AUTHORIZED DOCUMENTATION

Administration Guide

Novell®
Password Management

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Contents

4 Password Self-Service 49

A Security Considerations 75

B Documentation Updates 77

About This Guide

This guide provides information on how to manage passwords on Novell® systems. It includes instructions on how to deploy, configure, and manage Universal Password, password policies, and password self-service.

- Chapter 1, “Overview,” on page 9
- Chapter 2, “Deploying Universal Password,” on page 13
- Chapter 3, “Managing Passwords by Using Password Policies,” on page 25
- Chapter 4, “Password Self-Service,” on page 49

Audience

This guide is written primarily for network administrators.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comment feature at the bottom of each page of the online documentation, or go to www.novell.com/documentation/feedback.html and enter your comments there.

Documentation Updates

For the most recent version of the *Password Management Administration Guide*, visit the Password Management Documentation Web site (http://www.novell.com/documentation/password_management32/index.html).

Documentation Conventions

In Novell documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

A trademark symbol (®, ™, etc.) denotes a Novell trademark. An asterisk (*) denotes a third-party trademark.

When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux* or UNIX*, should use forward slashes as required by your software.

1 Overview

This section provides an overview of Universal Password, password policies, and password self-service.

1.1 Universal Password Background

Universal Password is managed by the Secure Password Manager, a component of the NMAS™ module (`nmas.nlm` on NetWare®). The Secure Password Manager simplifies the management of password-based authentication schemes across a wide variety of Novell® products as well as Novell partner products. The management tools expose only one password and do not expose all of the behind-the-scenes processing for backwards compatibility.

Secure Password Manager and the other components that manage or make use of Universal Password are installed as part of the NetWare 6.5 or later and eDirectory™ 8.7.3 or later install; however, Universal Password is not enabled by default. Because all APIs for authentication and setting passwords are moving to support Universal Password, all the existing management tools, when run on clients with these new libraries, automatically work with the Universal Password.

NOTE: Password Management 2.02, a plug-in for Novell eDirectory for iManager 2.*x,* is available for download at the Novell Free Download Site (http://download.novell.com). Minimum requirements are eDirectory 8.7.3 or later and iManager 2.02 or later. Information on how to download and install this plug-in is available on the download site.

Novell Client™ software supports the Universal Password. It also continues to support the NDS® password for older systems in the network. After Universal Password has been configured and enabled for a user, the Novell Client has the capability of automatically upgrading/migrating the NDS password to the Universal Password.

1.2 Universal Password

In the past, administrators have needed to manage multiple passwords (simple password, NDS password, enhanced password) because of password limitations. Administrators have also needed to deal with keeping the passwords synchronized.

- NDS Password: The older NDS password is stored in a hash form that is nonreversible. Only the NDS system can make use of this password, and it cannot be converted into any other form for use by any other system.
- Simple Password: The simple password was originally implemented to allow administrators to import users and passwords (clear text and hashed) from foreign LDAP directories such as Active Directory* and iPlanet*.

The limitations of the simple password are that no password policy (minimum length, expiration, etc.) is enforced.

- Enhanced Password: The enhanced password is no longer supported by Novell. The enhanced password is the forerunner of Universal Password. It offers some password policy, but its design is not consistent with other passwords. It provides a one-way synchronization and it replaces the simple or NDS password.

Novell introduced Universal Password as a way to simplify the integration and management of different password and authentication systems into a coherent network.

Universal Password addresses these password problems by doing the following:

- Providing one password for all access to eDirectory™.
- Enabling the use of extended characters in passwords.
- Enabling advanced password policy enforcement.
- Allowing synchronization of passwords from eDirectory to other systems.

Most features of password management require Universal Password to be enabled.

For detailed information, see Chapter 2, “Deploying Universal Password,” on page 13.

1.3 Password Policies

Universal Password provides the ability to create advanced password policies. A password policy is a collection of administrator-defined rules that specify the criteria for creating and replacing end user passwords. NMAS allows you to enforce password policies that you assign to users in Novell eDirectory.

You manage password policies by using iManager.

For more information, see Chapter 3, “Managing Passwords by Using Password Policies,” on page 25.

1.4 Password Self-Service

Password Self-Service enables users to do the following:

- Recover from forgotten passwords

  This service reduces calls to the help desk when users forget passwords.
- Reset passwords

  Users change their passwords while viewing the rules that you have specified in the password policy.

You manage the policy for password self-service by using iManager. Users access the password self-service features in several ways, including the Novell Client™, the iManager 2.0.2 portal, and the Identity Manager User Application.

The Password Self-Service features were removed from iManager 2.6 and later, so in order for users to use the self-service features, you must have a server running iManager 2.0.2. Users go to this server's portal (https://www.*my_iManager_server*.com/nps) to access the self-service features.

For more information, see Chapter 4, “Password Self-Service,” on page 49.

1.5 Password Synchronization

Password synchronization across connected systems is a feature included with Novell® Identity Manager 2.0 and later. It provides the following benefits:

- Bidirectional password synchronization
- Enforcement of Password Policies on connected systems
- E-mail notification when synchronization fails
- The ability to check password synchronization status for a user

For more information, see Chapter 5, “Password Synchronization across Connected Systems” in the *Novell Identity Manager 3.5.1 Administration Guide* (http://www.novell.com/documentation/idm35/admin/data/an4bz0u.html).

Deploying Universal Password

2

This section describes how to deploy and manage Universal Password.

Follow the instructions in sections 2.1 through 2.8 to deploy Universal Password:

2.1 Step 1: Review the Services You Currently Use and Understand their Current Password Limitations

The following table outlines some Novell® services and the password limitations they have. These limitations are addressed by Universal Password:

Table 2-1 *Password Limitations*

Service	Description	Limitations
Novell Client™ for Windows* NT*/2000/XP versions earlier than 4.9 and Novell Client for Windows 95/98 versions earlier than 3.4.	The Novell Client software for file and print services. It uses the NDS® password, which is based on the RSA public/private key system.	◆ Has limited support for passwords with extended characters ◆ Passwords are inaccessible from non-Novell systems ◆ Passwords are stored in a way that prevents extraction, thus disallowing interoperability with the simple password

Service	Description	Limitations
Windows Native Networking (CIFS) in NetWare 6 and NetWare 5.1 (NFAP add-on pack for NetWare 5.1)	Novell's CIFS server as part of the Native File Access Protocols. It allows Windows clients to access Novell services by using the built-in Windows Client Networking Services.	◆ Uses a separately administered password called the simple password ◆ Has no expiration or restriction capabilities for the simple password ◆ Attempts to synchronize with NDS password but can get out of sync
Macintosh* Native Networking (AFP) in NetWare 6 and NetWare 5.1 (NFAP add-on pack for NetWare 5.1)	Novell's AFP server as part of the Native File Access Protocols. It allows Macintosh clients to access Novell services by using the built-in Macintosh Client Networking Services.	◆ Uses a separately administered password called the simple password ◆ Has no expiration or restriction capabilities for the simple password ◆ Attempts to synchronize with the NDS password but can get out of sync
LDAP	Novell's LDAP services allow a user to bind using a username and password across a Secure Sockets Layer (SSL) connection.	◆ Limited interoperability with Novell Client services (NDS password) for extended character or international versions ◆ First tries the NDS password, then attempts to utilize the simple password if the bind is not a simple bind (that is, the bind is using an encrypted password)
LDAP User Import	Uses ICE or other tools to import users from foreign directories into eDirectory. Passwords are also brought in.	◆ Passwords are imported into the simple password ◆ Mutually exclusive of NFAP solutions (Windows and Macintosh Native File Access) if it is not a clear text password ◆ Password is in its digested/hashed native format
Web-Based Services	Novell Web-based services (Apache Web server) authentications. This includes eGuide, Novell Portal Services, and other Web-based applications.	◆ Limited interoperability with Novell Client services (NDS password) for extended character or international versions ◆ Not designed to check the simple password
RADIUS Services	Novell RADIUS Authentication Services.	◆ Limited interoperability with the Novell Client services (NDS password) for extended character or international versions
NetWare Remote Manager	Novell's Web-based server health and management interface.	◆ Limited interoperability with Novell Client services (NDS password) for extended character or international versions ◆ Not designed to check the simple password

Service	Description	Limitations
DirXML® Password Synchronization for Windows 1.0 and DirXML Starter Pack	Enables synchronization of passwords for NT, Active Directory, and eDirectory™ accounts.	- eDirectory password changes made outside of the Novell Client are not synchronized. For example, an eDirectory password change made through eGuide would not be synchronized to Active Directory or NT. See Sample Password Scenarios (http://www.novell.com/documentation/lg/dirxmlstarterpack/jetset/data/aktnwz0.html) for detailed information about DirXML Password Synchronization for Windows.

2.2 Step 2: Identify Your Need for Universal Password

If you answer yes to any of the following questions, you should plan to deploy and use Universal Password:

- Do you currently use Native File Access and desire to enforce policies such as password expiration or password length?
- Do you use or plan to use Native File Access (Windows or Macintosh)?
- Do you plan to have international users access Novell Web-based services or use the Novell Client for Windows to access Novell file and print services?
- Do you plan to use Novell Identity Manager 2 or 3, with its enhanced password policy and password synchronization capabilities?

2.3 Step 3: Make Sure Your Security Container Is Available

NMAS relies on storing global policies to the eDirectory tree, which is effectively the security domain. The security policies must be available to all servers in the tree.

NMAS places the authentication policies and login method configuration data in the Security container that is created off the [Root] partition. This information must be readily accessible to all servers that are enabled for NMAS. The purpose of the Security container is to hold global policies that relate to security properties such as login, authentication, and key management.

eDirectory 8.8 provides security container caching. This feature caches the security container data on local servers so NMAS doesn't need to access the Security container with every attempted login. See the *eDirectory 8.8 Administration Guide* (http://www.novell.com/documentation/edir88/edir88new/data/bwpla84.html) for more information.

With NMAS and eDirectory 8.7.x, we recommend that you create the Security container as a separate partition and that the container be widely replicated. This partition should be replicated as a Read/Write partition only on those servers in your tree that are highly trusted.

WARNING: Because the Security container contains global policies, be careful where writable replicas are placed, because these servers can modify the overall security policies specified in the eDirectory tree. In order for users to log in with NMAS, replicas of the User objects and security container must be on the NMAS server.

For additional information, see Novell TID3393169 (http://www.novell.com/support/viewContent.do?externalId=3393169)

2.4 Step 4: Verify That Your SDI Domain Key Servers Are Ready for Universal Password

You must verify that the SDI Domain Key servers meet minimum configuration requirements and have consistent keys for distribution and use by other servers within the tree. These steps are crucial. If you don't follow them as outlined, you could cause serious password issues on your system when you turn on Universal Password.

We recommend that NetWare 6.5 or later or eDirectory 8.7.3 or later be installed on your SDI Domain Key servers.

1 At a NetWare server console, load `sdidiag.nlm`.

   or

   At a Windows server command prompt, run `sdidiag.exe`.

   `Sdidiag.nlm` ships with NetWare 6.5 or later. `Sdidiag.exe` ships with the Windows version of eDirectory 8.7.3 or later. Both files are available as part of a security patch (`sdidiag21.exe`) associated with Novell TID 2966746 (http://support.novell.com/severlet/tidfinder/2966746).

2 Log in as an Administrator by entering the server (full context), the tree name, the username, and the password.

3 Check to make sure all your servers are using 168-bit keys.

   Follow the instructions in Novell TID 3364214 (http://www.novell.com/support/viewContent.do?externalId=3364214)to ensure that this requirement is met.

4 Enter the command `CHECK -v >> sys:system\sdnotes.txt`.

   The output to the screen displays the results of the `CHECK` command.

5 If no problems are found, go to Section 2.5, "Step 5: Upgrade at Least One Server in the Replica Ring to NetWare 6.5 or Later or eDirectory 8.7.3 or Later," on page 17.

   or

   If problems are found, follow the instructions written to the `sys:system\sdinotes.txt` file to resolve any configuration and key issues, then continue with Step 6.

6 Verify that the SDI Domain Key Servers are running NICI 2.6.*x* or later.

   At the server console, enter the NetWare command `M NICISDI.NLM`.

   The version must be 264*xx.xx* or later.

   If the version is earlier, you must do one of the following:

   - Update the servers' NICI to version 2.6.*x*, which requires eDirectory 8.7.3 or later.

You can download NICI from the Novell Free Download site (http://download.novell.com). Select NICI from the Product or Technology drop-down list, then click Search.

- Update the SDI Domain Key servers to NetWare 6.5 or later or eDirectory 8.7.3 or later.
- Remove the servers as SDI Domain Key Servers and add a NetWare 6.5 or eDirectory 8.7.3 or later server. See Section 2.5, "Step 5: Upgrade at Least One Server in the Replica Ring to NetWare 6.5 or Later or eDirectory 8.7.3 or Later," on page 17.

7 (Optional) After completing one of the options above, you might want to rerun the SDIDIAG CHECK command. See Step 4.

For more information on SDIDIAG, see Novell TID 10088626 (http://support.novell.com/cgi-bin/search/searchtid.cgi?/10088626.htm).

Adding or Removing an SDI Domain Key Server

To remove a server as an SDI Domain Key Server

1 At a NetWare server console, load `sdidiag.nlm`.

At a Windows server, open a command prompt box and run `sdidiag.exe`.

`Sdidiag.nlm` ships with NetWare 6.5 or later. `Sdidiag.exe` ships with the Windows version of eDirectory 8.7.3 or later. Both files are available as part of a security patch (`sdidiag21.exe`) associated with Novell TID 2966746 (http://support.novell.com/severlet/tidfinder/2966746).

2 Log in as an administrator with management rights over the Security container and the W0.KAP.Security objects by entering the server (full context), the tree name, the username, and the password.

3 Enter the command

For example, if server1 exists in container PRV in the organization Novell within the Novell_Inc tree, you would type `.server1.PRV.Novell.Novell_Inc.` for the servername.

To add a server as an SDI Domain Key Server:

4 From a NetWare server console, load `sdidiag.nlm`.

or

From a Windows server, open a command prompt box and run `sdidiag.exe`.

5 Log in as an Administrator by entering the server (full context), the tree name, the username, and the password.

6 Enter the command `AS -s` *servername*.

For example, if server1 exists in container PRV in the organization Novell within the Novell_Inc tree, you would type `.server1.PRV.Novell.Novell_Inc. for the servername`.

2.5 Step 5: Upgrade at Least One Server in the Replica Ring to NetWare 6.5 or Later or eDirectory 8.7.3 or Later

1 Identify the container that holds the User objects of those users who will be using Universal Password.

2. Find the partition that holds that container and the User objects.
3. Identify at least one server that holds a writable replica of the partition.
4. Upgrade that server to NetWare 6.5 or later or eDirectory 8.7.3 or later.

You do not need to upgrade all servers in your tree in order to enable Universal Password; however, we recommend that you upgrade them all as soon as possible. Plan to upgrade the servers that hold writable replicas first, followed by those with read-only replicas or no replicas. This allows Universal Password support for services on all those servers.

IMPORTANT: If you have LDAP and CIFS (Windows Native Networking) and/or AFP (Macintosh Native Networking) servers that you want to use Universal Password, you must upgrade those servers to NetWare 6.5.

2.6 Step 6: Check the Tree for SDI Key Consistency

Verify that all instances of cryptographic keys are consistent throughout the tree. To ensure that each server has the cryptographic keys necessary to securely communicate with the other servers in the tree:

1. At a NetWare server console, load `sdidiag.nlm`.

   or

   At a Windows server command prompt, run `sdidiag.exe`.

2. Enter the command `CHECK -v >> sys:system\sdinotes.txt -n` *`container DN`*.

   For example, if user Bob exists in container USR in the organization Acme within the Acme_Inc tree, you would type `.USR.Acme.Acme_Inc.` for the container DN.

   This reports if there are any key consistency problems among the various servers and the Key Domain servers.

   The output to the screen displays the results of the `CHECK` command.

3. If no problems are reported, you are ready to enable Universal Password. Go to "Step 7: Enable Universal Password" on page 18.

   or

   If problems are reported, follow the instructions in the `sdinotes.txt` file.

   In most cases, you are prompted to run the command `RESYNC -T`. This command can be repeated any time NMAS reports -1418 or -1460 errors during authentication with Universal Password.

   For more information on SDIDIAG options and operations, refer to the following:

   - Novell TID 3364214 (http://www.novell.com/support/viewContent.do?externalId=3364214)
   - Novell TID 7005397 (http://www.novell.com/support/viewContent.do?externalId=7005397)

2.7 Step 7: Enable Universal Password

1. Start Novell iManager.

2 Click *Roles and Tasks* > *Passwords* > *Password Policies*.

3 Start the Password Policy Wizard by clicking *New*.

4 Provide a name for the policy and click *Next*.

5 Select *Yes* to enable Universal Password.

6 Complete the Password Policy Wizard.

IMPORTANT: If you assign a policy to a container that is the root of a partition, the policy assignment is inherited by all users in that partition, including users in subcontainers. To determine whether a container is a partition root, browse for the container and note whether a partition icon is displayed beside it.

If you assign a policy to a container that is not the root of a partition, the policy assignment is inherited only by users in that specific container. It is not inherited by users that are in subcontainers. If you want the policy to apply to all users below a container that is not a partition root, you must assign the policy to each subcontainer individually.

2.8 Step 8: Deploy Novell Client Software

You can deploy the Novell Client for Windows version 4.91, but the client does not take advantage of these services until you enable Universal Password on the server (see Section 2.7, "Step 7: Enable Universal Password," on page 18).

Once the Universal Password is enabled, the Novell Client 4.9.1 and later for Windows automatically starts using the Universal Password. Users see no differences in the client, except with case-sensitive passwords.

NOTE: Novell Client 4.9.1 includes the NMAS Client.

2.9 Backward Compatibility

Universal Password is designed to supply backward compatibility to existing services. By default, passwords changed with this service can be synchronized to the simple and NDS passwords on the User object (you can choose which passwords you want to have synchronized by using the Password Management plug-in). This way, NetWare 6 and 5.1 servers running Native File Access protocols for Windows and Apple* native workstations continue to have their passwords function properly. Novell Client software earlier than the Novell Client for Windows version 4.9 or the Novell Client for Windows version 3.4, which don't take advantage of NMAS, also have their passwords continue to function properly.

The exception to this is the use of international characters in passwords. Because the character translations are different for older clients, the actual values no longer match. Customers who have deployed Web-based or LDAP services and who use international passwords have already seen these problems and have been required to change passwords so they do not include international characters. We recommend that all servers be upgraded to NetWare 6.5 and all Novell Client software be upgraded in order for full, system-wide international passwords to function properly.

The Novell NetWare Storage Management Services™ (SMS) infrastructure is used for Novell and third-party backup and restore applications. Additionally, the Novell Server Consolidation utility, Distributed File Services Volume Move, and Server Migration utilities use SMS as their data management infrastructure. The system passwords used by these Novell and third-party products cannot contain extended characters if they are to function in a mixed environment of NetWare 4, 5, and 6 servers. However, when all servers are upgraded to NetWare 6.5, extended character passwords can be used.

NOTE: Refer to Novell TID 3065822 (http://www.novell.com/support/viewContent.do?externalId=3065822) to see which applications and services are Universal Password-capable, as well as which applications and services are extended character-capable. Many applications and services can use extended characters without Universal Password.

The following table shows the expected behavior of Universal Password when it is enabled and interacts with older services.

***Table 2-2** Behavior of Enabled Universal Password*

Password Change Method	Passwords Changed
Novell Client software earlier than Novell Client for Windows NT/2000/XP version 4.9 or Novell Client for Windows 95/98 version 3.4 to any server version	NDS password only.
Native File Access (Windows or Macintosh) on NetWare 5.1 or NetWare 6	Simple password and NDS password. The password change is successful only if the old NDS and simple passwords were in sync.
Native File Access (Windows or Macintosh) on NetWare 6.5	Universal, simple, and NDS passwords are changed. All are synchronized, even if old ones were out of sync (if the configuration allows for synchronization and the password policy is configured to allow changes to NDS and simple passwords).
LDAP (standard) earlier than eDirectory 8.7.3	NDS password only.
LDAP (extended) earlier than eDirectory 8.7.3	Simple password or NDS password is changed (extensions specify which one). Simple password change results in a -1697 failure.
LDAP (standard) to NetWare 6.5 (or NetWare 5.1 or 6 running eDirectory 8.7.3)	Universal, simple, and NDS passwords are changed. All are synchronized even if old ones were out of sync (if the password policy is configured to allow changes to NDS and simple passwords).
LDAP (extended) to NetWare 6.5	Universal, simple, or NDS password changed (extensions specify which one). This only applies if the password policy is configured to allow changes to NDS and simple passwords.
NetWare Administrator (run on a workstation with a client earlier than version 4.9) to any User object in any container	NDS password only.
NetWare Administrator (run on a workstation with the version 4.9 client) to a User object in a container that has a R/W replica on a NetWare 6.5 server (or NetWare 5.1or 6 running eDirectory 8.7.3)	(Untested and unsupported) Universal, simple, and NDS passwords are changed. All are synchronized even if old ones were out of sync.

Password Change Method	Passwords Changed
ConsoleOne® (run on a workstation with a client earlier than version 4.9) to any User object in any container	There are separate change password pages for the NDS password and the simple password.
ConsoleOne (run on a workstation with the version 4.9 client) with the NMAS client installed and enabled to a User object in a container that has a R/W replica on a NetWare 6.5 server (or NetWare 5.1 or 6 running eDirectory 8.7.3)	Universal, simple, and NDS passwords are changed. All are synchronized even if old ones were out of sync (if the password policy is configured to allow changes to NDS and simple passwords).
ConsoleOne (run on a workstation with the version 4.9 client) to a User object in a container that has no R/W replicas on any NetWare 6.5 servers, or NetWare 5.1 or 6 with eDirectory 8.7.3 (only R/W replicas on NetWare 5.1 or NetWare 6 servers with eDirectory versions earlier than 8.7.3)	There are separate change password pages for the NDS password and the simple password.
Novell iManager 1.5 (NetWare 5.1 or NetWare 6 only) to any User object in any container	NDS password only.
Novell iManager 2.0 (NetWare 6.5 only) to a User object in a container that has a R/W replica on a NetWare 6.5 server (or NetWare 5.1 or 6 running eDirectory 8.7.3)	Universal, simple, and NDS passwords are changed. All are synchronized even if old ones were out of sync (if the password policy is configured to allow changes to NDS and simple passwords).
Novell iManager 2.0 (NetWare 6.5 only) to a User object in a container that does not have any R/W replica on any NetWare 6.5 server, or NetWare 5.1 or 6 servers running eDirectory version 8.7.3	NDS password only.
Novell Remote Manager running on a NetWare 6.5 server to a User object in a container that has a R/W replica on a NetWare 6.5 server, or NetWare 5.1 or 6 servers running eDirectory version 8.7.3	Universal, simple, and NDS passwords are changed. All are synchronized, even if old ones were out of sync (if the password policy is configured to allow changes to NDS and simple passwords) .
Novell Remote Manager running on a NetWare 6.5 server to a User object in a container that does not have a R/W replica on a NetWare 6.5 server, or NetWare 5.1 or 6 servers running eDirectory version 8.7.3	NDS password only.
Novell Remote Manager NDS change password running on a NetWare 5.1 or NetWare 6 server	NDS password only.
Novell Remote Manager simple password management (NetWare 5.1 and 6 only with Native File Access installed)	Simple password only.

2.10 Password Administration

You can use the following methods to administer Universal Password:

- **iManager (Recommended):** Administering passwords by using Novell iManager automatically sets the Universal Password to be synchronized to simple and NDS password values for backward compatibility. The NMAS task in iManager does allow for granular management of individual passwords and authentication methods that are installed and configured in the system.

  In iManager using the Password Management plug-in, you can use password policies to specify how Universal Password is synchronized with NDS, simple, and distribution passwords. In addition, an iManager task is provided that lets an Administrator set a user's Universal Password.
- **ConsoleOne:** The *NDS Password* tab in ConsoleOne on a NetWare 6.5 server, or on a Windows workstation with the Novell Client for Windows version 4.9/4.91 installed, automatically sets the Universal Password and synchronizes other passwords for backward compatibility.
- **NWAdmin32:** Although Novell has not tested this case, NetWare Administrator should automatically set the Universal Password and synchronize other passwords for backward compatibility.
- **LDAP:** Changing passwords via LDAP on a NetWare 6.5 server also sets the Universal Password and synchronizes other passwords for backward compatibility.
- **Third-party Applications:** Third-party applications that are written to Novell Cross-Platform Libraries and that perform password management also set the Universal Password and synchronize other passwords if the newer libraries are installed on the Novell Client for Windows version 4.9/4.9.1 workstation or NetWare 6.5 server.

2.11 Issues to Watch For

- In a mixed environment of Novell Client software earlier than the Novell Client for Windows NT/2000/XP version 4.9 or the Novell Client for Windows 95/98 version 3.4 (including Native File Access servers on NetWare 5.1 and NetWare 6), if passwords are changed from those older systems, only the older values are changed, so the NDS or the simple password is out of synchronization with the Universal Password. This might be an issue only for users who log in to their accounts from both older Novell Client workstations (earlier than Client for Windows NT/2000/XP version 4.9 or Novell Client for Windows 95/98 v3.4) and from newer Novell Client workstations (Novell Client for Windows NT/2000/XP version 4.9 or Novell Client for Windows 95/98 version 3.4). If so, the problem occurs only if users either use international characters in passwords or if they change the password from the older workstation.
- When you disable a user’s NDS password, the NDS password is set to an arbitrary value that is unknown to the user. The following list describes how some login methods handle this change:
  - The simple password method is not disabled if the NDS password is disabled. The simple password method uses the Universal Password if it is enabled and available. Otherwise, it uses the simple password. If Universal Password is enabled but not set, then the simple password method sets the Universal Password with the simple password.

  - The enhanced password method is not disabled when the NDS password is disabled. The enhanced password does not use the Universal Password for login.
  - The NDS password method (Universal Password) is not disabled when the NDS password is disabled. The NDS password method uses the Universal Password if it is enabled and available. Otherwise, it uses the NDS password. If the Universal Password is enabled but not set, then the NDS Password method sets the Universal Password with the NDS password.
- A security enhancement was added to NMAS 2.3.4 regarding Universal Passwords changed by an administrator. It works the same way as the feature previously provided for NDS password. If an administrator changes a user's password, such as when creating a new user or in response to a help desk call, for security reasons the password is automatically expired if you have enabled the setting to expire passwords in the password policy. (This is the *Number of days before password expires (0-365)* setting in the password policy under *Advanced Password Rules*). For this particular feature, the number of days is not important, but the setting must be enabled.

  NOTE: With NMAS 3.1.3 and later, this behavior can be overwritten in the password policy by selecting the *Do not expire the user's password when the administrator sets the password* option.

- Prior to NMAS 3.1, NDS password settings are replaced when password policies are changed.

  If you create a password policy and enable Universal Password and enable Advanced Policy, the Advanced Password Rules are enforced instead of any existing password settings for NDS password. The legacy password settings are ignored. No merging or copying of previous settings is done automatically when you create password policies.

  For example, if you had a setting for the number of grace logins that you were using with the NDS password, when you enable Universal Password you need to re-create the grace logins setting in the Advanced Password Rules in the password policy.

  NMAS 3.1 and later replaces the NDS password setting on the user object with corresponding password policy settings. For example, if the number of grace logins for the user object is 4, and it is 5 for the password policy, when the user logs in or changes the password, the number of grace logins for the user object changes to 5.

Managing Passwords by Using Password Policies

3

You can use password policies to increase security by setting rules for how users create their passwords. You can also decrease help desk costs by providing users with self-service options for forgotten passwords and for resetting passwords.

The following is discussed in this section:

- Section 3.1, “Overview of Password Policy Features,” on page 25
- Section 3.2, “Planning for Password Policies,” on page 26
- Section 3.3, “Prerequisite Tasks for Using Password Policies,” on page 31
- Section 3.4, “Creating Password Policies,” on page 34
- Section 3.5, “Assigning Password Policies to Users,” on page 44
- Section 3.6, “Finding Out Which Policy a User Has,” on page 45
- Section 3.7, “Setting A User's Password,” on page 46
- Section 3.8, “Troubleshooting Password Policies,” on page 46

For information on Forgotten Password Self-Service and Reset Password Self-Service, see Chapter 4, “Password Self-Service,” on page 49.

3.1 Overview of Password Policy Features

A password policy is a collection of administrator-defined rules that specify the criteria for creating and replacing end-user passwords. NMAS™ enables you to enforce password policies that you assign to users in Novell® eDirectory™.

Password policies can also include Forgotten Password Self-Service features, to reduce help desk calls for forgotten passwords. Another self-service feature is Reset Password Self-Service, which lets users change their passwords while viewing the rules the administrator has specified in the password policy. Users access these features through the iManager self-service console.

Most features of password management require Universal Password to be enabled. Ideally, you should also integrate the iManager self-service console into your existing company portal, if you have one, to give users easy access to Forgotten Password Self-Service and Reset Password Self-service. The iManager self-service console is available only with iManager 2.0.2.

You create password policies by using a wizard. In iManager, click *Passwords* > *Password Policies* > *New*. For more information on creating password policies, see Section 3.4, “Creating Password Policies,” on page 34.

Consider the following before you implement password policies:

- Section 3.1.1, “Universal Password,” on page 26

3.1.1 Universal Password

Using a password policy requires you to enable Universal Password for your users if you want to use advanced password rules, password synchronization, and many of the Forgotten Password features.

For information on deploying Universal Password, see Chapter 2, "Deploying Universal Password," on page 13.

3.2 Planning for Password Policies

- Section 3.2.1, "Planning How to Assign Password Policies in the Tree," on page 26
- Section 3.2.2, "Planning the Rules for Your Password Policies," on page 26
- Section 3.2.3, "Planning Login and Change Password Methods for your Users," on page 28

3.2.1 Planning How to Assign Password Policies in the Tree

We recommend that you assign a default policy to the whole tree and assign any other policies you use as high up in the tree as possible, to simplify administration.

NMAS determines which password policy is in effect for a user. See Section 3.5, "Assigning Password Policies to Users," on page 44 for more information.

3.2.2 Planning the Rules for Your Password Policies

You can use the Advanced Password Rules in a password policy to enforce your business policies for passwords.

Keep in mind that the Novell Client (4.9 SP2), Identity Manager User Application, and the iManager self-service console (iManager 2.0.2) display the password rules from the password policy. If your users will be changing their passwords through the LDAP server or on a connected system, you need to make the password rules readily available to users to help them be successful in creating a compliant password.

If you are using Identity Manager Password Synchronization, keep in mind that you must make sure that the users who are assigned password policies match with the users you want to participate in Password Synchronization for connected systems. Password policies are assigned with a tree-centric perspective. By contrast, Password Synchronization is set up per driver, on a per-server basis. To get the results you expect from Password Synchronization, make sure the users that are in a read/write or master replica on the server running the drivers for Password Synchronization match with the containers where you have assigned password policies with Universal Password enabled. Assigning a password policy to a partition root container ensures that all users in that container and subcontainers are assigned the password policy.

Advanced Password Rules

Advanced Password Rules let you define the following criteria for the Universal Password:

- The lifetime of a password: Password policies provide the same policy features eDirectory has offered in the past, so you can specify how often a password must be changed, and whether it can be reused.
- What a password contains: You can require a combination of letters, numbers, uppercase or lowercase letters, and special characters. You can exclude passwords that you don't feel are secure, such as your company name.

To use Advanced Password Rules in a password policy, you must enable Universal Password. If you don't enable Universal Password for a policy, the password restrictions set for the NDS® password are enforced instead.

NOTE: When you create a password policy and enable Universal Password, the Advanced Password Rules are enforced instead of any existing password settings for NDS Password. The legacy password settings are ignored. No merging or copying of previous settings is done automatically when you create password policies.

For example, if you have a setting for the number of grace logins that you use with the NDS Password, when you enable Universal Password you need to re-create the grace logins setting in the Advanced Password Rules in the password policy.

If you later disable Universal Password in the password policy, the existing password settings that you had are no longer ignored. They would be enforced for the NDS password.

NMAS 3.1 and later replaces the NDS password setting on the user object with corresponding password policy settings. For example, if the number of grace logins for the user object is 4, and it is 5 for the password policy, when the user logs in or changes the password, the number of grace logins for the user object changes to 5.

Enforcing Policies

When you assign a password policy to users in the tree, any password changes going forward must comply with the Advanced Password Rules in that policy. In the portal (iManager 2.02, Virtual Office, Identity Manager User Application, and eXtend™ Director), the password rules are displayed in the page where the user changes the password. In Novell Client™ 4.9 SP2 or later, the rules are also displayed. In both methods of access, a noncompliant password is rejected. NMAS is the application that enforces these rules.

You can specify in the policy that existing passwords are checked for compliance and users are required to change existing noncompliant passwords. A password is marked as expired when the check for compliance option is enabled and the password does not satisfy the password policy rules.

You can also specify that when users authenticate through a portal, they are prompted to set up any Forgotten Password features you have enabled. This is called post-authentication services. For example, if you want users to create a Password Hint that can be e-mailed to them when they forget a password, you can use post-authentication services to prompt users to create a Password Hint at login time.

The post-authentication setting is the last option on the Forgotten Password property page.

3.2.3 Planning Login and Change Password Methods for your Users

There are several different ways a user can log in or change a password. For all of them, you need to upgrade your environment to eDirectory 8.7.3 or later with the associated LDAP server, NMAS 2.3 or later, and iManager 2.0.2 or later. For more information about upgrading to support Universal Password, see Chapter 2, “Deploying Universal Password,” on page 13.

This section explains the additional requirements for supporting Universal Password in each case:

- “Novell Client” on page 28
- “iManager 2.02 and Virtual Office” on page 29
- “Other Protocols” on page 29
- “Connected Systems” on page 29
- “Preventing Legacy Novell Clients from Changing Passwords” on page 30

Novell Client

If you are using the Novell Client, upgrade it to version 4.9 SP2 or later.

Keep in mind that using the Novell Client is not required, because users can log in through the iManager self-service console or other company portals depending on your environment. Also, the Novell Client is no longer required for Password Synchronization on Active Directory or NT.

The following table describes the differences between Novell Client versions in regard to Universal Password and gives suggestions for handling legacy Novell Clients.

Table 3-1 *Universal Password with legacy Novell Clients*

Novell Client Version	Login	Change Password
Earlier than 4.9	Does not go through NMAS, so it does not support Universal Password. Instead, it logs in directly using the NDS password.	Changes the NDS Password directly, instead of going through NMAS. If you are using Universal Password, this can mean that the NDS password and the Universal Password are not kept synchronized. To prevent this, you have three options: ◆ Upgrade all the clients to version 4.9 or later. ◆ Block legacy clients from changing passwords by using an attribute value on a container. With this solution, legacy clients can still log in, but they cannot change the password. Password changes must be done using a later Novell Client or iManager. See “Preventing Legacy Novell Clients from Changing Passwords” on page 30. ◆ Use the password policy setting for *Remove the NDS Password when Setting Universal Password*. This is a drastic measure, because it prevents both login and password change through the NDS password.

Novell Client Version	Login	Change Password
4.9	Supports Universal Password.	Enforces password policy rules for Universal Password. If a user tries to create a password that is not compliant, the password change is rejected. However, the list of rules is not displayed to the user.
4.9 SP2 or later	Supports Universal Password.	Enforces password policy rules for Universal Password. In addition, it displays the rules to the users to help them create compliant passwords.

iManager 2.02 and Virtual Office

iManager 2.02 and Virtual Office provide Password Self-Service, so users can reset passwords and set up Forgotten Password Self-Service if the password policy provides it. The iManager self-service console is accessible to users on your iManager 2.02 server by using a URL such as https://www.*servername*.com/nps (for example, https://www.myiManager.com/nps).

- Make sure users have a browser that supports iManager 2.0.2 or later.
- We recommend that in your password policies you accept the default setting of *Synchronize NDS Password When Setting Universal Password*.
- Make sure you have the NMAS Simple Password login method installed. You can install it when you install eDirectory or you can manually install it afterward.

Other Protocols

Make sure that eDirectory, LDAP server, NMAS, and iManager are upgraded to support Universal Password.

For information about using AFP, CIFS, and other protocols with Universal Password, see Chapter 2, "Deploying Universal Password," on page 13.

Connected Systems

If you are using Identity Manager Password Synchronization, make sure the following requirements are met so that user password changes are successful:

- Any DirXML® drivers for the system have been upgraded to Identity Manager format.
- The Identity Manager driver configuration includes the new Password Synchronization policies.
- The Password Synchronization settings should specify that Universal Password is to be used, as well as the Distribution Password if bidirectional Password Synchronization is desired.
- Password filters have been deployed on the connected system to capture passwords, if necessary.

For more information, see "Password Synchronization across Connected Systems" in the *Novell Identity Manager 3.5.1 Administration Guide* (http://www.novell.com/documentation/idm35/admin/data/an4bz0u.html).

Preventing Legacy Novell Clients from Changing Passwords

For versions of the Novell Client earlier than 4.9, login and password changes go directly to the NDS Password instead of through NMAS, so Universal Password is not supported.

If you are using Universal Password, using a legacy Novell Client to change passwords can create a problem called *password drift*, meaning that the NDS password and the Universal Password are not kept synchronized.

To prevent this issue, one option is to block password changes from Novell Clients earlier than version 4.9. This is done by using an eDirectory attribute on a partition root container, class, or object. The attributes are part of the schema in eDirectory 8.7.3 or later and are not supported on eDirectory 8.7.0 or earlier.

The method used by legacy Novell Clients to change the NDS password is called NDAP password management. The following list explains how you can use an attribute to disable NDAP password management at the partition level. You can still enable it per class or per object if necessary by using other attributes.

- **ndapPartitionPasswordMgmt:** For partition-level containers. If the attribute is not present or the value is not set at the partition level, then NDAP password management is enabled.

  To disable NDAP password management, add this attribute to the partition and set it to 0. To enable it again, set the attribute to 1.

  You can use the other attributes listed below to let classes or objects use NDAP password management even if it is disabled at the partition level. However, if NDAP password management is enabled at the partition level, then NDAP password management is enabled for all objects in that partition regardless of the class and entry level policies.
- **ndapClassPasswordMgmt:** For a class. If you add this attribute to a class definition, the class can use NDAP password management even if the partition-level policy specifies that it is disabled. The presence of this attribute is what enables is NDAP password management; the value is not important.
- **ndapPasswordMgmt:** For a specific object. If you add this attribute to a specific object and set the value to 1, the object can use NDAP password management even if the partition or class specifies that it is disabled.

  A setting of 0 disables NDAP password management, but only if it is also disabled at the partition level.

IMPORTANT: Remember that eDirectory 8.7.0 and earlier does not support this feature. If a tree exists with an eDirectory 8.7.3 or later server and an eDirectory 8.7.0 or earlier server, and the two servers share a partition, disabling NDAP password management on that partition has unreliable results. The 8.7.3 server enforces the setting, preventing legacy Novell Clients from changing the NDS password; however, the 8.7.0 server does not enforce the setting. If a user tries to change the NDS Password via the 8.7.0 server, the change succeeds.

3.3 Prerequisite Tasks for Using Password Policies

If you want to take advantage of all the features of password policies, you need to complete some steps to prepare your environment.

1 Upgrade your environment to support Universal Password.

For more information, see Chapter 2, “Deploying Universal Password,” on page 13.

2 Upgrade your client environment to support Universal Password.

See Section 3.2.3, “Planning Login and Change Password Methods for your Users,” on page 28 and Chapter 2, “Deploying Universal Password,” on page 13.

3 If you have not run the iManager Configuration Wizard previously when you set up iManager (either as part of the iManager install or post-installation), you must run it. For information on how to run the iManager Configuration Wizard, see Section 6.1.2, “Installing RBS,” in the *Novell iManager 2.7 Administration Guide* (http://www.novell.com/documentation/imanager27/imanager_admin_27/data/am757mw.html).

IMPORTANT: After you run the iManager Configuration Wizard, iManager runs in RBS mode. This means that administrators do not see any tasks unless they have assigned themselves to specific roles. Make sure you assign administrators to roles to give them access to all the iManager tasks.

4 Install the Password Management plug-ins.

This is available for download at the Novell Free Download Site (http://download.novell.com).

5 Make sure that SSL is configured between the iManager Web server and eDirectory, even if they are running on the same machine.

This is a requirement for NMAS 2.3 or later, and for Step 6.

6 Make sure the LDAP Group-Server object in eDirectory is configured to require TLS for simple bind.

This is the default setting when you configure iManager. Requiring TLS for simple bind is strongly recommended for Password Self-Service functionality, and is required for using the iManager task *Passwords* > *Set Universal Password*.

If you are requiring TLS for simple bind, no additional configuration is needed for the LDAP SSL port.

IMPORTANT: If you choose not to require TLS for simple bind, this means that users are allowed to log in to the iManager self-service console by using a clear-text password.

You can use this option, but another step is required.

By default, the Password Self-Service functionality assumes that the LDAP SSL port is the one specified in the System.DirectoryAddress setting in the `PortalServlet.properties` file. If your LDAP SSL port is different, you must indicate the correct port by adding the following key pair to the `PortalServlet.properties` file:

LDAPSSLPort=*your_port_number*

For example, if you are running Tomcat, you would add this key pair in the `PortalServlet.properties` file in the `tomcat\webapps\nps\WEB_INF` directory.

7. To enable e-mail notification for Forgotten Password features, complete the steps in Section 4.6, “Configuring E-Mail Notification for Password Self-Service,” on page 66.

   You must set up the SMTP server and customize the e-mail templates.
8. (NetWare 6.5 users only) If you have previously set up Universal Password for use with NetWare 6.5, complete the steps in Section 3.3.1, “Re-Creating Universal Password Assignments,” on page 32.

You are now ready to use all the features of password policies. Create policies as described in Section 3.4, “Creating Password Policies,” on page 34.

3.3.1 Re-Creating Universal Password Assignments

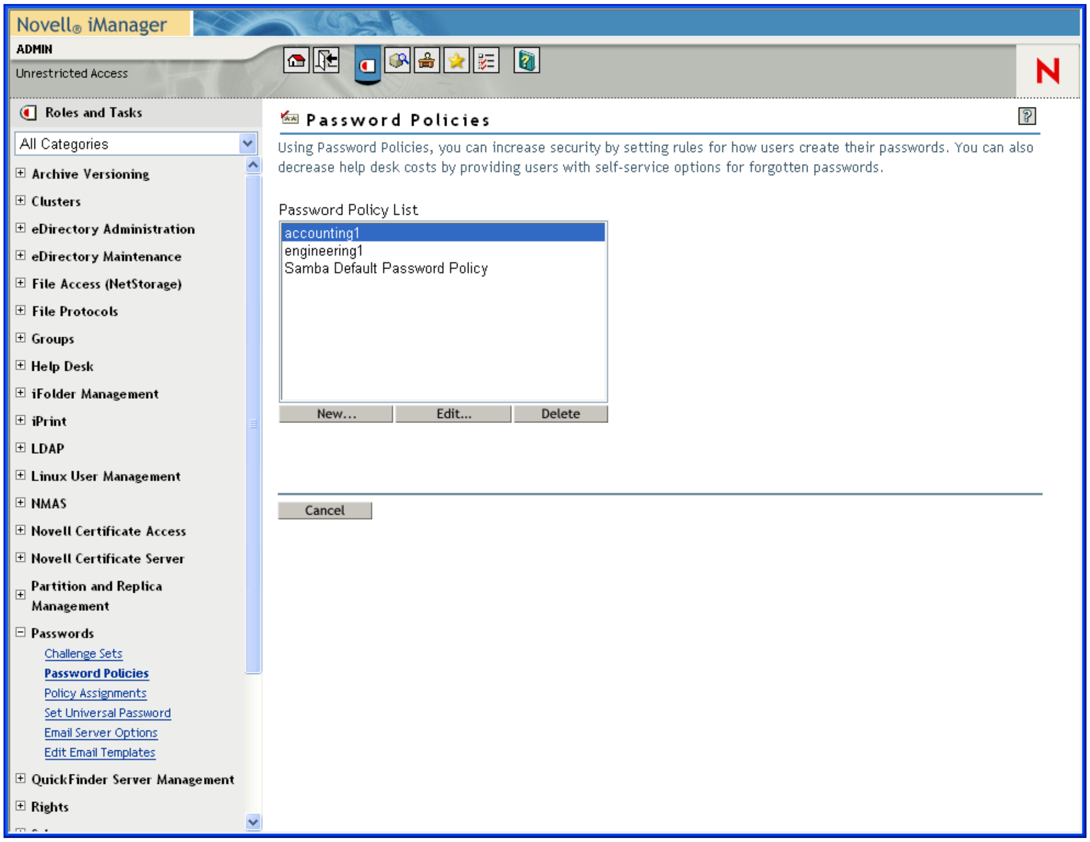
If you have previously set up Universal Password for use with NetWare 6.5, you must remove the old password policies and use the new plug-ins and password policies.

- The NMAS plug-ins that were used in NetWare 6.5 for Universal Password are no longer available. Instead, you use *Passwords* > *Password Policies*, which offers more features.
- The first time you use the *Password Policies* in the new plug-ins, you see three policy objects in the list that cannot be edited:
  - Universal Password On
  - Universal Password Off
  - Universal Password On - S

  These objects were used for the NetWare 6.5 implementation of Universal Password. To take advantage of the additional benefits of password policies provided by Identity Manager, you need to remove them.

  The following figure shows an example:

Figure 3-1 *Password Policies from NetWare 6.5 use of Universal Password*



Using Password Policies, you can increase security by setting rules for how users create their passwords. You can also decrease help desk costs by providing users with self-service options for forgotten passwords.

Password Policy List

accounting1
engineering1
Samba Default Password Policy

To remove the old policy objects and re-create your policies:

1 Decide where you want Universal Password enabled in your tree:

- If you want it turned on for the same containers as when you set up Universal Password the first time with the NetWare 6.5 plug-ins, continue with Step 2.
- If you want it turned on everywhere in your tree, simply create a new password policy with Universal Password enabled and assign it to the Login Policy object. Then continue with Step 4 to remove the old policies.

2 Find out where in the tree you had previously enabled Universal Password when you set it up using the plug-ins that shipped with NetWare 6.5.

This step is necessary because the plug-ins do not display where the assignments were made using the old plug-ins. Instead, you find them by searching the tree.

2a Search the tree for objects that have the nspmPasswordPolicyDN attribute populated with one of the following values:

- Universal Password On
- Universal Password On - S

2b Make a note of all the containers that are the results of the search. These are the containers where Universal Password is turned on.

3 If you want Universal Password assigned in the same containers where you had assigned it previously, create one or more new password policies with Universal Password enabled and assign them to the same containers.

Refer to the list of containers from Step 2 to make sure your assignments match.

4 Go to *Passwords* > *Password Policies* and remove the policy objects that remain from the first NetWare 6.5 implementation:

- Universal Password Off
- Universal Password On
- Universal Password On - S

After removing the old policy objects, you can use new password policies to meet your password needs.

3.4 Creating Password Policies

1 Make sure you have completed the steps in Section 3.3, “Prerequisite Tasks for Using Password Policies,” on page 31.

These steps prepare you to use all the features of password policies.

2 In iManager, in the *Roles and Tasks* view, click *Passwords* > *Password Policies*.

3 Click *New* to create a new password policy.

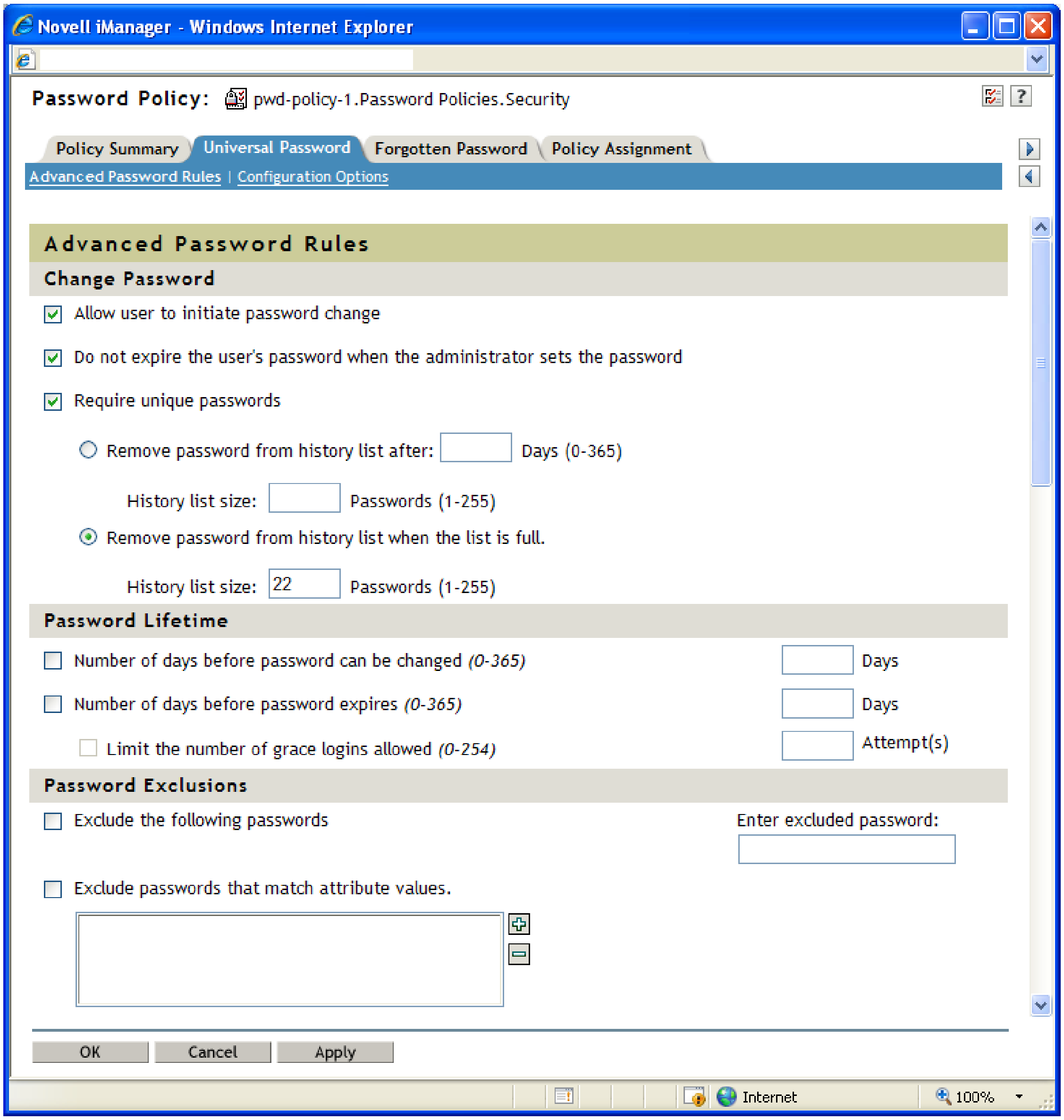
4 Follow the steps in the wizard to create Advanced Password Rules, Universal Password Configuration Options, and Forgotten Password selections for the policy.

See the online help for information about each step, as well as the information in Chapter 3, “Managing Passwords by Using Password Policies,” on page 25 and in Chapter 4, “Password Self-Service,” on page 49.

3.4.1 Advanced Password Rules

Figure 3-2 shows the first section of the advanced password rules:

Figure 3-2 Advanced Password Rules



Novell iManager - Windows Internet Explorer

Password Policy: pwd-policy-1.Password Policies.Security

Policy Summary
Universal Password
Forgotten Password
Policy Assignment
Advanced Password Rules | Configuration Options

Advanced Password Rules

Change Password

☑ Allow user to initiate password change

☑ Do not expire the user's password when the administrator sets the password

☑ Require unique passwords

○ Remove password from history list after: [ ] Days (0-365)

History list size: [ ] Passwords (1-255)

● Remove password from history list when the list is full.

History list size: 22 Passwords (1-255)

Password Lifetime

□ Number of days before password can be changed *(0-365)* [ ] Days

□ Number of days before password expires *(0-365)* [ ] Days

□ Limit the number of grace logins allowed *(0-254)* [ ] Attempt(s)

Password Exclusions

□ Exclude the following passwords

Enter excluded password: [ ]

□ Exclude passwords that match attribute values.

Change Password

- Allow user to initiate password change

  This allows the user to use the password self-service features (see Chapter 4, “Password Self-Service,” on page 49).

- Do not expire the user’s password when the administrator sets the password

  This option requires the user to go and change his or her password. This feature allows you to override the default. The default in eDirectory, when password expiration is set, is to expire the user’s password when the administrator sets the password.

- Require unique passwords

When this option is selected, the user is prevented from changing the password to one that is already in the history list. For example, if you specify 3, the user's previous three passwords are stored. If a user tries to change the password and reuse one that is in the history list, the password policy rejects the password and the user is prompted to specify a different one.

You can specify how unique passwords are enforced by using one of the following two values:

- Remove password from history list after a specified number of days (0-365) and a specified history list size (1-255).

  If you require unique passwords, you can specify how many days a previous password remains stored in the history list for comparison.

  For example, if you specify 30 and the user's previous password was "mountains99", that password remains in the history list for 30 days. During that time, if the user tries to change his or her password and reuse "mountains99," the password policy rejects that password and the user is prompted to specify a different one. After the 30-day period, the old password is no longer stored for comparison, and the password policy allows it to be reused.

  If you require unique passwords, you can indicate how many passwords are stored in the history list for comparison. For example, if you specify 3, then the user's previous three passwords are stored. If a user tries to change his or her password and reuse one that is in the history list before the number of days specified for removal from the history list, the password policy rejects the password and the user is prompted to specify a different one.

  If *Require unique passwords* is selected and you select *Remove password from history list after a specified number of days (0-365)* but don't specify a number of days, the password is on the history list for 8 times the value set in the *Number of days before password expires (0-365)* field. If neither field has a value, the password is on the history list for 365 days.

  If you specify a password history list size and a number of days, and the number of passwords in the password history list size has been met, the user cannot change his or her password unless the password has expired. An administrator can change or set a user password even if the password list size has been met.

  After one or more passwords expire in the password history list, the list is no longer full, and a user is again able to change his or her password. This limitation is included to prevent users from changing their passwords so many times that a password is no longer included in the password history list, and they can re-use it.

  If a password history list size is not specified, the password history is never full.

- Remove password from history list when the list is full and a specified history list size (1-255).

  If you require unique passwords, you can indicate how many passwords are stored in the history list for comparison. This option works on a first-in, first-out basis, where the oldest passwords are removed from the history list first. For example, when a user creates a new password that is not currently in the history list, the oldest password in the history list is removed if the history list is full.

  If this option is selected, you should also select the minimum password lifetime option.

Password Lifetime

- Number of days before password can be changed (0-365)

For example, if this value is set to 30, a user must keep the same password for 30 days before he or she can change it. The password policy does not allow the Universal Password to be changed by the user before that time has elapsed.

- Number of days before password expires (0-365)

  For example, if this value is set to 90, a user's password expires 90 days after it has been set. If grace logins are not enabled, the user cannot log in after a password has expired, and administrator assistance is needed to reset the password. However, if you enable grace logins, the user can log in with the expired password the specified number of times. Also, if you have not selected the *Limit Grace Logins* option, unlimited grace logins are allowed.

NOTE: A security enhancement was added to NMAS 2.3.4 regarding Universal Passwords changed by an administrator. It works in much the same way as the feature previously provided for NDS password. If an administrator changes a user's password, such as when creating a new user or in response to a help desk call, the password is automatically expired if you have enabled the setting to expire passwords in the password policy. For this particular feature, the number of days is not important, but this setting must be enabled. Selecting the *Do Not Expire User's Password When the Administrator Sets the Password* option overrides this security enhancement.

  - Limit the number of grace logins allowed (0-254)

    When the password expires, this value indicates how many times a user is allowed to log in to eDirectory by using the expired password. If grace logins are not enabled, the user cannot log in after a password has expired, and he or she requires administrator assistance to reset the password. If the value is 1 or more, the user has a chance to log in additional times before being forced to change the password. However, if the user does not change the password before all the grace logins are used, he or she is locked out and is unable to log in to eDirectory. Also, if you have not selected the *Limit Grace Logins* option, unlimited grace logins are allowed.

Password Exclusions

- Exclude the following passwords

  This allows you to manually type the passwords you want to exclude. You can exclude only specific words, not a pattern or an eDirectory attribute.

  For NMAS 3.1.3 and later, the strings in the exclude list cannot be contained in the password and the comparison is case-insensitive. For example, if test is in the exclude list, then the following cannot be passwords: Test, TEST, ltest, test1, and latest.

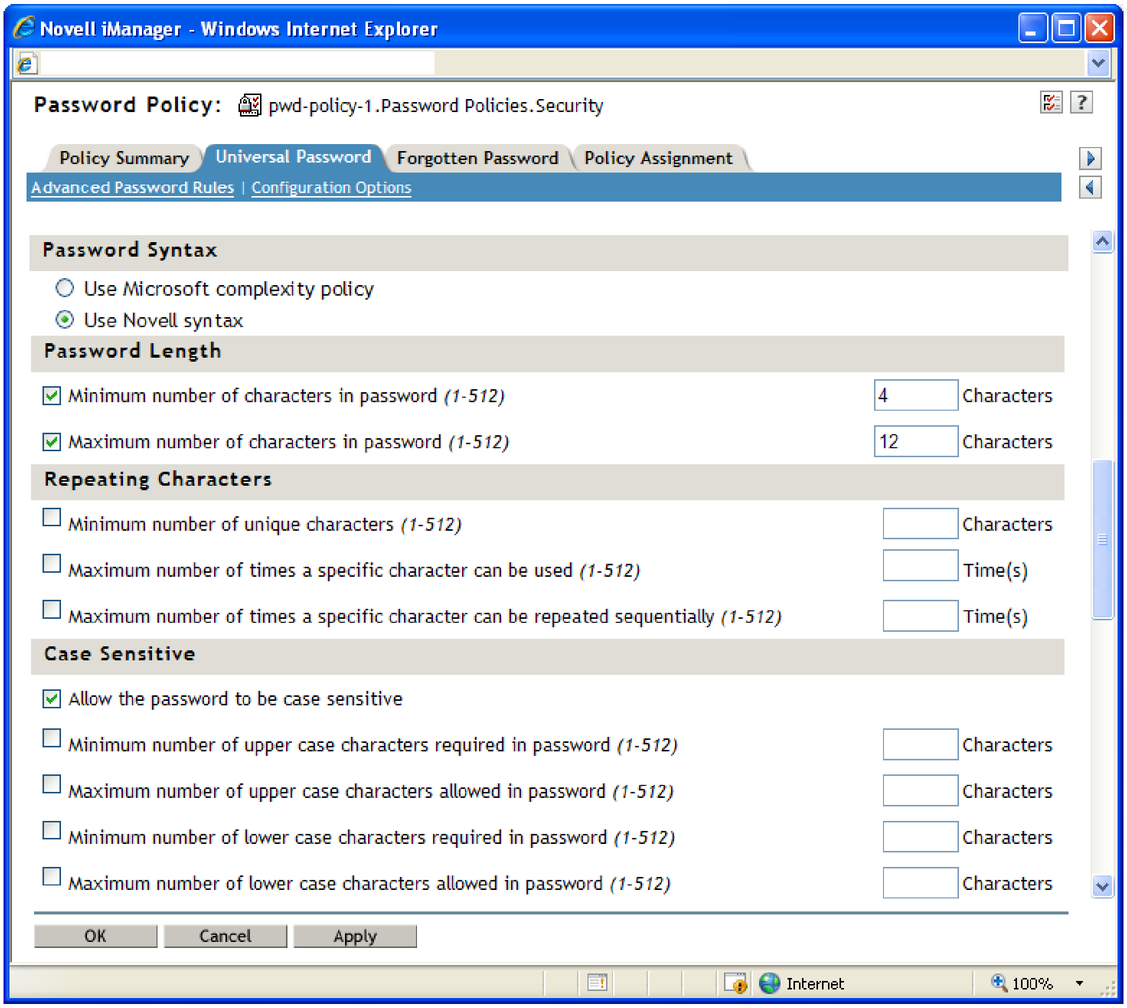
  Keep in mind that password exclusions can be useful for a few words that you think would be security risks. Although an exclusion list feature is provided, it is not intended to be used for a long list of words such as a dictionary. Long lists of excluded words can affect server performance. Instead of a long exclusion list to protect against "dictionary attacks" on passwords, we recommend that you use the Advanced Password Rules to require numbers to be included in the password.

- Exclude passwords that match attribute values

This allows you to select User object attributes that you want to exclude from being used as passwords. For example, if you add the Given Name attribute to the list and the Given Name attribute contained the value of Frank, then frank, frank1, 1frank, etc. could not be used as the password.

Use the plus and minus buttons to add and delete attribute values from the list.

Figure 3-3 *Advanced Password Rules Continued*



Password Policy: pwd-policy-1.Password Policies.Security

Password Syntax

○ Use Microsoft complexity policy

● Use Novell syntax

Password Length

☑ Minimum number of characters in password *(1-512)*	4	Characters
☑ Maximum number of characters in password *(1-512)*	12	Characters

Repeating Characters

□ Minimum number of unique characters *(1-512)*		Characters
□ Maximum number of times a specific character can be used *(1-512)*		Time(s)
□ Maximum number of times a specific character can be repeated sequentially *(1-512)*		Time(s)

Case Sensitive

☑ Allow the password to be case sensitive

□ Minimum number of upper case characters required in password *(1-512)*		Characters
□ Maximum number of upper case characters allowed in password *(1-512)*		Characters
□ Minimum number of lower case characters required in password *(1-512)*		Characters
□ Maximum number of lower case characters allowed in password *(1-512)*		Characters

Password Syntax

- Use Microsoft complexity policy

  This allows you to use the Microsoft* Complexity Policy. If you select this option, several options on the Advanced Password Rules page are set to meet the criteria of the Microsoft Complexity Policy. These options include:

  - Minimum password length is 6
  - Maximum password length is 128

    - The password must contain at least one character from three of the four types of character (uppercase, lowercase, numeric, and special)
        - Uppercase characters include all uppercase characters in the Basic Latin and the Latin-1 character sets.
        - Lowercase characters include all lowercase characters in the Basic Latin and the Latin-1 character sets.
        - Numeric characters are 1, 2, 3, 4, 5, 6, 7, 8, 9, 0.
        - Special characters are all other characters.

      Use this option if you must synchronize passwords between eDirectory and Microsoft Active Directory.
    - The values of the following user attributes can not be contained in the password: CN, Given Name, Surname, Full Name, and displayName.
- Use Novell syntax

  This allows you to use the Novell syntax for the password policy.

Password Length

- Minimum number of characters in password (1-512)
- Maximum number of characters in password (1-512)

Repeating Characters

- Minimum number of unique characters (1-512)
- Maximum number of times a specific character can be used (1-512)
- Maximum number of times a specific character can be repeated sequentially (1-512)

Case Sensitive

In eDirectory 8.7.1 and 8.7.3, you needed to use the Novell Client for case sensitivity to work. In eDirectory 8.8 or later, you can make your passwords case sensitive for all the clients that are upgraded to eDirectory 8.8. See the *eDirectory 8.8 Administration Guide* (http://www.novell.com/documentation/beta/edir88/index.html?page=/documentation/beta/edir88/edir88new/data/brix9ry.html#brix9ry) for more information.

With *Allow the passwords to be case sensitive* selected, you have four options:

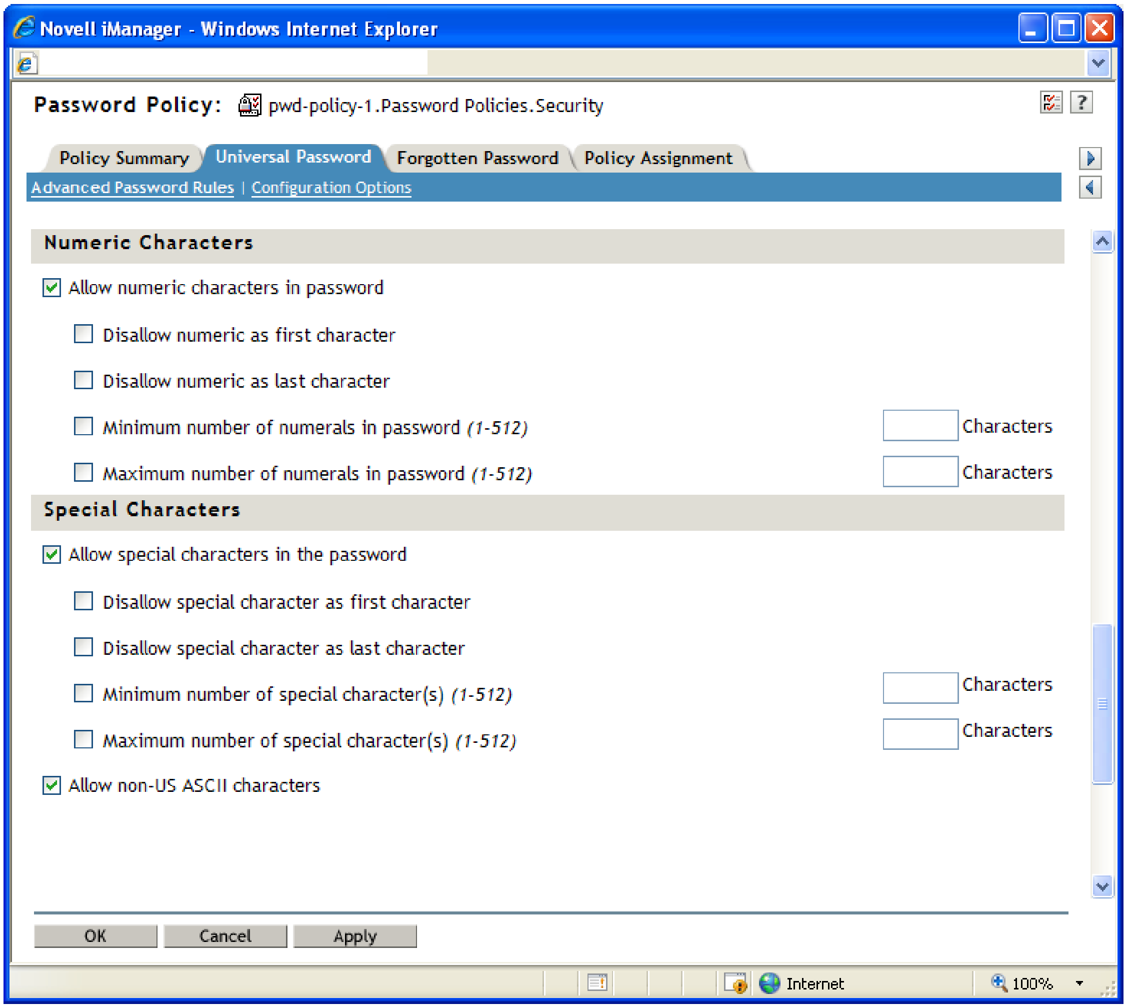
- Allow the password to be case sensitive
    - Minimum number of uppercase characters required in the password (1-512)
    - Maximum number of uppercase characters allowed in the password (1-512)
    - Minimum number of lowercase characters required in the password (1-512)
    - Maximum number of lowercase characters allowed in the password (1-512)

When *Allow the password to be case sensitive* is not selected, the passwords are case insensitive and you have two options:

- Minimum number of alphabetic characters allowed in password (1-512)
- Maximum number of alphabetic characters allowed in password (1-512)

IMPORTANT: Passwords are stored with case, and are synchronized between systems with case sensitivity, even though the *Allow passwords to be case sensitive* option is not selected. The case of password characters is ignored if the *Allow the password to be case sensitive* option is not selected.

Figure 3-4 *Advanced Password Rules Final*



Password Policy: pwd-policy-1.Password Policies.Security

Numeric Characters

☑ Allow numeric characters in password

□ Disallow numeric as first character

□ Disallow numeric as last character

□ Minimum number of numerals in password *(1-512)* Characters

□ Maximum number of numerals in password *(1-512)* Characters

Special Characters

☑ Allow special characters in the password

□ Disallow special character as first character

□ Disallow special character as last character

□ Minimum number of special character(s) *(1-512)* Characters

□ Maximum number of special character(s) *(1-512)* Characters

☑ Allow non-US ASCII characters

Numeric Characters

- Allow numeric characters in the password
  - Disallow numeric as first character
  - Disallow numeric as last character
  - Minimum number of numerals in password (1-512)
  - Maximum number of numerals in password (1-512)

Special Characters

Special characters are the characters that are not numbers (0-9) and are not alphabetic characters. (The alphabetic characters are a-z, A-Z, and alphabetic characters in the Latin-1 code page 850.)

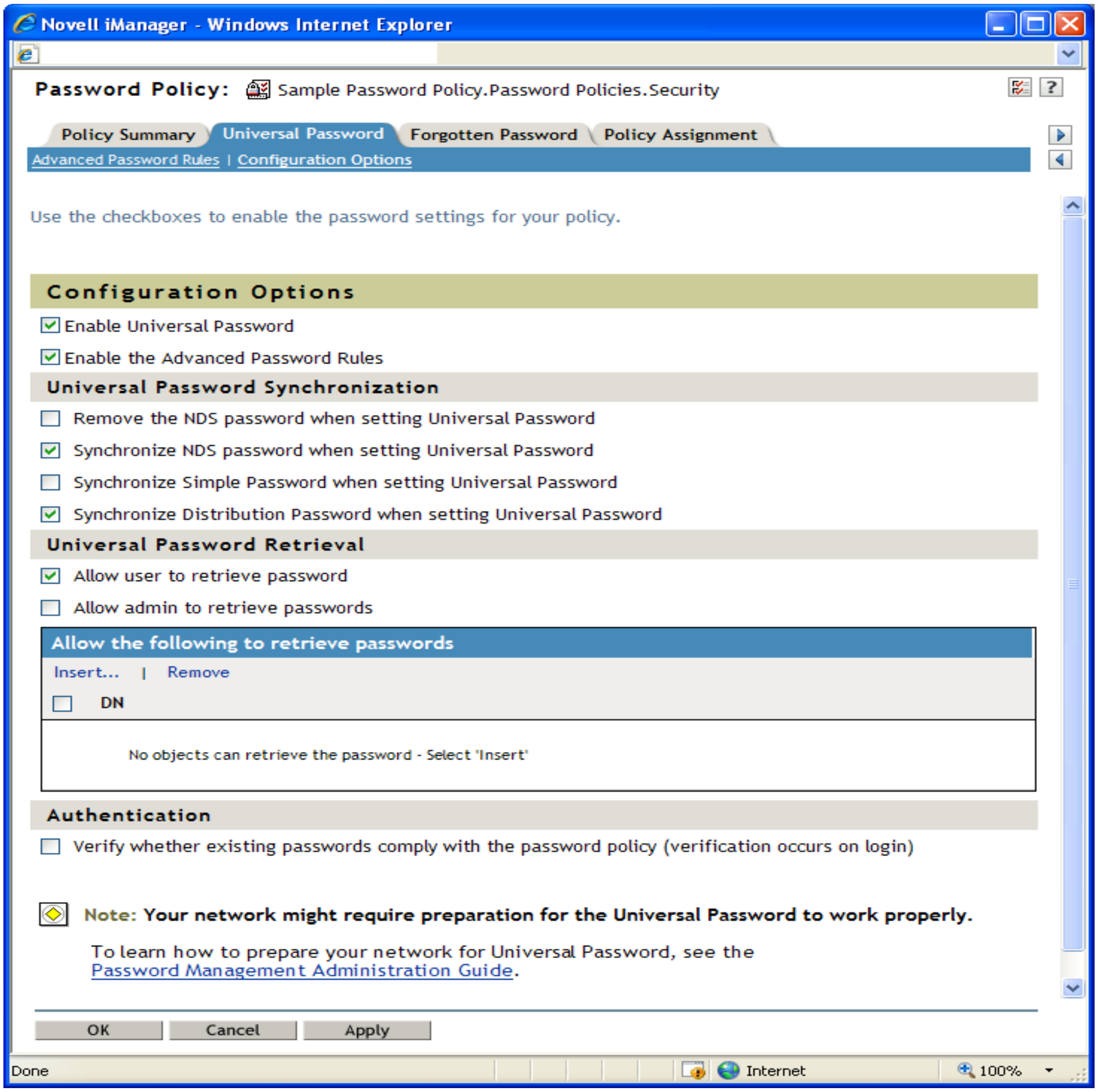
- Allow special characters in the password
  - Disallow a special character as first character
  - Disallow a special character as last character
  - Minimum number of special characters (1-512)
  - Maximum number of special characters (1-512)
- Allow non-US ASCII characters

  This allows the password to have characters outside of the Basic Latin character set (also known as extended characters).

3.4.2 Universal Password Configuration Options

The following figure shows an example of the Universal Password configuration options:

Figure 3-5 *Configuration Options*



Password Policy: Sample Password Policy.Password Policies.Security

Use the checkboxes to enable the password settings for your policy.

Configuration Options

☑ Enable Universal Password

☑ Enable the Advanced Password Rules

Universal Password Synchronization

□ Remove the NDS password when setting Universal Password

☑ Synchronize NDS password when setting Universal Password

□ Synchronize Simple Password when setting Universal Password

☑ Synchronize Distribution Password when setting Universal Password

Universal Password Retrieval

☑ Allow user to retrieve password

□ Allow admin to retrieve passwords

Allow the following to retrieve passwords

□ DN

No objects can retrieve the password - Select 'Insert'

Authentication

□ Verify whether existing passwords comply with the password policy (verification occurs on login)

Note: **Your network might require preparation for the Universal Password to work properly.**

To learn how to prepare your network for Universal Password, see the Password Management Administration Guide.

- Enable Universal Password

  Enables Universal Password for this policy. You must enable Universal Password if you want to use the other password policy features.

- Enable the Advanced Password Rules

  Enables the Advanced Password Rules found on the Advanced Password Rules page for this policy. These advanced password rules help secure your environment by giving you control over password lifetime and what the password can contain.

- Universal Password Synchronization

  - Remove the NDS password when setting Universal Password

    If this option is selected, the NDS password is disabled when the Universal Password is set. Also, when the NDS password is set, the NDS password hash is set to a random value that is not known except to eDirectory. There might or might not be a password that could be hashed to the random value.

    - Synchronize NDS password when setting Universal Password

      If this option is selected, and the Universal Password is set, the NDS password is set at the same time and with the same password.

    - Synchronize Simple Password when setting Universal Password

      Provided solely for backward compatibility with NetWare 6.0 servers that contain AFP/CIFS users. If you have NetWare 6.0 servers in the tree that contain AFP/CIFS users, you should select this option.

      NOTE: The setting of this option does not affect your ability to import user passwords by using ICE.

      If this option is selected, and the Universal Password is set, the Simple Password is set at the same time and with the same password.

    - Synchronize Distribution Password when setting Universal Password

      Determines whether the Identity Manager Metadirectory engine can retrieve or set a user’s Universal Password in eDirectory.

      If this option is selected, and the Universal Password is set, the Distribution Password is set at the same time and with the same password.

      The Distribution Password can be used with Identity Manager to perform password synchronization to connected systems. This option also allows the Metadirectory engine to retrieve a user’s Universal Password in eDirectory.

- Universal Password Retrieval
    - Allow user agent to retrieve password

      Determines whether the Forgotten Password Self-Service feature can retrieve a password on behalf of a user, so that the password can be e-mailed to the user. If this option is not selected, the corresponding feature is dimmed on the Forgotten Password page in the Password Policy.

      This option allows users to retrieve their own passwords by using NMAS LDAP extensions.

    - Allow admin to retrieve passwords

      Lets you retrieve users' passwords by using a third-party product or service that uses this functionality.

      This option is not recommended with NMAS 3.2 and later. Instead you should use the *Password ACL* option to assign password read rights to specific objects (such as the SAMBA or freeRADIUS service objects) that need this ability to perform their functions.

      If *Allow admin to retrieve passwords* is selected, then users that have either the write privilege to the target object’s ACL attribute or the read and/or write privilege to the target object’s password management attribute can retrieve the target object’s password.

    - Allow the following to retrieve passwords

      Lets you insert an object that has the ability to retrieve passwords.

      NOTE: We recommend that you do not enable the *Allow Admin to retrieve password* option. Instead, assign the password Read privilege to the objects that need to read the password (for example, the Radius or Samba service objects). Then, set an inherited rights filter to the Password Policy object that only allows a trusted user to manage the Password Policy object.

- Authentication
    - Verify whether existing passwords comply with the password policy (verification occurs on login)

      If this option is selected and users log in through iManager or the iManager self-service console, their existing passwords are checked to make sure they comply with the Advanced Password Rules in the users' password policy. If an existing password does not comply, users are required to change it.

3.5 Assigning Password Policies to Users

You can assign a password policy to users in eDirectory by assigning the policy to the whole tree (by using the Login Policy object), specific partitions or containers, or specific users. We encourage you to set password policies as high up in the tree as you can, to simplify administration.

IMPORTANT: Assigning a password policy to an entire eDirectory tree or to a container in a tree that contains a very large number of users (tens of thousands) in subcontainers can cause the iManager plug-in (and iManager) to hang.

In this case, you might want to consider individually assigning password policies to lower-level containers in order to control the number of users for each password policy assignment.

A policy is not in effect until you assign it to one or more objects. You can assign a password policy to the following objects:

- Login Policy object

  We recommend that you create a default password policy for all users in the tree. You do this by creating a policy and assigning it to the Login Policy object. The Login Policy object is located in the Security container just below the root of the tree.
- A container that is a partition root

  If you assign a policy to a container that is the root of a partition, the policy assignment is inherited by all users in that partition, including users in subcontainers. To determine whether a container is a partition root, browse for the container and note whether a partition icon is displayed beside it.
- A container that is not a partition root

  If you assign a policy to a container that is not the root of a partition, the policy assignment is inherited only by users in that specific container. It is not inherited by users that are in subcontainers. If you want the policy to apply to all users below a container that is not a partition root, you must assign the policy to each subcontainer individually.
- A specific user

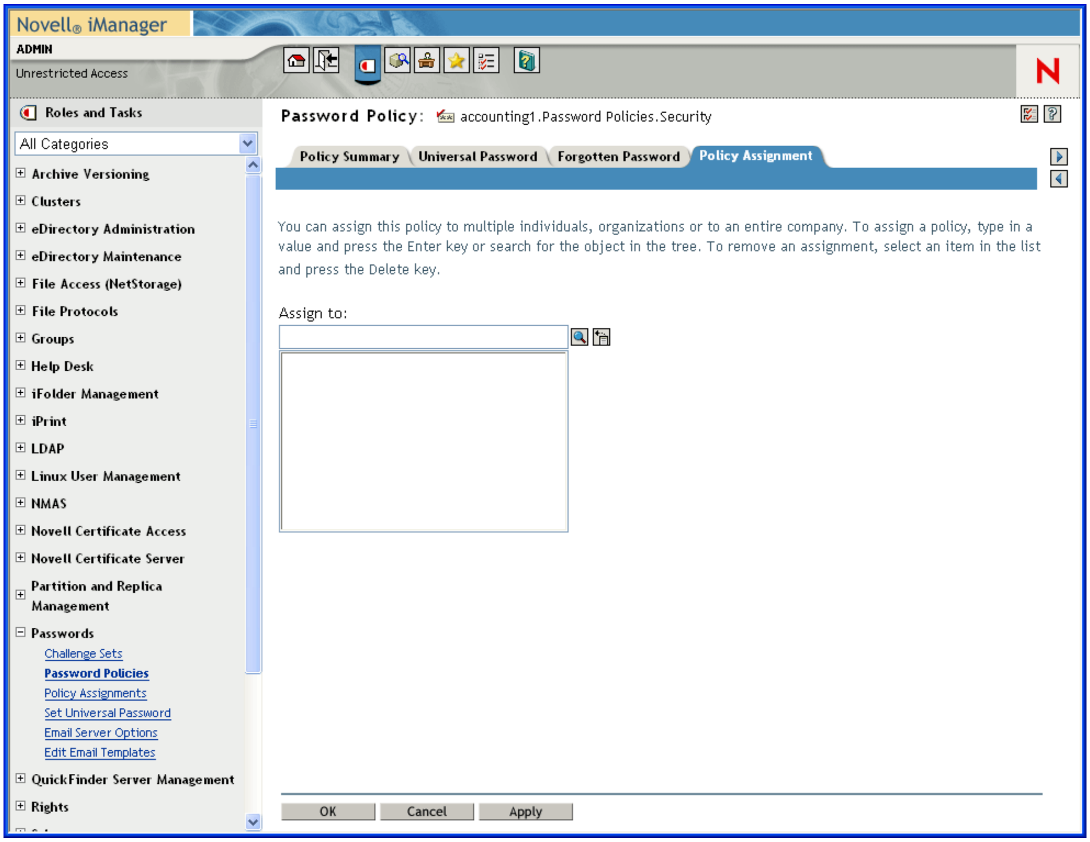
Only one policy is effective for a user at a time. Novell Modular Authentication Services (NMAS) determines which policy is effective for a user by looking for policies in the following order and applying the first one it finds.

1. **Specific user assignment:** If a password policy has been assigned specifically to the user, that policy is applied.
2. **Container:** If the user has no specific assignment, NMAS applies the policy that is assigned to the container that holds the user.

3. **Partition root container:** If no policy is assigned to the user or to the container directly above the user, the policy assigned to the partition root container is applied.
4. **Login Policy object:** If no policy is assigned to the user or other containers, the policy assigned to the Login Policy object is applied. It is the default policy for all users in the tree.

The following figure shows an example of the property page where you specify which object password policy is assigned to:

Figure 3-6 *Assigning Password Policy to Objects*



Password Policy: accounting1.Password Policies.Security

You can assign this policy to multiple individuals, organizations or to an entire company. To assign a policy, type in a value and press the Enter key or search for the object in the tree. To remove an assignment, select an item in the list and press the Delete key.

Assign to:

3.6 Finding Out Which Policy a User Has

Only one policy is in effect for a user at a time. To find out which policy is in effect for a particular user or container:

1. Go to iManager > *Passwords* > *View Policy Assignments*.
2. Browse to and select the desired user.
3. Click *OK*.

If there are multiple policies in the tree, NMAS determines which policy to apply to a user as described in Section 3.5, “Assigning Password Policies to Users,” on page 44.

3.7 Setting A User's Password

Administrators or help desk personnel can set a user's Universal Password by using a task in iManager. The task shows the password rules for the password policy that is in effect for the user.

1. In iManager, click *Passwords* > *Set Universal Password*.
2. Browse to and select the desired user.
3. Click *OK*.

   If the user has a password policy assigned and Universal Password enabled, you are allowed to change the password by using this task.

   If the Advanced Password Rules are enabled in the policy, you see a list of rules that must be followed.

   If Universal Password is not enabled for a user, the Advanced Password Set task displays an error and the password is not changed. You must either assign a policy to the user and then return to this task, or change the user's NDS password by using the *eDirectory Administration* > *Modify Object* task.
4. Create a password for the user, making sure it is compliant with all password rules that are displayed.

   The Universal Password is changed for the user.

   If Password Synchronization is set up in your environment, the user's new password is distributed to the connected systems that are configured to accept it.

NOTE: A security enhancement was added to NMAS 2.3.4 regarding Universal Passwords changed by an administrator. It works in much the same way as the feature previously provided for NDS password. If an administrator changes a user's password, such as when creating a new user or in response to a help desk call, the password is automatically expired if you have enabled the setting to expire passwords in the password policy. The setting, named *Number of days before password expires (0-365)*, is in Advanced Password Rules. For this particular feature, the number of days is not important, but the setting must be enabled.

The *Do Not Expire the User's Password When the Administrator Sets the Password* option overrides this feature.

3.8 Troubleshooting Password Policies

- Section 3.8.1, "iManager Self-Service Login Requires Full DN," on page 47
- Section 3.8.2, "Errors Indicate a Password Policy Is Not Assigned to a User," on page 47
- Section 3.8.3, "Using Challenge Response Questions," on page 47
- Section 3.8.4, "Giving Access to Users in New Containers," on page 47
- Section 3.8.5, "NMAS LDAP Transport Error," on page 48

3.8.1 iManager Self-Service Login Requires Full DN

If you have to type a full DN at the login prompt, the user object probably does not reside under the container specified during iManager or Portal configuration. You need to run the Portal Servlet Configuration Wizard (http://*your_iManager_server*/nps/servlet/), and specify additional login containers for the contextless login. The Forgotten Password feature also uses this setting to resolve a user's DN.

3.8.2 Errors Indicate a Password Policy Is Not Assigned to a User

Errors about password policy not assigned to a user

If you see an error saying that a password policy is not assigned to a user from the Set Universal Password task, and you know that the user does have a password policy assigned, SSL might be the issue.

- To help confirm that SSL configuration is the problem, use the View Policy Assignment task to check the policy for that user. If the View Policy Assignment task displays an NMAS Transport error, this also can be an indicator that SSL is not configured properly.
- Make sure that SSL is configured correctly between the Web server running iManager and the primary eDirectory tree. Confirm that you have a certificate configured between the Web server and eDirectory.

  This can be a problem if you are running iManager on Windows 2000 machine with IIS as the Web server, because iManager install doesn't automatically configure the certificate for you in that scenario.
- If you are not requiring TLS for simple bind, you must make sure you indicate the correct LDAP SSL port as explained in the note in Step 6 on page 31.

3.8.3 Using Challenge Response Questions

Make sure that you are using a browser that iManager 2.02 supports.

3.8.4 Giving Access to Users in New Containers

When you set up iManager or one of Novell's portal products, such as Novell's UserApp™, you specify the portal users container. Usually you specify a container at a high level in the tree, so that all users in the tree can access portal features. If all your users are below that container, then all users have access to Forgotten Password and Reset Password Self-Service.

If you later create a container with users outside the portal users' container, and these users can't access Forgotten Password and Reset Password features, you'll need to specifically assign rights to the following gadgets for that new container: Challenge Response Setup, Change Universal Password, and Hint Setup.

For instructions on adding new users to the portal users' container, see Portal User in the *Novell exteNd Director Platform Edition Installation and Configuration Guide* (http://www.novell.com/documentation/lg/nedpe41/configure/data/ajhotzv.html#ajhotzv).

3.8.5 NMAS LDAP Transport Error

If you are installing Identity Manager in a multiserver environment and use some of the Password Management plug-ins in iManager, you might see an error that begins with `NMAS LDAP Transport Error`.

One common cause of this error is that the `PortalServlet.properties` file is pointing to an LDAP server that does not have the NMAS extensions that are needed for Identity Manager. Open the `PortalServlet.properties` file and make sure the address for the LDAP server is the same server where you installed Identity Manager.

Other possible causes:

- The LDAP server is not running.
- SSL is not configured for LDAP between the iManager server running the plug-ins and the LDAP server.
- When logging in to other trees with iManager to manage remote Identity Manager DirXML servers, you might encounter errors if you use the server name instead of the IP address for the remote server.
- The trusted root certificate of the tree you authenticate to must be imported as a trusted certificate onto the Web server. You can use `keytool.exe` to export the certificate to the Web server. (If you install eGuide, the certificate is exported to the Web server during the configuration process.)

Password Self-Service

4

This section provides information on setting up and managing Password Self-Service.

4.1 Overview of Password Self-Service

You can reduce help desk costs by setting up self-service so users can recover from forgotten passwords or reset their passwords while viewing the rules you have specified in the password policy.

You manage the policy for Password Self-Service by using one of the following:

- iManager

  Most of this chapter describes how to manage password self-service using iManager.
- Identity Manager User Application

  For information on managing password self-service with the Identity Manager User Application, see Chapter 2, "Using the Identity Self-Service Tab" in the *Identity Manager Roles Based Provisioning Module 3.6 User Application User Guide* (http://www.novell.com/documentation/idmrbpm36/ugpro/data/ugpropartidentity.html).

Users access the Password Self-Service features by using one of the following:

- iManager 2.0.2 portal

  The Password Self-Service features were removed from iManager 2.6 and later, so in order for users to use the self-service features, you must have a server running iManager 2.0.2. Users go to this server's portal (https://www.*my_iManager_server*.com/nps) to access the self-service features.
- Identity Manager User Application portlet

  For information on using password self-service with Identity Manager User Application, see Chapter 2, "Using the Identity Self-Service Tab" in the *Identity Manager Roles Based Provisioning Module 3.6 User Application User Guide* (http://www.novell.com/documentation/idmrbpm36/ugpro/data/ugpropartidentity.html).
- Novell® Client™

For information on using password self-service with the Novell Client, see Section 6.3, “Using Forgotten Password Self-Service” in the *Novell Client for Windows Installation and Administration Guide* (http://www.novell.com/documentation/noclienu/noclienu/data/bxne05q.html).

- Virtual Office

  Virtual Office is no longer supported by Novell. For information on using password self-service with Virtual Office, see the *Virtual Office Configuration Guide* (http://www.novell.com/documentation/oes/virtualoffice/data/am0ogoi.html).

4.2 Prerequisites for Using Password Self-Service

Review the information in Chapter 3, “Managing Passwords by Using Password Policies,” on page 25 and meet the prerequisites in Section 3.3, “Prerequisite Tasks for Using Password Policies,” on page 31.

Although you can use some Password Self-Service features without deploying Universal Password, we recommend that you prepare your environment and turn on Universal Password so you can use all the features of password policies.

You can also set up the Password Self-Service features in Virtual Office. Users use the Virtual Office portal (https://www.*my_iManager_server*.com/vo) to access the self-service features. See Section 4.8.1, “Integrating Password Self-Service with Virtual Office,” on page 70.

The Novell Client also takes advantage of Password Self-Service features. See “Using Forgotten Password Self-Service” in the *Novell Client for Windows Installation and Administration Guide* (http://www.novell.com/documentation/noclienu/noclienu/data/bxne05q.html).

Although users can use iManager 2.0.2 as one way to use the Password Self-Service features, this section assumes that you are managing Password Self-Service by using iManager 2.5 or later.

4.3 Managing Forgotten Passwords

The following sections describe how to manage forgotten passwords by using iManager.

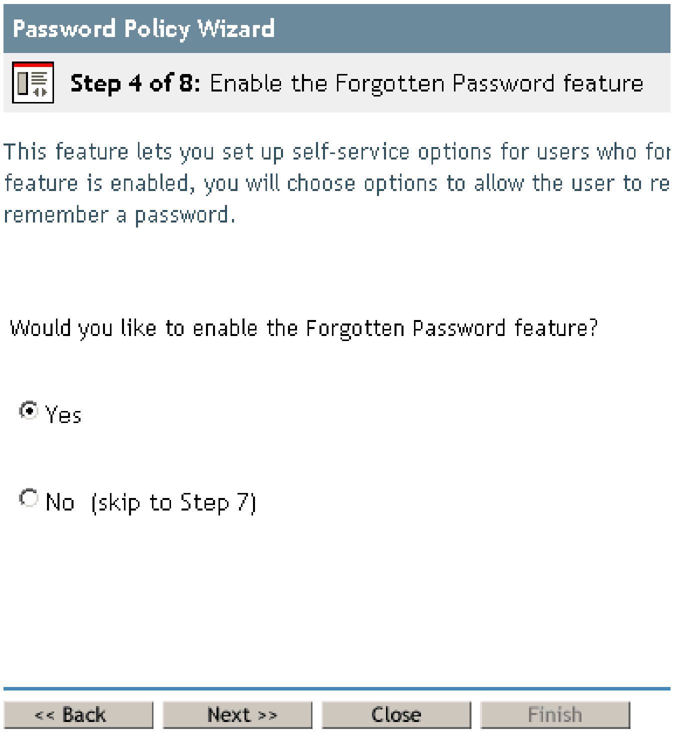
For information on managing forgotten passwords by using the Identity Manager User Application, see Section 5.3, “Password Management Configuration” in the Identity Manager 3.5.1 User Application Administration Guide (http://www.novell.com/documentation/idm35/agpro/data/b6mixux.html).

- Section 4.3.1, “Enabling Forgotten Password,” on page 51
- Section 4.3.2, “Creating or Editing Challenge Sets,” on page 52
- Section 4.3.3, “Selecting a Forgotten Password Action,” on page 55
- Section 4.3.4, “Disabling Password Hint by Removing the Hint Gadget,” on page 57
- Section 4.3.5, “Configuring Forgotten Password Self-Service,” on page 58
- Section 4.3.6, “What Users See When They Forget Passwords,” on page 62

4.3.1 Enabling Forgotten Password

To enable users to recover from a forgotten password without contacting the help desk, enable the Forgotten Password feature. As the following figure illustrates, you encounter this option while using the Password Policy Wizard to create a password policy. For more information on the Password Policy Wizard, see "To create a challenge set while using the Password Policy Wizard:" on page 54

Figure 4-1 *Enable Forgotten Password*



Password Policy Wizard

Step 4 of 8: Enable the Forgotten Password feature

This feature lets you set up self-service options for users who for feature is enabled, you will choose options to allow the user to re remember a password.

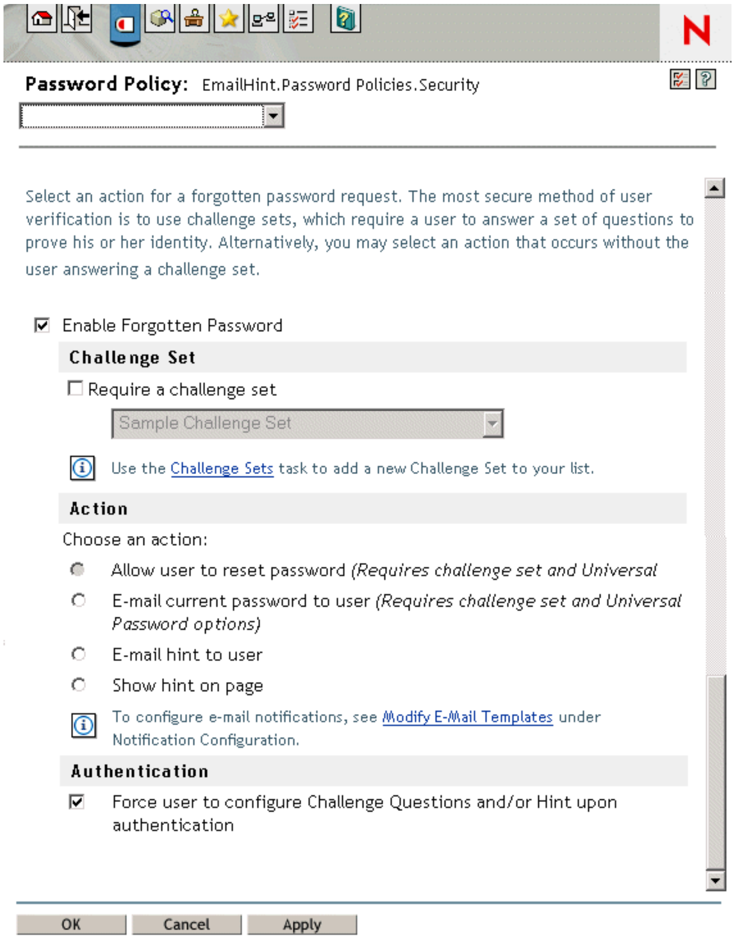
Would you like to enable the Forgotten Password feature?

● Yes

○ No (skip to Step 7)

You can also enable Forgotten Password on an existing password policy:

1. In iManager, click *Passwords* > *Password Policies*.
2. Click the name of the policy.
3. Click the *Forgotten Password* tab.



Password Policy: EmailHint.Password Policies.Security

Select an action for a forgotten password request. The most secure method of user verification is to use challenge sets, which require a user to answer a set of questions to prove his or her identity. Alternatively, you may select an action that occurs without the user answering a challenge set.

☑ Enable Forgotten Password

Challenge Set

☐ Require a challenge set

Sample Challenge Set

Use the Challenge Sets task to add a new Challenge Set to your list.

Action

Choose an action:

○ Allow user to reset password *(Requires challenge set and Universal*

○ E-mail current password to user *(Requires challenge set and Universal Password options)*

○ E-mail hint to user

○ Show hint on page

To configure e-mail notifications, see Modify E-Mail Templates under Notification Configuration.

Authentication

☑ Force user to configure Challenge Questions and/or Hint upon authentication

4 Select *Enable Forgotten Password*, select or create a challenge set, specify an action, select the *Authentication* option, then click *OK*.

4.3.2 Creating or Editing Challenge Sets

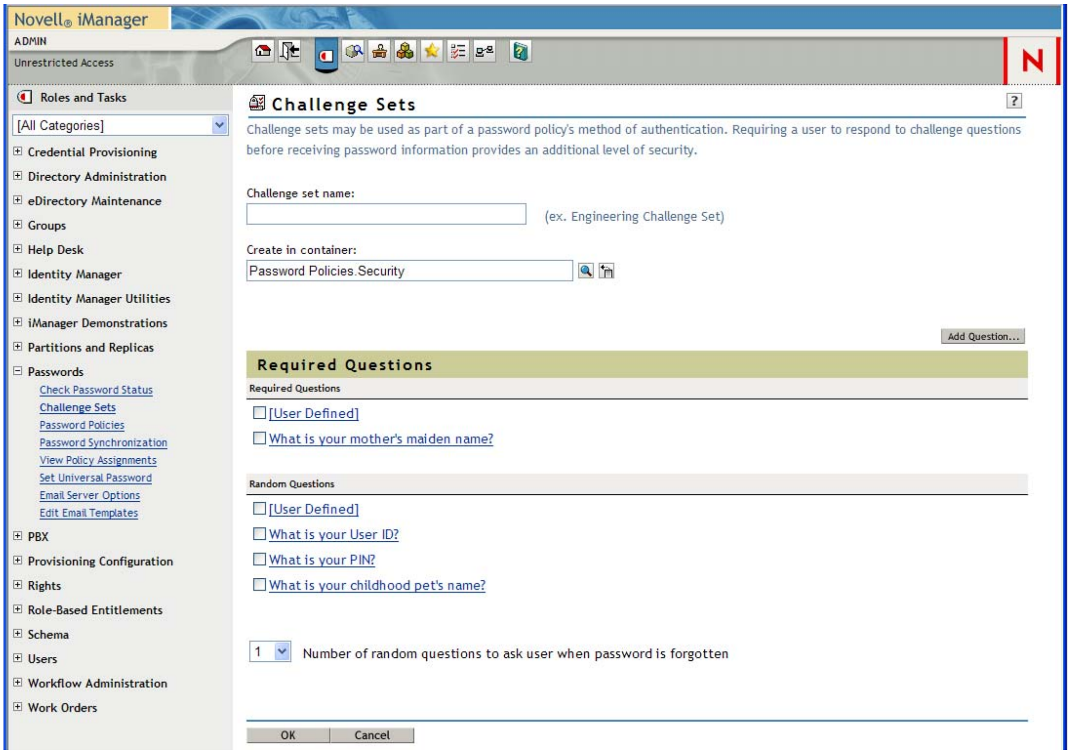
A challenge set is a set of questions that a user answers to prove his or her identity, instead of using a password. The challenge set is assigned to a password policy and is used as part of a password policy's method of authentication. Users' answers to these challenge questions are case insensitive.

You can use challenge sets as part of providing Forgotten Password self-service for users. Requiring a user to answer challenge questions before receiving forgotten password help provides an additional level of security.

When you create a password policy, you can enable Forgotten Password self-service so that users can get help without calling the help desk. To make self-service more secure, you can create a challenge set and specify that users must answer the challenge set questions before obtaining forgotten password help. You also specify what action takes place to help users after they answer the questions, such as displaying a password hint to the user. These self-service features are available to users through Novell iManager. Your choices are explained in Section 4.3.3, "Selecting a Forgotten Password Action," on page 55.

To create a challenge set:

1. In iManager, click *Passwords* > *Challenge Sets*.
2. Click *New*.



Challenge Sets

Challenge sets may be used as part of a password policy's method of authentication. Requiring a user to respond to challenge questions before receiving password information provides an additional level of security.

Challenge set name: (ex. Engineering Challenge Set)

Create in container: Password Policies.Security

Required Questions

Required Questions

□ [User Defined]

□ What is your mother's maiden name?

Random Questions

□ [User Defined]

□ What is your User ID?

□ What is your PIN?

□ What is your childhood pet's name?

1 Number of random questions to ask user when password is forgotten

3. Type a name in the *Challenge set name* field, select a container for the challenge set to be created in, then select or create challenge questions.

   To select a default question in the challenge set, select its check box.

   To edit a question or the number of characters (minimum or maximum) allowed for responses, click the question.

   To create a question and add it to the challenge set, click *Add Question*.

   User Defined: If you select this option, users can create their own challenge question.

   Novell Modular Authentication Services (NMAS™) stores a user's user-defined questions and responses in Novell eDirectory™.

   Required Questions: Questions in this list always appear when a user uses Password Self-Service.

   Random Questions: Questions in this list appear only once as a complete set, when the user sets up Forgotten Password by answering the challenge set questions for the first time. When the user later needs to use Forgotten Password, only a few of the questions are presented for the user to answer. The number of random questions that appear depends on the number that you specify.

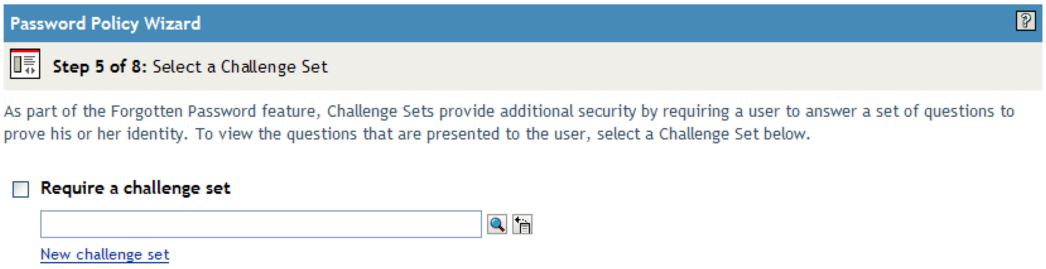
4. Click *OK*.

To create a challenge set while using the Password Policy Wizard:

1 In iManager, launch the Wizard by clicking *Passwords* > *Password Polices* > *New*.

2 In Step 4, click *Yes* to enable Forgotten Password.

3 In Step 5, select Require a Challenge Set and then click New challenge set.



Password Policy Wizard

Step 5 of 8: Select a Challenge Set

As part of the Forgotten Password feature, Challenge Sets provide additional security by requiring a user to answer a set of questions to prove his or her identity. To view the questions that are presented to the user, select a Challenge Set below.

☐ **Require a challenge set**

New challenge set

To use an existing challenge set, browse for and select it.

4 Specify the container you want the challenge set created in. Type a name in the *Challenge Set Name* field, then click *Next*.

5 Select or create required or random challenge questions.

If you don't want to create new questions, select existing ones.

To enable users to add their own questions, select *User Defined*.

To create a new question:

5a Click *Add Question*.

5b Select *Administrator Defines the Question*, click *Add*, specify a language from the drop-down menu, type the question, then click *OK*.

5c Select whether the question is required or random.

5d Specify minimum and maximum characters required, then click *OK*

6 Specify the number of random question, then click *Next*.

7 Complete the remaining steps in the Password Policy Wizard.

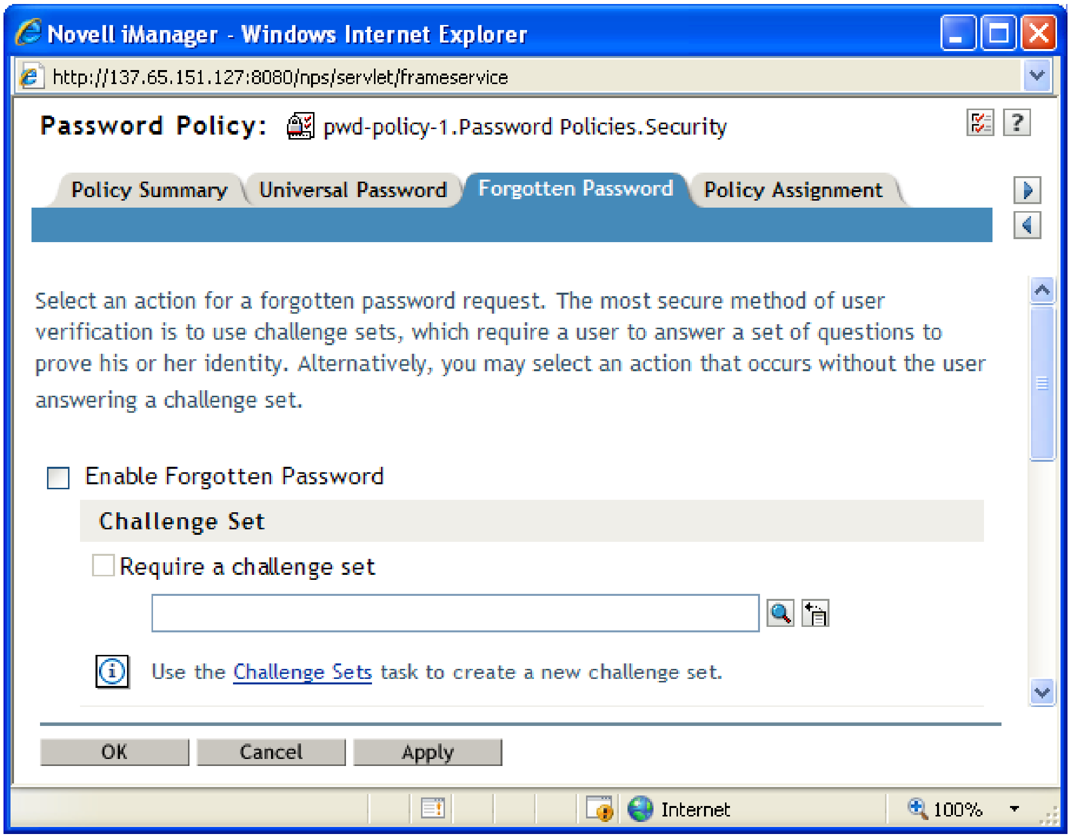
To create a challenge set for an existing password policy:

1 In iManager, click *Passwords* > *Password Policies*.

2 Click the name of a policy.

3 Click the *Forgotten Password* tab.

4 Select *Enable Forgotten Password* > *Require a Challenge Set*.



Novell iManager - Windows Internet Explorer
http://137.65.151.127:8080/nps/servlet/frameservice
Policy Summary
Universal Password
Forgotten Password
Policy Assignment
OK
Cancel
Apply
Internet
100%

Password Policy: pwd-policy-1.Password Policies.Security

Select an action for a forgotten password request. The most secure method of user verification is to use challenge sets, which require a user to answer a set of questions to prove his or her identity. Alternatively, you may select an action that occurs without the user answering a challenge set.

□ Enable Forgotten Password

Challenge Set

□ Require a challenge set

Use the Challenge Sets task to create a new challenge set.

5 Browse for and select an existing challenge set or create a new one and then select the new one.

To create a new one:

5a Click the *Challenge Sets* link.

5b In the Challenge Sets dialog box, click *New*.

5c In the Challenge Sets dialog box, name the challenge set, specify a container to create the challenge set in, select or add required or random questions, then specify the number of random questions to ask.

5d Click *OK*.

4.3.3 Selecting a Forgotten Password Action

1 In iManager, click *Passwords* > *Password Policies*.

2 Click the name of the policy.

3 Click the *Forgotten Password* tab.

4 Select the *Enable Forgotten Password* checkbox.

5 Select an action.

- **Allow User to Reset Password:** After answering the challenge set questions to prove his or her identity, the user is allowed to change to a new password. Because the user has authenticated through answering the challenge questions, the user is allowed to change the password without being required to provide the old password. To use this option, you must require a challenge set, and the user must have previously set up Forgotten Password in the iManager portal by answering the challenge set questions.

- **E-mail Current Password to User:** After answering the challenge set questions to prove his or her identity, the user receives the current password in an e-mail. To use this option, you must do the following:
  - Enable Universal Password for the policy. It is found in *Configuration Options* under *Universal Password*.
  - Enable the Allow User to Retrieve Password option, found in *Configuration Options* under *Universal Password*.
  - Set up e-mail notification as described in Section 4.6, "Configuring E-Mail Notification for Password Self-Service," on page 66.

  Also, the user must have previously set up Forgotten Password in iManager by answering the challenge set questions.
- **E-mail Hint to User:** The user receives the password hint in an e-mail. To use this option, you must set up e-mail notification as described in Section 4.6, "Configuring E-Mail Notification for Password Self-Service," on page 66.

  Also, the user must have previously set up Forgotten Password in iManager by providing a password hint.
- **Show Hint on Page:** The user is shown the password hint in the iManager portal. To use this option, the user must have previously set up Forgotten Password in iManager by providing a password hint.

Password Hints

If you specify a Forgotten Password action that requires password hint, the user can enter a hint that is a reminder of the password.

- "Password Hint" on page 56
- "Secure Hint" on page 57

Password Hint

The Password Hint attribute (nsimHint) is publicly readable, to allow unauthenticated users who have forgotten a password to access their own hints. Password hints can significantly reduce help desk calls.

For security, password hints are checked to make sure they do not contain the user's actual password. However, a user could still create a password hint that gives too much information about the password.

To increase security when using password hints:

- Allow access to the nsimHint attribute only on the LDAP server used for Password Self-Service.
- Remind users to create password hints that only they would understand. The Password Change Message in the password policy is one way to do that. See Section 4.5, "Adding a Password Change Message," on page 65.

Secure Hint

The Secure Hint attribute (nsimPasswordReminder) is more secure because it is not publicly readable. It requires the user to answer challenge questions before the hint is displayed.

The challenge/response requirement is set in the Forgotten Password section of the Password Policy properties.

If you choose not to use a password hint, make sure you don't use it in any of the password policies. To prevent password hints from being set, you can go a step further and remove the Hint Setup gadget completely, as described in Section 4.3.4, "Disabling Password Hint by Removing the Hint Gadget," on page 57.

4.3.4 Disabling Password Hint by Removing the Hint Gadget

Password Hint is one method of helping users remember a password as part of Forgotten Password Self-Service. In the password policy, the Forgotten Password actions that use Password Hint are named E-mail Hint to User and Show Hint on Page.

For Password Hint to be useful to a user who has forgotten a password, unauthenticated users must have public access to the Password Hint attribute (nsimHint). Although Password Self-Service checks the password hint to make sure that the user has not included the actual password within the hint, you might still consider this public access to be a security issue.

If you don't want to use password hints, choose a different option for the Forgotten Password action in the password policy.

If you prefer to, you can remove the Hint Setup gadget completely. After installing the Identity Manager plug-ins for iManager, use the Configure view to remove the Hint Setup gadget by doing the following:

1. In iManager, click the *Configure* icon.
2. Click *Portal Platform Configuration* > *Gadgets*.
3. From the list of gadgets, select *Hint Setup*.
4. Click *Delete*.

After you delete the gadget, Hint Setup is no longer available to the user. The post-authentication services query for the existing gadgets before adding them to the delegation list. Regardless of what the policy states for post-authentication services, if the gadget does not exist, the service is not presented to the user by the post-authentication services or in the iManager portal.

After you delete the Hint gadget, make sure you don't select *E-mail Hint* or *Display Hint* as the forgotten password action in the password policy.

4.3.5 Configuring Forgotten Password Self-Service

Clicking the *Forgot your password?* link when logging in to the portal (such as https://www.*servername*.com/nps) does not work for the user unless the following conditions are met:

- The administrator has set up a password policy with Forgotten Password enabled.
- The user has set up challenge questions or a password hint, if either of them is specified in the Forgotten Password setting.

- "Prompting Users to Set Up Forgotten Password" on page 58
- "User Setup for Forgotten Password" on page 59
- "Requiring Existing Passwords to Comply" on page 60

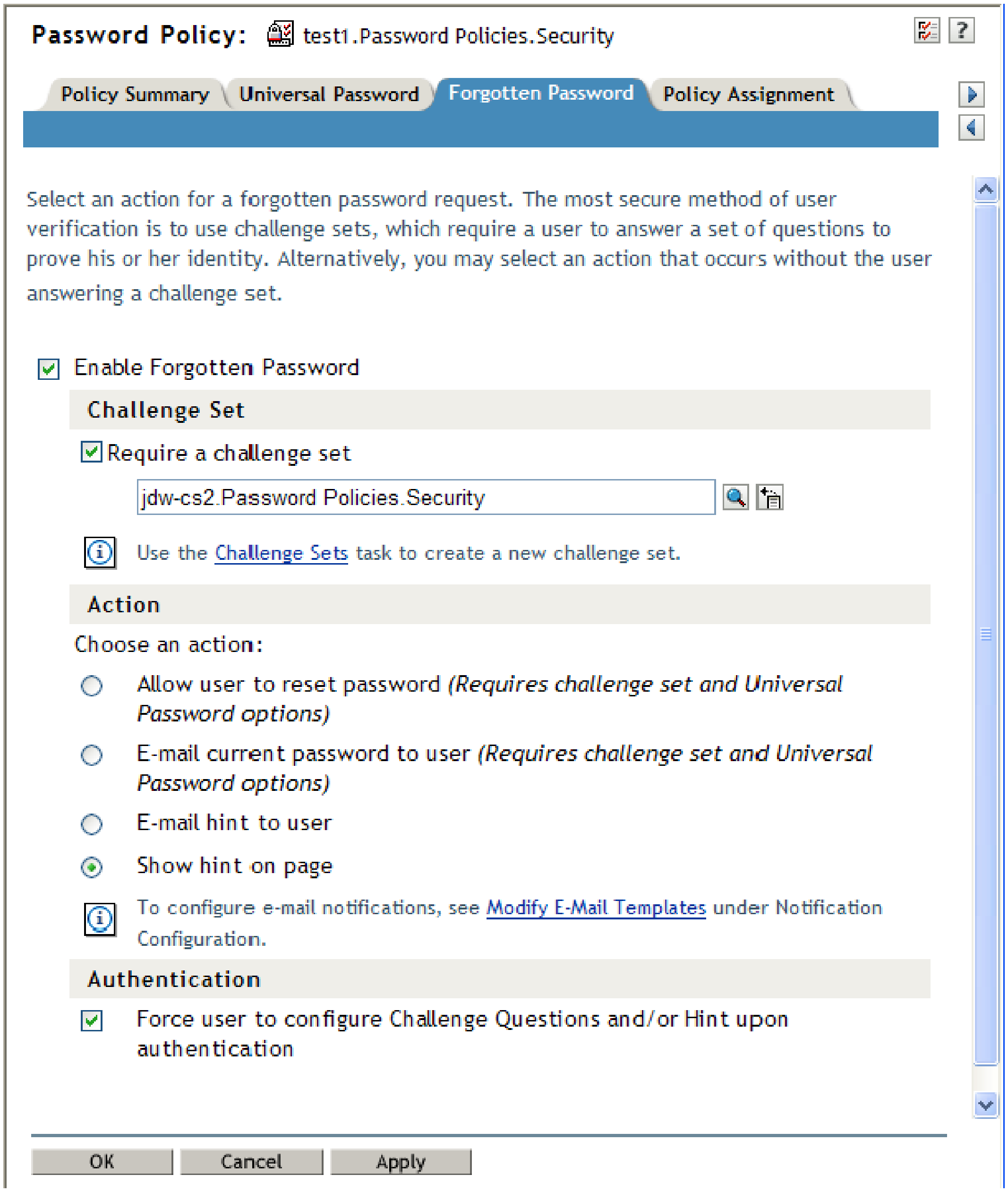
Prompting Users to Set Up Forgotten Password

For some Forgotten Password actions, the user must do some setup before using the Forgotten Password self-service. For example, if the password policy specifies that a challenge set is used to allow a user to prove identity, and if the forgotten password action is to e-mail a password hint to the user, the user must first answer challenge-set questions and create a password hint before being able to use Forgotten Password Self-Service.

Users can initiate setting up these features in the portal, or you can require that users set them up by using post-authentication services (pages displayed when users log in to the portal).

To prompt users to set up these features at login time, select the *Force users to configure Challenge Questions and/or Hint upon authentication* option in the Password Policies interface at the bottom of the Forgotten Password page. This is selected by default when you create a policy.

Figure 4-2 *Password Policy*



Password Policy: test1.Password Policies.Security

Select an action for a forgotten password request. The most secure method of user verification is to use challenge sets, which require a user to answer a set of questions to prove his or her identity. Alternatively, you may select an action that occurs without the user answering a challenge set.

☑ Enable Forgotten Password

Challenge Set

☑ Require a challenge set

jdw-cs2.Password Policies.Security

Use the Challenge Sets task to create a new challenge set.

Action

Choose an action:

○ Allow user to reset password *(Requires challenge set and Universal Password options)*

○ E-mail current password to user *(Requires challenge set and Universal Password options)*

○ E-mail hint to user

● Show hint on page

To configure e-mail notifications, see Modify E-Mail Templates under Notification Configuration.

Authentication

☑ Force user to configure Challenge Questions and/or Hint upon authentication

To let users set up Forgotten Password at a time of their choice, you need to give them the URL for the portal, such as https://www.*my_iManager_server*.com/nps.

User Setup for Forgotten Password

There are two ways the user's part of the configuration can be accomplished:

- "Post-Authentication" on page 60
- "In the Portal" on page 60

Post-Authentication

The administrator can require the user to set up Forgotten Password features after a successful login by selecting the Forgotten Password option to force the user to configure challenge questions or a hint upon authentication. If this option is selected but a user does not have questions or a hint set up, Forgotten Password configuration gadgets are displayed to the user the next time he or she logs in through the portal (such as https://www.*servername*.com/nps). This is called post-authentication setup.

In the Portal

When users log in through the iManager portal, iManager gives them access to the gadgets for setting up or changing challenge sets and password hints for Forgotten Password Self-Service. This is the same place where users can initiate a password change. They can access the following gadgets here:

- Hint Setup
- Answer Challenge Questions
- Change Password (Universal)

The user can initiate changing these at any time. But if a hint or challenge set is not required for the user's password policy, the user cannot set them up; the page displays a message indicating that the options are not accessible.

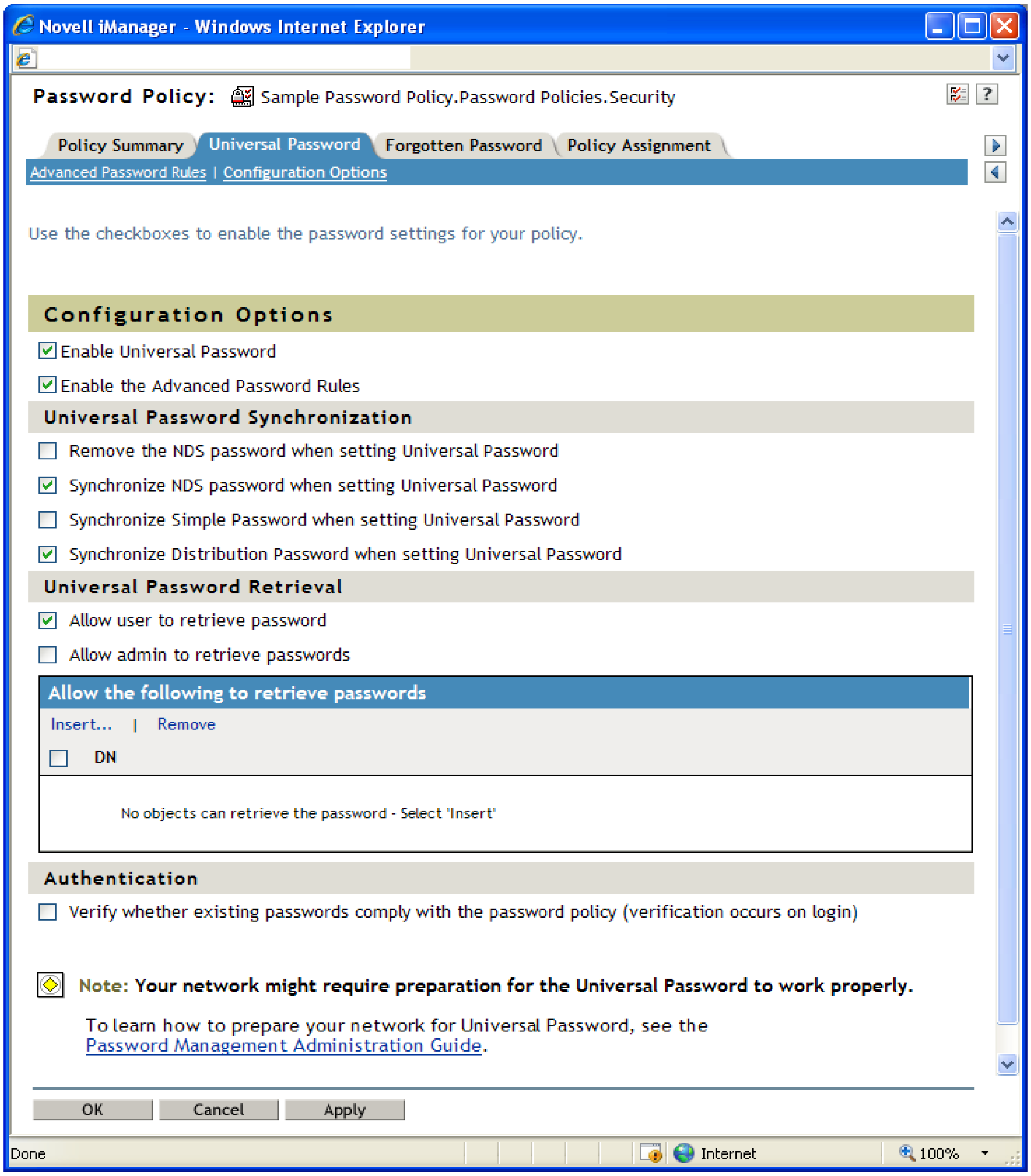
To see specific examples of how these user options look in each application (iManager 2.02 portal, User Application portlet, Novell Client, and Virtual Office), refer to the documentation for each application as outlined in Section 4.1, "Overview of Password Self-Service," on page 49.

Requiring Existing Passwords to Comply

If you create or change a password policy, you can require users to change existing passwords that don't comply the next time they log in through the portal.

To do this, set an option in the password policy by using the *Universal Password* tab under *Configuration Options*. The option is called *Verify whether existing passwords comply with the password policy (verification occurs on login)*. By default, this option is turned off when you create a new password policy. The following figure illustrates the page where you set this option:

Figure 4-3 Requiring Existing Passwords to Comply



Password Policy: Sample Password Policy.Password Policies.Security

Use the checkboxes to enable the password settings for your policy.

Configuration Options

☑ Enable Universal Password

☑ Enable the Advanced Password Rules

Universal Password Synchronization

□ Remove the NDS password when setting Universal Password

☑ Synchronize NDS password when setting Universal Password

□ Synchronize Simple Password when setting Universal Password

☑ Synchronize Distribution Password when setting Universal Password

Universal Password Retrieval

☑ Allow user to retrieve password

□ Allow admin to retrieve passwords

Allow the following to retrieve passwords

□ DN

No objects can retrieve the password - Select 'Insert'

Authentication

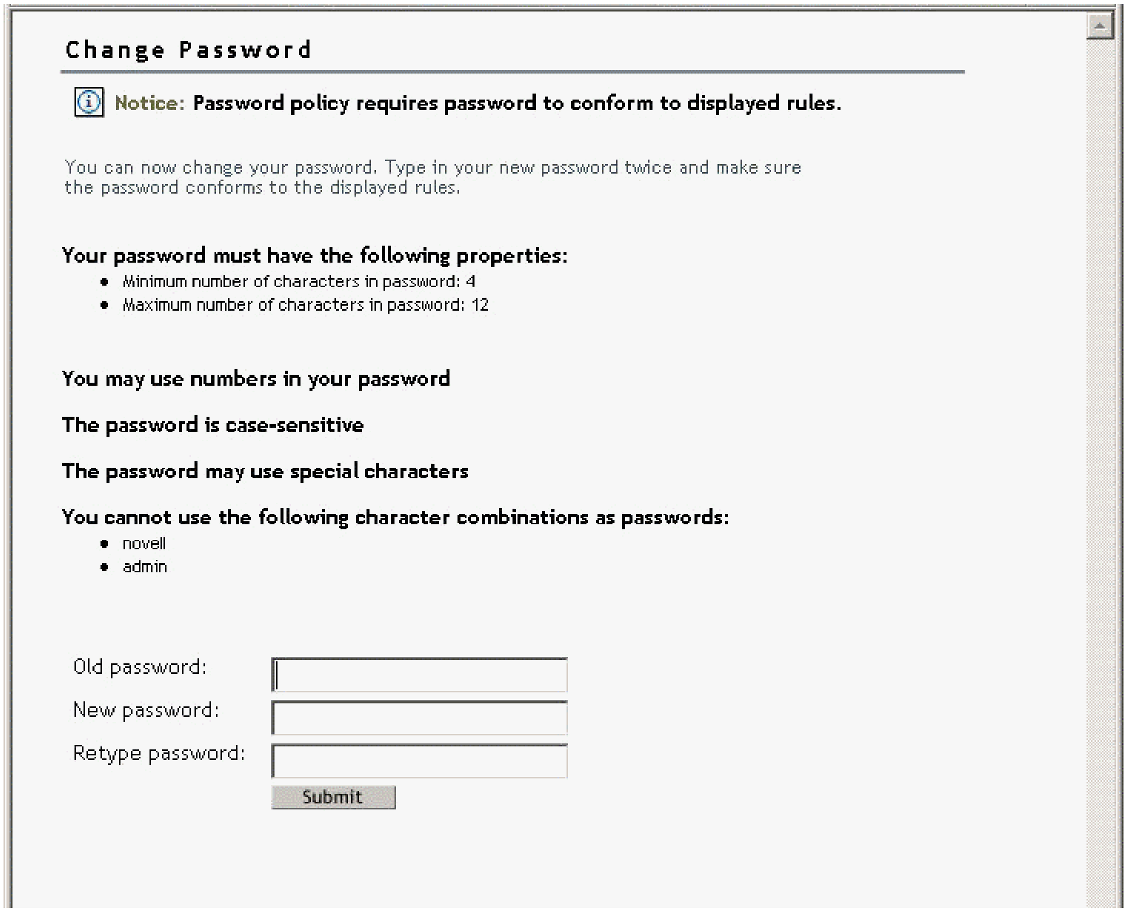
□ Verify whether existing passwords comply with the password policy (verification occurs on login)

Note: Your network might require preparation for the Universal Password to work properly.

To learn how to prepare your network for Universal Password, see the Password Management Administration Guide.

If this option is set, the next time users log in through the portal, their passwords are checked for compliance with the password policy. If the password does not comply, a page similar to the following is displayed, and the user is not allowed to log in without changing the password.

Figure 4-4 *Change Password*



Change Password

Notice: Password policy requires password to conform to displayed rules.

You can now change your password. Type in your new password twice and make sure the password conforms to the displayed rules.

Your password must have the following properties:

- Minimum number of characters in password: 4
- Maximum number of characters in password: 12

You may use numbers in your password

The password is case-sensitive

The password may use special characters

You cannot use the following character combinations as passwords:

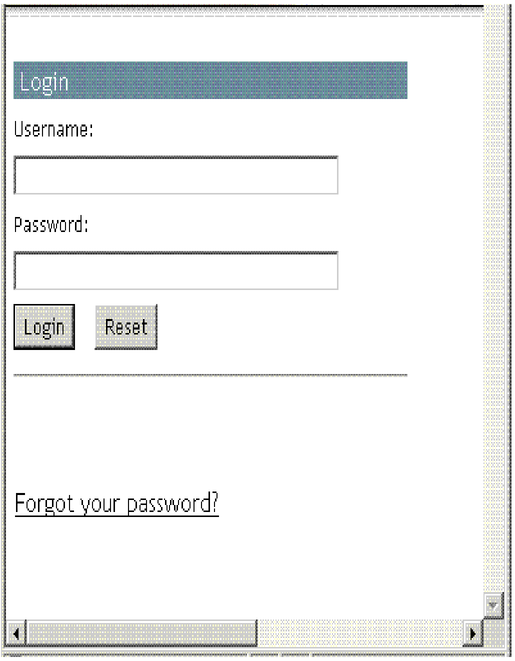
- novell
- admin

Old password:	
New password:	
Retype password:	

4.3.6 What Users See When They Forget Passwords

After you have installed the iManager plug-ins that shipped with Identity Manager, the *Forgotten Password* link shows up in the iManager portal (such as https://www.*servername*.com/nps), as illustrated in the following figure.

Figure 4-5 Forgotten Password in iManager



Login

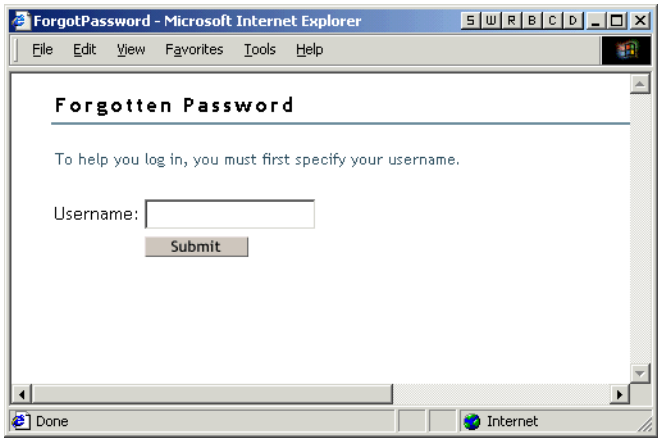
Username:

Password:

A similar link is displayed when authenticating through Virtual Office and the Novell Client.

If a user clicks this link, the following page is displayed, asking for the username:

Figure 4-6 Forgotten Password in Virtual Office and Novell Client



Forgotten Password

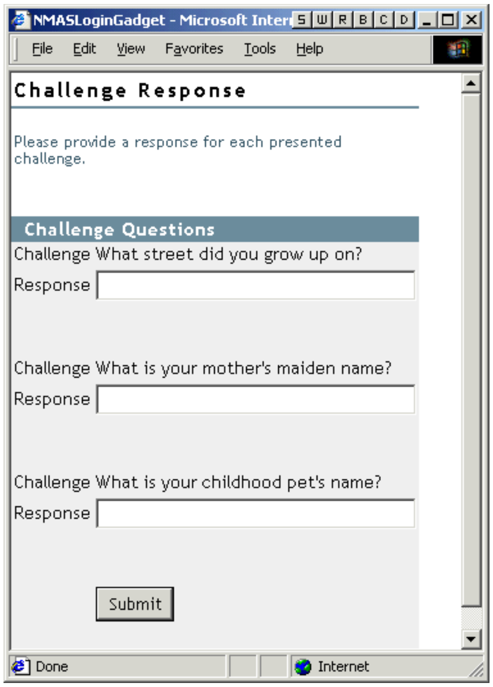
To help you log in, you must first specify your username.

Username:

After the username is entered, the Forgotten Password settings determine what the user sees.

For example, if the administrator specified in the password policy that a challenge set is used, a page similar to the following is displayed. The user must then answer challenge set questions to prove his or her identity.

Figure 4-7 Forgotten Password Challenge Questions


NMASLoginGadget - Microsoft Inter
File Edit View Favorites Tools Help
Submit
Done
Internet

Challenge Response

Please provide a response for each presented challenge.

Challenge Questions

Challenge What street did you grow up on?

Response

Challenge What is your mother's maiden name?

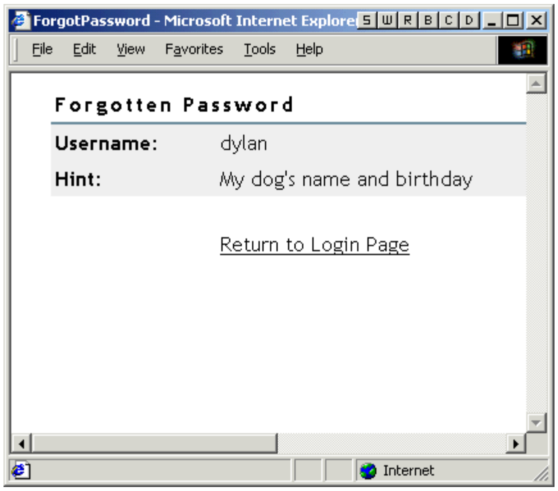
Response

Challenge What is your childhood pet's name?

Response

If the Administrator specified that the Forgotten Password action is *Show Hint on Page*, a page similar to the following is displayed:

Figure 4-8 Forgotten Password Hint


ForgotPassword - Microsoft Internet Explore
File Edit View Favorites Tools Help
Return to Login Page
Internet

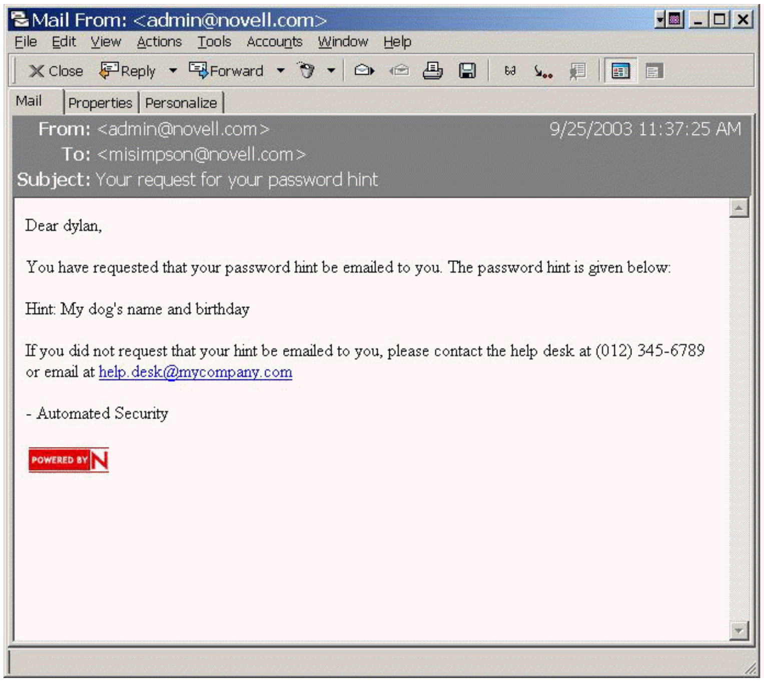
Forgotten Password

Username: dylan

Hint: My dog's name and birthday

If the Administrator specified that the Forgotten Password action is *E-mail Current Password to User* or *E-mail Hint to User*, a message is displayed saying that the password or hint has been e-mailed. The user receives an e-mail similar to the following:

Figure 4-9 *Password Hint E-Mail*


Mail From: <admin@novell.com>
File Edit View Actions Tools Accounts Window Help
Close Reply Forward
Mail Properties Personalize

From: <admin@novell.com> 9/25/2003 11:37:25 AM
To: <misimpson@novell.com>
Subject: Your request for your password hint

Dear dylan,

You have requested that your password hint be emailed to you. The password hint is given below:

Hint: My dog's name and birthday

If you did not request that your hint be emailed to you, please contact the help desk at (012) 345-6789 or email at help.desk@mycompany.com

- Automated Security

4.4 Providing Users with Password Reset Self-Service

You can set up the password policy to allow users to reset their own passwords. How this is exposed to the user depends on which application they use to accomplish this task. See Section 4.1, "Overview of Password Self-Service," on page 49 for documentation links to the different applications.

4.5 Adding a Password Change Message

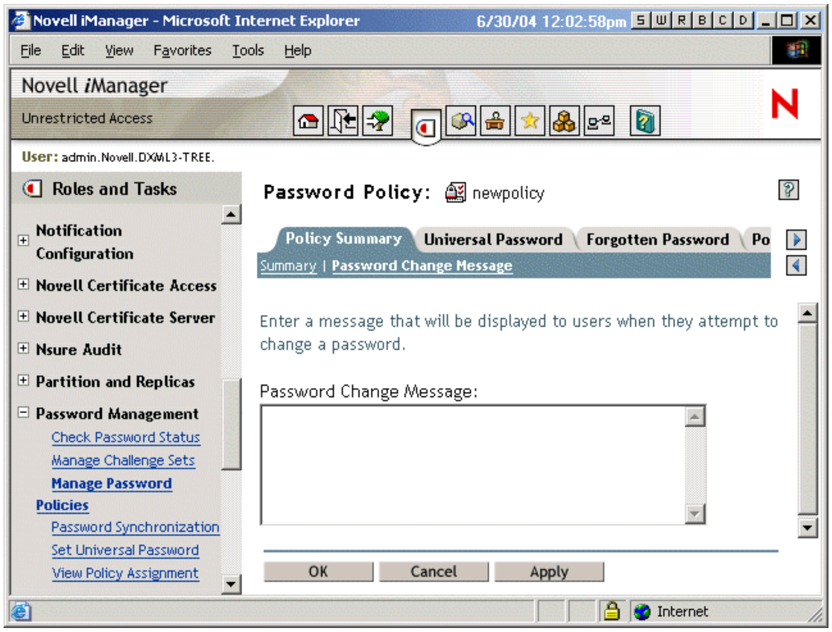
Although users can change their passwords whenever they choose to, they typically use the same passwords as long as possible. To increase security, you can use a password policy to require them to change it. That policy can contain a Password Change Message and the password rules. Whenever users change a password, they see this message along with the rules.

To edit the password policy and create this message:

1. In iManager, click *Passwords* > *Password Policies*.
2. Click the name of the password policy you want to add a message to.
3. Click *Policy Summary* > *Password Change Message*.

   The following page appears:

Figure 4-10 Password Change Message



User: admin.Novell.DXML3-TREE.

Password Policy: newpolicy

Enter a message that will be displayed to users when they attempt to change a password.

Password Change Message:

4 Type the message you want users to see, then click *OK*.

4.6 Configuring E-Mail Notification for Password Self-Service

The iManager role named Notification Configuration lets you specify the e-mail server and customize the templates for e-mail notifications.

E-mail templates are provided to allow Password Synchronization and Password Self-Service to send automated e-mails to users.

You don't create the templates; they are provided by the application that uses them. The e-mail templates are Template objects in eDirectory, and they are placed in the Security container, usually found at the root of your tree. Although they are eDirectory objects, you should edit them only through the iManager interface.

This is a modular framework; as new applications are added that use e-mail templates, the templates can be installed along with the applications that use them.

Identity Manager provides templates for Password Synchronization and Forgotten Password notifications. You control whether e-mail messages are sent, based on your choices in the iManager interface.

For Forgotten Password, e-mail notifications are sent only if you choose to use one of the Forgotten Password actions that causes an e-mail to be sent: e-mail password to user or e-mail password hint to user.

The following information is discussed in this section:

- Section 4.6.1, “Prerequisites,” on page 67

- Section 4.6.2, “Setting Up the SMTP Server to Send E-Mail Notification,” on page 67
- “Setting Up E-Mail Templates for Notification” on page 68

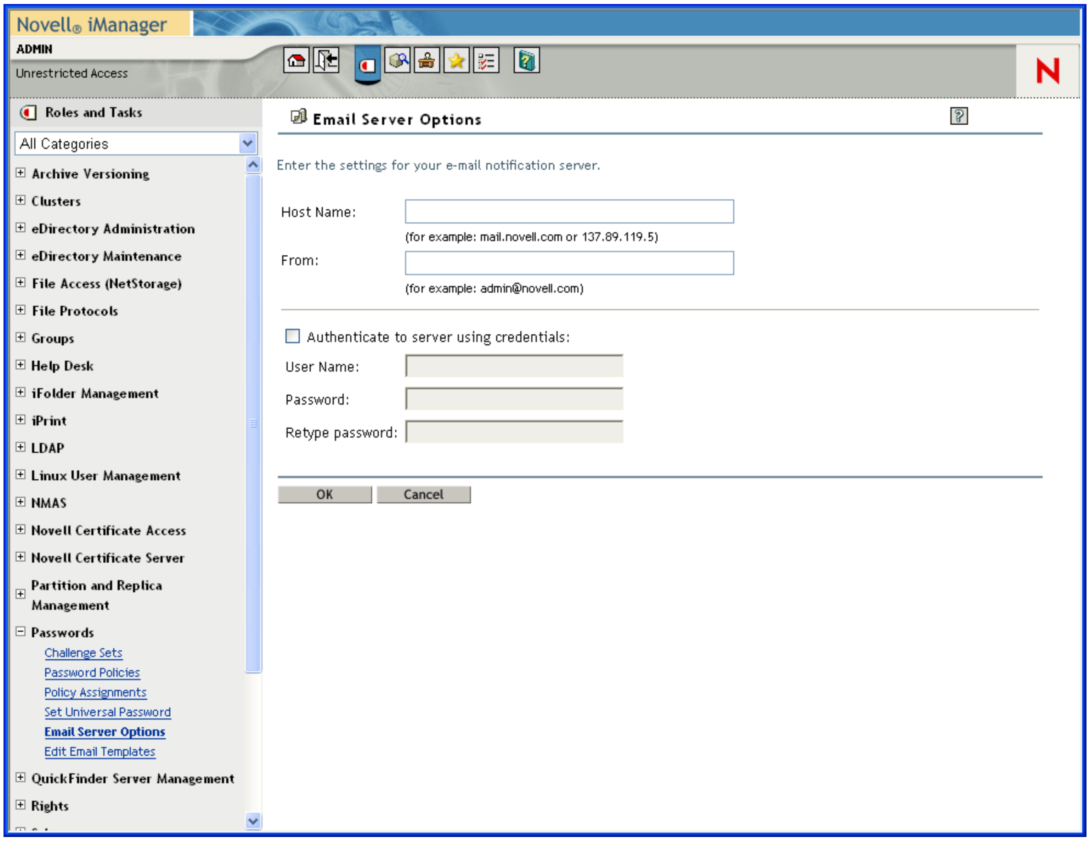
4.6.1 Prerequisites

- Make sure that your eDirectory users have the Internet EMail Address attribute populated.

4.6.2 Setting Up the SMTP Server to Send E-Mail Notification

1 In iManager, click *Passwords* > *E-mail Server Options*.

The following page appears:



Email Server Options

Enter the settings for your e-mail notification server.

Host Name:

(for example: mail.novell.com or 137.89.119.5)

From:

(for example: admin@novell.com)

□ Authenticate to server using credentials:

User Name:

Password:

Retype password:

2 Specify the following information:

- Hostname
- Name you want to appear in the From field of the e-mail message (such as “Administrator”)
- Username and password for authenticating to the server (if necessary)

3 Click *OK*.

4 Customize the e-mail templates as described in “Setting Up E-Mail Templates for Notification” on page 68.

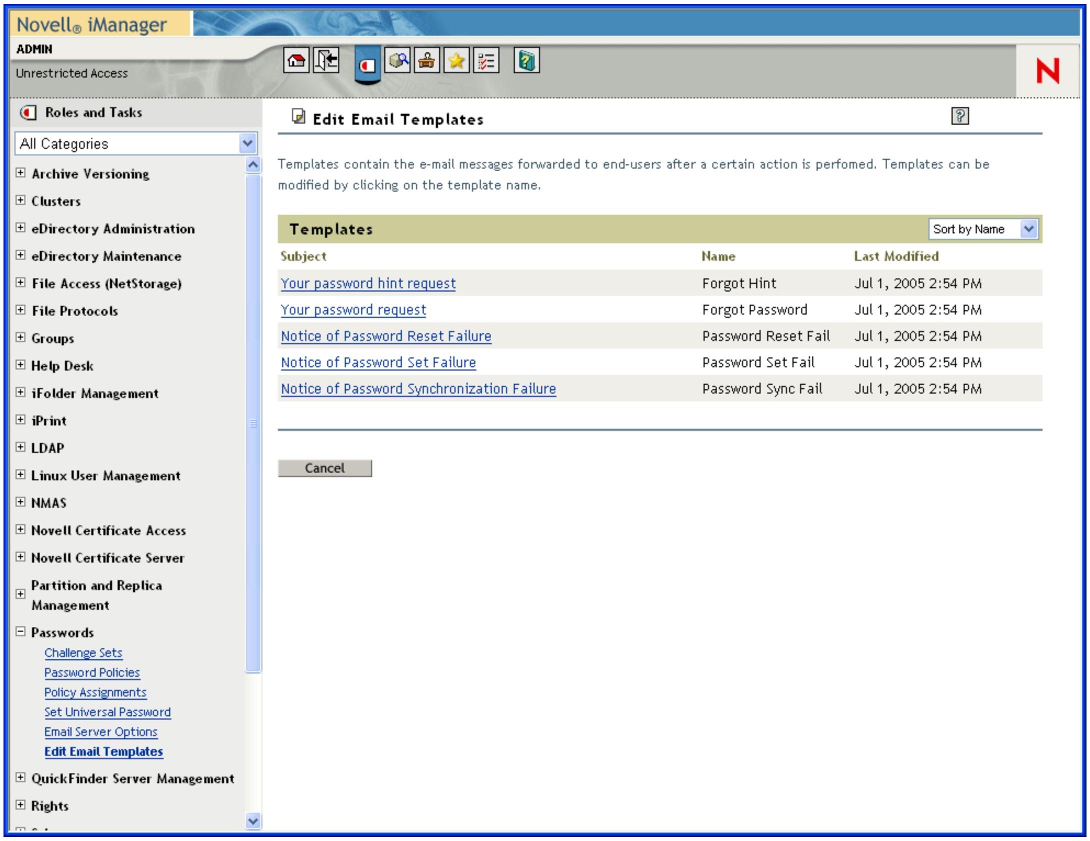
After the e-mail server is set up, e-mail messages can be sent by the applications that use them, if you are using the features that cause messages to be sent.

4.6.3 Setting Up E-Mail Templates for Notification

You can customize these templates with your own text. The name of the template indicates what it is used for. Email templates offer language support.

1 In iManager, click *Passwords > Edit Email Templates*.

A list of templates appears, as in the following example:



Edit Email Templates

Templates contain the e-mail messages forwarded to end-users after a certain action is perfomed. Templates can be modified by clicking on the template name.

Templates

Subject	Name	Last Modified
Your password hint request	Forgot Hint	Jul 1, 2005 2:54 PM
Your password request	Forgot Password	Jul 1, 2005 2:54 PM
Notice of Password Reset Failure	Password Reset Fail	Jul 1, 2005 2:54 PM
Notice of Password Set Failure	Password Set Fail	Jul 1, 2005 2:54 PM
Notice of Password Synchronization Failure	Password Sync Fail	Jul 1, 2005 2:54 PM

2 Edit the templates as desired.

Keep in mind that if you want to add any replacement tags, some additional tasks might be required.

4.7 Testing Password Self-Service

To verify that the features are set up correctly, complete the following as part of testing Password Self-Service:

1 Create a policy with the following characteristics: (For information on how to accomplish this, see, "To create a challenge set while using the Password Policy Wizard:" on page 54).

- Enable Forgotten Password
- Require Challenge Set

- Select the option to verify that the challenge response and hint are configured on login
- Assign the password policy to a container with at least one user you can use to test with (a user who has the e-mail address indicated on the User object in the Internet EMail Address attribute)

2 Make sure you have another user to test with who does not have a password policy assigned.

3 To test password self-service, use the Identity Manager User Application. For information on how to do this, see Chapter 2, "Using the Identity Self-Service Tab" in the *Identity Manager Roles Based Provisioning Module 3.6 User Application User Guide* (http://www.novell.com/documentation/idmrbpm36/ugpro/data/ugpropartidentity.html).

For Windows users, test password self-service using the Novell Client. For information on how to do this, see Section 6.3, "Using Forgotten Password Self-Service" in the *Novell Client for Windows Installation and Administration Guide* (http://www.novell.com/documentation/noclienu/noclienu/data/bxne05q.html).

4.8 Adding Password Self-Service to Your Company Portal

Most of the procedures in the Password Self-Service section assume that you are using the Password Self-Service features on an iManager 2.0.2 server, which is the last version of iManager to support password self-service. If you have a version of iManager later than 2.0.2, you can only perform password self-service through Novell's User Application. For more information on performing password self-service using Novell's User Application, see Chapter 2, Using the Identity Self-Service Tab" of the *Identity Manager Roles Based Provisioning Module 3.6 User Application User Guide* (http://www.novell.com/documentation/idmrbpm36/ugpro/data/ugpropartidentity.html).

Refer to the following table for instructions on how Password Self-Service features can be used with portal products, including products other than iManager.

Table 4-1 *Password Self-Service Features and Portal Products*

Product	Support for Password Self-Service	Procedure
iManager 2.0.2	You can integrate the features. This product supports Password Self-Service features if you install the password management plug-ins. These plug-ins are included with the Identity Manager 3 and are also available separately from download.novell.com.	Follow the steps in ◆ Section 3.3, "Prerequisite Tasks for Using Password Policies," on page 31. ◆ All procedures in Chapter 4, "Password Self-Service," on page 49 (except for Section 4.8, "Adding Password Self-Service to Your Company Portal," on page 69, which is not necessary for iManager 2.02.)

Product	Support for Password Self-Service	Procedure
Identity Manager User Application	User application allows users to perform password self-service tasks.	See Chapter 2,"Using the Identity Self-Service Tab" in the *Identity Manager Roles Based Provisioning Module 3.6 User Application User Guide* (http://www.novell.com/documentation/idmrbpm36/ugpro/data/ugpropartidentity.html).
Virtual Office, provided with NetWare 6.5 Support Pack 2, running on an iManager server	You can integrate the features. You can use the Password Self-Service features on the same NetWare server used for Virtual Office and iManager by installing the plug-ins and completing some additional steps.	Section 4.8.1, "Integrating Password Self-Service with Virtual Office," on page 70
Novell Portal Services (NPS) versions earlier than 4.1	You must link to the features. Although these legacy NPS products run Novell portal modules (NPMs), they don't have some of the enhancements that are required for the Password Self-Service features of the `ForgottenPassword.npm`. To use this product with Password Self-Service, create links from your company portal to the end-user password features on an iManager server.	Section 4.8.2, "Linking to Password Self-Service from a Company Portal," on page 71
Third-party products	You must link to the features. Because third-party products don't run Novell portal modules, you can't use the Password Self-Service features directly in another product. To use third-party products with Password Self-Service, create links from your company portal to the end user password features on an iManager server.	Section 4.8.2, "Linking to Password Self-Service from a Company Portal," on page 71

4.8.1 Integrating Password Self-Service with Virtual Office

Virtual Office supports all the features of Password Self-Service in NetWare 6.5 Support Pack 2 and later, and with OES 1 Linux. Virtual Office is not supported on OES 2 Linux.

For instructions, see the *Virtual Office Configuration Guide* (http://www.novell.com/documentation/oes/virtualoffice/data/am0ogoi.html).

4.8.2 Linking to Password Self-Service from a Company Portal

For products that can't provide the Password Self-Service features by running the `ForgottenPassword.npm` (as noted in Table 4-1 on page 69), you can use the Password Self-Service features by creating another iManager server with the password management plug-ins installed and then linking from your portal home page to the iManager portal on the other server, such as https://*iManager_server_IP_address*/nps.

The password management plug-ins are included with the Identity Manager plug-ins and are available separately by downloading the Password Administration Plug-in for iManager 2.*x* from http:\\download.novell.com.

Complete the tasks in these sections:

- "Prerequisites" on page 71
- "Linking to Forgotten Password Self-Service" on page 71
- "Linking to User Password Management Tasks" on page 72
- "Returning Self-Service Users to the Company Portal" on page 73
- "Making Sure Users Have Configured Password Features" on page 74

Prerequisites

The iManager server and the tree you are using must be prepared as follows:

- Meet the prerequisites described in Section 3.3, "Prerequisite Tasks for Using Password Policies," on page 31
- Make sure you have set up password policies for your eDirectory users

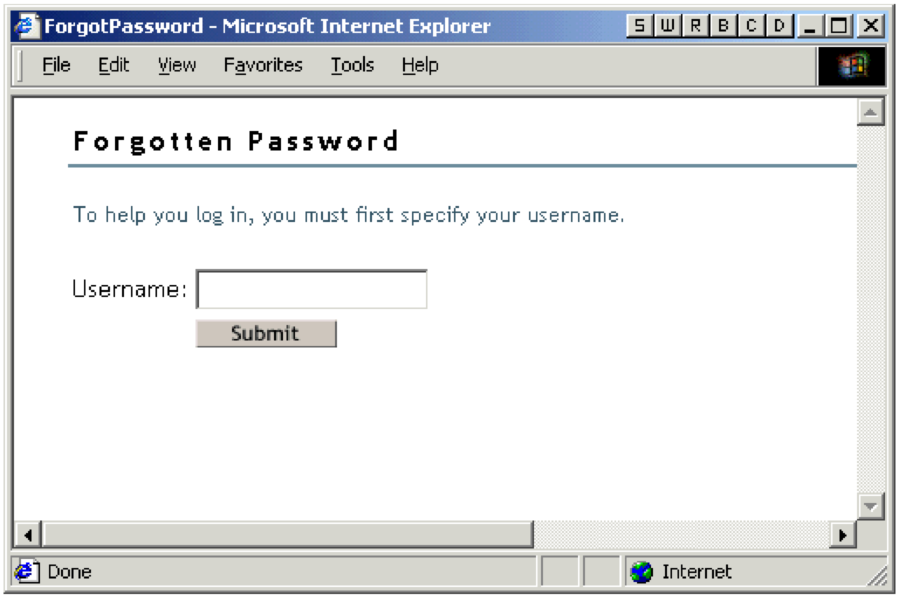
Linking to Forgotten Password Self-Service

To give users access to Forgotten Password Self-Service from your company portal, you can link to that service on a separate iManager Web server.

1 Create a link such as "Forgot your password?" on the login page for your company portal and point it to the following URL on your iManager Web server:

   http://*iManager_server_IP_address*/nps/servlet/
   fullpageservice?NPService=ForgotPassword&nextState=getUserID

   This URL takes users to the following page, where they begin the Forgotten Password process.


ForgotPassword - Microsoft Internet Explorer
File Edit View Favorites Tools Help

Forgotten Password

To help you log in, you must first specify your username.

Username:

2 To customize the return page to go to the login page for your company portal, complete the steps in "Returning Self-Service Users to the Company Portal" on page 73.

Linking to User Password Management Tasks

1 Make sure all the eDirectory users in the portal users container have rights to the Hint attribute, which is named nsimHint.

When you install the DirXML plug-ins on an iManager Web server, this step is automatically completed for the tree that iManager is configured for.

If you are pointing to a different tree, you must complete this step manually.

A utility is provided to help you do this, which you can download and run by doing the following:

1a Go to http:\\download.novell.com.

1b Fill in the following fields:

- **Search By:** Product
- **Choose a Product:** Novell Identity Manager

1c Download the item named 2.0 Password Management Plug-in for iManager 2.0.*x*.

1d Follow the instructions in the `nsimhintreadme.txt` file.

If users do not have rights to the nsimHint attribute, they get an error like the following when they try to create a hint:

```
"Could not write user hint" (Task could not be completed).
```

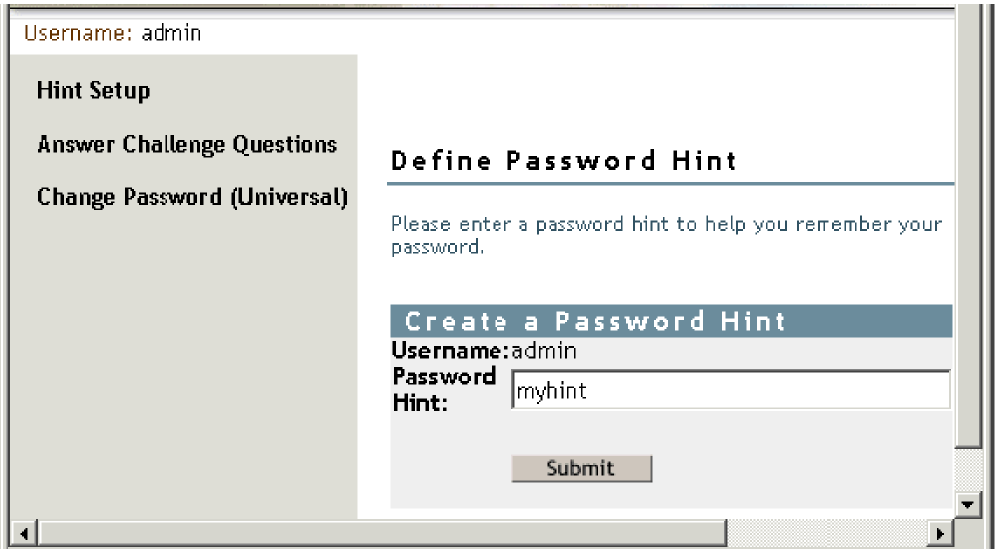
2 Provide users with a link from your company portal to the password management tasks.

You can create a *Manage Passwords* link from the company portal and link to https://*other_iManager_server*/nps. This link would provide access to the Password Management end user tasks:

- Hint Setup

- Answer Challenge Questions
- Change Password (Universal)

A user who clicks on the link would first need to log in and then would see a page like the following example:


Username: admin

Define Password Hint

Please enter a password hint to help you remember your password.

Create a Password Hint

Username:admin

Password Hint: myhint

3 Complete the steps in "Returning Self-Service Users to the Company Portal" on page 73.

Returning Self-Service Users to the Company Portal

The Password Self-Service features include scenarios in which users are provided with a link that lets them return to the login page. For example, when a user changes a password by using the Forgotten Password Self-Service, a page is displayed with the message `Your password has been successfully changed. Click here to return to login page.`

If you point from your company portal to Password Self-Service on a separate iManager server, you might want to customize the default return page so that users are returned to the login page for your company portal when they complete password tasks. By default, clicking the button returns the user to a page on the iManager Web server.

A link to return to the login page is provided in these three places:

- The page where a user can set a new password
- The page displayed after a user successfully changes a password
- The page where a user views a hint

To customize the return page to go to the login page for your company portal:

1 On the iManager Web server you are using for Forgotten Password Self-Service, locate the following directory:

```
\tomcat\webapps\nps\portal\modules\ForgottenPassword\skins\default\device
s\default
```

2 Locate the following file in that directory:

```
forgottenpassword.xsl
```

3 Edit the `forgottenpassword.xsl` file to customize the default return page.

Replace the code

```
href="{LoginURL}"
```

with a hard-coded URL such as

```
href="(http:\\www.your_company_portal_home_page.com)"
```

You need to make this change in three places in the file.

4 Stop and restart Tomcat on the iManager server.

The Return to Login Page links now redirect users to your company's portal login page.

4.8.3 Making Sure Users Have Configured Password Features

When users log in to the iManager portal at https://*iManager_server_IP_address*/nps, they are prompted to take action through a series of post-authentication pages if conditions such as the following are true:

- The user password doesn't comply with Advanced Password Rules in the password policy
- The password policy requires Challenge Questions when using Forgotten Password Self-Service and the user has not configured these questions
- The password policy is using Forgotten Password with Display Password Hint as the action and the user has not created a hint

For example, these prompts are necessary to make sure that the user can use Forgotten Password Self-Service. If the password policy requires users to answer Challenge Questions and the user has never configured them initially, the user can't access Forgotten Password Self-Service. If the user has not created a password hint, the user can't retrieve it to help in remembering the password.

Because other portal products won't automatically provide the post-authentication features, you need to make sure that users log in to the iManager portal at least once to create compliant passwords and complete password management setup, and then again whenever you make changes to Password Policies.

This can be done by making sure that users go to a Manage Passwords link you provide as described in "Linking to User Password Management Tasks" on page 72, which requires users to log in to the iManager portal.

4.9 Troubleshooting Password Self-Service

- To use Challenge Response questions, make sure that you are using a browser that iManager 2.02 supports.
- If you don't have SSL set up properly, you won't be able to log in to iManager or the portal. If you can log in successfully to iManager and you are requiring TLS for Simple Bind, SSL is set up properly and you can rule out SSL-related issues when troubleshooting Password Self-Service.

Security Considerations

A

Reversible encryption of Universal Password is required for convenient interoperation with other password systems. Administrators must evaluate the costs and benefits of the system. Using a Universal Password stored in eDirectory™ might be more secure or convenient than attempting to manage several passwords.

A Universal Password in eDirectory is protected by three levels of security: triple DES encryption of the password itself, eDirectory rights, and file system rights.

- The Universal Password is encrypted by a triple DES, user-specific key. Both the Universal Password and the user key are stored in system attributes that only eDirectory can read. The user key (3DES) is stored encrypted with the tree key, and the tree key is protected by a unique NICI key on each machine (Neither the tree key nor the NICI key is stored within eDirectory. They are not stored with the data they protect). The tree key is present on each machine within a tree, but each tree has a different tree key, so data encrypted with the tree key can be recovered only on a machine within the same tree. Thus, while stored, the Universal Password is protected by three layers of encryption.
- Each key is also secured via eDirectory rights. Only administrators with the Supervisor right or the users themselves have the rights to change Universal Passwords.

NOTE: The password policy can be configured to allow Universal Password to be read by administrators and for users to read their own passwords through using NMAS/LDAP extensions. This is not enabled by default.

- File system rights ensure that only a user with the proper rights can access keys.

  If Universal Password is deployed in an environment requiring high security, you can take the following additional precautions:

  - Make sure that the following directories and files are secure:

NetWare	`sys:\system\nici`
Windows	`\system32\novell\nici`
	`\system32\` where the NICI DLL is installed
Linux/Unix	`/var/novell/nici`
	`etc/nici.cfg`
	`/usr/locall/lib/libccs2.so` and the NICI shared libraries in the same directory
	On LSB-compliant systems, make sure the following directories are also secure:
	`/var/opt/novell/nici`
	`etc/opt/novell`
	`/opt/novell/lib`

Consult the documentation for your system for specific details of the location of NICI and eDirectory files.

- As with any security system, restricting physical access to the server where the keys reside is very important.

For security considerations relating to password management, see “Security Considerations” in the *Novell Modular Authentication Services 3.3.1 Administration Guide*.

Documentation Updates

B

The documentation was updated on the following dates:

- Section B.1, “August 6th, 2010,” on page 77
- Section B.2, “August 7th, 2008,” on page 77
- Section B.3, “June 7th, 2008,” on page 78
- Section B.4, “April 23rd, 2008,” on page 78
- Section B.5, “March 13th, 2008,” on page 78

B.1 August 6th, 2010

Updates were made to the following sections. The changes are explained below.

Location	Change
Section 2.6, “Step 6: Check the Tree for SDI Key Consistency,” on page 18	Fixed the following doc comment: - Doc comment#14679 (http://doccomments.provo.novell.com/admin/main?/admin/viewcomment/14679) - Doc comment#14676 (http://doccomments.provo.novell.com/admin/main?/admin/viewcomment/14676)
Entire Book	Fixed the broken links to all the TIDs. Updated the guide with the new TID numbers as follows:
Section 2.3, “Step 3: Make Sure Your Security Container Is Available,” on page 15.	Updated the TID to Novell TID3393169 (http://www.novell.com/support/viewContent.do?externalId=3393169) from Novell TID 10091343 (http://support.novell.com/cgi-bin/search/searchtid.cgi?/10091343.htm).
Section 2.4, “Step 4: Verify That Your SDI Domain Key Servers Are Ready for Universal Password,” on page 16	Updated the TID to Novell TID 3364214 (http://www.novell.com/support/viewContent.do?externalId=3364214)from Novell TID 10093969 (http://support.novell.com/cgi-bin/search/searchtid.cgi?/10093969.htm)
Section 2.9, “Backward Compatibility,” on page 19	Updated the TID to Novell TID 3065822 (http://www.novell.com/support/viewContent.do?externalId=3065822).

B.2 August 7th, 2008

Updates were made to the following sections. The changes are explained below.

Location	Change
“About This Guide” on page 7	Updated link to the Password Management Documentation Web site.

Location	Change
Section 1.5, "Password Synchronization," on page 11 and "Connected Systems" on page 29	Updated links to the Novell Identity Manager 3.5.1 Administration Guide.

B.3 June 7th, 2008

Updates were made to the following sections. The changes are explained below.

Location	Change
Section 4.3.2, "Creating or Editing Challenge Sets," on page 52	Added information explaining that answers to challenge questions are case-insensitive.

B.4 April 23rd, 2008

Updates were made to the following sections. The changes are explained below.

B.4.1 Overview

Location	Change
"Change Password" on page 35	Changed information in the section regarding the *Require unique passwords* option.
Section 3.4.2, "Universal Password Configuration Options," on page 41	Added another paragraph further explaining the *Allow admin to retrieve passwords* option.

B.5 March 13th, 2008

Updates were made to the following sections. The changes are explained below.

B.5.1 Overview

Location	Change
Section 1.1, "Universal Password Background," on page 9	Moved this information from Chapter 2, as it provides an overview of Universal Password.
Section 1.5, "Password Synchronization," on page 11	Moved this information from Chapter 5 in order to better consolidate information.

Location	Change
Section 4.7, “Testing Password Self-Service,” on page 68	Changed information from testing password self-service with Virtual Office, which is no longer supported, to testing password self-service with Identity Manager User Application and Novell Client.
Appendix A, “Security Considerations,” on page 75	Moved this section from Chapter 2.
	Made editorial changes and updated the guide to current Novell documentation standards.