

Novell eDirectory™: The Standard for Directory Services

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Session Agenda

What is a directory and why would you use one

Types of directories

Value of a directory

The myth of one directory

The value of open standards/multi-platform support

Is LDAP good enough?

Novell eDirectory component technologies

Directory services competitors

Q&A

The What and When of Directory Services

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What is a Directory?

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Functions that a directory typically provides:

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Relationships (groups and roles)

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Directories and Databases

Directory

Extremely fast read operations

Relatively static data

Distributed

Hierarchical

Object-oriented

Standard schema

Multi-valued attributes

Multi-master replication



Database

Write-intensive operations

Data in flux or historical data

Application-specific schema

Complex data models

Data integrity

ACID transactions

Source: "Should I Use a Directory, a Database or Both?" –Novell AppNotes

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When to Use a Directory

-  Is the data relatively static?
-  Does the data need to be distributed?
-  Can the data be used by more than one application?
-  Is the data multi-valued?
-  Can your data or application take advantage of a hierarchical relationship?
-  Do you need flexible security options?
-  Do you need single sign-on?
-  Do you need distributed or delegated administration capabilities?

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Source: "Should I Use a Directory, a Database or Both?" —Novell AppNotes

If the answer is yes to some or all of these questions, you should definitely consider using a directory.

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Types of Directories



LDAP directory - Based on a widely accepted industry standard and typically used for basic capabilities like authentication and authorization

Application directory - Lightweight directory implementation designed to support the specific needs of an application



Full-service directory - Feature-rich directory often used as the hub of corporate identity information and the foundation for identity management solutions

Virtual directory - Provides a virtual, consolidated view into many directories



Meta-directory - Synchronizes identity data among different directories

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The Value of a Directory

| <i>Feature</i> | <i>Benefit</i> |
|----------------------------------|---|
| Authentication and authorization | Improved security |
| Centralized administration | Simplify administration to reduce costs |
| Personalization | Improve service levels |
| White/yellow pages | More productive and effective collaboration |



A directory helps equate IT with your business goals ... a place where written policy becomes manifest.

Customer Deployments

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Case Study: Municipal Government

Customer situation

- No citywide mechanism for contacting city employees
- No way even to know the exact number of city employees
- Informational phone system lacked contact details

Approach

- Novell eDirectory as directory for agency contacts
- Sun needed 9 servers for every 1 Novell server
- Sun directory does not scale when dealing with large #s of attributes

Business Results

- Citizens get the right information in a timely manner
- Foundation for the informational phone system and citywide identity management
- Greatly improved communication across city agencies



Case Study: Cathay Pacific Airways

Customer Situation

- International airline based in Hong Kong
- Operates in 150 locations with 14,600 employees, many of which are highly mobile
- Needed to cut IT costs and provide secure, reliable remote access

Approach

- Chose a Novell Nsure® solution to integrate IT systems
- Created a secure Web portal providing remote access to apps
- eDirectory serves as the central repository for identity and security data

Business Results

- Eliminated much of the manual administration associated with identity mgmt
- Employees have secure, anywhere access to email and other apps
- “Novell is the perfect solution for our distributed environment”



Case Study:

North East Independent School District

Customer Situation

- Managing 58,000 students and 8,000 faculty and staff in more than 55 locations
- Costly process to update user data across mainframes and dept apps
- Students and teachers had to juggle multiple passwords

Approach

- Selected Novell Nsure to integrate AD, legacy systems and many home-grown Web apps
- Novell eDirectory provides central directory for schools and depts
- Nsure Identity Mgr synchs identity data and passwords

Business Results

- Eliminated 200 hours of manual administration at the start of each school year
- Significantly reduced the number of password-related helpdesk calls
- “With Novell, we are not constantly playing catch up...”

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A Study in Mythology



- Zeus - chief among the gods in Greek mythology
- Zeus was the supreme ruler of Mount Olympus and the gods who resided there. Associated with weather, his main attribute was the thunderbolt.

- Odin - chief among the gods in Norse mythology
- Odin was a god of war and death, but also the god of poetry and wisdom. His attributes included the spear Gungnir and his eight-footed steed Sleipnir.



Directory Mythology

- A single directory for the entire enterprise
- Most directories today are tied to an OS or application platform. Consolidation is a costly endeavor without a lot of ROI.

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Future-Proofing a Directory

What will you be doing and deploying two years from now?

Evaluating Linux and open source?

Considering identity federation or Web services?

Deploying a new enterprise-wide
business application?

Considering an authentication method beyond
simple passwords?

What to look for...

- *LDAP Certified* by The Open Group - the industry yardstick for signifying conformance to the LDAP standard
- Compliance with DSML, SOAP and a host of other protocols
- Multi-platform support for Linux, UNIX, Windows and others



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Is LDAP Good Enough?

...in some cases, yes ... depending on your goals

Simple LDAP Directory

Basic authentication and authorization based on passwords

Core management functions with an LDAP tool

Simple, fairly static security model

Only supporting LDAP applications

Limited replication capabilities

Novell eDirectory

Advanced authentication with support for biometrics or tokens

Remote Web-based management and monitoring for all functions

Dynamic security model supporting inherited rights

Supporting a variety of access protocols

Unlimited multi-master replication

Novell eDirectory Component Technologies

Management Tools

Administration

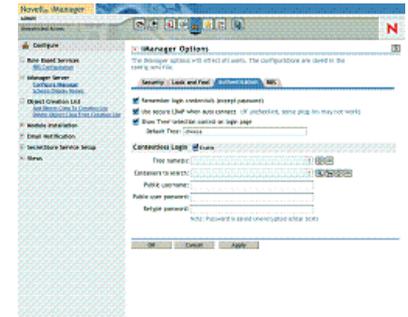
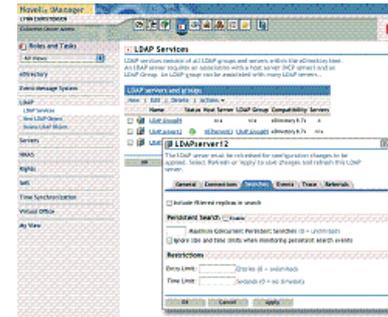
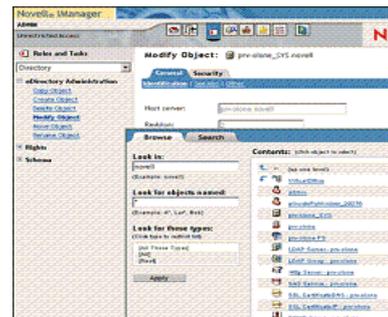
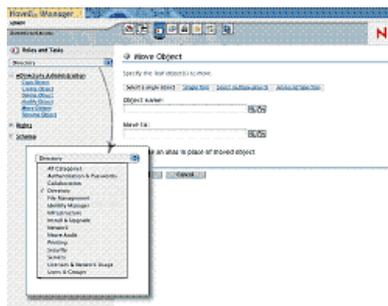
Novell iManager Directory administration tasks available from the browser, including delegated administration

Maintenance

Directory Server Diagnostics
Novell iMonitor provides server mgmt and diagnostics from a browser

Monitoring Interfaces
SNMP events allow eDirectory to snap into standard enterprise management consoles

Comprehensive Repair Tools
Repair tools allowing repair of entire data set, partial data set and individual objects; replication repair utilities; and many low-level directory operations. Many of these tools work while online.



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Corporate White Pages

Novell + SUSE LINUX Novell eGuide

Shawn Dickerson

Novell Employ Last Name Starts with anderson Search

| Last Name | First Name | Business Ph |
|-----------|-------------|----------------|
| Anderson | Angie | 1-801-861-3724 |
| Anderson | Brady | 801/861-3130 |
| Anderson | Carl | 1-801-861-2692 |
| Anderson | Carla | 1-801-861-8101 |
| Anderson | Dale | 801/861-1102 |
| Anderson | Dale A | 1-651-714-4722 |
| Anderson | David | 44-131-625-555 |
| Anderson | Debra | 18018615946 |
| Anderson | Doug | 801/861-1788 |
| Anderson | Ed | 1-801-861-6840 |
| Anderson | Eric | 1-801-861-1237 |
| Anderson | Patrick | |
| Anderson | Paul | |
| Anderson | Paul R | |
| Anderson | Reed | |
| Anderson | Robert | 1-801-861-9386 |
| Anderson | Rod | 801/861-3407 |
| Anderson | Todd Blaine | 801/861-5214 |
| Anderson | Tony | 801/861-1103 |

Information Organizational Chart

Organizational Chart

NSIG PM Int

[Email this team!](#)
[Print Format](#)

Note to Managers : Managers should see a link above titled "Edit Orgar see this link, please submit an. [Hrline1 Manager Request](#) email.

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Wireless Authentication



Novell contributes client code and publishes eDirectory APIs to the freeRADIUS project

Integration with freeRADIUS provides support for 802.11x wireless authentication

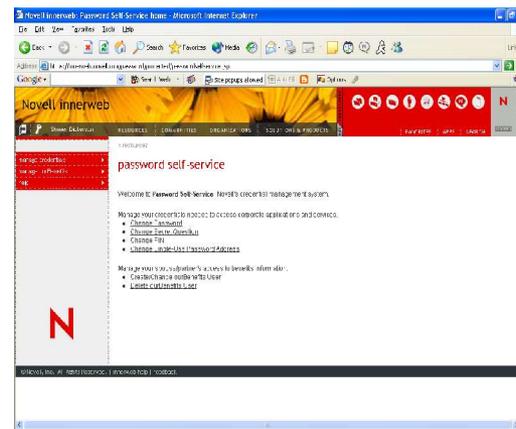


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Password Self-Service

Dramatically reduce password reset calls with FREE password self-service for Novell eDirectory. Visit www.novell.com/self-service to see:

- The benefits of password self-service
- System requirements and a link to password management plug-ins
- Deployment Guide, which walks you through the process of configuring password policies to establish self-service password reset
- A product demo

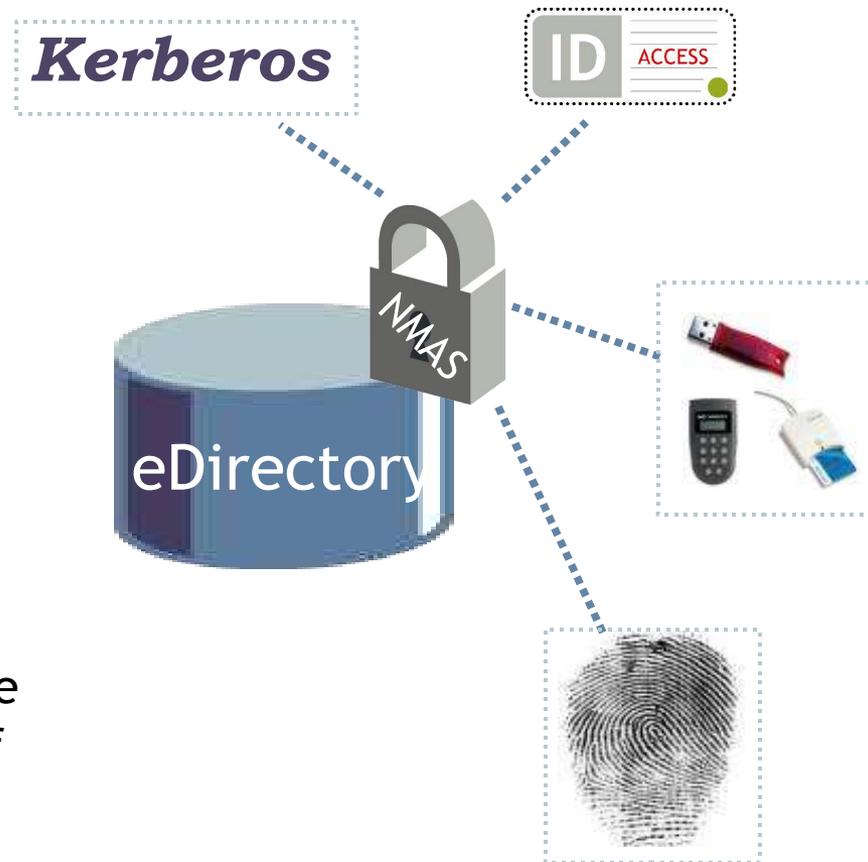




Novell Modular Authentication Service

NMAS™ Provides Strong Authentication

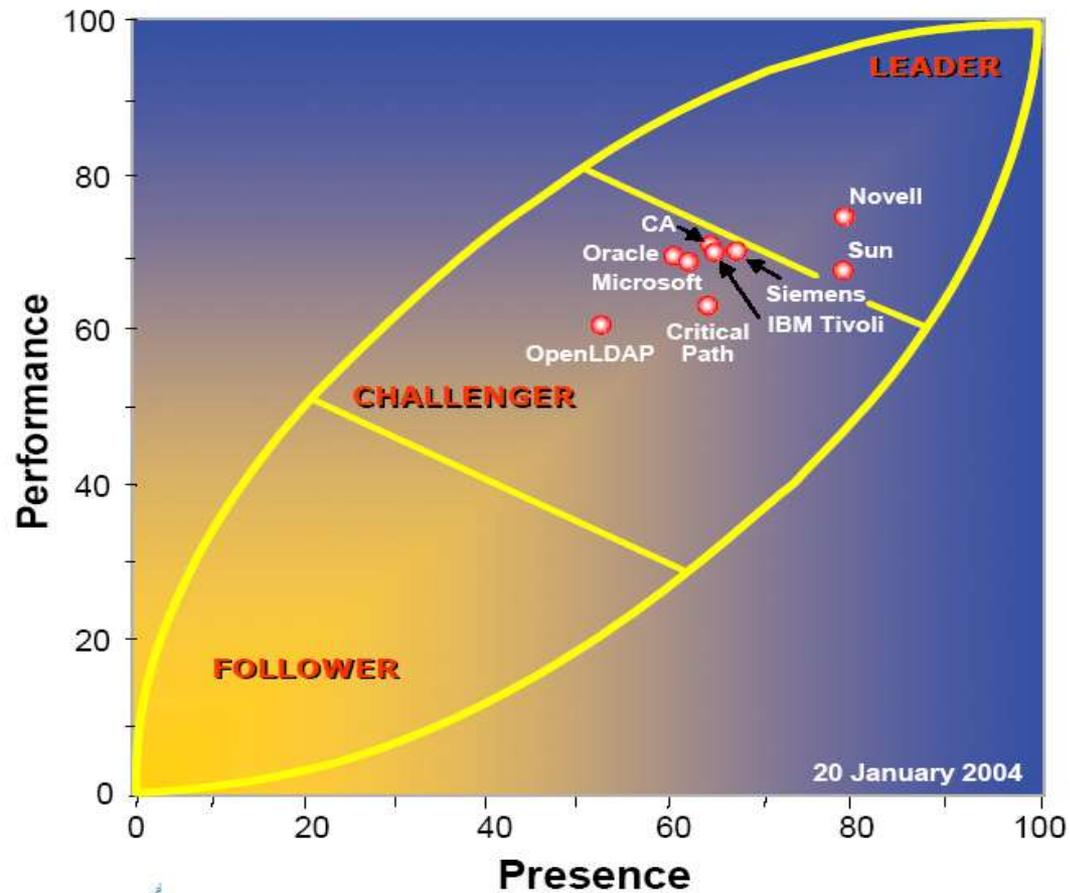
- Pluggable to adapt to the security needs of any organization
 - biometrics, Kerberos, smart cards, PKI, proximity cards and others
- Graded authentication provides access based on the strength and combination of login method



A Closer Look at Competitive Offerings

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Market Leadership - META Group



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Sun Java System Directory Server

Strengths

- Solid scalability and performance in many circumstances
- Supported by many 3rd-party products

Weaknesses

- ...aka Sun ONE Directory Server; aka iPlanet Directory Server; aka Netscape Directory
- Unlimited multimaster replication ... as long as *unlimited* means *4 replicas*
- Not suitable for distributed environments; cannot partition the directory
- Inconvenient and cryptic management tools
- Cannot scale well with complex attributes



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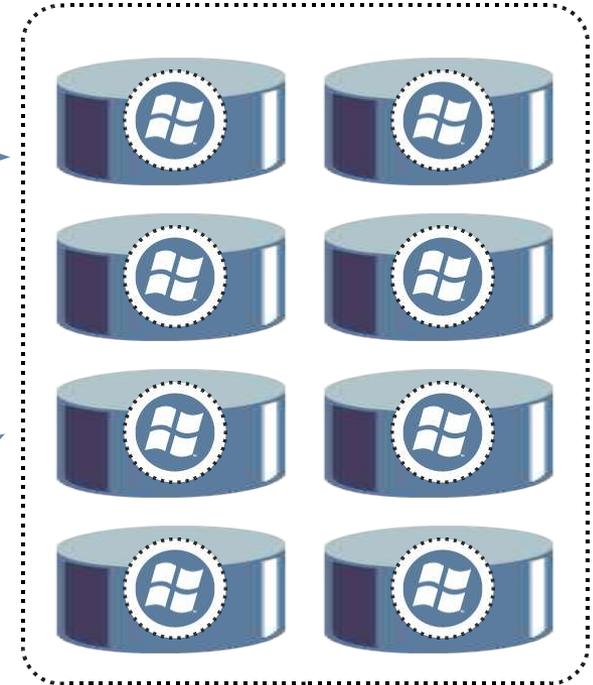
Microsoft Active Directory & AD/AM

Strengths

- Solid NOS directory, as long as your network looks like this
- Microsoft developer program and partner support
- AD/AM brings much greater flexibility in deploying a directory

Weaknesses

- Nobody's network looks like this
- Not *LDAP Certified* by The Open Group
- Ongoing Windows security issues (the only platform for deployment)
- Scalability that cannot reach Internet magnitudes without significant hardware investments

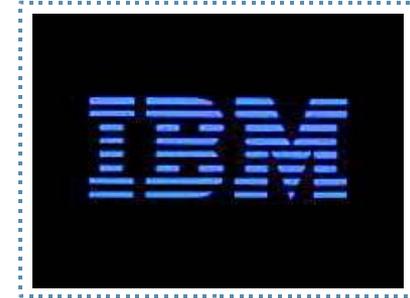


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IBM Tivoli Directory Server

Strengths

- Integral component of IBM's identity management suite
- IBM corporate and consulting resources



Weaknesses

- Directory technology is not strategic to IBM
- Simply an LDAP interface to DB2
- Limited partner and 3rd-party product support

Questions & Answers

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