

EXHIBIT D



Novell is now a part of Micro Focus

LOGIN

United States, English

CHANGE

Products

Services & Support

Partners

Communities

About Us

How to Buy

Search



Overview of Novell Application Launcher 2.0

Articles and Tips: article

Support Home

Download ▶

Help yourself ▶

Let us help ▶

Contribute ▶

Customer Center

01 Sep 1997

Describes NAL 2.0, which allows administrators to efficiently control application use and insulates users from the complexities of the network environment. NAL manages physical file movement, registry editing, installation questions, and a number of other issues.

- Introduction
- The Challenge of Administering Desktops
- Fast, Powerful Software Distribution and Application Management
- The Importance of a Global Directory
- The Benefits of Novell Application Launcher
- Flexible Distribution Methods Give You a Choice
- The Road Ahead
- Conclusion

Introduction

In today's competitive environment, companies, schools, and organizations are seeking ways to cut costs and increase the efficiency of their operations. Increasingly, the expenses and complexities of managing distributed computing environments are coming under scrutiny.

Recognizing that efficient software distribution and application management is critical to reducing your total cost of network ownership, you may be looking for a solution that enables you to make new and updated applications available to all of the users across your network. At the same time, you want a solution that brings these capabilities to existing desktops and servers, allowing your organization to retain and maximize existing investments.

The Challenge of Administering Desktops

The software distribution process and on-going application administration can be a never-ending chore for IT staff. With employees using different desktops and software, and updated applications arriving ever more frequently, IT personnel can spend much of their time going from system to system to install new software or resolve problems that arise later. Their only alternative to manual installation has been to use complicated installation templates to distribute new software versions in a sweeping, wide-spread roll-out that is cumbersome, expensive, and slow to deploy.

This "big bang" approach doesn't address the on-going challenge of administering desktops-especially in IS departments where resources, human and otherwise, are already stretched.

The ideal solution would enable you to make critical applications available to your knowledge workers while providing you with the control you need to efficiently maintain the desktops in your organization. This solution also needs to work with your existing systems-eliminating the expense of purchasing additional hardware, software, or training. It must be easy to administer, reduce down-time for the user, and eliminate or reduce time spent resolving application problems. In short, the ideal solution would reduce the cost of ownership beyond the distribution process. That solution is Novell Application Launcher.

Fast, Powerful Software Distribution and Application Management

Novell Application Launcher: the next-generation solution Novell Application Launcher (NAL) 2.0 is next-generation application management technology. It is based on the philosophy of "just in time" application access, and software distribution which is on-demand, user-based, and tied to who the users are, what they need access to, and when they need access. NAL's key value is two-fold:

1. As an administrator, you create an application, an operating system upgrade, or even the files you want to distribute out to your user community once. Once you've created this application "object," you can fine-tune any registry settings or environmental variables. These become an intrinsic part of the application delivered and managed by NAL.

Even the way users access the application-how they install and run it, and where they run it from-is totally controlled by you, dynamically and flexibly. These changes can occur even while the user is logged in and working. The responsibility for the entire installation and subsequent access of the application is shifted from the users back onto you, the administrator, letting you manage the whole process centrally from any PC located on the network that is running the administrative console.

2. Your users are insulated from the complexities of the network environment. The applications they need are intrinsically linked to who they are, not how the PC is configured. Physical file movement, registry editing, install-related questions, even problems with the application that come up months later, are managed and handled by NAL. No matter where they log in as authenticated NDS-users, the NAL-managed desktop will find them.

Deploy Applications Quickly and Easily Using NDS

Novell Application Launcher combines users and applications in your IntranetWare or NetWare 4 environment to provide simple to use, yet powerful software distribution and deployment of network-based applications. This directory-based solution brings together user administration tasks and application administration tasks into the single centralized Novell Directory Services (NDS) management database.

No longer do you need to maintain redundant information about your users and the applications they need in separate databases. With NDS and NAL, you have a global view of all of your resources, including applications. Associating applications with your users is now as simple as a few keystrokes and a mouse click. Deploying to an entire organization is no more difficult administratively than deploying to a single individual.

The Importance of a Global Directory

Novell Directory Services is the most widely used directory service in the world. A core component of the IntranetWare and NetWare 4 platforms today, with additional support for Windows NT, NDS serves as a universal directory service for organizing, accessing, authenticating and managing network information and resources.

It melds every network user and resource into a truly cohesive system, eliminating redundant administrative tasks and providing users with secure anywhere, anytime access to business-critical information and applications. NDS insulates users from the complexity of the network, while providing administrators a much simpler way of providing resources to the user.

Because it scales easily, NDS lets you administer and manage diverse systems from a central location, with a single login-especially important in distributed environments. As networks continue to grow and add Internet access-and network services span multiple platforms-NDS provides a powerful way to automate management and ensure secure access to all network resources. By shielding users and support staff from network complexities, NDS greatly reduces your overall cost of network ownership.

Managing your users and their applications from one central database Novell Application Launcher is built on NDS, letting you combine the power of managing users across your enterprise with application management. Simply put, Novell Application Launcher lets you harness the power of your network directory, using it to perform the physical distribution of software for not only the initial installation, but the process of managing the access of the application thereafter-saving you countless hours in physical trips to your users' on-site location or the calls they place to the help desk.

Unlike many other competitive solutions that maintain application data in a separate database from user administration, NAL combines the two. Access and applications become one logical idea, reducing your support costs, thereby reducing your costs of ownership.

Shifting The Paradigm from the User to the Administrator

With Novell Application Launcher, you can increase your business productivity by putting the responsibility of "know-how" about installing and configuring applications back onto the administrator. "Freedom of choice" of applications for users doesn't mean that it has to be an additional burden for you. Use the Novell SnAPPShot tool to profile the application or configuration process (i.e., a de-install or registry cleanup).

Next, use the administrative component of Novell Application Launcher, which is a snap-in for NetWare Administrator, to establish not only how you want to distribute the application, but more importantly how you want the application to be run from the user's desktop. Associate the application to the users that need access to the application, and NAL, utilizing the directory, does the rest. Server independent, with NDS as the backbone, NAL delivers the applications to your users.

This process saves you time by letting you distribute software without visiting each PC and server on the network, greatly increasing your productivity. It also allows you to enforce simplified, standard desktops for your user community, reducing calls to your help desk. Because applications can be associated with groups, organizations, or even across the enterprise, users who are added later automatically gain access to network applications or software distribution packages already created.

With this tool it's easy to get the latest software to users, keeping them productive. You can even give Windows 95 and NT users the added flexibility of launching applications from the Windows Explorer window or the system tray in addition to the Novell Application Launcher window. Because network applications are managed through NDS, they're associated with user login IDs-allowing them to "follow" users around the network. This means that no matter where they log in, users always see the same set of network applications-whether they're working at a branch office or roaming the campus.

The hidden benefit behind all of this flexibility is your control over the NAL-managed desktop. Once you've set up how you want NAL to manage your applications, your users cannot permanently delete or destroy these applications. NAL will correct and repair file deletion, file corruption, or mistakes made to the registry, file settings, or any system files that are managed by NAL since this is an intrinsic part of the application you previously set up.

This built-in "resiliency" results in cost savings to you. The true cost of ownership measurement is a reflection of supporting applications over the course of their deployment, not just their initial rollout. The NAL-managed desktop results in fewer calls to your support desk, which means less down-time for your users, less intervention required by your support staff, and more business productivity for your users.

The Benefits of Novell Application Launcher

To review, Novell Application Launcher provides the following benefits to your organization:

Simplifies Administration of Applications

Novell Application Launcher's administrative component uses the NetWare Administrator utility to let you create NDS-based application objects that make up not only the application components, but key administrative access and environmental attributes as well.

These application objects are associated with the users in your organization in the same network directory service where you maintain all of the information about your users. By eliminating redundancy, and by taking advantage of the flexible way NAL manages the application deployment process, your administration tasks are simplified. NAL is NDS-based, across your entire network, not server- or domain-based.

Dynamically Updates User Desktops

Novell Application Launcher allows you to assign applications to individual users, groups, or across your entire organization. NAL-managed applications are delivered to Windows desktops dynamically, and any changes are refreshed automatically.

Other solutions that employ a "big bang" approach (for example, sending applications out once at 9:00 a.m. Monday) cannot handle user administrative changes automatically. With NAL, you can associate an application with a group of users. New users added at a later time to the group automatically receive access to the same applications. When you need to make changes to an application, after you've completed the change and you've earmarked the application for immediate availability, all current and future group members gain automatic access to their assigned desktop configurations.

Simplifies User Access to Applications

Novell Application Launcher presents users with NAL-managed applications that are pre-configured by the administrator. Regardless of what PC they use, or where they log onto the network from, their view of NAL-managed applications remains the same. Novell Application Launcher and NDS do the rest, automatically taking care of drive mappings, environmental issues, physical file movement, and scheduling. NAL also resolves many of the problems that users might run into later with any configuration errors, problems with PC configurations, and more. Users cannot permanently delete or damage NAL-managed applications, further reducing support calls.

Dramatically Reduces the Cost of Setting Up Applications for Distribution

the characteristics of the software package being installed, you will be ready to distribute an application in a much shorter time than comparable solutions.

Manages Applications and Data in Intranets and Across the Internet

Novell Application Launcher leverages existing and emerging Internet technologies to let you distribute, track and update software and data. And as native NDS support expands to include all popular computing environments, Novell Application Launcher will enable hassle-free distribution of applications over the Internet to any location with NDS-enabled clients.

Provides Location Independence for Network Applications

Because applications delivered through NDS are associated with a user's network login ID, they follow the user around the network. Regardless of the login location, the user always sees the same set of network applications. This ensures users working from multiple locations or various workstations always have a consistent set of network applications. This also allows for easy configuration and replacement of workstations -- dramatically reducing the time and cost of administering network resources.

Offers Efficient Outsourcing of Network Administration

Many small businesses don't employ a full-time network administrator, while some larger companies are seeking to reduce costs by outsourcing help desk services. Using ManageWise, Novell's end-to-end management solution, and Novell Application Launcher, a service provider can fix network problems remotely before they disrupt your operations. Your provider can also quickly install software updates and fixes remotely, saving you time and money.

Built on a Scalable Architecture that Grows with Your Needs

Like IntranetWare, Novell software distribution products and management solutions scale to handle any size LAN, WAN or enterprise intranet. With the next version of Novell Application Launcher, you will be able to add additional distribution servers as easily as you add clients today. In addition, multithreading capabilities will enable you to send software to many more servers for quicker distribution.

Provides Complete Security and Control of Applications

Novell Application Launcher leverages NDS to for full authentication and access rights that you easily define. In addition, ManageWise provides an accurate accounting picture through automatic software inventory across the enterprise. Lastly, NDS and other NetWare security controls are always in place to prevent unauthorized access to the network or to individual applications.

Flexible Distribution Methods Give You a Choice

With Novell Application Launcher, you can make applications available through two different methods. You can install applications on each user's hard drive, and/or install them as shared applications on the network.

The first method, automated software distribution, gives you the option of "pulling" or "pushing" software updates to desktops. Pull distribution lets you "surface" an application icon on the user's desktop. Clicking the icon either launches a network application, which resides on a server, or runs an install program, placing (or updating) the application on the user's hard drive before launching it.

Push distribution automatically loads applications onto target desktops without user intervention. This is useful for distributing critical software that needs to reside on desktops, such as operating system and network client updates, as well as E-mail and custom business applications.

The second method allows you to maintain network-based applications for shared use on the network. To launch a desired application, users simply click on an icon on their desktop. Network-based applications are available to users through their network login ID. This lets users access their familiar, standard set of applications no matter where they are working.

The Road Ahead

Novell's next generation solution will become available in three phases, each adding enhanced capabilities to make your life easier:

- Phase One: Current-Novell Application Launcher 2.0 delivers advanced server-to-client software distribution and application management.
- Phase Two: Early '98-New versions of Novell Application Launcher will add scalable server-to-server software distribution.
- Phase Three: '98 and beyond-Novell Application Launcher will work on any implementation of NDS released by Novell on all major operating systems. Coupled with Lightweight Directory Access Protocol (LDAP) compliance, this could provide directory-enabled distribution of software and data across the Internet.

Phase One: Distributing Applications from Servers to Clients

Besides delivering full software distribution and deployment of network-based applications in the first part of '97, Novell Application Launcher provides several advanced capabilities. Key administrative functions include:

- Scheduled delivery: Administrators can schedule software distribution for off-peak hours. Systems that aren't turned on at night will load software upon booting up the following morning.
- The ability to modify registries and .INI files-enabling distribution to a wide variety of client configurations, including NT clients and servers
- Adding or removing icons from start-upmenus, system tray, or Windows 95 Explorer
- Adding or deleting icons from desktop folders
- Employing distribution templates created with SnAPPShot or created manually with NW Admin
- Resiliency and self-healing application repair on the desktop through launching and verify features

Phase Two: Scalable Server-to-Server Distribution

In early '98, Phase Two of Novell Application Launcher will deliver support for distributed multiserver systems. Server-to-server distribution will allow administrators to distribute applications to far-reaching end points-whether they are other servers or clients. Distributions will cross WAN links, not only, but far out in an N-tiered fashion through as many levels of servers

The distribution process will be virtually the same as in the server-to-client model, again using NDS to automate the entire procedure. NDS will determine the distribution sequence to route software to appropriate servers or desktops. Administrators will still have the option to review this path and modify it if they desire. This automated process will work on any network with native NDS support.

Phase Three: Novell Application Launcher and the Internet

Because Novell Application Launcher is tightly integrated with NDS, it will also offer software distribution to any environment with native NDS support, including LDAP implementations that support NDS. NDS is already available on IntranetWare and NetWare, Santa Cruz Operation's UnixWare and SunSoft Solaris. It will be available on Microsoft Windows NT Server in mid-1997. It is also planned for Hewlett-Packard's HP-UX and other UNIX operating systems.

When combined with recent developments such as Novell Border Services, Novell Application Launcher opens exciting software and data distribution possibilities for secure electronic commerce.

Conclusion

Implementing a software distribution strategy will significantly increase your organization's productivity while greatly reducing your total cost of network ownership. To fully automate application distribution and efficiently administer desktops across your entire network, the solution you choose should be simple to use, reliable and integrated with a secure, global directory. You should also consider the costs of supporting those applications beyond the distribution process itself. Novell Application Launcher is a complete software distribution product available today that brings together user administration and applications for system-wide management from a central network directory.

Of course, when you choose Novell, you get much more than specific products. You get business-class solutions from the world leader in networking that not only help you run your company today, but grow in value to meet your future needs. Our solutions let you integrate Windows NT into your IntranetWare and NetWare networks, helping you maximize all of your investments. And because our products are Internet-ready, they position you to take full advantage of the Internet as new services become available. For powerful solutions to run your business, count on Novell.

For a roadmap of Novell's Solutions, please visit <http://www.novell.com> on the World Wide Web. To learn more about the capabilities that future versions of Novell Application Launcher will provide, please visit the ManageWise home page at <http://www.novell.com/managewise/>.

** Originally published in Novell AppNotes*

Disclaimer

The origin of this information may be internal or external to Novell. While Novell makes all reasonable efforts to verify this information, Novell does not make explicit or implied claims to its validity.