on a cluster of Windows Server 2003–based systems at headquarters and selected branch offices, and implementing a relatively low-cost IPSec virtual private network, Menlo Worldwide Forwarding can provide the application to any authorized user with an Internet connection and a PC running Windows 2000 or Windows XP,” reports Ron Berger, Menlo Worldwide Forwarding IT Managing Director.

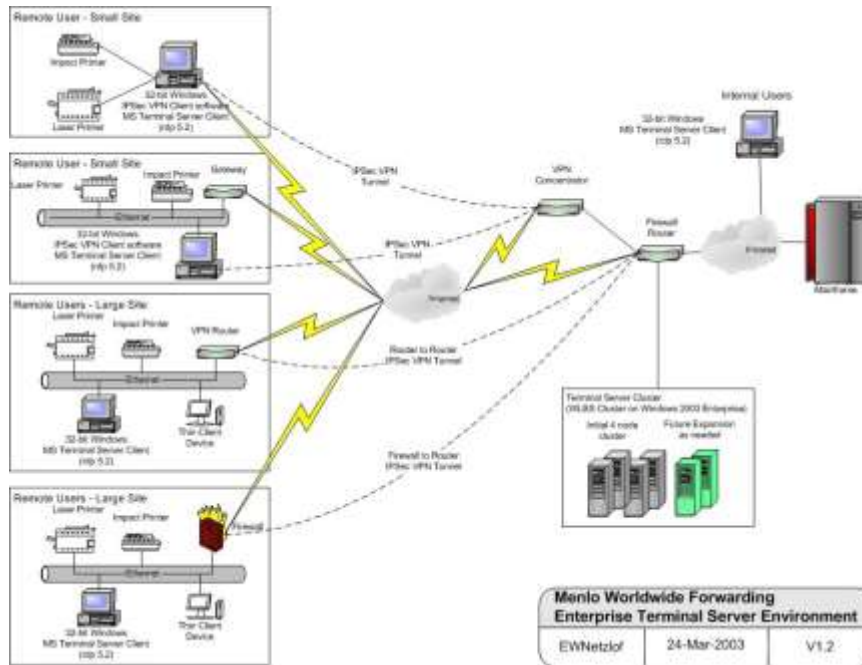
**Providing a Cost-Effective, Consistent Global Process.** For Feitzinger, the chief benefit of the Windows Terminal Server deployment is the ability to offer Menlo Worldwide Forwarding

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IT Managing Director  
Menlo Worldwide Forwarding

customers a high level of global process consistency without having to make a major investment in assets. "Because installation and maintenance will be centralized on the Terminal Server farm, we expect management costs to be dramatically lower than those of a distributed solution," he says.

Berger concurs. "With the Windows Terminal Server deployment, we can contain all management costs in our central data center," he says. "This will enable us to avoid the exorbitant expense of setting up multiple infrastructures and sending out technicians every time maintenance and upgrades are needed. Consequently, we estimate savings of at least \$300,000 yearly."



*"We'll not only deliver the full [ERP] application to our agents, but also be able to place Menlo Worldwide Forwarding employees at customer sites and deliver our full line of business applications to them as if they were sitting at a desk in a regular service center. This provides a huge opportunity to add value to our customers' operations by integrating them more closely with our personnel and operations."*

Vida Parandvash  
 Director, Infrastructure & Support  
 Menlo Worldwide Forwarding

The deployment of the company's flagship ERP application on a cluster of Windows Server 2003-based systems at headquarters and selected branch offices will enable Menlo Worldwide Forwarding employees and agents worldwide to keep customers informed of the progress of their shipment.

**Extending Value for Customers.** In addition to its significant cost advantages, the Terminal Server deployment of EMCON 2000 will enable Menlo Worldwide Forwarding to provide major value-added services to its customers. According to Vida Parandvash, Director, Infrastructure & Support, "We'll not only deliver the full EMCON 2000 application to our agents, but also be able to place Menlo Worldwide Forwarding employees at customer sites and deliver our full line of business applications to them as if they were sitting at a desk in a regular service center. This provides a huge opportunity to add value to our customers' operations by integrating them more closely with our personnel and operations. It also will help us to tailor our services for a given customer and to adjust quickly to changing customer needs."

**Enhancing Productivity.** At the user level, the productivity benefits anticipated from the Terminal Server deployment of EMCON 2000 are equally clear. "With the Windows Server 2003 Remote Desktop Protocol client, users can print to devices that are local, networked, or server-hosted in a straightforward, transparent manner," according to Erich Netzlof, Manager, Architecture,

Research & Development. "This will support the diverse client environments and configurations that are found in the offices of Menlo Worldwide Forwarding agents and customers."

Another productivity advantage comes with the Windows Server 2003 Local Time Zone Redirection feature, which enables EMCON 2000 to work properly without any modifications in the terminal server environment. "The use of local time is crucial to employees and agents tracking the progress of a customer's freight as it moves across the globe," Netzlof adds. Productivity gains also are anticipated from a Terminal Server capability that reconnects a user, in the event of a power outage or network disruption, to the same terminal that he or she was accessing before the event. Netzlof notes that this capability is vital in remote regions where power outages are common.

**Positioning for the Future.** While Menlo Worldwide Forwarding IT executives are happy with the fact that Windows Terminal Server positions Menlo Worldwide Forwarding to provide ongoing value to its employees, agents, and customers, they acknowledge that the benefits extend well beyond the initial deployment of EMCON 2000. This is because having the Terminal Server infrastructure in place is expected to facilitate the deployment of other solutions to Menlo Worldwide Forwarding users. Plans are already underway to add two new applications to the software stack: one that will generate labels used by the company's bar-code-scanning handheld PCs and another that will store images of the dozens of specialized documents required for moving freight through customs systems.

### **Windows Active Directory Deployment**

Menlo Worldwide Forwarding IT executives initially planned to delay the implementation of their second Windows Server 2003 project—deployment of Windows Server 2003-based domain controllers to branch offices—until the Terminal Server deployment was well underway. But as it turned out, the executives decided not to wait. "With software from other vendors, we often wait until the product is installed on a large-scale basis before moving ahead, but with Windows Server 2003 that rule just didn't apply," Netzlof says. "Even in beta release, the operating system was so stable, and the Terminal Server deployment so easy, that we decided to accelerate our domain-controller project."

**Making the Most of Costly Network Bandwidth.** Being able to bring the Active Directory service to the branch offices is a major cost advantage for Menlo Worldwide Forwarding because of the high "last mile" cost of bandwidth for much of the company's networks, especially those overseas. "By using Active Directory to minimize the volume of DNS, logon-ID, and other directory-replication data that travels across the wire, we can avoid many bandwidth upgrades, saving roughly \$100,000 each year," Berger says. The way that Active Directory minimizes the volume of data, according to Dana Colavitti, Manager, Windows Operations & Support, is by replicating it in a highly controlled fashion, with the help of the following features:

- **DCPromo from media.** At Menlo Worldwide Forwarding, the installation of a new domain controller requires a process known as "promotion," during which the server receives about 500 megabytes of Active Directory content. To avoid overloading the bandwidth available to many Menlo Worldwide Forwarding sites, the company can use the more advanced DCPromo capability available in Windows Server 2003 to burn the content to a CD for local promotion at the site. The only content that needs to be sent over the network is changes made since the creation of the CD.

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- **Logon services without Global Catalog.** Because of the way in which Windows Active Directory segments data, Menlo Worldwide Forwarding can enable logon services at branch offices and service centers without having to replicate Global Catalog data (which covers user information for the entire family of companies of which Menlo Worldwide Forwarding is part) to each domain controller. This approach eliminates the replication of several hundred megabytes of unneeded data to each service center while it maintains the local logon services that are vital in the event of a network failure.
- **Application partitions.** Through a feature known as application partitions, Windows Active Directory enables attributes to be replicated on a group basis. This enables Menlo Worldwide Forwarding to partition DNS data, for example, from the rest of the Active Directory schema and replicate it only to servers that run DNS.

**Significantly Reducing Costs with Management Capabilities.** Another advantage of the Windows Active Directory deployment comes with the enhanced management capabilities of Group Policy. According to Colavitti, these capabilities will make a big difference in helping Menlo Worldwide Forwarding to simplify the process of ensuring configuration consistency and security among its 7,000 desktops worldwide. “By using the Group Policy Management Console and its ability to show administrators the net effect of multiple Group Policy settings on Active Directory objects, as well as the no-touch deployment capabilities, we anticipate a 10 to 15 percent reduction in the cost of server and desktop management overall,” he says. “We also anticipate a 5 to 7 percent reduction in the cost of managing desktop security.”

**Extending the Value of IT.** The deployment of the Windows Server 2003 projects will touch nearly every aspect of Menlo Worldwide Forwarding operations. For users at remote locations, the Terminal Server deployment of EMCON 2000 will provide global process consistency that would have been cost-prohibitive to deliver any other way. For customers, Menlo Worldwide Forwarding employees and agents will be able to anticipate changing needs and adjust their services to meet those needs. For users and administrators at branch offices, the Active Directory–based domain controllers will simplify desktop configuration consistency and security and significantly reduce management costs.

For Feitzinger, perhaps the central benefit to Menlo Worldwide Forwarding of the Windows Server 2003 deployment projects is the ability to maximize the effectiveness of the company’s IT expertise and infrastructure. “By using Microsoft processes and technologies, we’ve been able to extend the reach of tools and competitive applications like EMCON 2000, and will do so with others as well, to whole new groups of users and customers,” he says. “It’s projects like these that will vastly increase the value of IT to the entire enterprise.”

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Ed Feitzinger  
Senior Vice President  
Menlo Worldwide Technologies

Microsoft Windows Server 2003 enables you to create a highly productive platform for powering connected applications, networks, and Web services. Windows Server 2003:

- Helps you to deliver a reliable, secure, scalable platform for applications and network services
- Makes it easy for you to deploy, manage, and use
- Empowers you with a complete server platform to quickly build connected solutions
- Enables you to maximize business value by leveraging the largest partner solution ecosystem

For more information about Windows Server 2003, please visit:  
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For more information about Menlo Worldwide Forwarding (formerly known as Emery Forwarding), visit the Web site at: <http://www.emeryworldwide.com/>

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