M Technology and Windows NT: Exploring the Next New Frontier

by Rita Shoor

NT is hot and getting hotter. Having clearly conquered the desktop, Microsoft is making good on its vow to repeat the win with Windows NT on the server. Many M developers find NT servers especially attractive because of the superior price/performance of both Intel- and Digital Alpha-based hardware.

Fortunately for M developers, moving to NT can be a trivial task, thanks to M's unmatched portability. However, developers have concerns about NT's viability for hosting enterprise-class applications. Developers ask "can NT match the reliability, scalability, and manageability of UNIX or VMS systems?"

InterSystems' newly released Open M Next Generation software is designed specifically to add the enterprise-class dimension to NT servers. With its close partnership with Microsoft, InterSystems has focused on ensuring high-performance transaction processing for NT server systems.

Just how hot is NT and why is this important to M developers? We asked InterSystems' Vice President of Strategic Planning, Paul Grabscheid, for his perspective.

What are the factors driving the move to NT for M Technology applications?

Actually, NT is becoming the platform of choice for an increasing number of applications, both in and out of the M community. For example, worldwide NT shipments are estimated at 3,005,000 for 1996 compared to about 958,000 in 1995. Those figures from International Data Corp. (IDC), a technology market research firm in Framingham, MA, show a 213.7% growth in NT shipments over 12 months. When IDC looked at Netware, 1996 shipments were estimated at 1,280,000 compared to 885,000 the previous year. While there is still growth here, it's significantly less at 44.6% than that of Windows NT. And the estimated shipments of OS/2 for 1996 are 2,397,000 which is a 46.8% decrease from 1995 when shipments were at about 4,504,000, according to IDC.

NT's growth is exploding. IDC projects a compound annual growth rate for NT of about 37% through the year 2000. I think that's conservative. This growth partially reflects the fact that NT has grown up. Microsoft's initial NT release had shortcomings and was not up for enterprise client/server applications. When release 3.5 hit the market at the end of 1994, that all changed. Things got even better with NT 3.51 and 4.0. Now, NT offers the right operating environment for business-critical applications.

Strong support by hardware vendors is clear evidence of NT market acceptance. We're seeing interest in NT by most major hardware suppliers. Digital, for example, supports NT on the Alpha, a platform that many InterSystems customers are choosing for new, high-performance Open M-based transaction processing applications.

Of course, many analysts believe that NT deployment is often limited to non-mission-critical applications. However, adding the value of M Technology NT enhances the key manageability, scalability and performance attributes that are essential for enterprise deployment.

Are there other reasons why M developers are seriously considering NT?

The growth in client/server has definitely acted as an accelerant. Economics also comes into play here. IS organizations are very focused now on the total cost of system ownership and NT economics look good. In this environment, applications can run on relatively inexpensive platforms and incur lower management costs than are typical of alternative UNIX-based systems. This is really evident at the low end of the UNIX world where we're seeing Open M customers—value-added resellers (VARs) as well as user organizations—really focus on NT-based application development.

To gauge the scalability of M on NT, one of our customers conducted a pair of benchmarks. The first, on a multiprocessor Digital Alpha system, was able to handle 900 concurrent users and still meet the company's very stringent response requirements. The second, on a three-processor Compaq PC, scaled to over 600 users, provided graphic evidence of the power of NT, even with commodity-priced hardware.

And the fact that Windows NT applications tend to be easier to manage than UNIX applications—mostly because the system management interface is easier to use (Figure 1)—is another enabling factor. The Open M system management

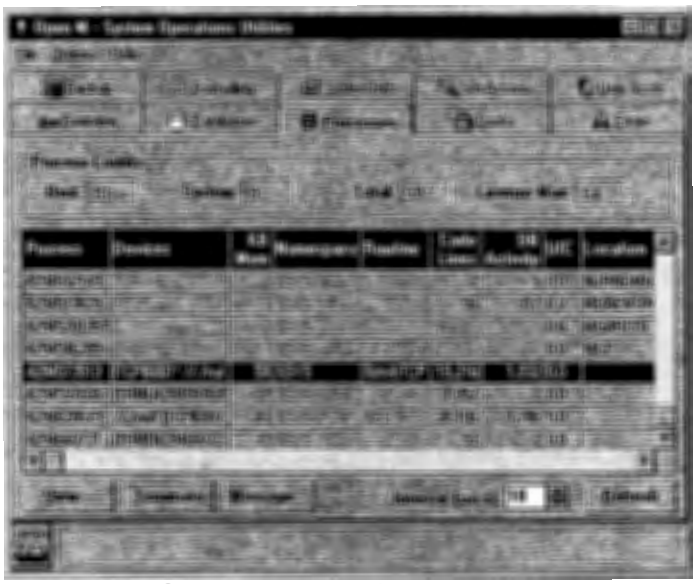

Figure 1. Open M's graphical M System Operations Utilities screen reduces learning curve.

interface for Windows NT, for example, is a typical Windows interface with the characteristics and standards already familiar to virtually every developer and data center manager. That reduces the learning curve associated with any move to a new platform. I think the familiar interface also makes people more comfortable about putting an NT system into office or departmental environments where they might have hesitated about implementing a UNIX application.

There's a perception that M developers are slower to adopt new technologies than their peers who are working with higher-profile DBMSs such as Oracle or Informix. Is that accurate when it comes to NT?

I don't think that perception is accurate, and it's certainly off the mark when it comes to NT. The greater level of application portability offered by M is actually making it possible for M developers to move to NT more aggressively than those working with many other DBMS technologies. And, M's added capabilities in manageability, performance, and scalability give the M developer an edge over developers using other technologies.

We're seeing customers who have been in experiment-and-learn mode with NT now beginning to deploy production transactional systems. Some organizations such as Partners and the Veterans Administration are moving quickly to NT on an enterprise-wide basis. There is definitely a strong trend to adopt NT in our own customer population. A significant percentage of our customers are already developing applications in the NT environment and InterSystems is projecting that at least half of the Open M user base will be working with NT by the end of 1997.

Where does a move to NT development make the most sense?

Clearly, NT is the upgrade platform of choice for DOS applications. It is essentially the only realistic platform migration choice for DOS application developers.

NT is also attractive at the medium to high end, where many M developers currently use UNIX and VMS platforms. For these developers, NT is now a viable alternative because it is less expensive and generally easier to support than their current platforms.

What are some of the challenges developers face when they're starting to work in an NT environment?

Moving to NT itself is a trivial matter, However, many developers are often making several changes, such as a switch from character to GUI or from 2-tier to 3-tier client/server, along with an NT migration.

In Open M, we focused on providing technologies to streamline these changes. At the forefront of our technologies is Visual M, which provides a very quick means to add GUI to existing systems.

How are system management challenges being addressed?

As far as systems management goes, the key to success is a centralized approach. You cannot manage every distributed server individually.

Microsoft is clearly moving to centralized systems management with NT. InterSystems has mirrored that move in Open M with powerful, yet simple, point-and-click centralized systems management tools.

How about the tool choice for GUI application development on NT?

The problem with GUI development tools is less "will they do the job?" and more "which one is the right one?" There are scores, if not hundreds, of choices. The developer's challenge of choice is "how quickly can I learn the tool?" and "will it still be the right tool choice a few years from now?"

On both counts, we think that a strategy based on Microsoft Visual Basic (VB) represents the best choice. Many developers already know VB, and there are hundreds of thousands of trained VB developers in the world. We certainly think that Microsoft will establish VB as a standard and continue their aggreseive enhancement of this technology.

We believe that integrating M with VB provides the quickest-to-learn, most-powerful-for-development, and safest-for-the-long-term choice.

Do tools like Visual M and Visual Basic really have that much of an impact on M application development?

The VARs and IS organizations in our customer base have definitely found that the right visual development tools can have a significant impact on developer productivity. Centra Credit Union, for example, used Visual Basic and Visual M to develop a 3-tiered client/server application system that supports interactive kiosks and enables customers to conduct virtually all banking electronically. The system currently includes a Digital OpenVMS data server, Windows NT application server, UNIX server, and PC clients. Building on the success of the kiosk application, which went live in September, 1996, Centra is now involved in building a call center application with Visual M. The developers estimate that this application would require about a year to build with CGI applications and typical Internet development tools. Using Visual M, the projections are that the call center application will be complete in just three months.

Other database vendors are focused on building development tools. What led to the decision to enable GUI development through Visual Basic rather than building a new GUI development tool for NT applications?

The decision was made because we don't think that a proprietary toolset, which is what vendors like Oracle and Informix are building, is the best solution for the VARs and IS organizations who are building M-based applications. From our perspective, Microsoft is going to be the long-term winner in what's beginning to look like an all-out war among tools providers. They have the technology, the positioning, and the market penetration to make that happen.

In some ways, this is a scenario that closely parallels what happened during the '70s when the best development decision was to go with IBM because even if they didn't get it right the first time, they eventually would. That's what Microsoft did with NT...they got it right and it's taking off. It's also what InterSystems projects for development tools...eventually, Microsoft is likely to effectively own the market.

InterSystems' strategy, therefore, is to provide the links and support necessary to enable M developers to fully leverage Microsoft's technology. This close alignment will ensure that Open M works smoothly with the Microsoft toolset and provides our customer base with a development path that parallels that of the market leader.

We've talked about all of the positive aspects of NT-based development. What's the down side?

One question to consider is "can NT serve as an operating environment for the very largest application?" When you start scaling up to thousands or tens of thousands of users—and we're seeing organizations that are facing those kinds of end-user numbers—most NT sites simply do not yet have the experience base needed to move forward with 100% confidence.

The focus of InterSystems has been to enhance NT environments with scalability-improving technologies, such as database partitioning with Dynamic Namespace Mapping and high-performance networking with Distributed Cache Protocol (DCP).

There isn't any doubt that most CIOs tend to be fairly conservative . . . and rightly so . . . about committing large, mission-critical applications to a new operating platform. But, the trend to NT is a definite reality and we're seeing comfort levels increase in direct proportion to the number of applications that are up and running on a production basis. We think that the M developer has a real edge in using NT over developers in non-M environments. **M**

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