

# NetWare: The Application Platform of the Future

Cheryl Walton

Few people think of NetWare as an application platform, so what makes *NetWare Connection* bold enough to predict that NetWare will be the application platform of the future? Over the past year, we've been watching Novell embrace the Java platform, release Novell Directory Services (NDS) 8, and make agreements with strategic partners such as IBM. How do these developments add up to make NetWare a first-class application platform? We recently talked to Bill Oakes, director of network applications marketing at Novell, who put together the pieces of the puzzle for us.

Q: How does Novell plan to change the perception that NetWare is not an application server?

A: In order to answer this question, we need to define application server. It's a relatively abused term and has different meanings to different people. As a general rule, though, industry analysts and the press say that an application server is a platform on which one develops, deploys, and executes business logic. Today, this generally means either Win32 or UNIX derivative-based code. Windows NT Server, Solaris, UnixWare, and Linux are good examples of application servers.

Traditionally, NetWare has been used for network-centric services like file, print, directory, database, communications, etc. NetWare doesn't really have the development environment described by analysts and the press, so from a wide-spread perspective, it's not an application server. The real question is, is this a bad thing? You have to look at application servers today and question if this is what the next generation of application platforms will look like. I think not.

Q: Why does the world need a new generation of application servers?

A: The current generation of application servers is great for running business logic for a workgroup, department, or given enough hardware, even a company. However, when it comes to deploying current application environments on the Internet, today's application servers fall down. Hard.

Basically, today's application servers are deployed to run a specific application—or set of applications—for a select group of users in a business. Now, let's examine how you would take such an application and deploy it on the Internet. How would security be handled? Or performance? Reliability? Scalability? How would the application handle a dynamic connection? Dynamic connections mean you have to authenticate each and every request received, exacerbating the performance issue. Today's application development tools just don't account for the Internet.

Q: What is the new model for application servers, and how will these servers supply the development environment required for the Internet?

A: Analysts generally agree that the cur-

rent application server model will migrate to a more open-standards-based environment called the *Open Application Server (OAS) model*. Basically, the OAS model lays out the components necessary for application development, deployment, and execution in a volatile environment such as the Internet. The requirements, shown in this diagram [see Figure 1], are basically:

- An open-standards-based application development environment designed for the Internet
- A web server designed to scale from the intranet to the Internet
- A server-based Java Virtual Machine
- A directory infrastructure for managing identity and access to application and network resources
- A network operating system designed for the Internet
- Fundamental network resources such as file, print, communication, routing, etc.
- Network access—local and Internet
- Database connectivity

The OAS is really an attractive model, and many products from vari-

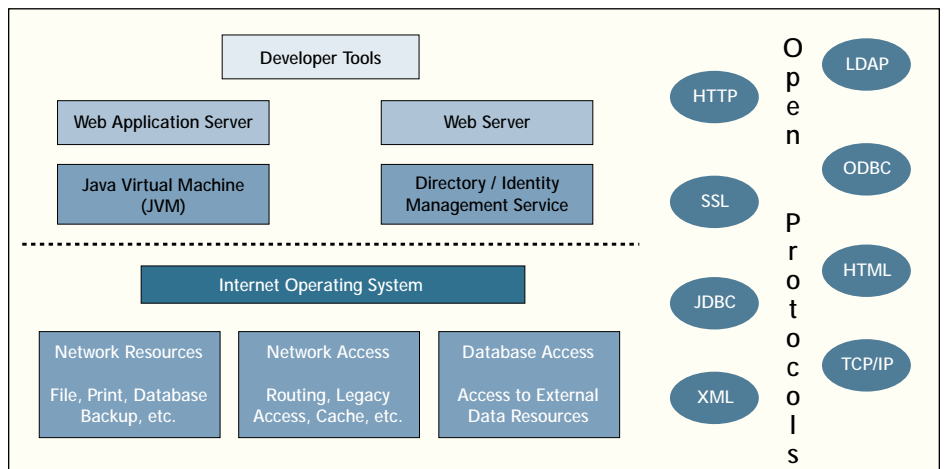


Figure 1. The Open Application Server model

ous operating system and application vendors meet the model's requirements. If you look at the diagram we just discussed, with Novell's technologies inserted [see Figure 2], then you can see that Novell has a strong offering in this space with NetWare 5.1.

Q: Novell has announced that it is porting IBM's WebSphere to NetWare. How does this announcement fit into Novell's application strategy?

A: WebSphere is arguably the best web application server available—and the NetWare version will be NDS-enabled! WebSphere is designed specifically for application development, deployment, and execution in the web environment.

In my opinion, IBM has the strongest web presence and strategy today. WebSphere already has a strong presence, with six other platforms available. Because of this, IBM brings an existing infrastructure to Novell in a space that, quite frankly, we're new in. Novell can take advantage of IBM's marketing resources and existing applications.

What Novell brings to IBM is a strong presence outside of IBM's traditional channel. But more importantly, Novell brings what I feel is the best possible platform for WebSphere and web applications to be deployed on. NetWare has defined the benchmark for fundamental network services such as file, print, routing, communications, etc. With NetWare 5, Novell has extended these services to the Internet, providing what may be the only operating system capable of scaling efficiently to the web. Couple this with the *only* directory capable of scaling to the Internet—we have tested NDS 8 with one billion objects with sub-second response time—and you have a premiere application environment that you know will be secure.

Q: How will the new generation of application servers accommodate legacy applications, particularly legacy database applications?

A: Novell is bridging the gap between the new application servers and legacy applications in several ways. First, Novell recently introduced a new product, SQL Integrator. This tool allows developers to access virtually any rela-

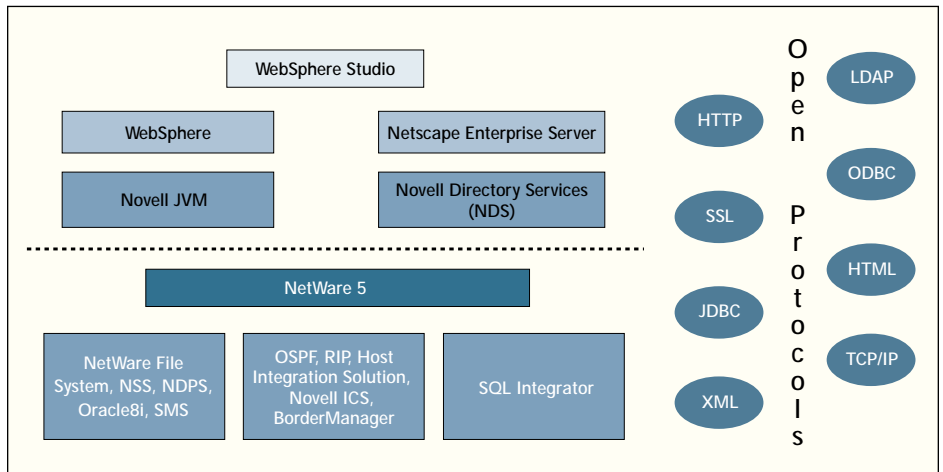


Figure 2. How Novell products fit into the Open Application Server model

tional data anywhere on the network and join it to any other relational data via a common record. SQL Integrator handles all datatype differences and uses NDS for managing identity and access to the data. SQL Integrator is a pretty amazing tool. We're just getting the word out on this product, but the feedback we've been getting is amazing. I highly recommend checking out Novell's web site (<http://www.novell.com/products/sqli>). You can learn more about SQL Integrator and even download a trial version!

Second, we have our Host Integration Solution developed in conjunction with IBM. This product (which is essentially NetWare for SAA for web users) provides managed access (via NDS) from the web and web-based applications to the IBM host environment.

Couple the Host Integration Solution with SQL Integrator for access to DB2 on the host, and you've got a total solution for accessing data regardless of its location. That's a powerful story! And, of course, Novell also has Oracle8, which actually ships in the box with NetWare 5, to provide a data repository for new data being deployed. Our own testing is showing that the latest release of Oracle—8.4—on NetWare is beating other platforms in its space, hands down.

Let me wrap this up by looping back to the beginning of our conversation. NetWare, as most people think of it today, is not an application server. But frankly, I don't think that's a bad thing—the current generation of application servers are becoming legacy.

With the OAS model emerging, there are new requirements for a new generation of open application servers. This is where Novell is focusing with the next release of NetWare, which will combine NetWare 5 with NDS 8, WebSphere Standard Edition, Netscape Enterprise Server, and Oracle8i. These components will make NetWare 5 the strongest open application server and will make Novell an incredibly strong platform on which to develop, deploy, and execute business logic designed for the web.

No other vendor can provide the scalability, security, and reliability that Novell brings to the table. And when you add SQL Integrator and Host Integration Solution, Novell can also state that no other vendor can provide access to data for those applications like we can.

Finally, for total fault tolerance, we can add Novell Clustering Services for NetWare 5. Bottom line, we're extending the security, reliability, and performance of NetWare to the Internet and bringing developers the platform they need to develop, deploy, and execute applications that can scale to the Internet.

By the way, if you're a developer, cool news! By the time this issue hits the stands, WebSphere Standard Edition for NetWare should be available with the beta version of the next release of NetWare 5. [For more information about the next release of NetWare 5, visit <http://www.novell.com>.]

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