

White Paper and Overview on Proposed Migration from Novell Netware Server to Macintosh Xserve Running Mac OS X Server for the Massachusetts Medical Society

Section 1. Introduction

This purpose of this white paper is to determine that the following platform specific server-side option, Apple Computer's Xserve rack mounted server product and Mac OS X Server v.10.2 will meet the Massachusetts Medical Society's (herein after referred to as Mass Med) need to migrate services and data from a legacy Novell Netware server system. This document will be broken down into the following sections:

1. Introduction—Page 1
2. Brief overview of Apple Computer's Xserve rack mounted server product and Mac OS X Server v.10.2—Page 2
3. Description of how Apple Computer's Xserve rack mounted server product and Mac OS X Server v.10.2 will meet the stated needs and objectives of Mass Med—Page 4
4. Conclusion—Page 6

VelocityDomain can design and implement a comprehensive strategy that will take an organization's need to upgrade their existing Mac environment to OS X, or to integrate new OS X Macs into a current heterogeneous environment running mission critical systems. With that in mind the goal of this white paper is to justify the complete confidence that VelocityDomain has in proposing the Apple/Macintosh solution as the optimum solution for this specific project.

Section 2. Brief Overview

Apple Computer, Inc.™ with their flagship operating system OS X is built on the robust stability of UNIX. OS X is supported on their exceptionally powerful G4 systems, entirely dedicated to digital media development, robust networking and data services, and is designed to seamlessly integrate into existing networks of any platform.

With Mac OS X Server, any organization can host their own website, run their own email server, provide file and networking services for their entire organization regardless of platform, and even stream real-time video over the web.

Now with Apple's new offering into the rack mounted world of server based hardware solutions, the Xserve, any organization can a run rock solid, comprehensive and secure client/server networked environment that meets or exceeds their needs for data storage and retrieval and network services.

As this document will illustrate, the Xserve running Mac OS X Server is an ideal choice for inclusion into an already existing network that runs a large Macintosh client base. Apple Computer has targeted the design and publishing market specifically with their hardware and operating system options in mind. Mass Med has a large design and publishing department running approximately 100 or so Macs (OS 9 and OS X) in a 500 plus user environment. This is an ideal situation for an Xserve device and for Mac OS X Server to provide the best QOS and value for Mass Med's investment dollars. The key points for this claim are as follows:

- The Xserve 1U rack mounted server unit has more than enough internal drive storage capacity (480 GB, almost half a terabyte, across four 120 GB Apple Drive Modules) for the initial data migration from Mass Med's legacy Novell server.
- The Xserve 1U rack mounted server unit comes standard with easy to use Server Monitoring tools, Network Management tools, Failover Warning and Redundant components, and an Enterprise-class sever operating system, Mac OS X Server v10.2
- The Xserve 1U rack mounted server unit has expansion capabilities to extend its data storage capacity via an optional Ultra 160 SCSI controller card to external storage devices such as the Xserve RAID solution (available late 2002) capable of up to 23 terabytes of drive space.
- The Xserve 1U rack mounted server unit has more than enough horse power with its dual 1 GHz PowerPC G4 processors with L3 level cache and up to 2 GB of SDRAM to service all of Mass Med's server-side computational data intensive needs for years to come.

- The Xserve 1U rack mounted server unit seamlessly integrates with existing heterogeneous networks such as Windows, Linux, and Mac OS 8/9 using native protocols built into the Mac OS X Server operating system such as: SMB/CIFS, NFS, and AFP. With Mac OS X Server's Open Directory support for any LDAP v.3 authentication and security system, users can transparently authenticate to any network volumes and services (such as printers) with no compatibility issues whatsoever—even with Microsoft's proprietary Active Directory.
- The Xserve 1U rack mounted server unit and Mac OS X Server comes with a superior customer service support package and third party software applications that will provide Mass Med with a fault tolerant system support and design and publishing industry specific server applications such as Adobe Go Live.

Given all of the brief benefits stated above the plain and simple choice to go with the Xserve and Mac OS X Server solution becomes apparent. The following section will detail a potential implementation and roll-out plan that VelocityDomain can perform for Mass Med at a high-level of service and a competitive price.

Section 3. Meeting Mass Med's Needs and Objectives

Mass Med has asked several important questions concerning their proposed project of migrating from a legacy Novell Netware server to a state of the art Xserve running Mac OS X Server. These questions and their answers are as follows:

Question: Why choose a Macintosh-based solution over a Microsoft/Intel-based one?

Answer: The following table can briefly sum up the benefits of choosing a Macintosh-based solution over Microsoft/Intel-based solution.

Out-of-the-box Support	Macintosh	Microsoft/Intel
Fully integrated hardware and software	Yes	No
1U rack mounted system running dual 1 GHz processors, 2 GB RAM, 480 GB HD space	Yes	No (Dell's PowerEdge 1650 comes in only half that of Apple's Xserve)
Native support for multiple platform protocols: SMB/CIFS, NFS, AFP	Yes	No (Windows 2000 Server requires third party add-ons for multi-platform protocol support)
Remote Server and Network monitoring tools	Yes	No
Centralized client system management, network boot images, and network software installs and upgrades—zero IT administration potential	Yes	Partial (Window 2000 Server requires third party add-ons to perform most of these tasks that Mac OS X Server does right out-of-the-box)
Easily Integrates with existing LDAP v.3 directory services and authentication	Yes	No (Windows 2000 Server uses a proprietary Active Directory service)
Customer Care Support	Yes	Partial (Apple's comprehensive customer care support package covers the entire system for less than Microsoft and the server vendor, such as Dell)
Low cost and simplified systems administration	Yes	Partial (Windows 2000 Server requires more specialized training, configuration and support time as opposed to Mac OS X Server's ease of use)
Third Party Support	Yes	Partial (Adobe Go Live is a Mac OS X Server side application developed specifically for design and publication organizations)

Question: How will a Mac OS X Server suit our department's specific needs after Novell's Netware server has been decommissioned?

Answer: With Mac OS X Server's Open Directory service all legacy Mac and Windows clients will be able to integrate into a viewable organization of network nodes, devices and volumes better represented on the network than Netware's NDS. Open Directory's support for WINS naming resolution for Windows clients, Keberos and SASL authentication, Workgroup and Macintosh Manager for Mac OS X and OS 8/9 client systems, and SSH2 support for remote and secure UNIX-based clients command line functions give Mac OS X Server a full palette of capabilities that exceeds the Novell Netware and Windows 2000 Server options.

Furthermore, Mac OS X Server has built-in file and print services that utilize any platform's native protocols such as SMB/CIFS, NFS and AFP. SMB/CIFS support allows Windows clients to transfer files and print via postscript directly to the Mac OS X Server (and networked printers); NFS will mount any UNIX-based volumes within your organization and print via LPR/LPD; and AFP (Apple File Protocol) will do the same for any legacy Mac OS 8/9 clients.

All in all, when Mass Med drops an Xserve running Mac OS X Server into its existing network, your organization will discover a whole host of easy to use and seamlessly integrated services available to all of your client workstations (and the whole Internet if you so choose) that are far too comprehensive for the scope of this document.

Question: How can VelocityDomain integrate and implement a new Mac OS X Server into our existing network with little or no disruption to our daily workflow?

Answer: VelocityDomain has years of experience in its members to help you migrate services, data, user accounts, and applications to newer systems regardless of platform with as little disruption to your organization's daily operations as possible.

VelocityDomain can perform a comprehensive organizational IT survey that encompasses all aspects from desktop systems, user needs, software upgrades or new solution strategies, back-end systems, network topology, system stability and status, and a complete report with graphs, charts, statistical analyses and intensively researched recommendations professionally prepared for executive management review.

We provide professionally written proposals for the entire project from start to finish and beyond with future service options at competitive rates in any market.

Section 4. Conclusion

As you can see from the previously stated features and point for point guideline fulfillments, the strategy outlined here can achieve the objectives set forth by the Mass Med's LAN/WAN department of design and publication.

VelocityDomain understands the complexities involved when an organization wants or needs to expand its operations and we are prepared to do the finest job possible at the most competitive price on the market today.

Furthermore, VelocityDomain Network Solutions has an established relationship with Apple Computer, Inc. via the Apple Consultants Network that will facilitate any application and system customizing and training needs for Mass Med personnel.

Should this white paper address the concerns of the LAN/WAN management staff, a future meeting and a proposal should be forthcoming at the behest of the Massachusetts Medical Society.

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