

Installation Guide

Novell File Reporter 2.6

November 10, 2015

Novell.



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About This Guide

This installation guide is written to provide network administrators the conceptual and procedural information for installing and configuring Novell File Reporter 2.5.

- ◆ Chapter 1, “Upgrading from a Previous Version,” on page 9
- ◆ Chapter 2, “Deployment Planning,” on page 11
- ◆ Chapter 3, “Licensing the Product,” on page 17
- ◆ Chapter 4, “Installing and Configuring the PostgreSQL Database,” on page 23
- ◆ Chapter 5, “Installing an SQL Server Instance that Supports Novell File Reporter,” on page 35
- ◆ Chapter 6, “Installing and Configuring the NFR Engine, Database, and Web Application in an Active Directory Environment,” on page 43
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- ◆ Chapter 8, “Installing and Configuring the Windows Agent,” on page 93
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- ◆ Chapter 10, “Installing the Client Tools,” on page 105
- ◆ Chapter 11, “Installing the Data Analytic Tools,” on page 107
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- ◆ Appendix B, “Deploying NFR Agents Remotely by Using the DeployAgents Tool,” on page 111
- ◆ Appendix C, “Deploying Windows Agents Remotely Using Microsoft System Center Configuration Manager,” on page 117
- ◆ Appendix D, “Documentation Updates,” on page 131

Audience

This guide is intended for network administrators who manage user and collaborative network storage resources.

Feedback

We want to hear your comments and suggestions about this guide 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 *Novell File Reporter 2.6 Installation Guide*, visit the [Novell File Reporter Documentation Web site \(http://www.novell.com/documentation/filereporter2\)](http://www.novell.com/documentation/filereporter2).

Additional Documentation

For additional Novell File Reporter 2.6 documentation, see the following guides at the [Novell File Reporter Documentation Web site \(http://www.novell.com/documentation/filereporter2\)](http://www.novell.com/documentation/filereporter2)

- ◆ *Novell File Reporter 2.6 Administration Guide*
- ◆ *Novell File Reporter 2.6 Database Schema and Custom Queries Guide*

1 Upgrading from a Previous Version

- ♦ Section 1.1, “Database,” on page 9
- ♦ Section 1.2, “License,” on page 10
- ♦ Section 1.3, “Web Application and NFR Engine,” on page 10
- ♦ Section 1.4, “NFR Agents,” on page 10

1.1 Database

1.1.1 PostgreSQL Database

If your deployment of Novell File Reporter will continue to use PostgreSQL, you should consider upgrading to the latest version in order to take advantage of any security updates and bug fixes. The Novell File Reporter ISO includes recent versions of both PostgreSQL 9.3.x and 9.4.x.

NOTE: The Novell File Reporter 2.6 ISO no longer includes installation packages for PostgreSQL 9.2.x. Although Novell File Reporter 2.6 continues to support PostgreSQL 9.2, we have only included the latest major releases of PostgreSQL 9.3 and 9.4.

For those wishing to update an existing PostgreSQL 9.2 installation, please download the corresponding Windows or Linux package from <http://www.postgresql.org> (<http://www.postgresql.org>).

Note that the `CC-PostgreSQL-9.x.y.exe` installers for Windows that ship with the ISO are custom packages, and must be uninstalled or disabled prior to installation of any other provider’s PostgreSQL 9.x package for Windows.

IMPORTANT: For best performance, we strongly recommended that you install PostgreSQL on Linux rather than Windows. The included PostgreSQL installers for Windows are simply included as a convenience, but are not recommended for production implementations.

For users who want to update an existing PostgreSQL 9.3 installation, simply run the included `CC-PostgreSQL-9.3.6.x.exe` installer for Windows or the `postgresql-9.3.x-linux-x64.run` installer for Linux. Refer to the release notes at <http://www.postgresql.org/docs/9.3/static/release-9-3-6.html> (<http://www.postgresql.org/docs/9.3/static/release-9-3-6.html>).

For users who want to update an existing PostgreSQL 9.4 installation, simply run the included `CC-PostgreSQL-9.4.1.x.exe` installer for Windows or the `postgresql-9.4.x-linux-x64.run` installer for Linux. Refer to the release notes at <http://www.postgresql.org/docs/9.4/static/release-9-4-1.html> (<http://www.postgresql.org/docs/9.4/static/release-9-4-1.html>).

For users who want to upgrade from a previous release of PostgreSQL to a newer one (i.e. upgrade from PostgreSQL 9.3 or 9.2 to 9.4), refer to the upgrade documentation at <http://www.postgresql.org/docs/current/static/pgupgrade.html> (<http://www.postgresql.org/docs/current/static/pgupgrade.html>).

1.1.2 Microsoft Database

If your plans for upgrading to Novell File Reporter 2.6 include switching from the PostgreSQL database to a Microsoft SQL Server database, there is currently no migration utility available for migrating the database content. You must, therefore, do one of the following:

- ♦ Reinstall all Novell File Reporter components and, when running the Database Configuration Wizard, specify the Microsoft SQL Server database. You will then need to recreate all of the scan policies, scan targets, and so forth, that reside on the database.
- ♦ Run the Database Configuration Wizard and specify the Microsoft SQL Server database. You will then need to recreate all of the scan policies, scan targets, and so forth, that reside on the database.

1.2 License

Novell File Reporter 2.6 requires an updated license. For procedures on updating the license, see [Section 3.2, “Replacing a License,” on page 18](#).

1.3 Web Application and NFR Engine

Upgrade the Web application and NFR Engine by installing the updated software on top of the existing Web application and NFR Engine software.

To upgrade an NFR Engine where Active Directory is the primary identity system, follow the procedures in [Chapter 6, “Installing and Configuring the NFR Engine, Database, and Web Application in an Active Directory Environment,” on page 43](#).

To upgrade an NFR Engine where eDirectory is the primary identity system, follow the procedures in [Chapter 7, “Installing and Configuring the NFR Engine, Database, and Web Application in an eDirectory Environment,” on page 67](#).

1.4 NFR Agents

It is not mandatory to upgrade your Novell File Reporter 2.0.x NFR Agents. However, be aware that the NFR Agents included in Novell File Reporter 2.6 are the latest patched versions, which include all bug fixes.

With this point considered, we recommend that you upgrade the NFR Agent software as soon as possible. You can do so by installing the updated NFR Agent software on top of the existing NFR Agent software.

To upgrade an NFR Agent on a Windows server, follow the procedures in [Chapter 8, “Installing and Configuring the Windows Agent,” on page 93](#).

To upgrade an NFR Agent on a Linux server, follow the procedures in [Chapter 9, “Installing and Configuring the Linux Agent,” on page 99](#).

2 Deployment Planning

Novell File Reporter can be installed to work in a variety of configurations. Before proceeding with the installation, you should understand how to deploy Novell File Reporter to best meet the needs of your organization.

- ♦ [Section 2.1, “Before You Proceed,” on page 11](#)
- ♦ [Section 2.2, “Develop a Plan for Deploying the NFR Agents,” on page 15](#)
- ♦ [Section 2.3, “Database Deployment Recommendations,” on page 15](#)

2.1 Before You Proceed

IMPORTANT: Because of their distinct architectures, Novell File Reporter Version 1.0.x and Version 2.6 cannot be integrated. If you have Novell File Reporter 1.0.x deployed in your network and want to keep it, be aware that you cannot import Version 1.0.x data to Version 2.6 and vice versa. You must ensure that the Version 1.0.x NFR Engine and data reside on servers where no components of Version 2.6 reside.

If you decide to install either the Novell File Reporter 2.6 NFR Engine or the NFR Agent on a server where a Novell File Reporter Version 1.0.x component is installed, you must fully remove the Version 1.0.x component before installing the Version 2.6 component.

- ♦ [Section 2.1.1, “Understand the Technologies and Expertise You Need,” on page 11](#)
- ♦ [Section 2.1.2, “Determine the Scope and Choose a Primary Identity System,” on page 12](#)
- ♦ [Section 2.1.3, “Decide Where to Host the NFR Engine,” on page 13](#)
- ♦ [Section 2.1.4, “Decide Which Database to Utilize,” on page 13](#)
- ♦ [Section 2.1.5, “Create a Worksheet,” on page 14](#)

2.1.1 Understand the Technologies and Expertise You Need

Before you install Novell File Reporter, review the following table to understand how different technologies might affect how you proceed.

Technology	Notes
Windows and Windows Networking	The NFR Engine runs on a Windows operating system and uses basic TCP/IP networking inherent to the operating system.
Microsoft Internet Information Server (IIS)	Novell File Reporter is accessed and managed via a Web browser. The Web service is an ASP.NET application that runs in conjunction with IIS. The installer and configuration utilities automatically configure IIS and manage most aspects of the installation for you. The NFR Engine and Web service must run on the same system in this release of the software.

Technology	Notes
DNS	<p>In order to access the Novell File Reporter Web service with a browser, the Web site name as registered with IIS must be used. In other words, the raw IP address does not work.</p> <p>You need to create a DNS entry for the name in the environment, or the entry needs to be added to the hosts file on every machine accessing the Novell File Reporter system.</p>
Database	<p>Novell File Reporter utilizes a Microsoft SQL Server or PostgreSQL database as the back end data store. The database must be accessible from the server running the NFR Engine.</p> <p>If you choose to use SQL Server, the instance must be configured according to the parameters specified in Chapter 5, "Installing an SQL Server Instance that Supports Novell File Reporter," on page 35.</p> <p>The Novell File Reporter ISO image includes a preconfigured PostgreSQL installation and configuration package for Windows and Linux. If you use either of these packages, most of the details of installing and configuring the PostgreSQL database are taken care of for you.</p>
Active Directory and Windows Server (Option)	<p>You can use Novell File Reporter to report on Active Directory and Windows file systems. If so, Novell File Reporter makes use of a proxy object and group in Active Directory that is used by the system as part of day-to-day operations.</p> <p>You should be familiar with the Windows network that you will be reporting against with Novell File Reporter as well as with basic Windows file system and Active Directory terminology and operations.</p>
eDirectory and NetWare / OES (Option)	<p>You can use Novell File Reporter to report on eDirectory and Novell file systems. If so, Novell File Reporter makes use of a proxy object and group in eDirectory that is used by the system as part of day-to-day operations.</p> <p>You should be familiar with the Novell network that you will be reporting against with Novell File Reporter as well as with basic Novell file system and eDirectory terminology and operations.</p>

2.1.2 Determine the Scope and Choose a Primary Identity System

You need to decide the scope of your installation and decide whether you will use eDirectory or Active Directory as your primary identity system.

The primary identity system is used by Novell File Reporter for licensing, administrative authentication, and authorization. It is also the source for user email address information used by the notification subsystem.

Scope	Primary Identity System
Single eDirectory tree	The given eDirectory tree
Multiple eDirectory trees	Choose one of the eDirectory trees
Single Active Directory forest	The given AD forest

Scope	Primary Identity System
Single Active Directory forest and single eDirectory tree	Pick one: <ul style="list-style-type: none"> ◆ The given AD forest ◆ The given eDirectory tree Note: Changing the primary identity system between eDirectory and Active Directory is non-trivial.
Single Active Directory forest and multiple eDirectory trees	Pick one: <ul style="list-style-type: none"> ◆ The given AD forest ◆ One of the eDirectory trees Note: Changing the primary identity system between eDirectory and Active Directory is non-trivial.

2.1.3 Decide Where to Host the NFR Engine

- ◆ The NFR Engine server host should have significant CPU, disk, and memory for all but the smallest installations.
- ◆ The NFR Engine runs on any of the following 64-bit Windows Servers:
 - ◆ Windows Server 2012 R2
 - ◆ Windows Server 2012
 - ◆ Windows Server 2008 R2

NOTE: If possible, the NFR Engine should not be installed on a Domain Controller.

Scope	NFR Engine Host Server Configuration Requirement
eDirectory only	Novell Client Installed
Active Directory only	Joined to the domain
Both eDirectory and Active Directory	Both: <ul style="list-style-type: none"> ◆ Novell Client installed ◆ Joined to the domain

2.1.4 Decide Which Database to Utilize

IMPORTANT: Database deployment recommendations are detailed in [Section 2.3, “Database Deployment Recommendations,”](#) on page 15.

You can utilize either a PostgreSQL database or a Microsoft SQL Server database. Here are some considerations for choosing one over the other:

- ◆ If you have a Microsoft Licensing Agreement that entitles you to Microsoft SQL Server, you might prefer to utilize Microsoft SQL Server.

Name of Target Volume or Share	Scan File System Data? (Yes No)	Scan Security Data? (Yes No)	Scan Trending Data? (Yes No)

2.2 Develop a Plan for Deploying the NFR Agents

Target File System to be Scanned	Agent can be Installed Locally?	Potential Proxy Agents
NetWare	No	Any of the following: <ul style="list-style-type: none"> ♦ Open Enterprise Server 11 ♦ Windows (with the Novell Client)
Open Enterprise Server	Yes	Any of the following: <ul style="list-style-type: none"> ♦ Open Enterprise Server 11 ♦ Windows (with the Novell Client)
Windows	Yes	Windows
Network Attached Storage (NAS) Device (CIFS-based)	No	Windows

When you decide whether to install the agent locally on an Open Enterprise Server or Windows server, or to have the Agent service run through a proxy, be aware of the following:

- ♦ Locally installed NFR Agents perform scans faster than proxy-based agents.
- ♦ Locally installed NFR Agents share CPU and memory resources with other software running on the system. If a server is already constrained for resources, consider using a proxy instead of installing the NFR Agent locally. For procedures, see [“Novell File Reporter 2.6 Administration Guide.”](#)

2.3 Database Deployment Recommendations

You should consider the following guidelines before installing and configuring any database system for Novell File Reporter.

- ♦ [Section 2.3.1, “Use a Dedicated Server,” on page 15](#)
- ♦ [Section 2.3.2, “Use a Dedicated Database Instance,” on page 16](#)
- ♦ [Section 2.3.3, “Provide Sufficient I/O Bandwidth,” on page 16](#)

2.3.1 Use a Dedicated Server

Due to the potential size of the collected scan data and the I/O processing needed for large database installations, we strongly recommend that you install the database on a dedicated server.

- ♦ For minimum requirements for a PostgreSQL host on a Windows Server, see [Section 4.2.1, “Minimum Requirements,” on page 23.](#)

- ♦ For minimum requirements for a PostgreSQL host on a Linux server, see [Section 4.3.1, “Minimum Requirements,” on page 28.](#)
- ♦ For minimum requirements for a SQL Server host, see [Section 5.2, “Minimum Requirements,” on page 35.](#)

2.3.2 Use a Dedicated Database Instance

In addition to sizing requirements, we recommend that you use a dedicated SQL Server instance or PostgreSQL cluster to prevent conflicts with other vendor software. Novell File Reporter needs access to manage the database security principals and roles, which requires access at the instance level. In addition, future developments of Novell File Reporter might include other instance-specific updates such as CLR extensions for SQL server, security principal and role management for delegation purposes, and custom extensions, all of which require management at the instance or cluster level.

In short, do not install the Novell File Reporter database in an instance or cluster that shares databases with other software.

2.3.3 Provide Sufficient I/O Bandwidth

Relation Database Management Systems are by nature very I/O intensive, especially when it comes to persisted storage on disk. For best performance, consider the following:

- ♦ Provide SSD-backed storage if possible for the database tablespaces or filegroups*.
- ♦ Alternatively, provide RAID-10 spindle storage for database tablespaces or filegroups*.
- ♦ Do not use RAID-5 storage for database storage.
- ♦ Do not use Network Attached Storage for database storage.
- ♦ If using a SAN, be sure to provide at least 10 GB or more throughput (ideally, the SAN link should be faster than the I/O capacity of the backend storage system, so that it is not the bottleneck).
- ♦ Be sure to enable battery-backed cache for RAID and SAN controllers.
- ♦ Optionally, place the transaction logs on a separate RAID-1 or SSD.

This can be done either during the installation of the SQL Server instance, or afterwards.

For procedures on moving database files after the installation of an SQL Server instance, see <https://msdn.microsoft.com/en-us/library/ms189133.aspx> (<https://msdn.microsoft.com/en-us/library/ms189133.aspx>).

For PostgreSQL, moving database files is a simple process of stopping the database server, relocating the `pg_xlog` folder, and then creating a symbolic link to the new path.

The need for separate disks for transaction logs is minimized if the main storage is already on RAID-10 or SSD, and the I/O channel is not already saturated.

*For basic information on SQL Server filegroups, see <https://msdn.microsoft.com/en-us/library/ms189563.aspx> (<https://msdn.microsoft.com/en-us/library/ms189563.aspx>).

*For basic information on PostgreSQL tablespaces, see <http://www.postgresql.org/docs/9.4/static/manage-ag-tablespaces.html> (<http://www.postgresql.org/docs/9.4/static/manage-ag-tablespaces.html>).

3 Licensing the Product

- ♦ Section 3.1, “Obtaining a License File,” on page 17
- ♦ Section 3.2, “Replacing a License,” on page 18

3.1 Obtaining a License File

Novell File Reporter requires a production license file or evaluation license file that you obtain from Novell.

- 1 In a Web browser, go to www.filereportersupport.com.
- 2 On the left side of the Web page, click *Licensing*.

A new Web page appears with options for obtaining the license in either eDirectory or Active Directory network environments.

Novell® File Reporter

printer friendly

Product License – 2.6

Welcome to the Novell File Reporter™ (NFR) 2.0 License and Activation page. Here you will have the opportunity to either request a trial license key or activate a production license key, which will immediately be sent to you via e-mail.

Option	eDirectory	Active Directory
Trial License		
You can obtain a free 30 day limited use trial license for Novell File Reporter by using one of the following servers:	Server1	Server1
	Server2	Server2
Production Activation		
Select one of the following links to proceed to a server to activate your Novell File Reporter license:	Server1	Server1
	Server2	Server2

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The Novell File Reporter directory type license you select is based on the directory service you use to authenticate to your network. Although Novell File Reporter can simultaneously report on storage devices residing in both eDirectory and Active Directory networks, you only authenticate to one directory service or “identity system.”

- 3 Do one of the following:
 - ◆ Request a trial license by clicking one of the server links in the *Trial License* region.
 - ◆ After you purchase Novell File Reporter, activate your production license by clicking one of the server links in the *Production Activation* region.

A new Web page appears with registration fields for you to complete.

- 4 Complete the fields and click *Submit*.

An email from the License Generator is automatically sent to you with an embedded link for accessing the license.

- 5 Click the link to access a new Web page with an embedded license file.

Novell® File Reporter

[Home](#) **License**



Novell File Reporter Version 2.6

The link for your license file appears below:

[NovellFileReporterV2_NVB.local_Fen-25-2014_FR.LIC](#)

(Please use **Right-Click->Save Target As..** to download the file.)

Note that if you are replacing a license file in an existing installation, the file must be renamed to 'FR.LIC'. If you have problems with this file and need assistance, please contact support@filereportersupport.com

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- 6 Right-click the license file and select *Save Target As*, then save the license file to a folder of your choice.

- 7 Note where the license file is saved.

You need to retrieve the license during the installation of the Novell File Reporter Engine.

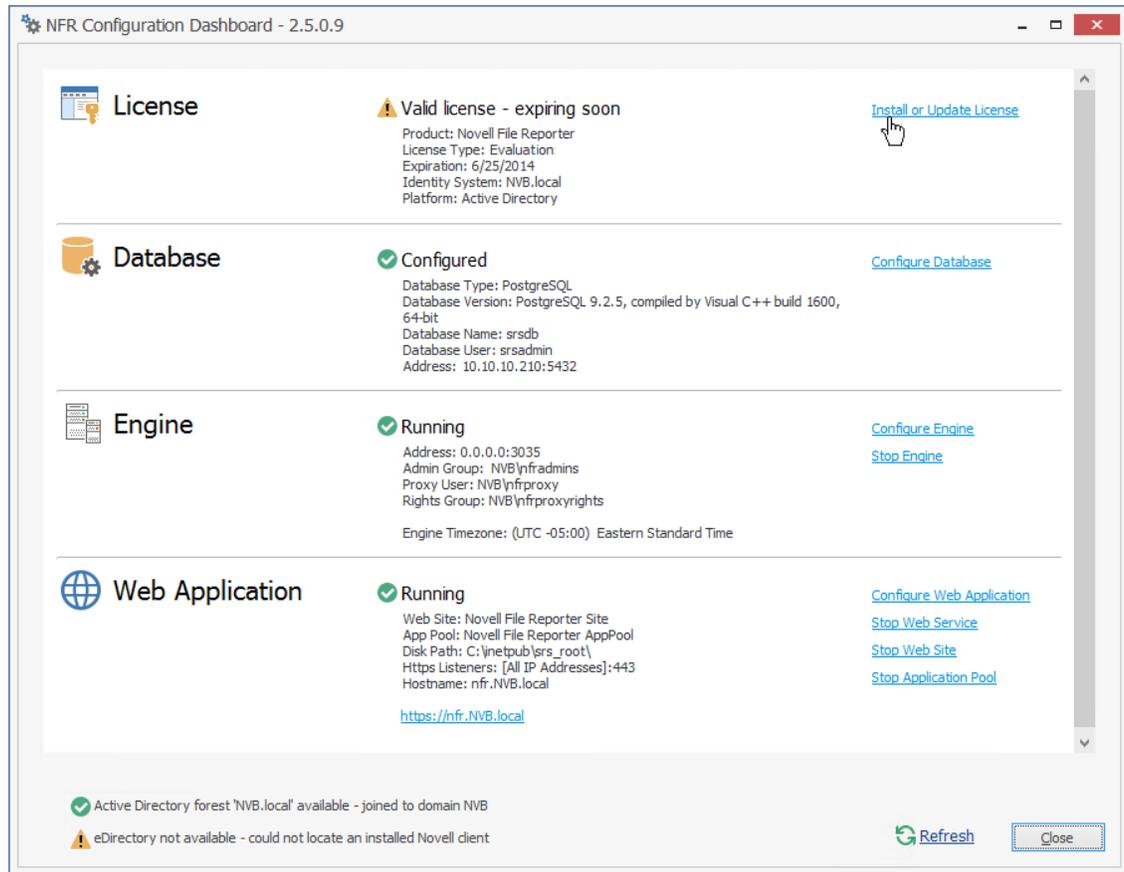
3.2 Replacing a License

You use the Novell File Reporter Configuration Dashboard to replace a Novell File Reporter license, including an evaluation license.

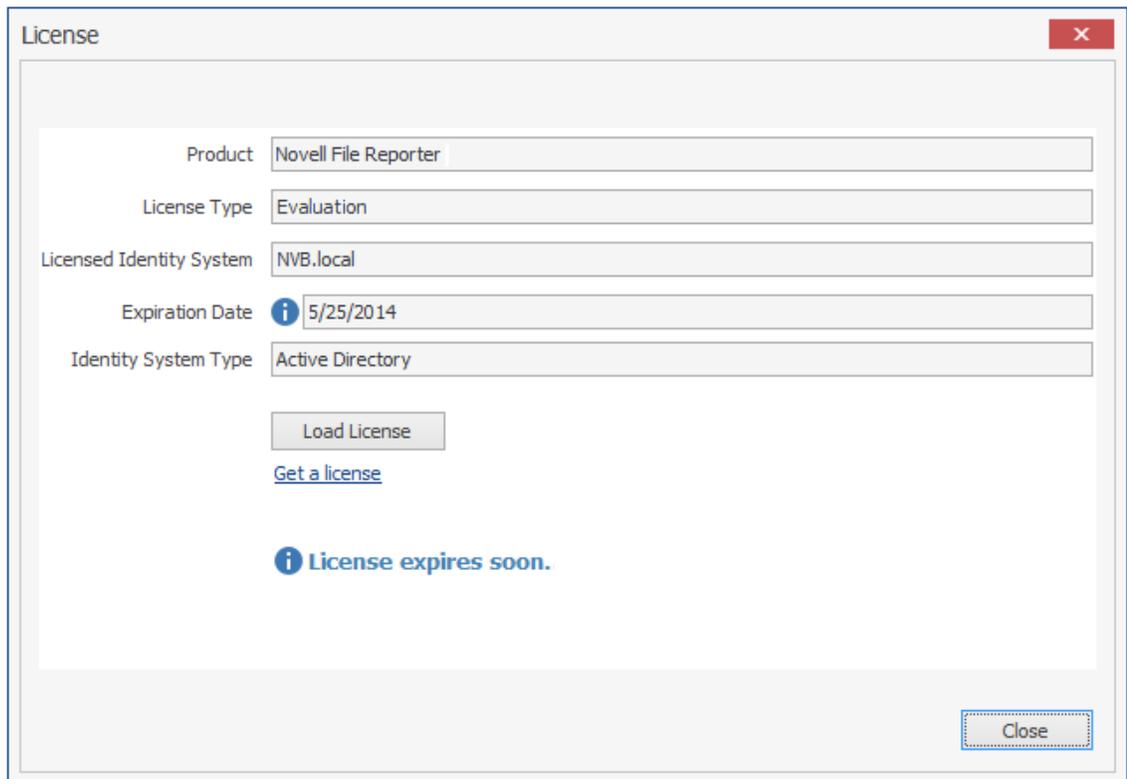
NOTE: The NFR Engine generates web and email notifications 60, 30, and 15 days before a license expires. License expiration checks are done every 24 hours at midnight.

When the license expires, you cannot log in through the Novell File Reporter Web application until the license is replaced; this can only be done through the Novell File Reporter Engine Configuration utility.

- 1 On the Novell File Reporter Configuration Dashboard, click *Install or Update Licensing*.



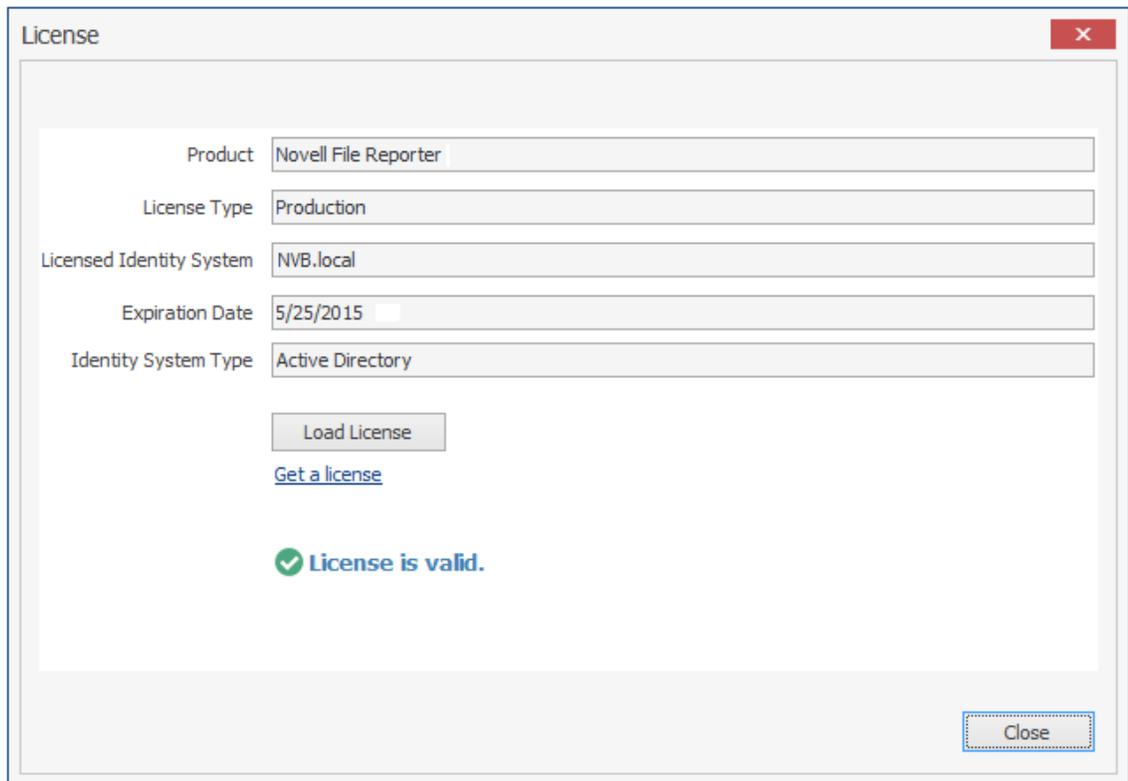
A page similar to the following appears:



2 Click *Load License*, then browse to and select the production license file.

3 When the confirmation prompt appears, click *Yes*.

The fields on the License page are filled in according to the data in the license file.



4 Click *Close*.

4 Installing and Configuring the PostgreSQL Database

This section provides procedures for installing and configuring the PostgreSQL database on a Windows server.

It also refers you to resources for helping you install the PostgreSQL database on a Linux host.

- ♦ [Section 4.1, “Accessing the Novell File Reporter Contents,” on page 23](#)
- ♦ [Section 4.2, “Installing the PostgreSQL Database on a Windows Server,” on page 23](#)
- ♦ [Section 4.3, “Installing the PostgreSQL Database on a Linux Server,” on page 27](#)

4.1 Accessing the Novell File Reporter Contents

- 1 On the Windows server that will host the PostgreSQL database, copy to a directory the `NFR_2_6_0.iso` file that was made available to you following your purchase of Novell File Reporter.
- 2 Mount or burn to CD or DVD the `NFR_2_6_0.iso` file.
- 3 Note the location of your mounted drive or burned CD or DVD.

This is the installation source you will use to install Novell File Reporter components.

4.2 Installing the PostgreSQL Database on a Windows Server

- ♦ [Section 4.2.1, “Minimum Requirements,” on page 23](#)
- ♦ [Section 4.2.2, “Installing and Configuring the PostgreSQL Database,” on page 24](#)

4.2.1 Minimum Requirements

- ♦ Any of the following 64-bit multi-core processor servers:
 - ♦ Windows Server 2008 R2
 - ♦ Windows Server 2012
 - ♦ Windows Server 2012 R2
- ♦ Minimum of 8 GB RAM

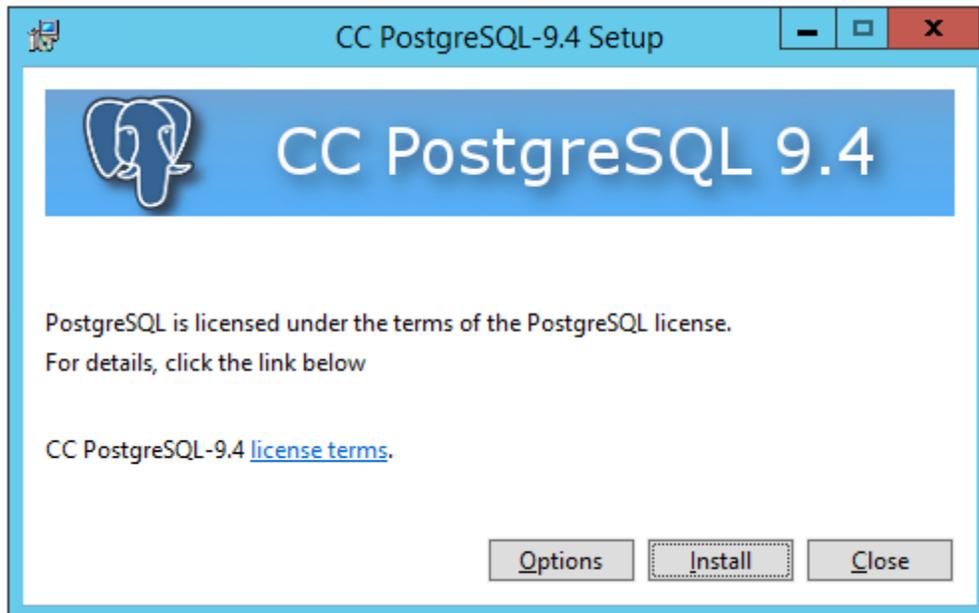
Depending on the size and frequency of your scans, this amount might need to be significantly increased.

- ◆ Disk space requirements:
 - ◆ Minimum 700 MB if the PostgreSQL database is installed on the same server as the NFR Engine
 - ◆ Minimum 350 MB if the PostgreSQL database is installed on a different server

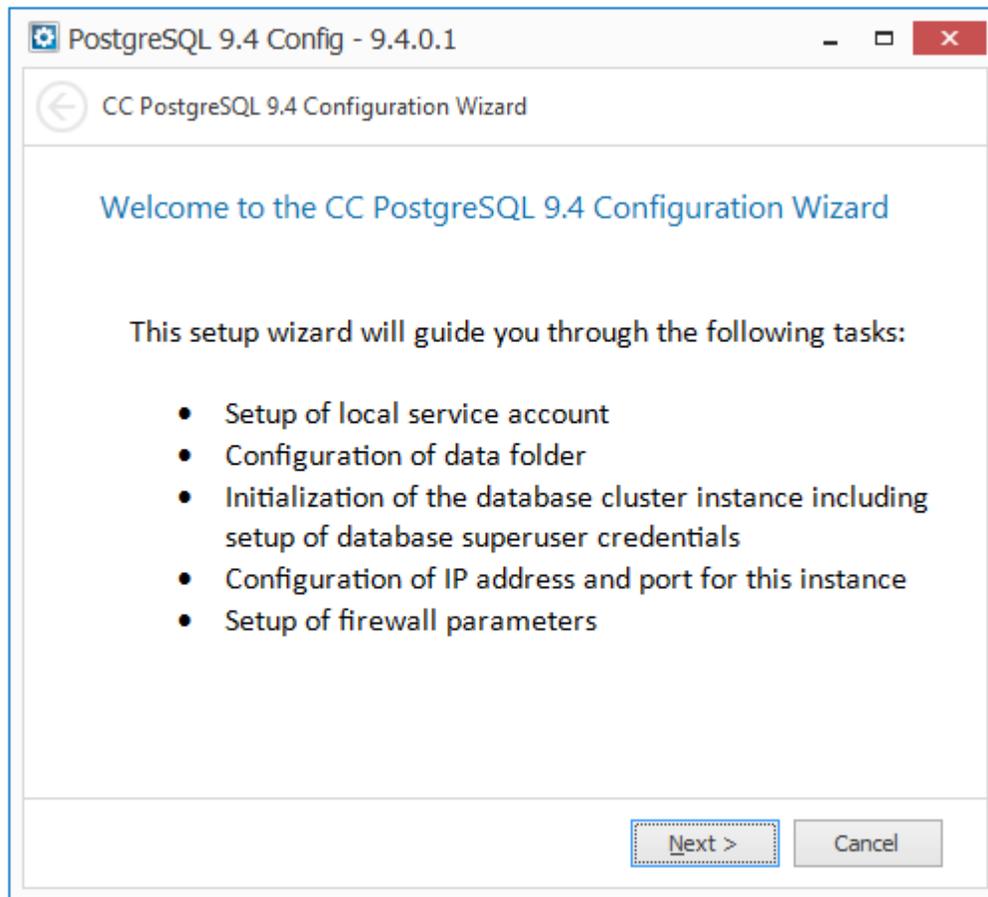
Depending on the size and frequency of your scans, these amounts might need to be significantly increased.

4.2.2 Installing and Configuring the PostgreSQL Database

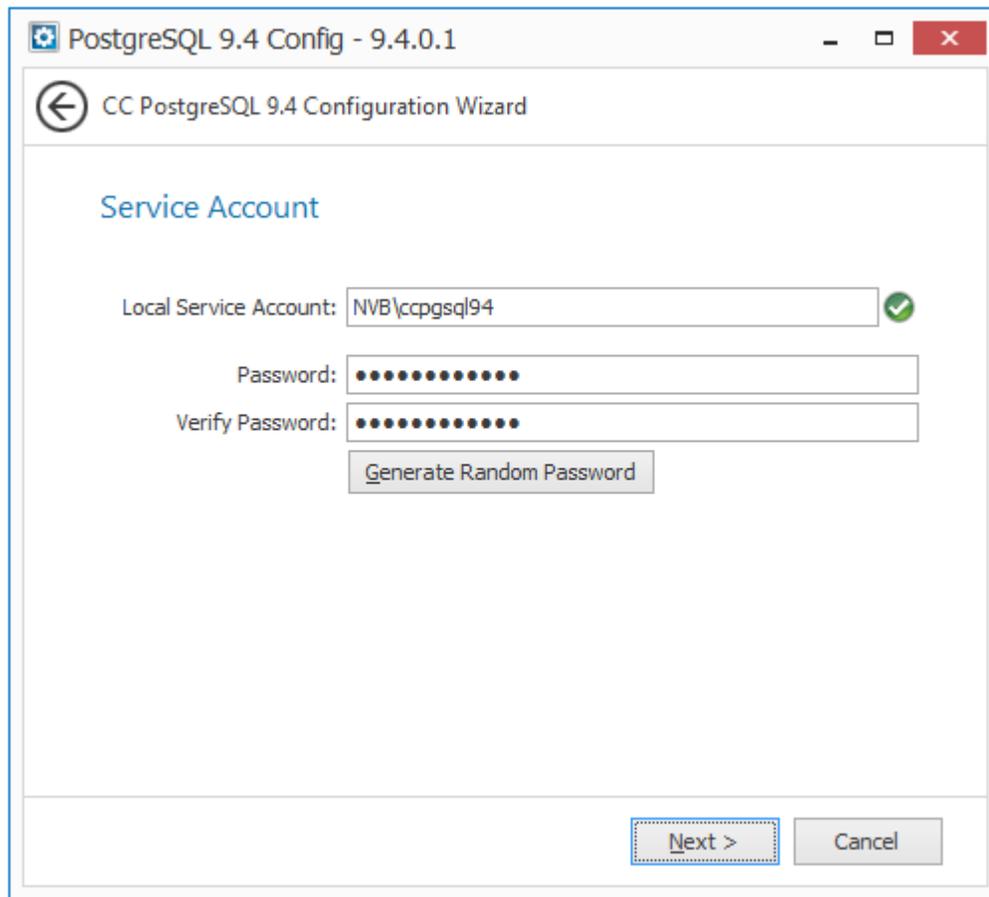
- 1 At the root of the `NFR_2_6_0.iso` image, double-click the `PostgreSQL` folder.
- 2 Double-click the `x86_64` folder.
- 3 Double-click `CC-PostgreSQL-9.4.1-1.exe`.
- 4 When you are asked if you want to run this file, click *Run*.



- 5 Click *Install*.
- 6 When you are notified that the setup was successful, click *Run Configuration Utility*.



7 Click *Next*.

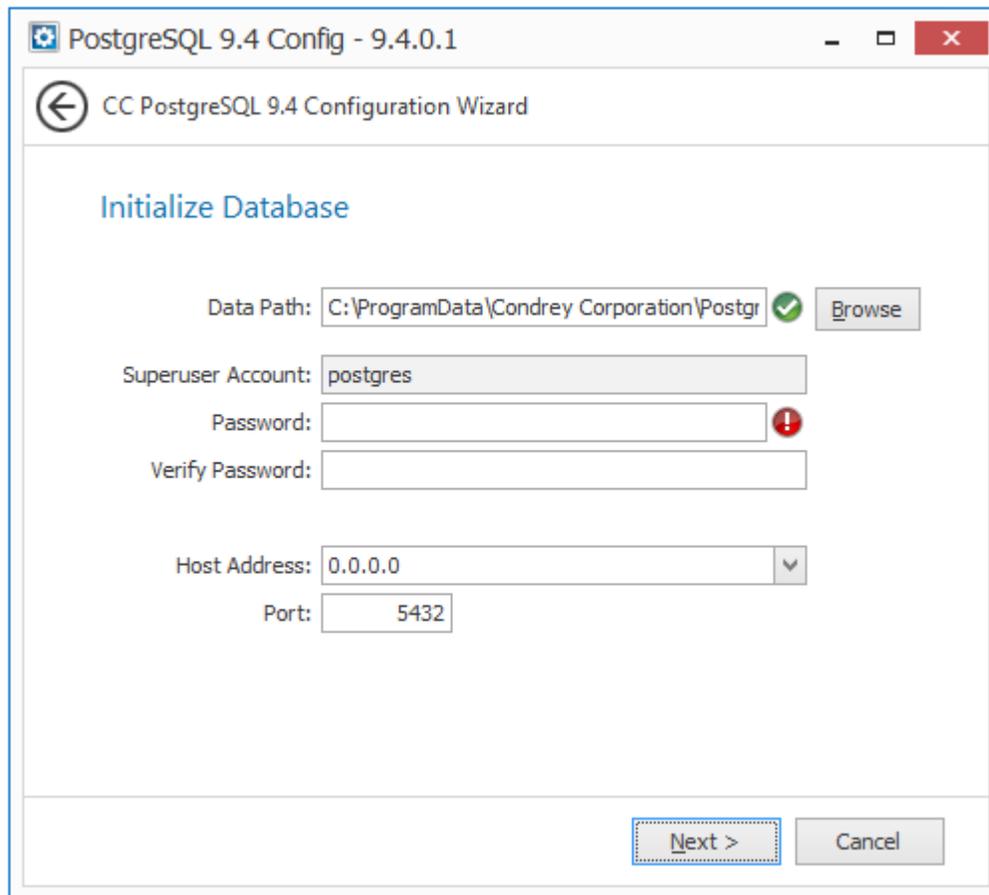


An account ID and password are generated automatically. This ID and password are used by the PostgreSQL database service to log in to the local server with a restricted service account.

You do not need to remember this ID and password because they are stored as a login credential on the server where you are installing the PostgreSQL database.

You can generate a random password or specify your own password according to the password policies that are in effect on the server.

- 8 Click *Next*.



- 9 Create and verify a database superuser account name and password.

You need to use this password later when you configure the NFR Engine and Web application.

- 10 Leave the *Host Address* field setting at 0.0.0.0 so it uses all available network addresses.

- 11 Unless there is a conflict, leave the port setting at 5432.

- 12 Click *Next*.

- 13 When you are notified that CC PostgreSQL has successfully been configured, click *Finish*.

- 14 Do one of the following:

- ♦ If your primary identity system will be Active Directory, proceed with [Chapter 6, “Installing and Configuring the NFR Engine, Database, and Web Application in an Active Directory Environment,”](#) on page 43.
- ♦ If your primary identity system will be eDirectory, proceed with [Chapter 7, “Installing and Configuring the NFR Engine, Database, and Web Application in an eDirectory Environment,”](#) on page 67.

4.3 Installing the PostgreSQL Database on a Linux Server

- ♦ [Section 4.3.1, “Minimum Requirements,”](#) on page 28
- ♦ [Section 4.3.2, “Installing and Configuring the PostgreSQL Database,”](#) on page 28

4.3.1 Minimum Requirements

Novell File Reporter 2.5 supports the following 64-bit Linux servers as hosts for the PostgreSQL database:

- ♦ SUSE Linux Enterprise Server 11
- ♦ SUSE Linux Enterprise Server 11 SP1
- ♦ SUSE Linux Enterprise Server 11 SP2
- ♦ SUSE Linux Enterprise Server 11 SP3
- ♦ Novell Open Enterprise Server 11
- ♦ Novell Open Enterprise Server 11 SP1
- ♦ Minimum of 8 GB of RAM

Depending on size and frequency of your scans, this amount might need to be significantly increased.

- ♦ Minimum 150 MB disk space

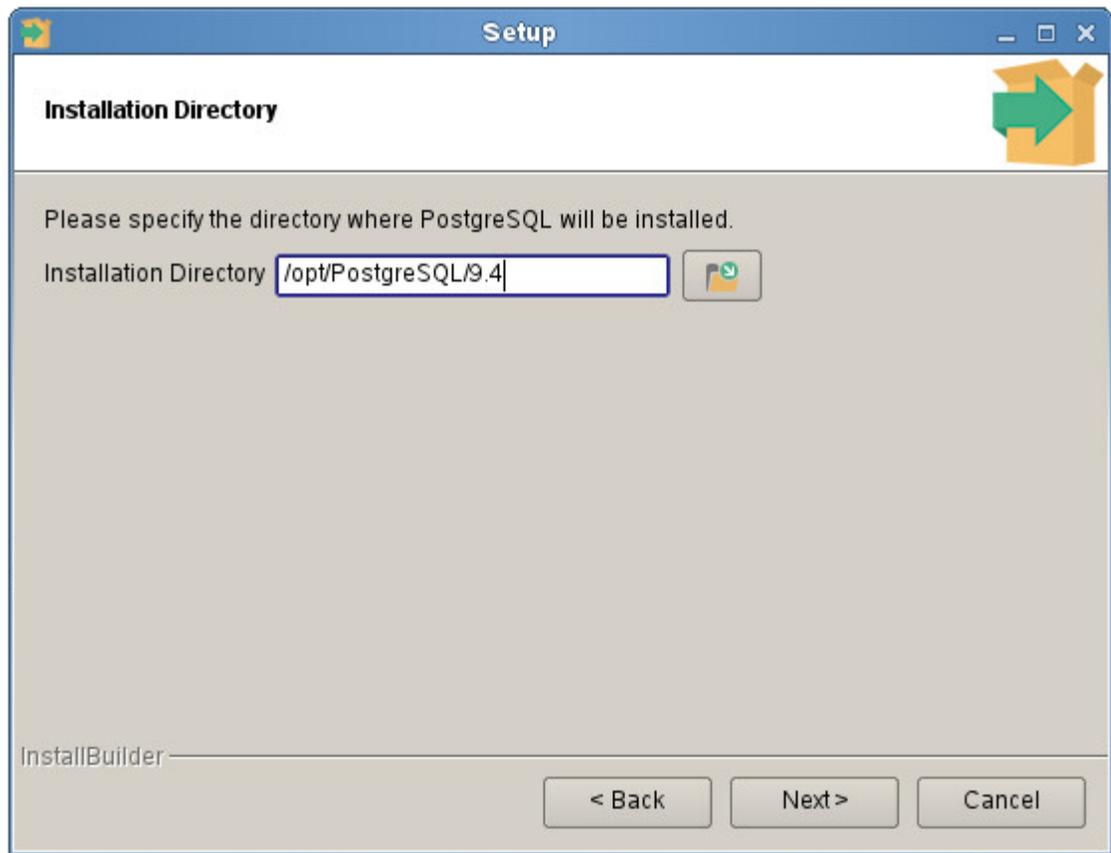
Depending on the size and frequency of your scans, this amount might need to be significantly increased.

4.3.2 Installing and Configuring the PostgreSQL Database

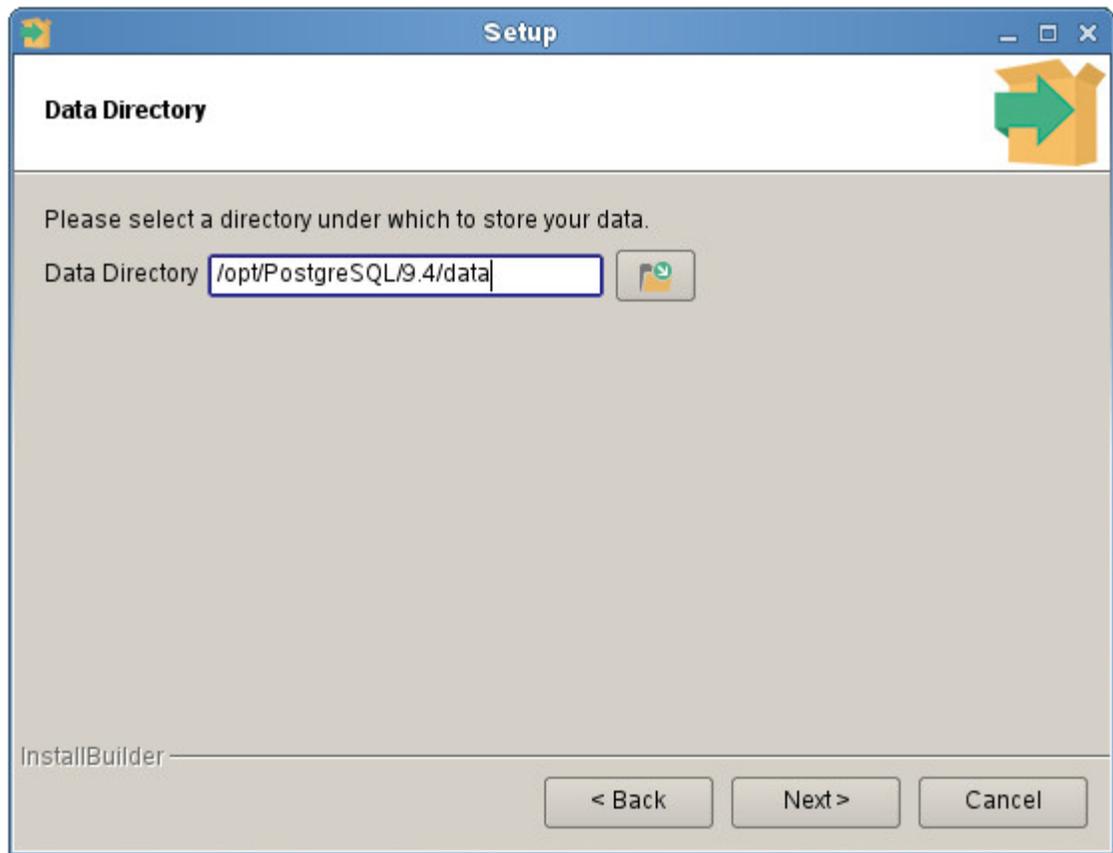
- 1 At the Linux server desktop where you will be installing the PostgreSQL database, create a new folder.
- 2 At the root of the `NFR_2_6_0.iso` image, open the `PostgreSQL` folder and double-click the `X86_64` folder.
- 3 Copy the `postgresql-9.4.1-x-linux-x64.run` and `setup_postgres_nfr.sh` files to the new folder that you created in [Step 1](#).
- 4 From the new folder, double-click the `postgresql-9.4.1-x-linux-x64.run` file.



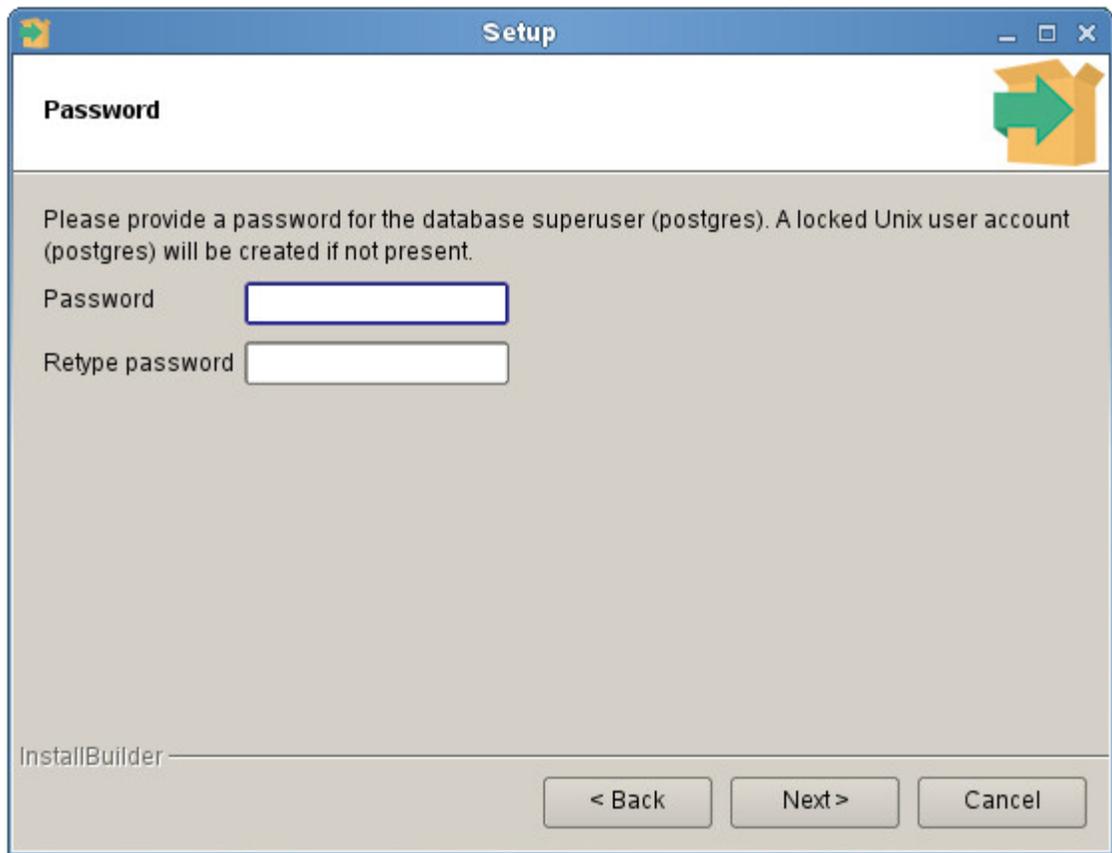
5 Click *Next*.



6 Accept the default installation directory by clicking *Next*.

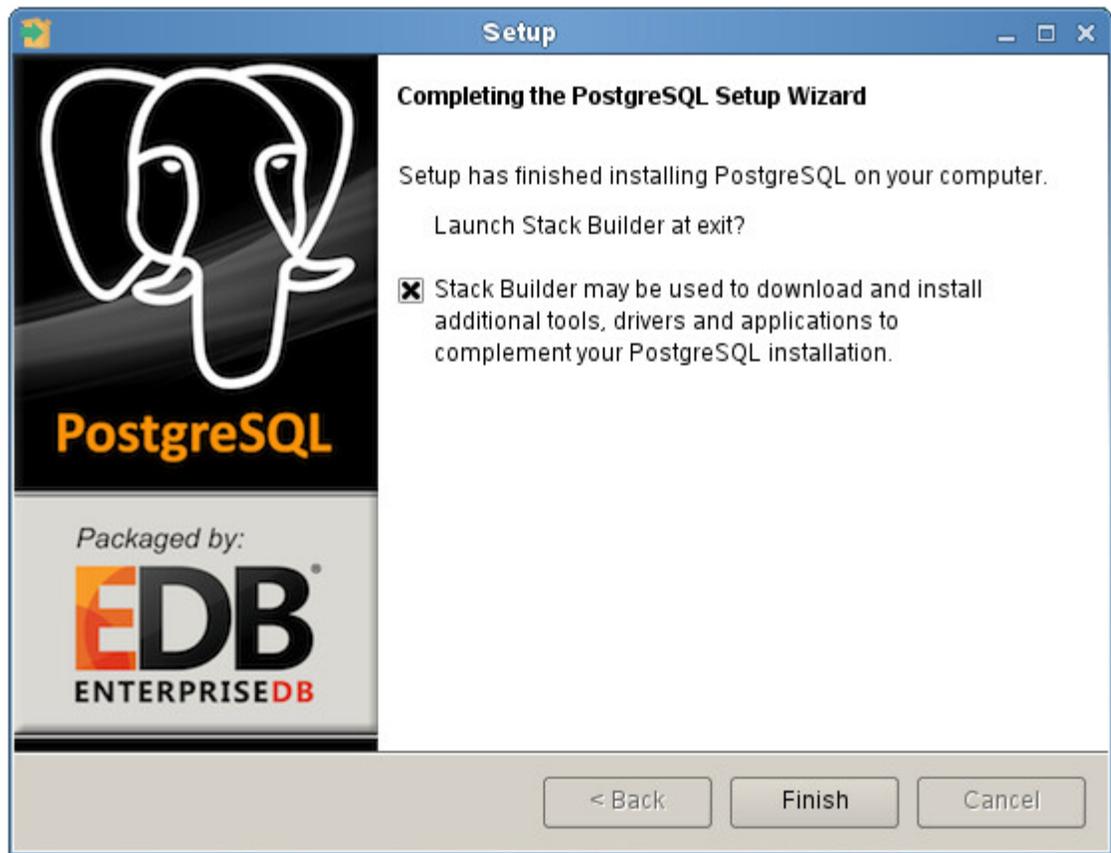


7 Accept the default data directory path by clicking *Next*.

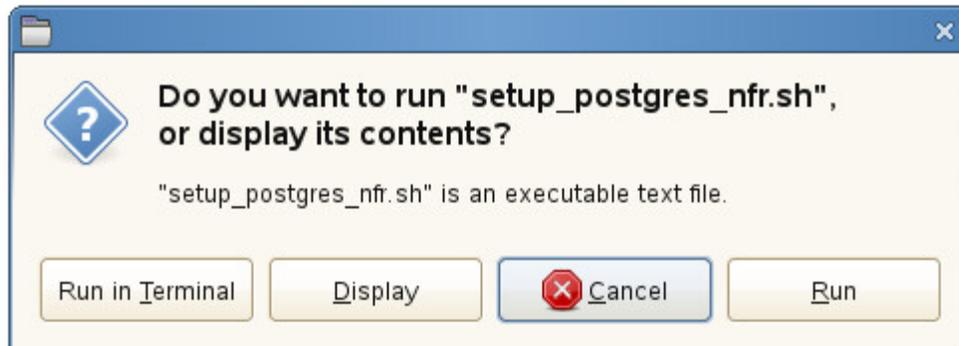


- 8 In the *Password* field, enter `postgres`, re-enter the password in the *Re-type password* field and then click *Next*.
- 9 Unless there is a conflict, accept the 5432 port setting and click *Next*.
- 10 Accept the Default locale setting and click *Next*.
- 11 When you are notified that the setup is ready to begin installing the PostgreSQL database on the computer, click *Next*.

The PostgreSQL database is installed on the Linux server.



- 12 Deselect the check box and click *Finish*.
- 13 From the new folder, double-click the `setup_postgres_nfr.sh` file.



- 14 Click *Run in Terminal*.
- 15 Do one of the following:
 - ◆ If your primary identity system will be Active Directory, proceed with [Chapter 6, “Installing and Configuring the NFR Engine, Database, and Web Application in an Active Directory Environment,”](#) on page 43.
 - ◆ If your primary identity system will be eDirectory, proceed with [Chapter 7, “Installing and Configuring the NFR Engine, Database, and Web Application in an eDirectory Environment,”](#) on page 67.

5 Installing an SQL Server Instance that Supports Novell File Reporter

This section provides procedures for installing a Microsoft SQL Server 2012 or SQL Server 2014 instance with the settings needed to support Novell File Reporter.

IMPORTANT: Novell File Reporter supports the Standard, Business Intelligence, and Enterprise versions of SQL Server 2012 and 2014. It does not support the Express version.

5.1 Prerequisites

- ♦ Verify that you have installed the latest SQL Server updates.

5.2 Minimum Requirements

- ♦ Any of the following 64-bit multi-core processor servers:
 - ♦ Windows Server 2008 R2
 - ♦ Windows Server 2012
 - ♦ Windows Server 2012 R2

- ♦ Minimum of 16 GB RAM

Depending on the size and frequency of your scans, this amount might need to be significantly increased.

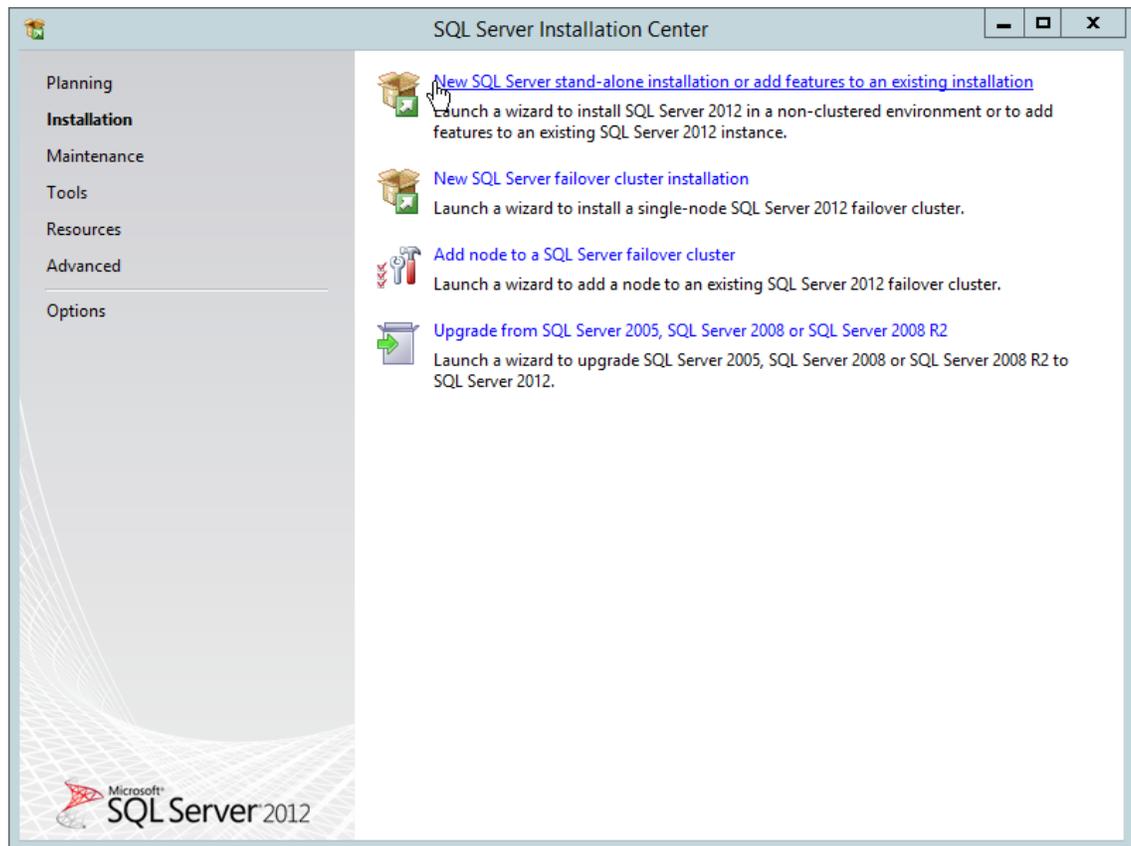
- ♦ Minimum 3 GB disk space

This number is only taking into consideration the database engine and the client components.

NOTE: For more details on SQL Server hardware requirements, see <https://msdn.microsoft.com/en-us/library/ms143506.aspx> (<https://msdn.microsoft.com/en-us/library/ms143506.aspx>).

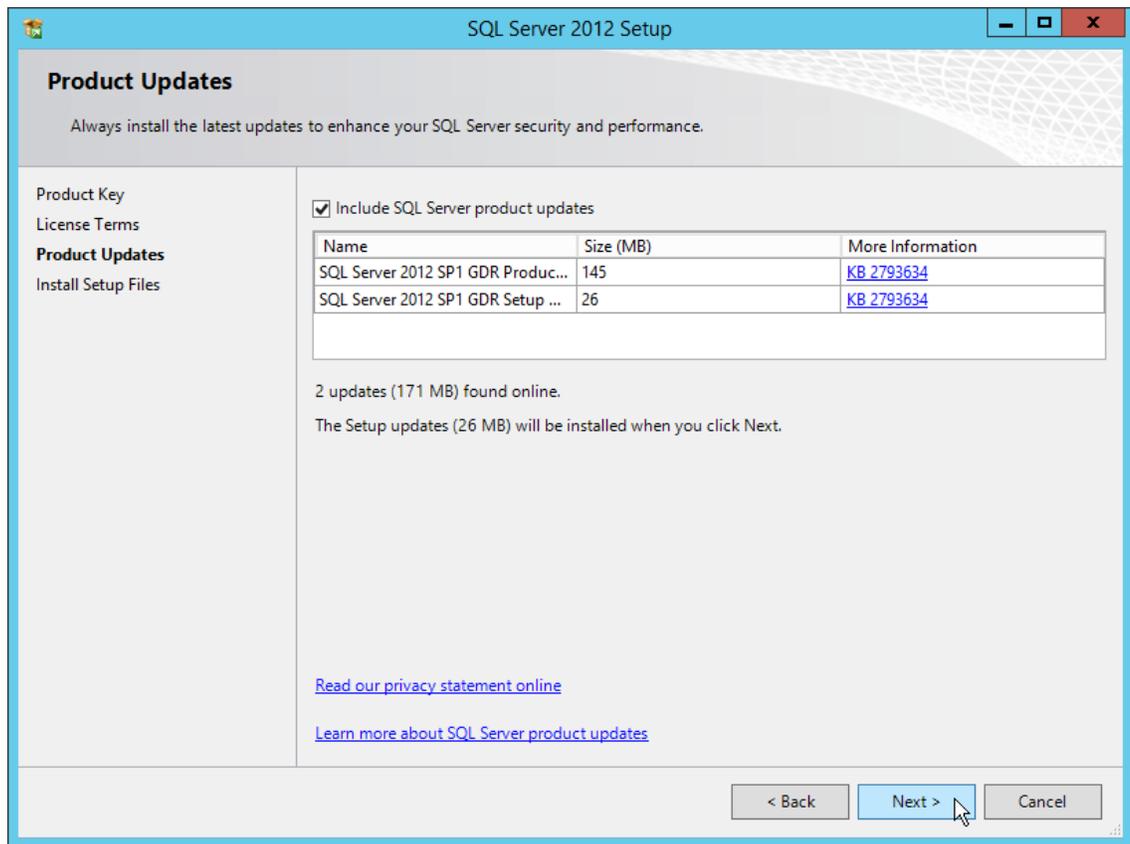
5.3 Installing a New Instance that Supports Novell File Reporter

- 1 From the Microsoft SQL Server ISO, double-click `setup.exe`.
- 2 On the SQL Server Installation page, click *Installation*.
- 3 Select *New SQL Server stand-alone installation or add features to an existing installation*.



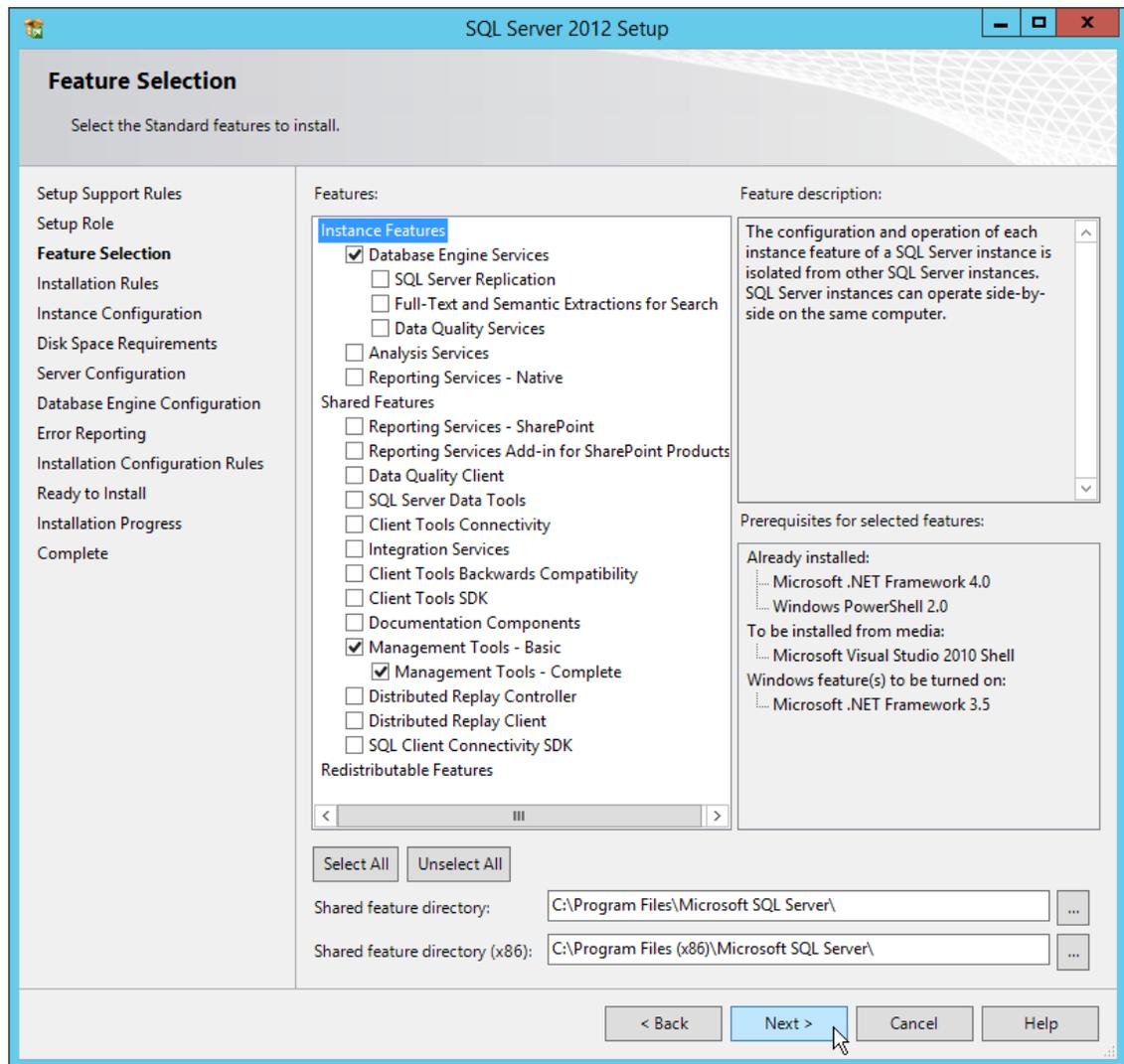
The Setup Support Rules operation is run.

- 4 When the operation has completed, click *OK*.
- 5 When prompted, enter your product key, then click *Next*.
- 6 Accept the license terms, then click *Next*.
- 7 Include all Microsoft SQL Server product updates, then click *Next*.



The Setup Support Rules operation is run again.

- 8 When the operation has completed, click *Next*.
- 9 On the Setup Role page, verify that the *SQL Server Feature Installation* option is selected, then click *Next*.
- 10 On the Feature Selection page, select the following check boxes:
 - ◆ *Database Engine Services*
 - ◆ *Management Tools - Basic*
 - ◆ *Management Tools - Complete*



11 Click *Next*.

The Installation Rules operation is run.

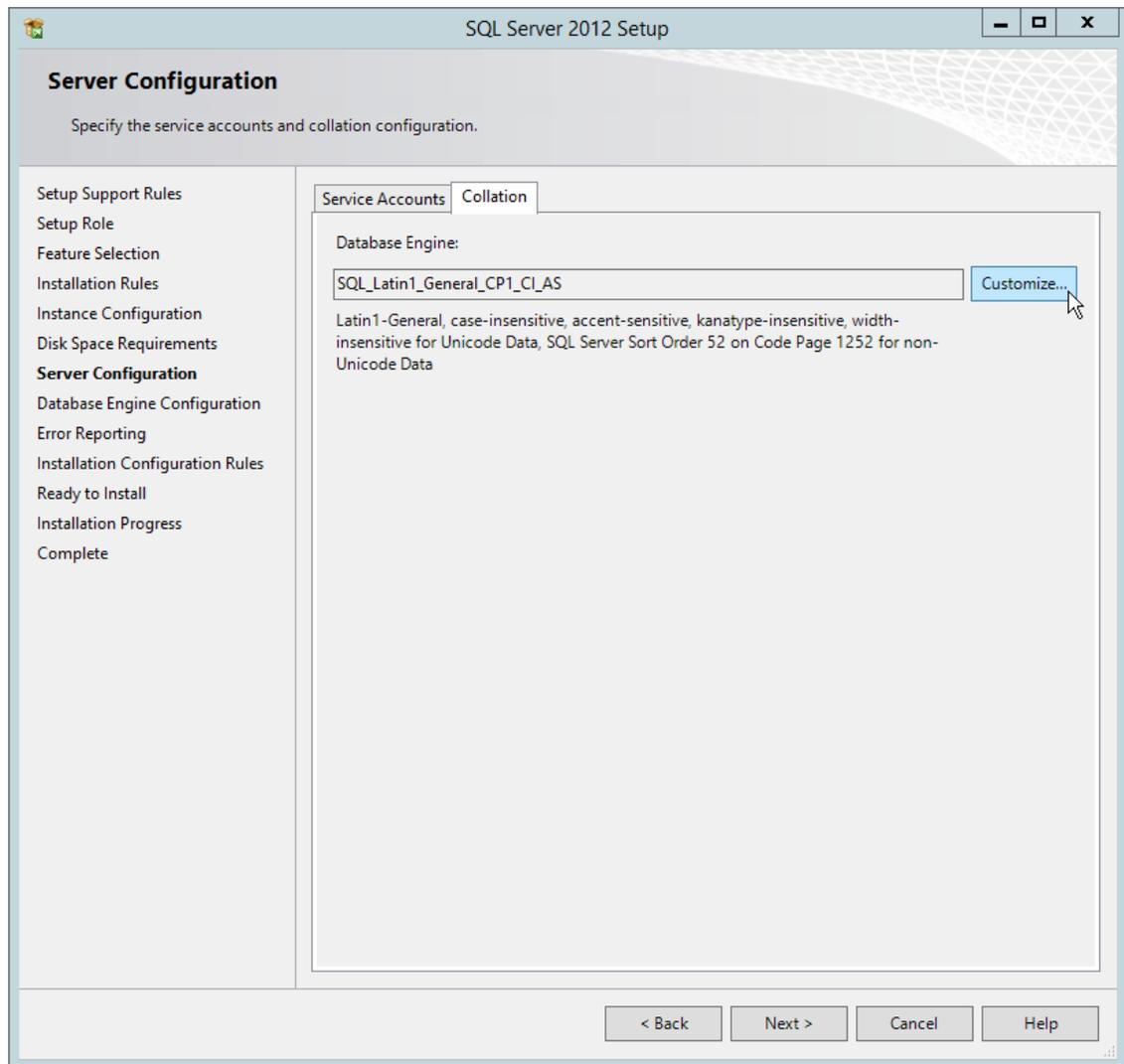
12 When the operation has completed, click *Next*.

13 On the Instance Configuration page, accept all of the default settings, then click *Next*.

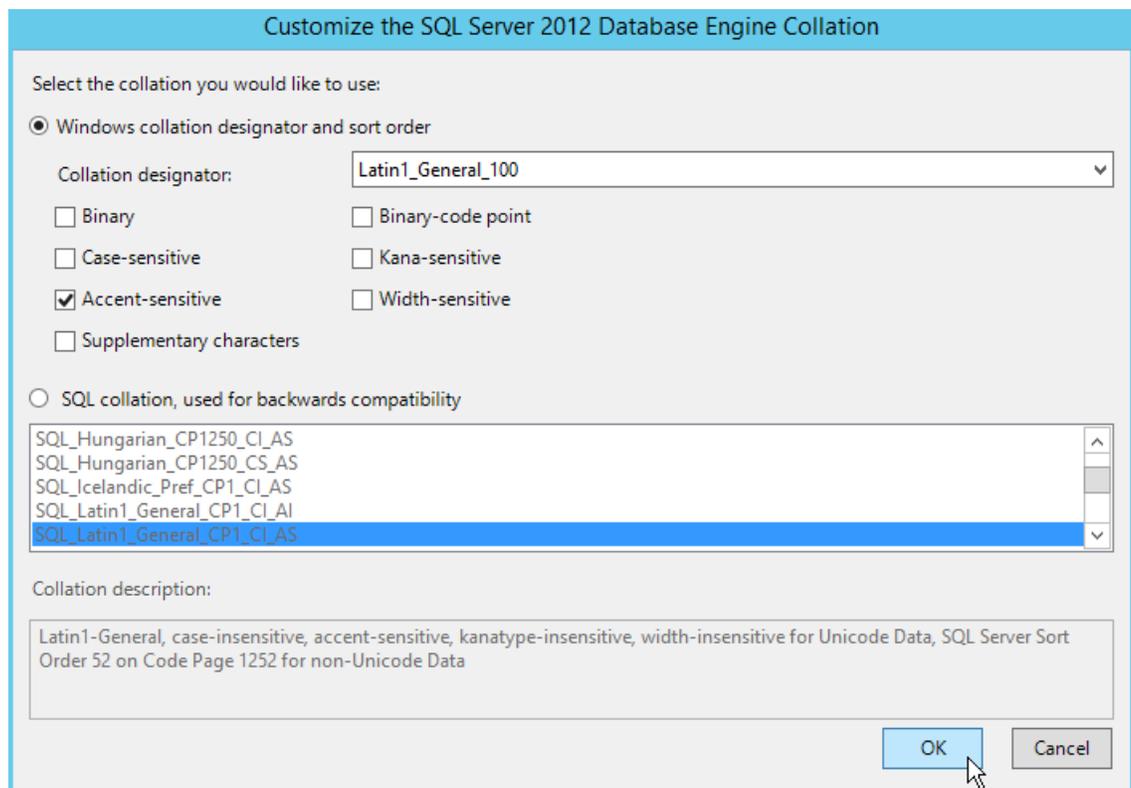
14 On the Disk Space Requirements page, review the disk space summary, then click *Next*.

15 On the *Service Accounts* tab of the Server Configuration page, accept the service account configurations, then click the *Collation* tab.

16 Click *Customize*.



- 17** From the drop-down menu, select an acceptable collation and settings for your locale. For example, in North America, an acceptable collation would be *Latin1_General_100* with the *Accent-sensitive* check box selected.
- We recommend that you select a collation that aligns with the Windows locale of the server where the NFR Engine is installed.
- For more information on collation and locales, refer to this [Microsoft document \(http://technet.microsoft.com/en-us/library/ms175194%28v=sql.105%29.aspx\)](http://technet.microsoft.com/en-us/library/ms175194%28v=sql.105%29.aspx).

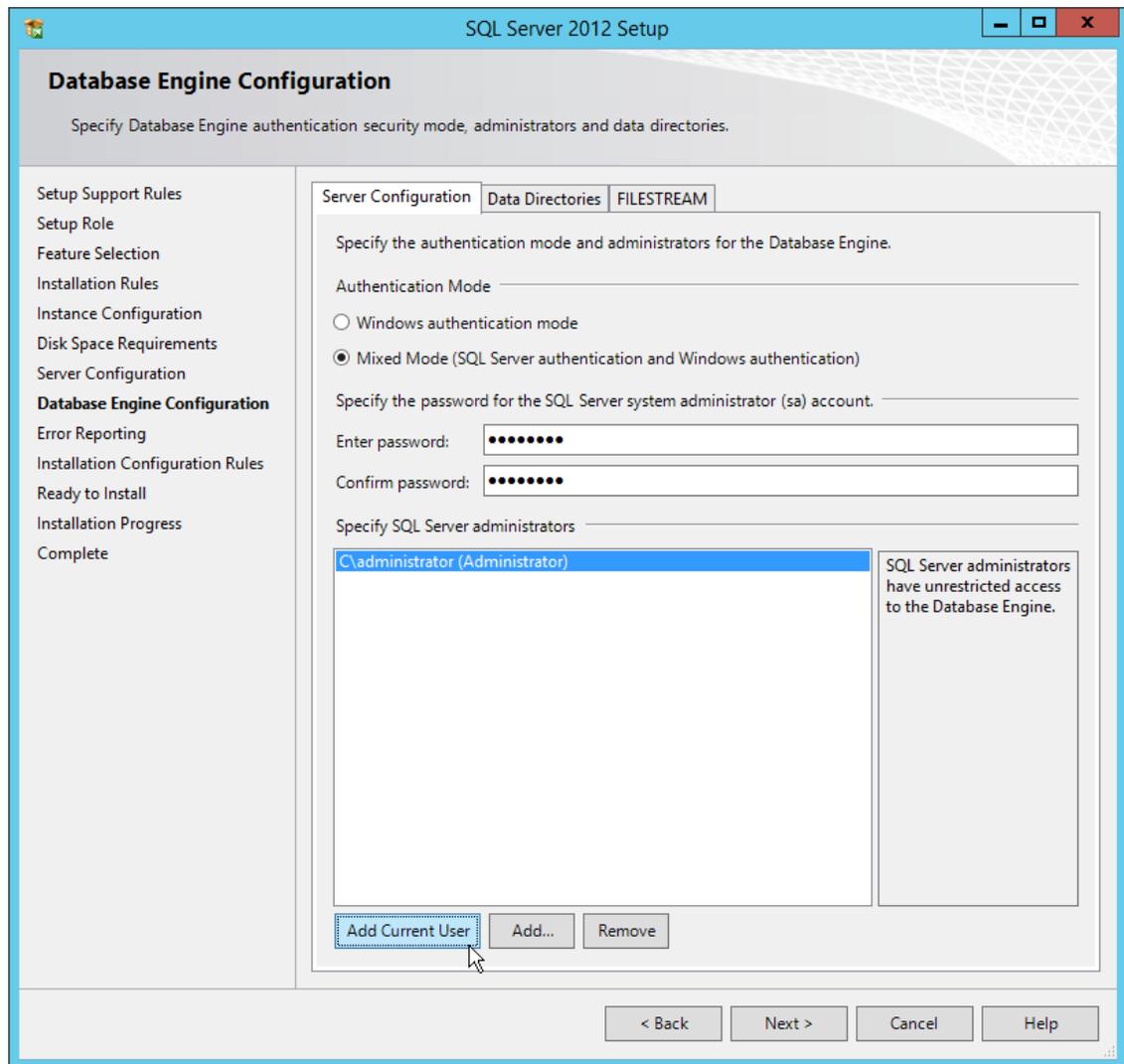


18 Click *OK*.

19 Click *Next*.

20 On the Database Engine Configuration page, select the *Mixed Mode (SQL Server authentication and Windows authentication)* option, enter and confirm the SQL Server administrator password, then click *Add Current User*.

Novell File Reporter does not support Windows authentication mode (also known as Integrated Security).



21 Click *Next*.

22 Review the data directories that are to be created, then click *Next*.

For best performance, the data directories should be located on a dedicated drive or drive array. For other best performance tips, refer to (<http://condreycorp.com/support/bp>).

23 Click *Next*.

The installation setup runs a rules operation.

24 When the operation has completed, click *Next*.

25 Click *Install*.

26 When the installation has completed, click *Close* to close the wizard.

5.4 Post Configuration Considerations

Review these points and make any needed adjustments to your SQL database settings before installing and configuring the Novell File Reporter Engine and Web Application:

- ♦ The SQL Server service must be listening via TCP/IP v4, because the NFR Engine and Web Service requires that for access.
- ♦ Some editions of SQL Server do not have TCP/IP enabled by default. If there are multiple instances, the instance that you just installed and configured might not be listening on the default port of 1433.
- ♦ Firewall rules might need to be modified.

6 Installing and Configuring the NFR Engine, Database, and Web Application in an Active Directory Environment

Procedures in this section include those needed for installing and configuring the NFR Engine, configuring the database, and Web Application in an Active Directory network environment.

This assumes that Active Directory is to be the primary identity system for Novell File Reporter. In other words, authentication is to take place via Active Directory. Additionally, the NFR Engine requires a license for the Active Directory version of Novell File Reporter.

- ◆ [Section 6.1, “Minimum Requirements,” on page 43](#)
- ◆ [Section 6.2, “Prerequisites,” on page 44](#)
- ◆ [Section 6.3, “Installing the NFR Engine,” on page 44](#)
- ◆ [Section 6.4, “Installing the License,” on page 46](#)
- ◆ [Section 6.5, “Configuring the Database,” on page 48](#)
- ◆ [Section 6.6, “Configuring the NFR Engine,” on page 52](#)
- ◆ [Section 6.7, “Configuring the Web Application,” on page 58](#)

NOTE: Although Active Directory is the primary identity system, you can still have Novell File Reporter scan and report on storage resources residing in eDirectory. See [Section 6.2, “Prerequisites,” on page 44](#).

6.1 Minimum Requirements

- ◆ Any of the following 64-bit multi-core processor servers:
 - ◆ Windows Server 2012 R2
 - ◆ Windows Server 2012
 - ◆ Windows Server 2008 R2
- ◆ The host machines must be in the Active Directory domain.
- ◆ Novell File Reporter supports a minimum forest functional level of Windows 2003 or later in native mode.
- ◆ Minimum of 16 GB RAM
 - Depending on the size and frequency of your scans, this amount might need to be significantly increased.
- ◆ Disk space requirements:
 - For disk space requirements, refer to the PostgreSQL product documentation located at: [\(For disk space requirements, refer to the PostgreSQL product documentation located at: http://www.postgresql.org/docs/.\)](http://www.postgresql.org/docs/)

6.2 Prerequisites

- ♦ Create a new host record in DNS for use with the Web Application.

For example: nfr.cctec.org

6.2.1 Prerequisites for Reporting on eDirectory Storage Resources

- ♦ If you want to report on storage resources that reside in an eDirectory network in addition to the Active Directory storage resources you report on, you must install the Novell Client software on the same Windows server where you install the NFR Engine:

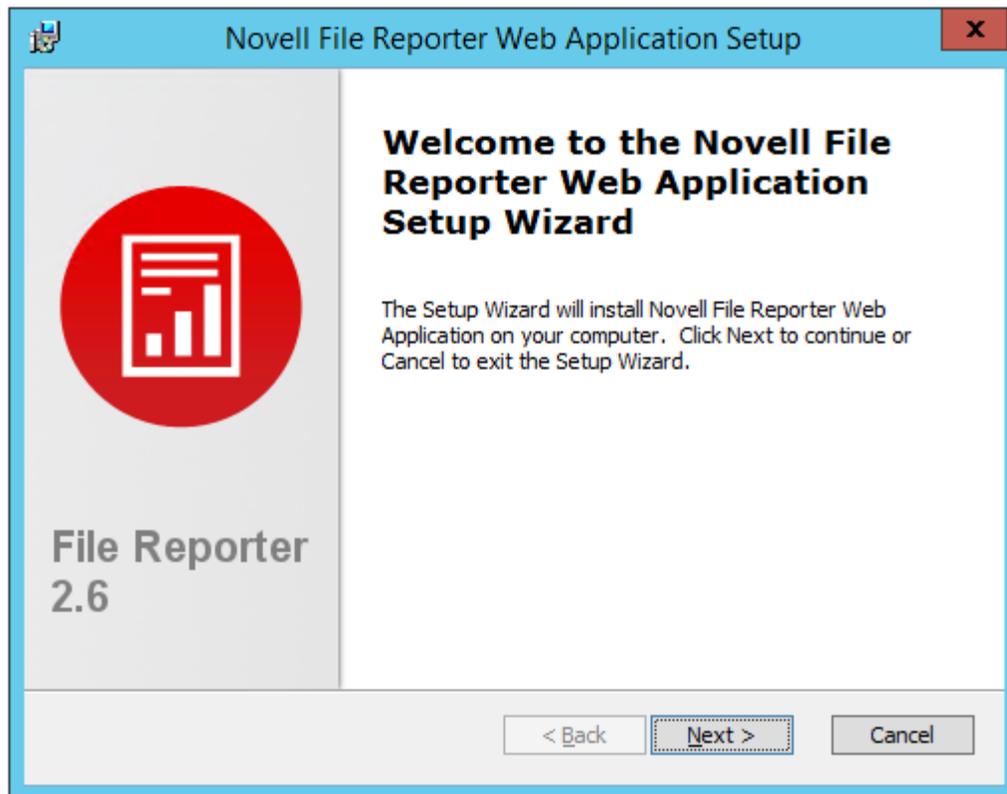
Having the Novell Client installed allows Novell File Reporter to connect to eDirectory and view the storage resources within.

- ♦ On the same Windows server, configure the Service Location Protocol settings within the Novell Client software.
- ♦ Review [Appendix A, “eDirectory Universal Password Settings,” on page 109](#) and complete any necessary prerequisite eDirectory Universal Password configurations.

6.3 Installing the NFR Engine

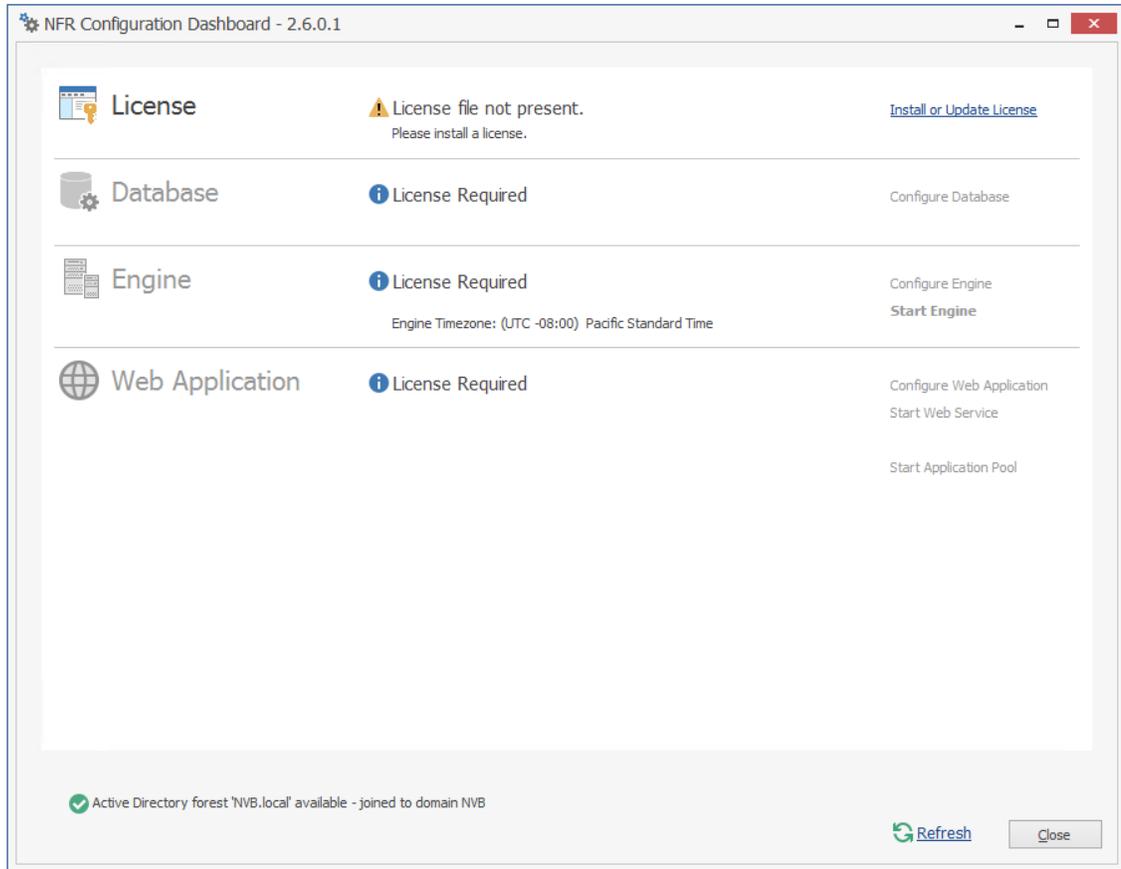
IMPORTANT: In order to successfully install the NFR Engine, you must be logged in as a domain administrator for the domain the computer is a member of. If you are not, the rights are not sufficient.

- 1 At the root of the `NFR_2_6_0.iso` image, double-click the `Windows` folder.
- 2 Double-click the `x86_64` folder.
- 3 Double-click `NFREngine-Installer-2.6-x64-xxxx`.
- 4 When you are asked if you want to run this file, click *Run*.
- 5 Agree to the license terms and conditions and click *Install*.



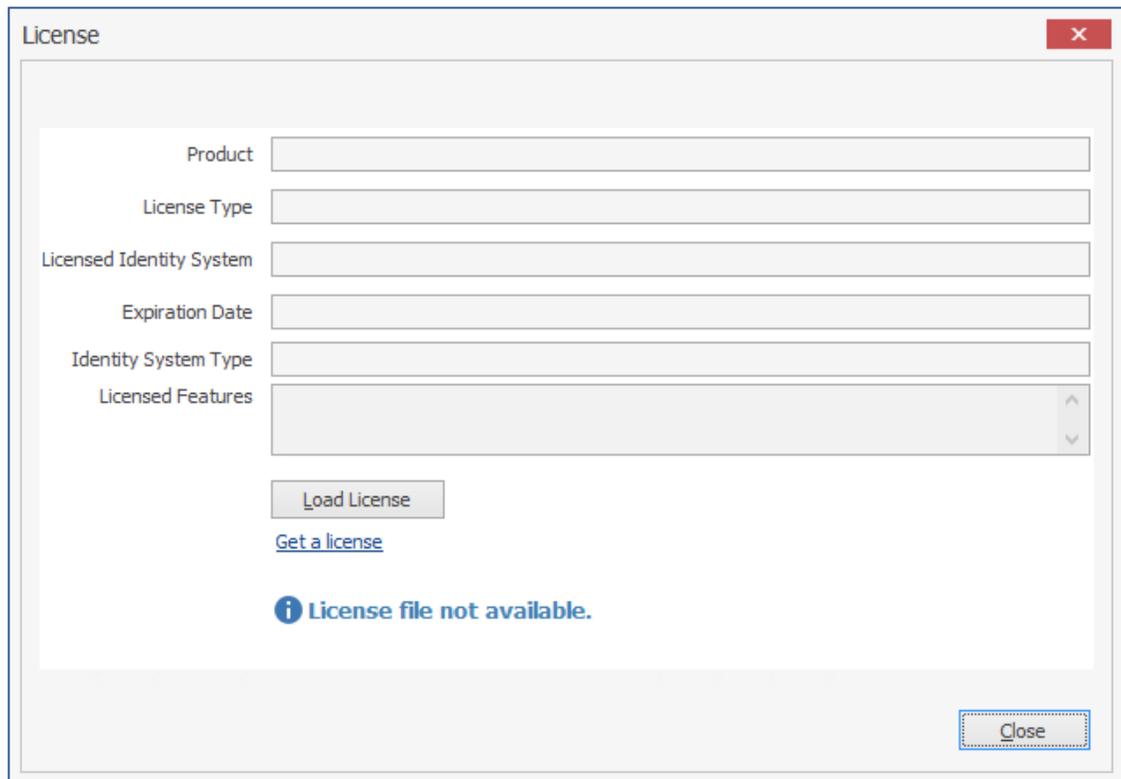
- 6 Click *Next*.
- 7 Accept the installation path or indicate a new path by using the *Browse* button.
- 8 Click *Install*.
- 9 Click *Finish*.
- 10 Click *Run Config Utility*.

The Novell File Reporter Configuration Dashboard appears.



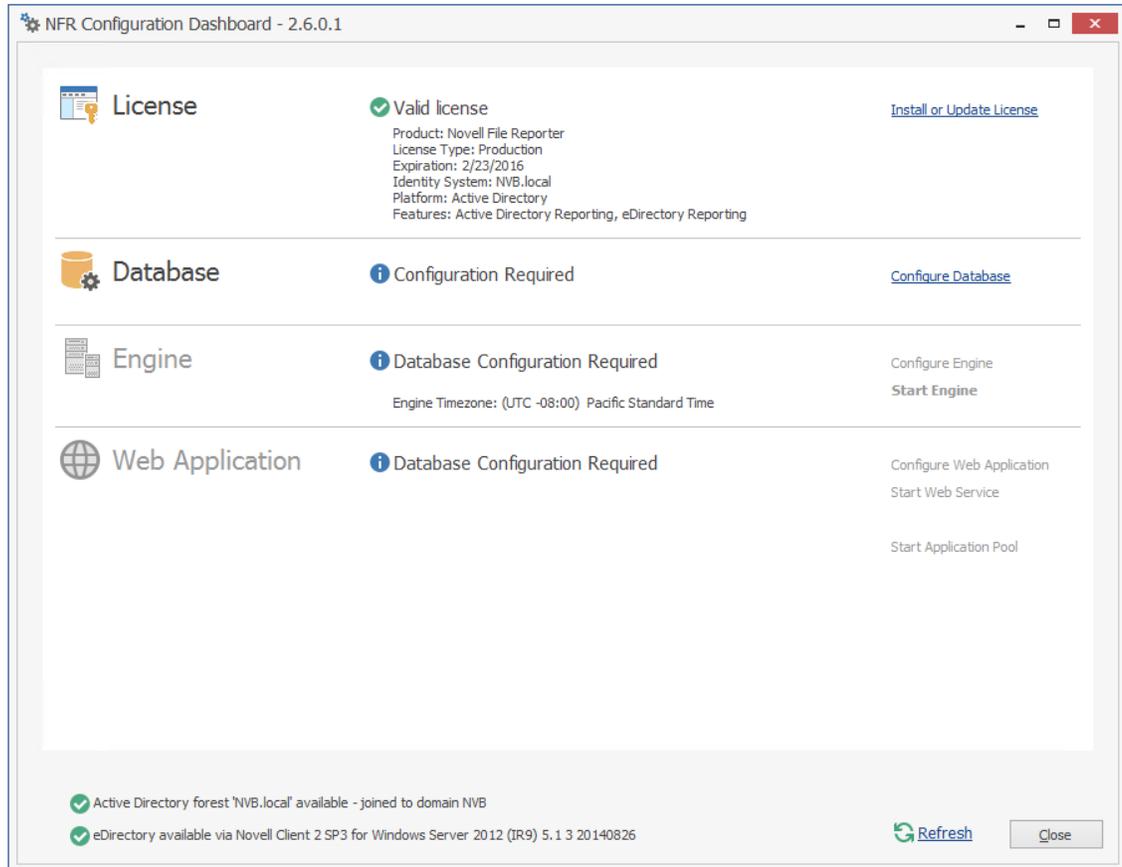
6.4 Installing the License

- 1 Click *Install or Update License*.



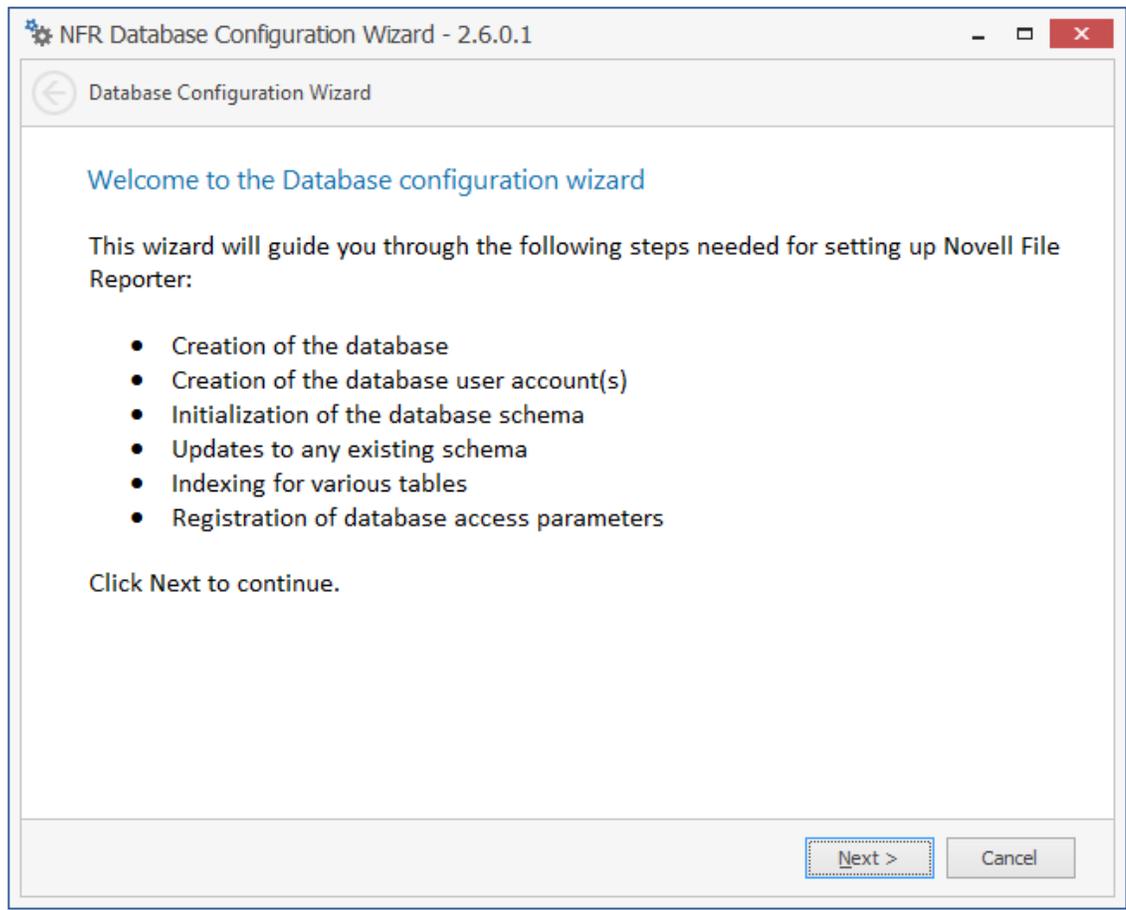
- 2 Click *Load License*, then browse to and select the license file.
You must have a Novell File Reporter license for Active Directory.
- 3 When the confirmation prompt appears, click *Yes*.

4 Click *Close*.



6.5 Configuring the Database

1 Click *Configure Database*.



The page indicates what database configuration tasks are to be completed in this wizard.

- 2 From the wizard page, read the overview of what will be configured and click *Next*.

This page lets you establish the settings needed for the NFR Engine and IIS to communicate with the database.

Database Properties: Displays information on the database name and version.

Type: Depending on the database you are using, select either *PostgreSQL 9.2* or *SQLServer 2012*.

NOTE: These selections specify the minimum supported versions of the databases. If you had Microsoft SQL Server 2014 for example, you would select *SQLServer 2012*.

Communication: Specifies address, port number, and name of the database.

Database Host Address: Specify the host address of the server where the database is installed.

Port: The default PostgreSQL database port setting is 5432. The default SQL Server port setting is 1433. If there is a port conflict, you can change it.

Initial Database: The default name of the Novell File Reporter database.

Database Service Accounts: Use this region to set authentication information for the Database Service User and Database Report User.

Database Service User: This field specifies the database account name that is used by Novell File Reporter to manage data in the database. This account has both read and write access to the database.

Set Password: Click *Set Password* to establish the password for the Database Service User.

Database Report User: This field specifies the database account name that Novell File Reporter uses to read data in the database while reporting.

Set Password: Click *Set Password* to establish the password for the Database Report User.

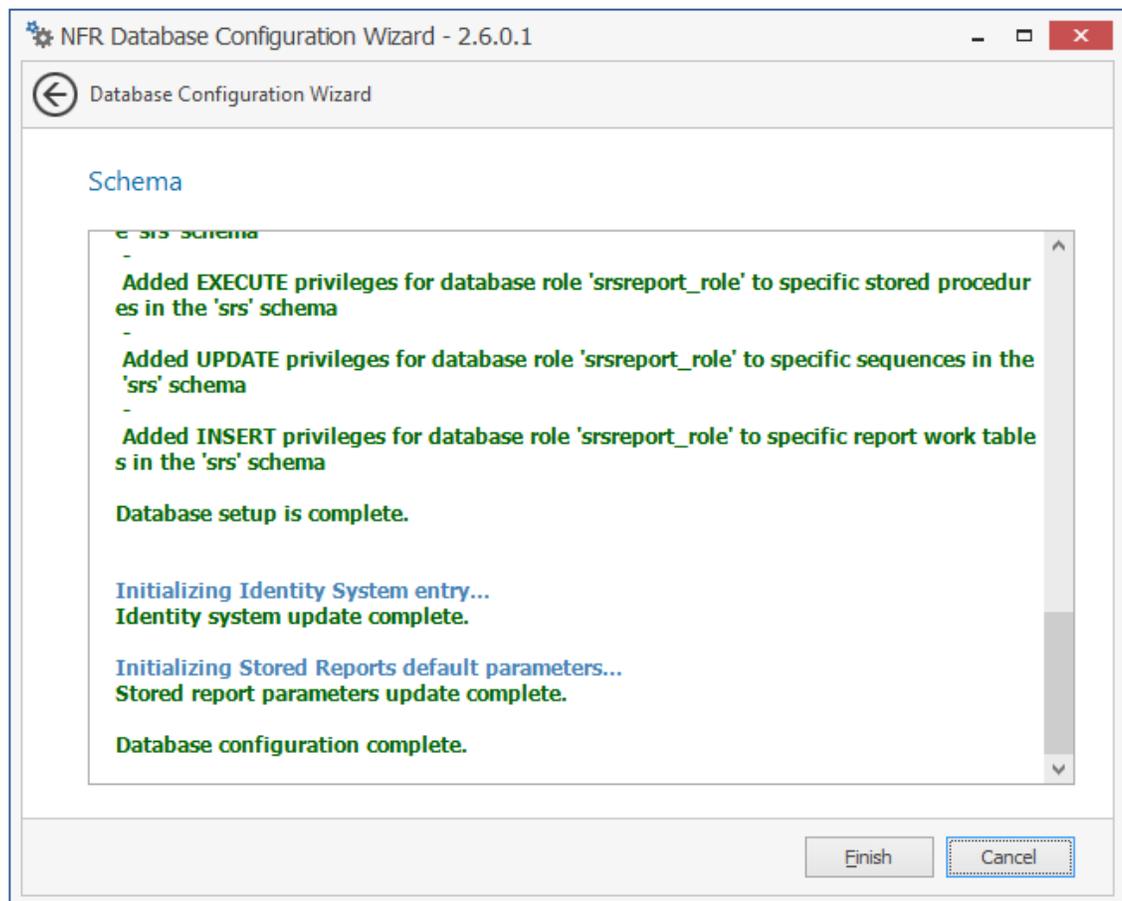
Database Report Role: This field specifies the account name of the role used to manage access for Report Users.

Database Admin Credentials: Use this region to establish the database administrator name and credentials.

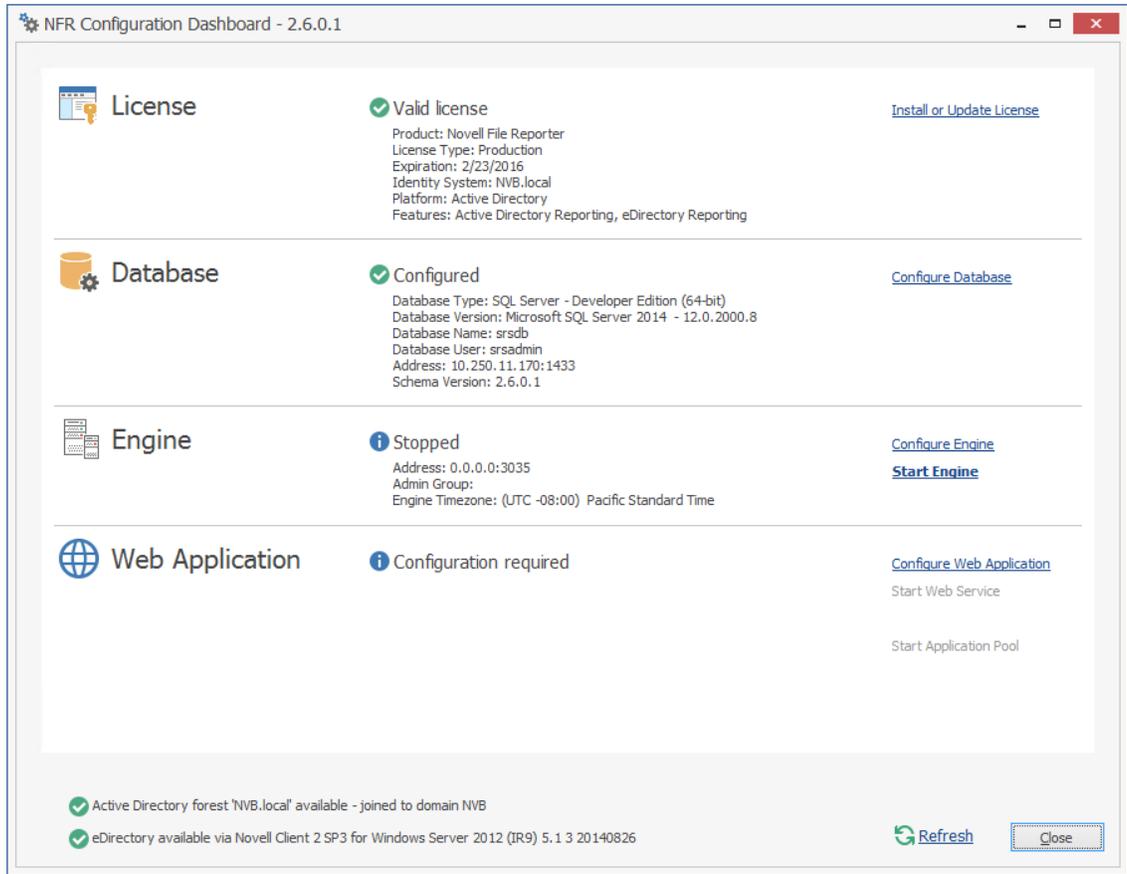
Database Administrator: If you are using a PostgreSQL database, specify the superuser name that you established in [Step 9 on page 27](#). If you are using an SQL Server 2012 or later database, specify the administrator name.

Password: If you are using a PostgreSQL database, specify the superuser password that you established in [Step 9 on page 27](#). If you are using an SQL Server 2012 or later database, specify the database administrator password.

3 Click *Next*.

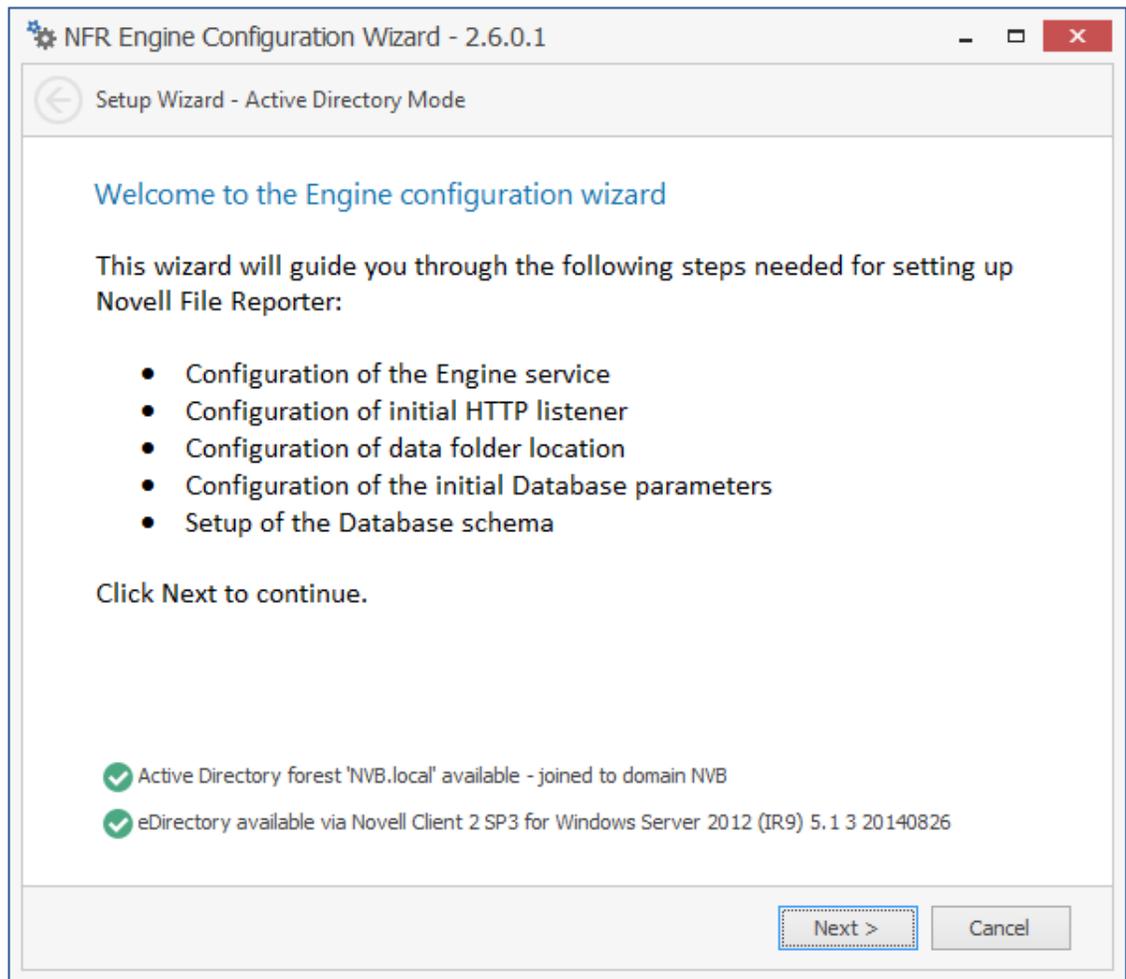


4 Review the configuration log and click *Finish*.

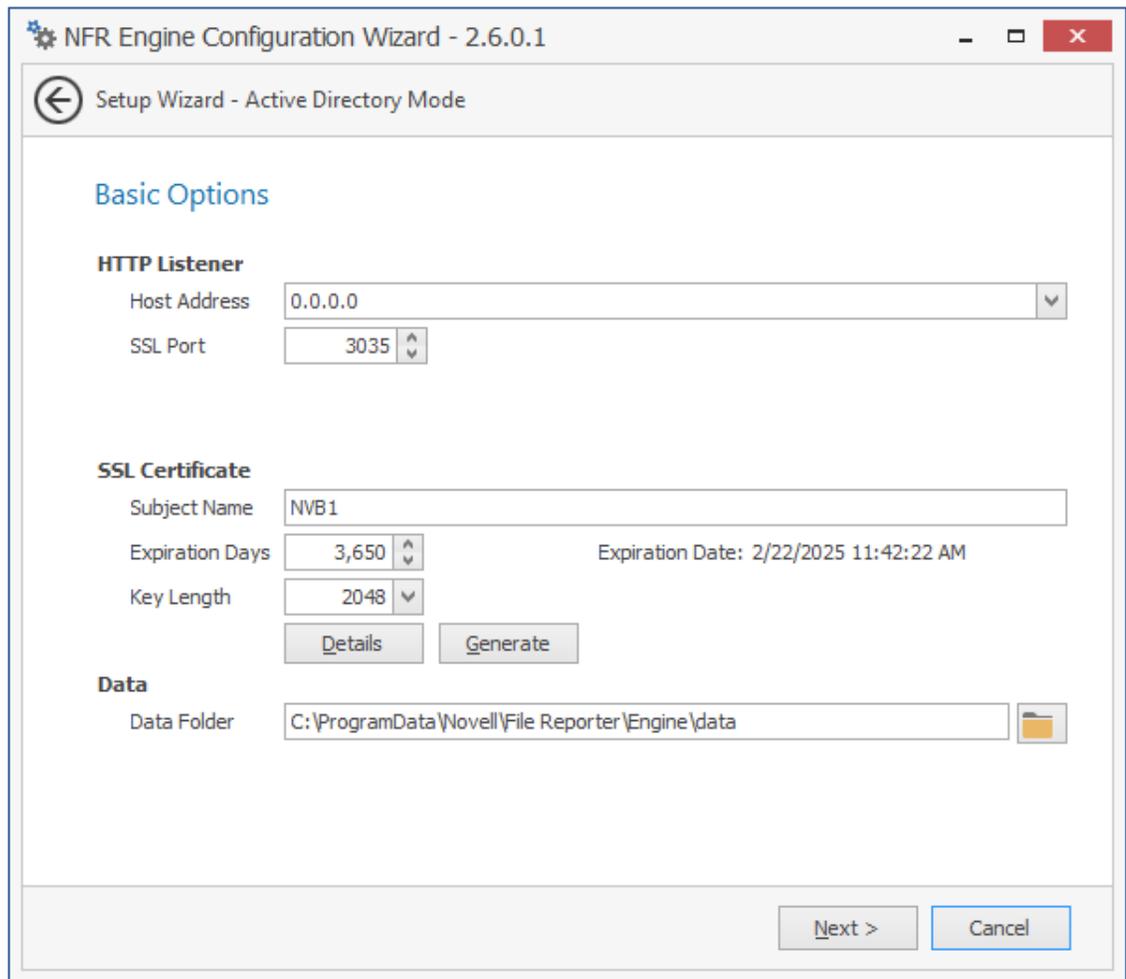


6.6 Configuring the NFR Engine

1 Click *Configure Engine*.



2 From the wizard page, read the overview of what will be configured and click *Next*.



This page lets you confirm or change basic NFR Engine configuration settings.

HTTP Listener: Communication parameters for the NFR Engine.

Host Address: Unless you want the NFR Engine to only listen on a certain IP address, leave this setting as it is.

SSL Port: Unless there is a port conflict, leave the setting at 3035.

SSL Certificate: Details for the SSL certificate that will be generated.

Subject Name: The name of the certificate that will be generated. The server name is listed by default.

Expiration Days: The life span of the security certificate, which is set at 10 years by default.

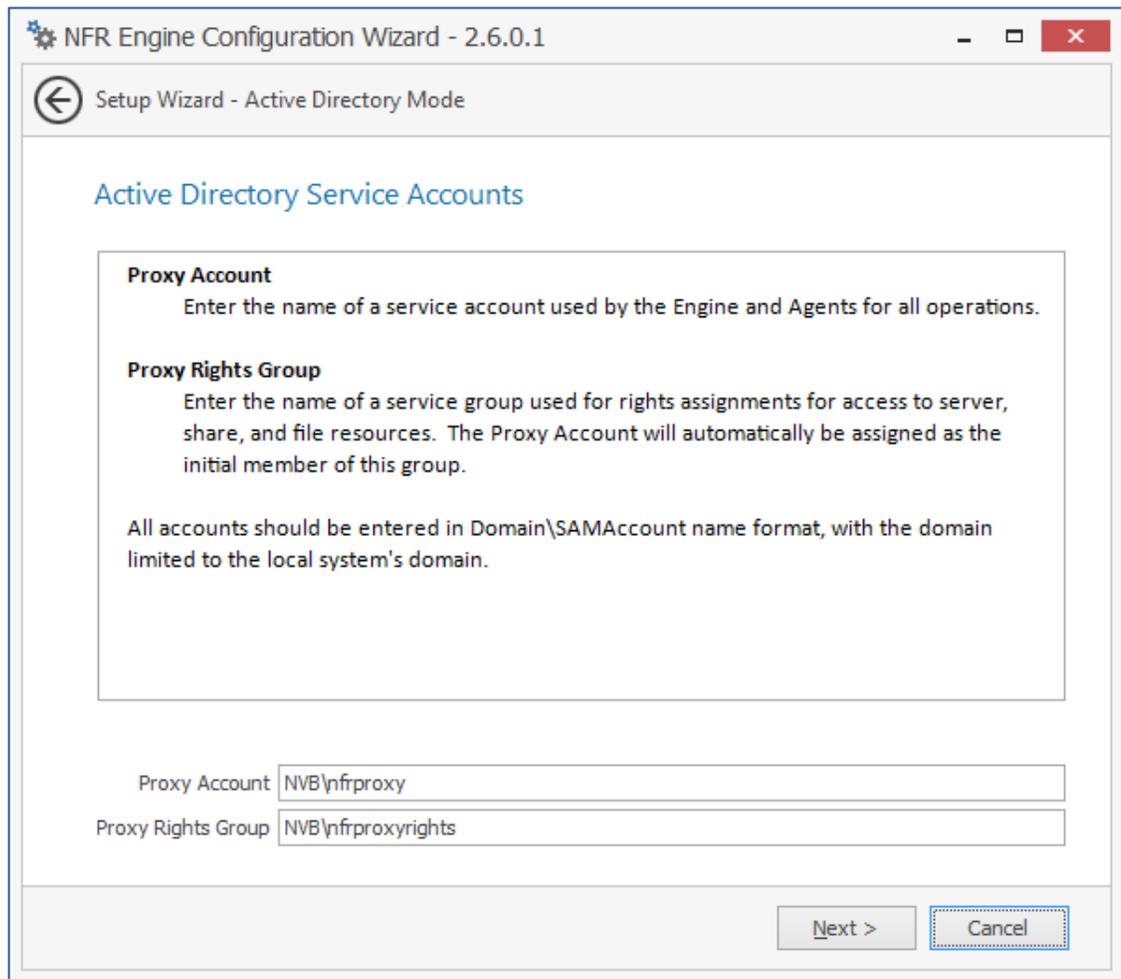
Key Length: The SSL certificate encryption setting, which is set at 2048 by default.

Details: Click the button to view the certificate data.

Generate: If you modify any of the settings in the SSL Certificate region, click this button to generate a new certificate.

Data Folder: The default location of the Data folder. The Data folder is used for a variety of tasks, including storing NFR Agent configuration data, serving as a temporary repository for scans, and mail spooling.

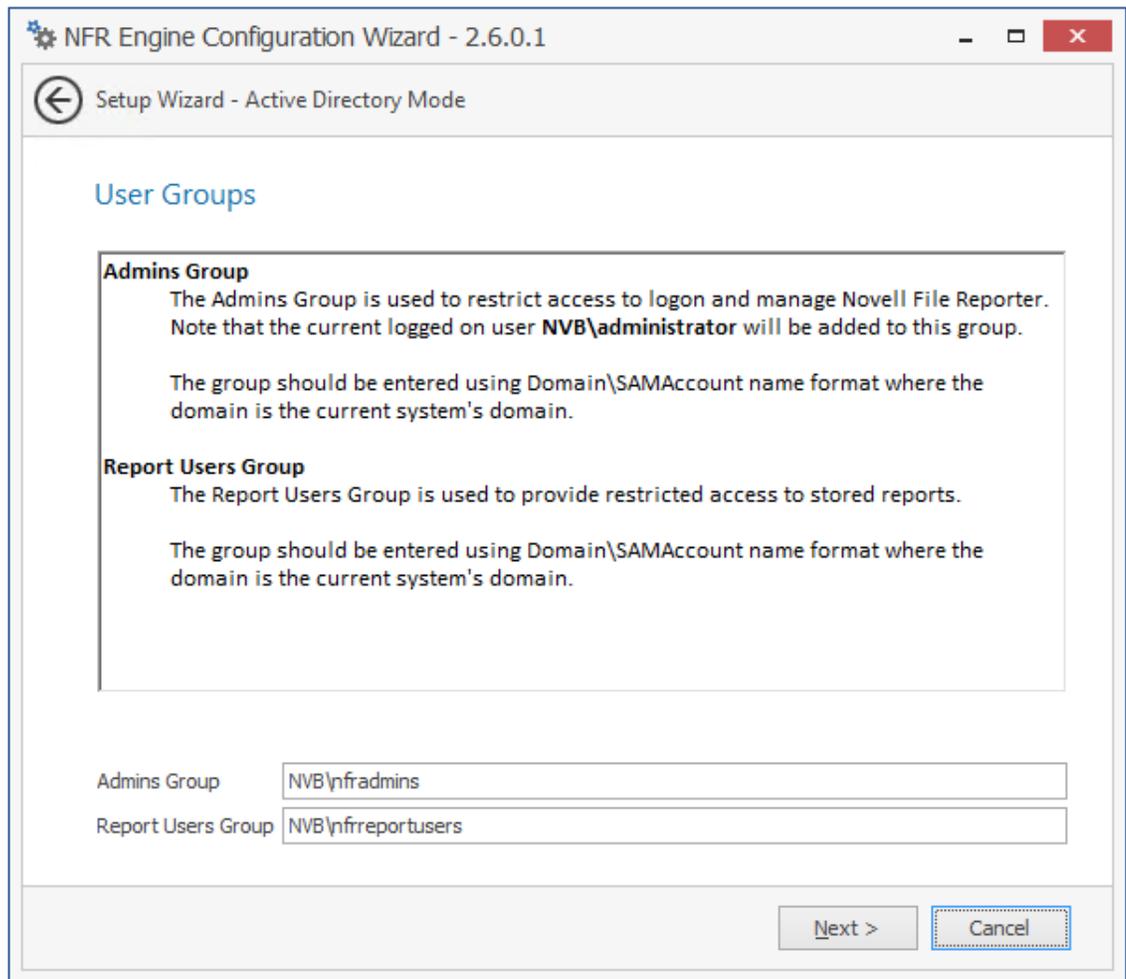
- 3 Edit any needed parameters settings and click *Next*.



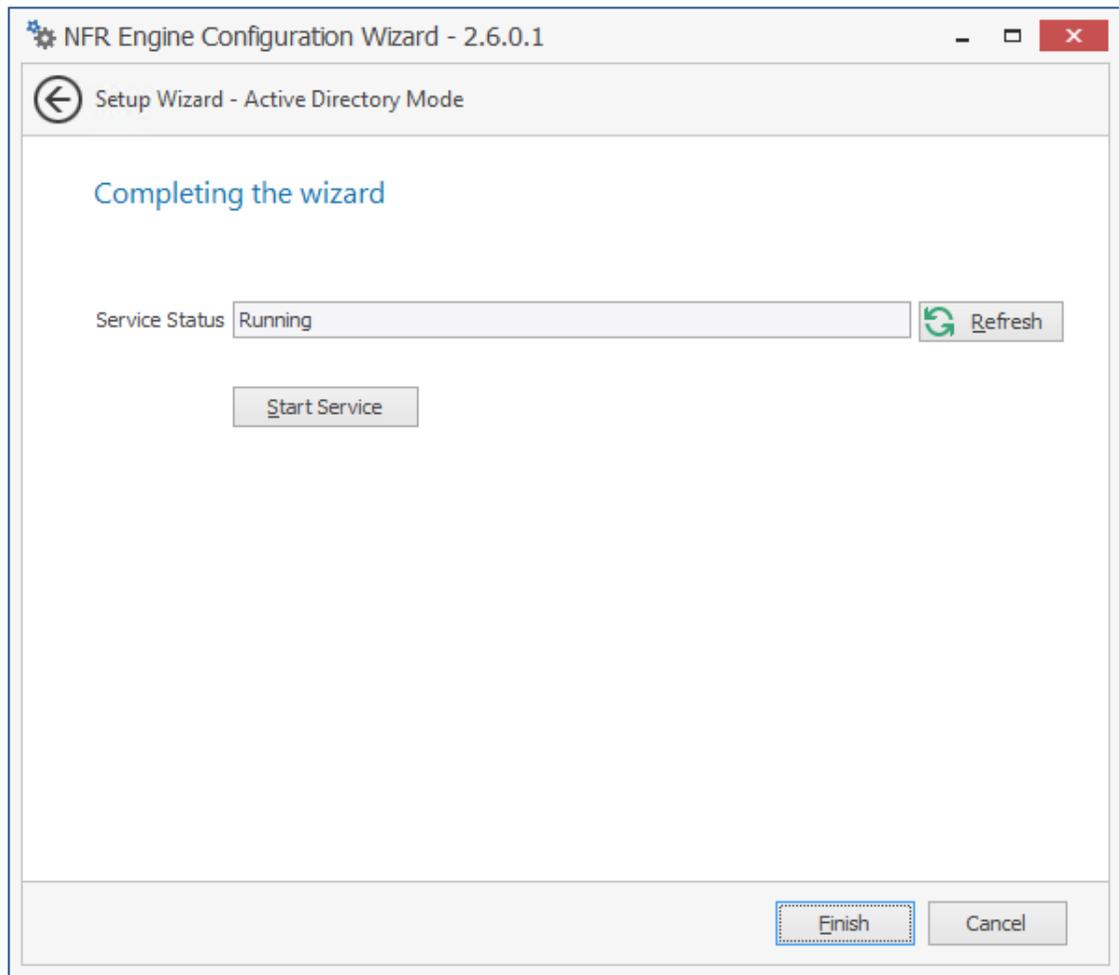
This page lets you establish a name for the proxy account and proxy rights group.

Novell File Reporter uses a proxy account so that NFR Agents can access all of the servers for reporting. A proxy rights group makes it easier to manage the rights of the proxy account.

- 4 Click *Next*.

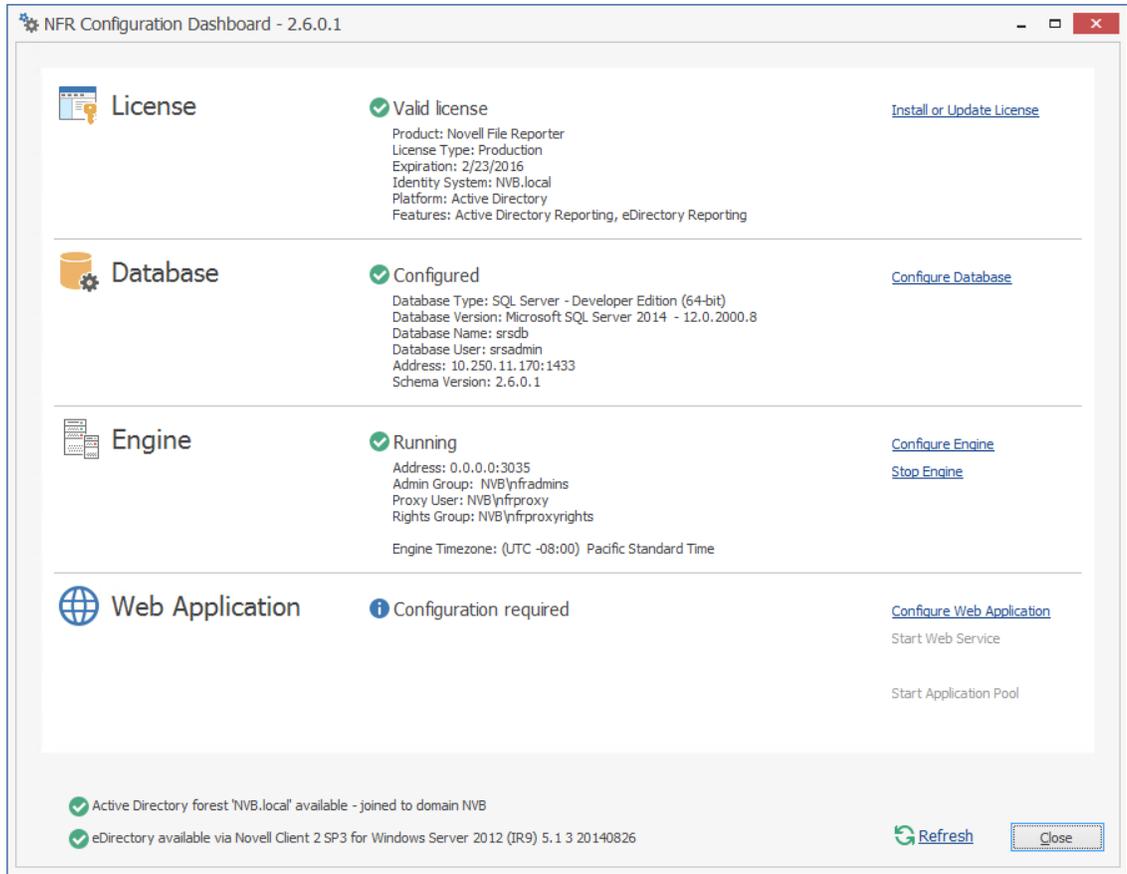


- 5 Specify the name for the Admins Group and Report Users Group, or use the default names. The Report Users Group is a group that Novell File Reporter creates in Active Directory. Members of this group have access to all stored reports.
- 6 Click *Next* to create the two groups.



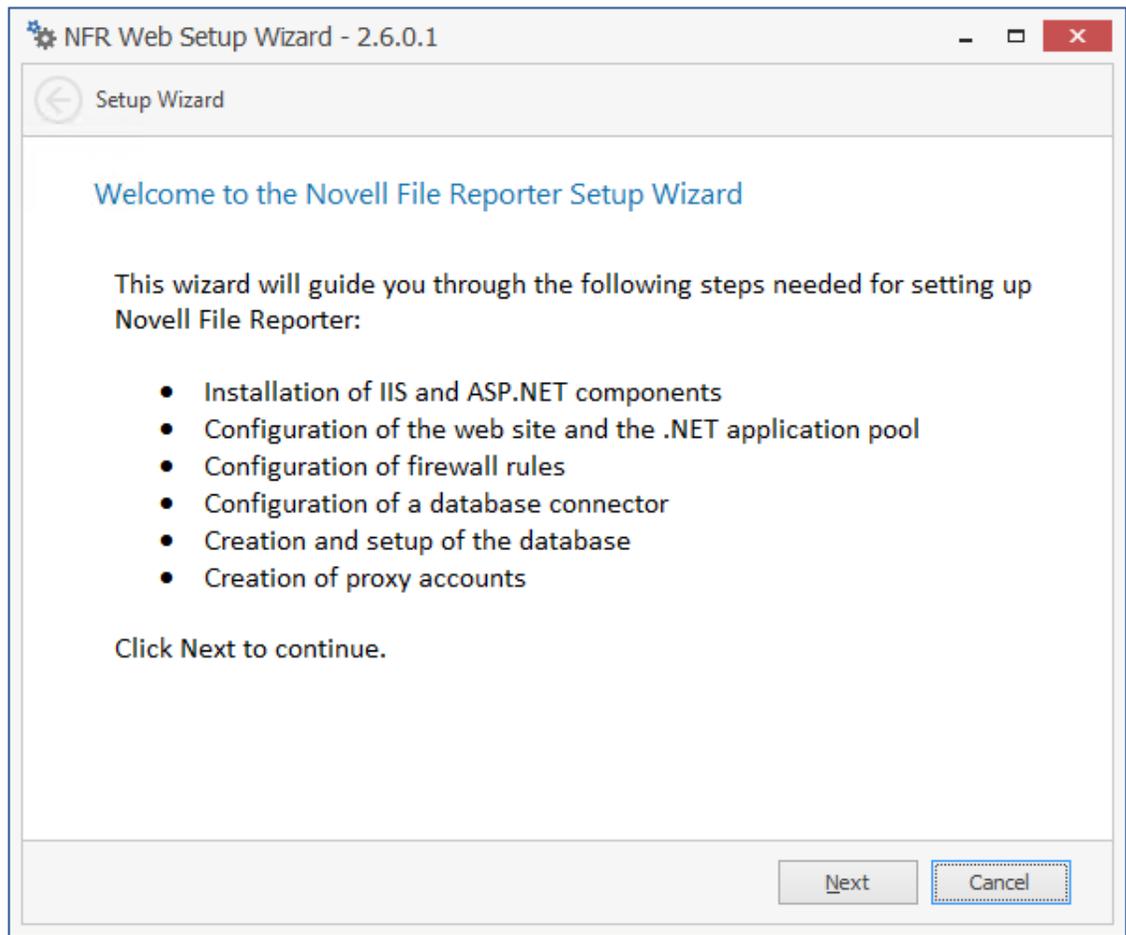
7 Click *Finish*.

The NFR Engine is now installed, configured, and running.

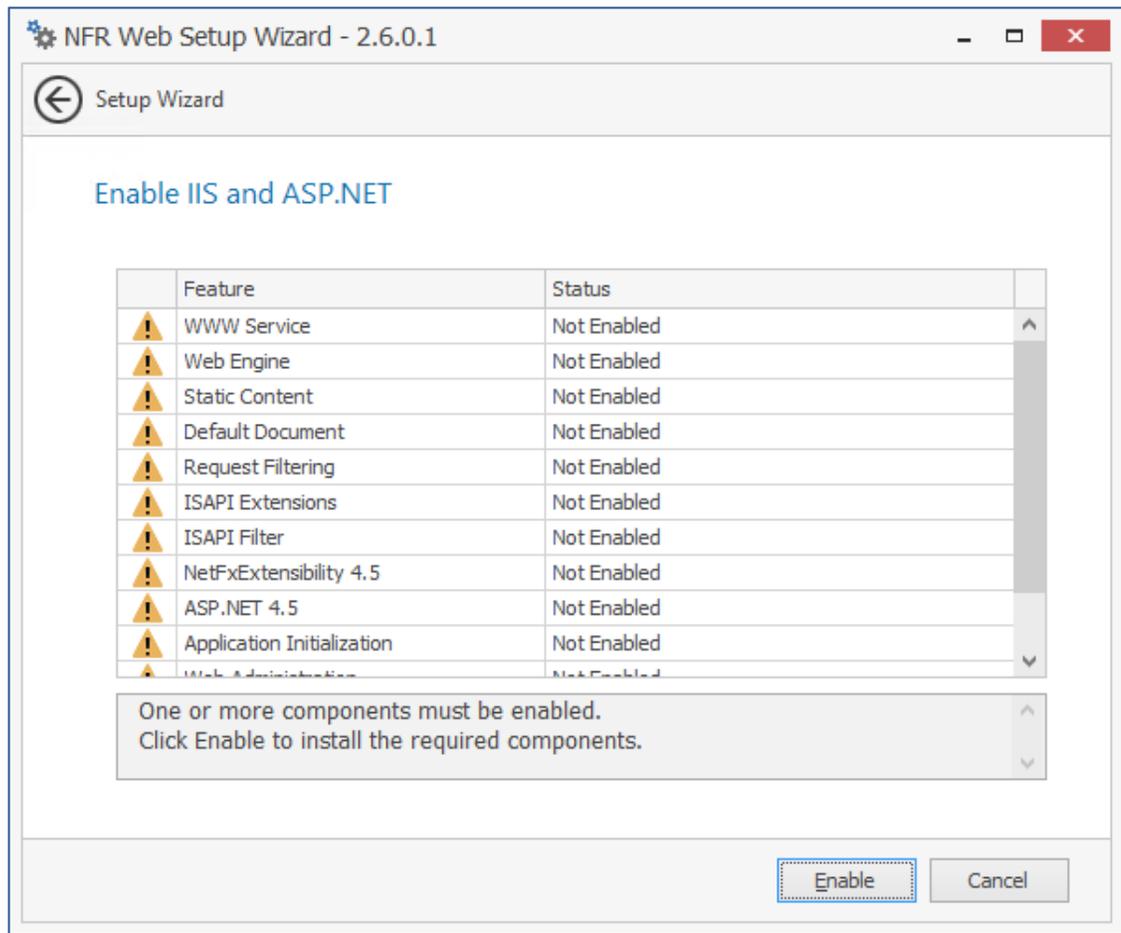


6.7 Configuring the Web Application

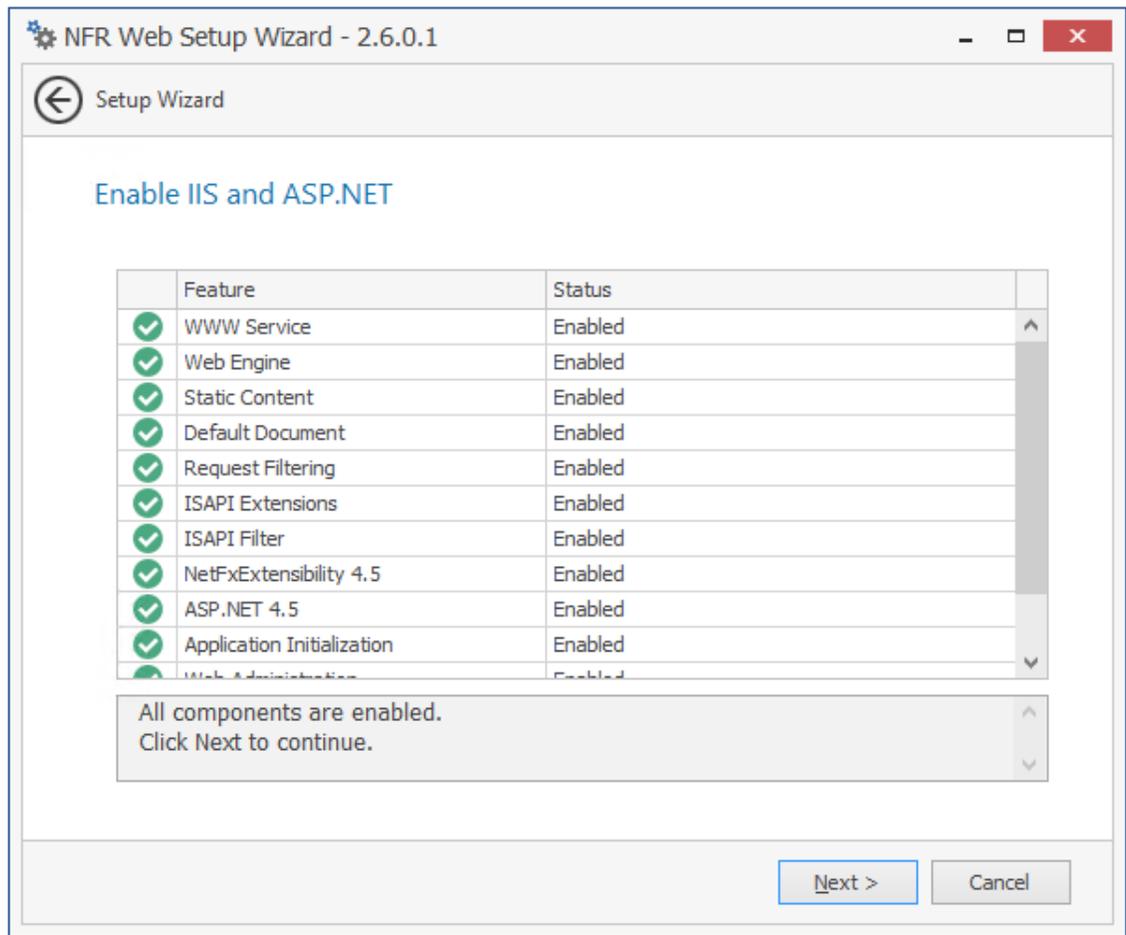
- 1 Click *Configure Web Application*.



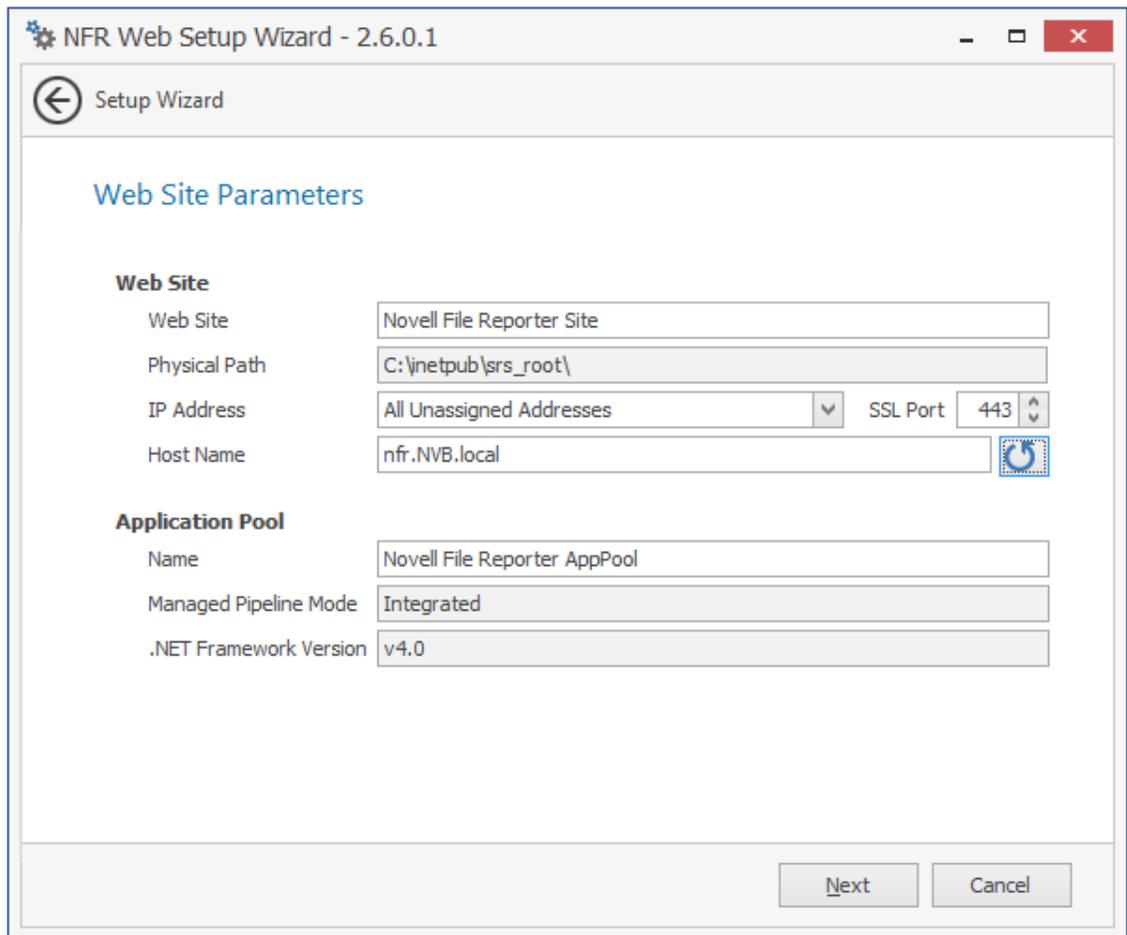
2 From the wizard page, read the overview of what will be configured and click *Next*.



3 Click *Enable*.



4 Click *Next*.



This page lets you review or edit settings applicable to the Novell File Reporter Web application. Unless there is a need to change a setting, we recommend that you leave the settings as they are currently established.

Web Site: Settings for the Microsoft IIS Web site.

Web Site: The default name for the Novell File Reporter Web site. If the default name does not conform to your organization’s naming standards, you can edit it.

Physical Path: This path was specified in [Step 7 on page 45](#) and is the location where files on the Web site are served up. You cannot edit this path.

IP Address: By default, this field indicates that Web requests will be responded to from any IP address available on the server. If the server has multiple IP addresses, you can specify which one you want to use.

SSL Port: The default port is 443. If there is a conflict, you can select another port.

Host Name: The host name as defined in DNS that you specified in [Section 6.2, “Prerequisites,” on page 44](#).

If a warning sign appears next to the Host Name entry, the host name is not fully resolved. Verify that there is a DNS entry for the Novell File Reporter Web application and that the resolved IP address or addresses are located on the host machine.

Application Pool: Settings pertaining to the Novell File Reporter application pool in Microsoft IIS.

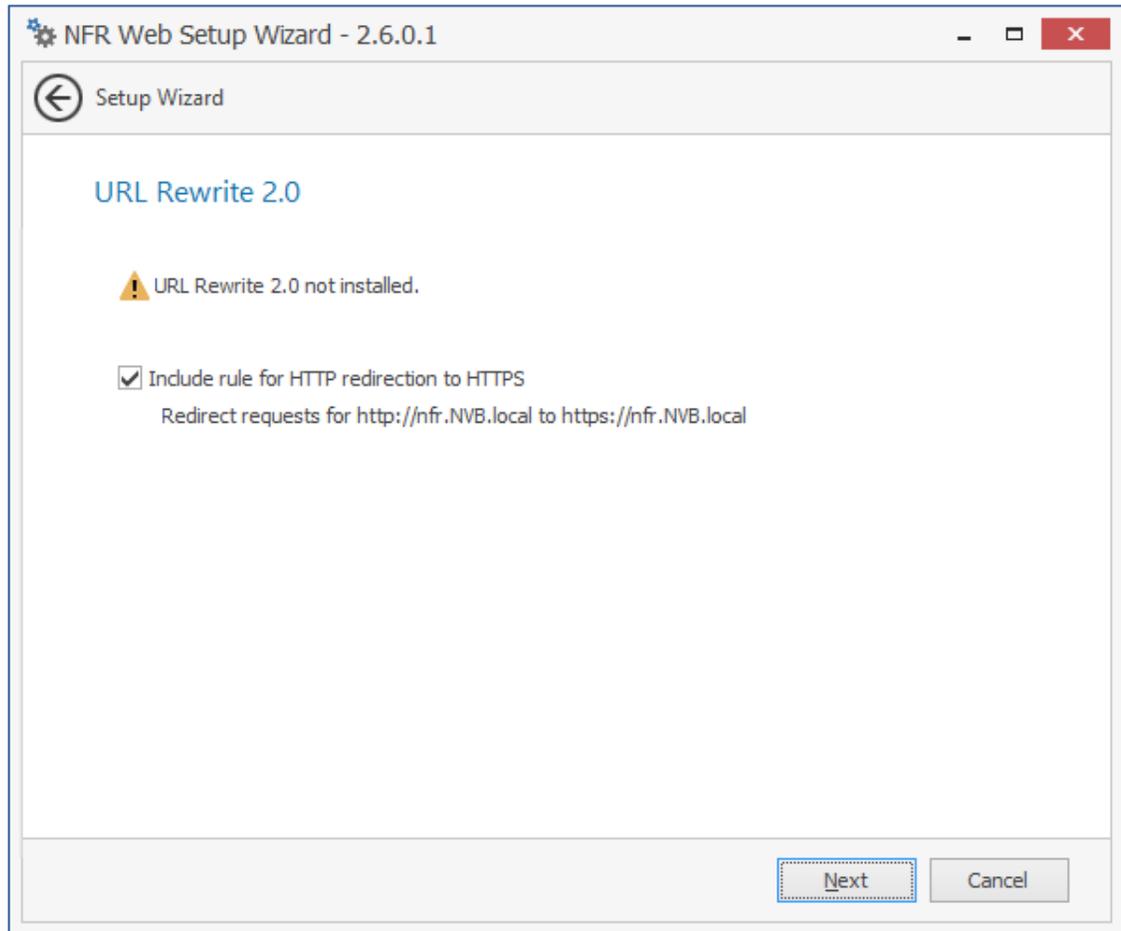
Name: The default name for the application pool. If the default name does not conform to your organization’s naming standards, you can edit it.

Managed Pipeline Mode: Microsoft IIS 7 and later uses the Integrated managed pipeline mode, meaning that requests are handled through a unified pipeline, rather than the classic mode in IIS 6 that utilized two pipelines.

.NET Framework Version: Novell File Reporter requires the .NET framework Version 4.5, which Novell File Reporter installs automatically.

Register ASP.NET with IIS: This appears only when you are installing on a Windows Server 2008 R2 machine. Unless you have a reason to deselect it, leave this option selected.

- 5 (Conditional) If the components are not enabled, click *Enable*.
- 6 Edit the fields as needed and click *Next*.

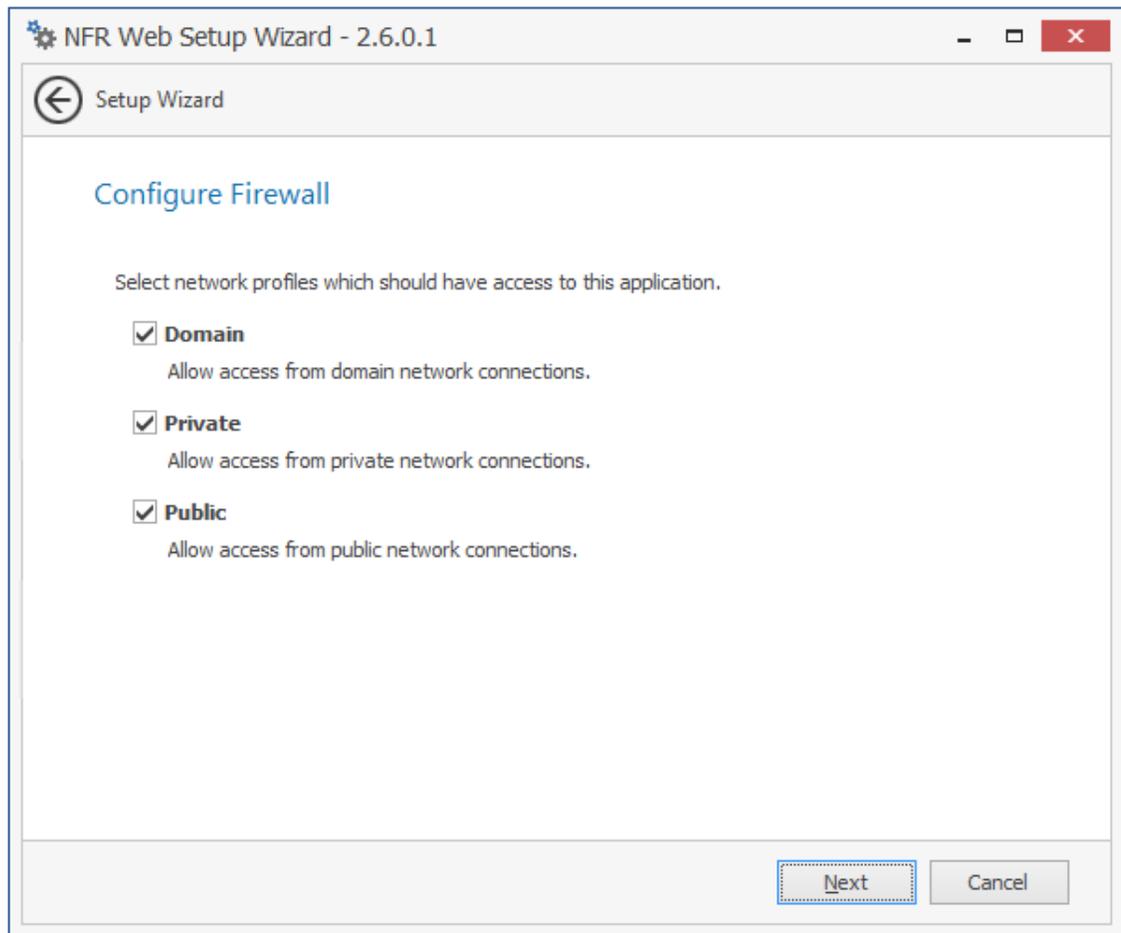


This page lets you install Microsoft IIS URL Rewrite Module 2.0, which will redirect the Novell File Reporter login page from an entered HTTP protocol, to HTTPS. For example, if you enter `http://nfr.nvb.local`, you would be redirected to the secure login page at `https://nfr.nvb.local`.

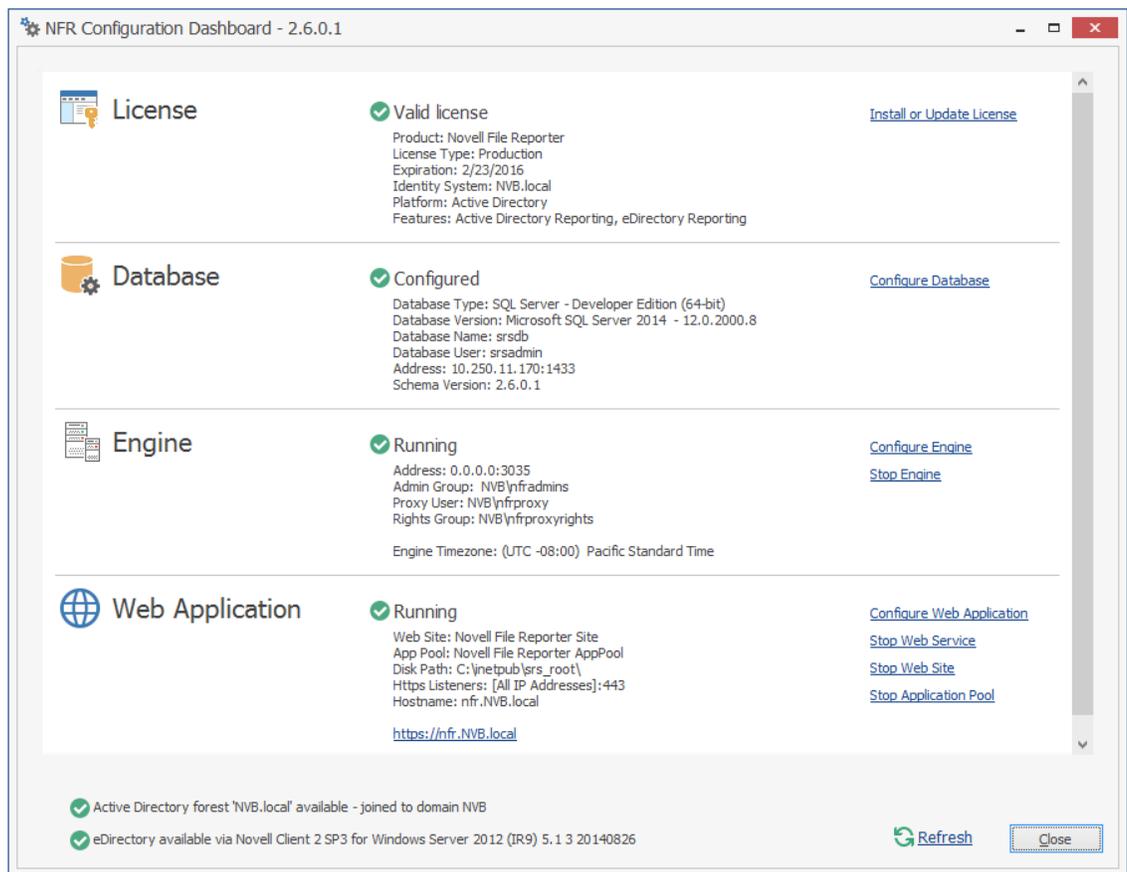
- 7 Unless your organization has a policy against redirects, leave the check box selected and click *Next*.



- 8 Accept the license terms and click Install.
- 9 Click *Finish* to close the IIS URL Rewrite Module 2 Setup wizard.



- 10 Set the network profiles according to your organization's security policies and click *Next*.
- 11 When you are notified that the initial setup for the Web Application is complete, click *Finish*.
The database, NFR Engine, and Web Application are now configured.



12 (Optional) Click the hyperlink to launch the Web-based administrative interface.

13 Install the NFR Agents by referring to the following chapters:

- ◆ To install NFR Agents on Windows servers, refer to [Chapter 8, “Installing and Configuring the Windows Agent,”](#) on page 93.
- ◆ To install NFR Agents on Linux servers, refer to [Chapter 9, “Installing and Configuring the Linux Agent,”](#) on page 99.

7 Installing and Configuring the NFR Engine, Database, and Web Application in an eDirectory Environment

Procedures in this section include those needed for installing and configuring the NFR Engine, configuring the database, and Web Application in an eDirectory network environment.

This assumes that eDirectory is to be the primary identity system for Novell File Reporter. In other words, authentication is to take place via eDirectory. Additionally, the NFR Engine requires a license for the eDirectory version of Novell File Reporter.

- ◆ [Section 7.1, “Minimum Requirements,” on page 67](#)
- ◆ [Section 7.2, “Prerequisites,” on page 68](#)
- ◆ [Section 7.3, “Installing and Configuring the NFR Engine,” on page 68](#)
- ◆ [Section 7.4, “Install the License,” on page 69](#)
- ◆ [Section 7.5, “Configuring the Database,” on page 71](#)
- ◆ [Section 7.6, “Configuring the NFR Engine,” on page 75](#)
- ◆ [Section 7.7, “Configuring the Web Application,” on page 84](#)

NOTE: Although eDirectory is the primary identity system, you can still have Novell File Reporter scan and report on storage resources residing in Active Directory. See [Section 6.1, “Minimum Requirements,” on page 43](#).

7.1 Minimum Requirements

- ◆ Any of the following 64-bit multi-core processor servers:
 - ◆ Windows Server 2008 R2
 - ◆ Windows Server 2012
 - ◆ Windows Server 2012 R2
- ◆ Minimum of 16 GB RAM

Depending on the size and frequency of your scans, this amount might need to be significantly increased.
- ◆ (Optional) If you want Novell File Reporter to report on storage devices that reside in Active Directory, the server on which you are installing the NFR Engine must be part of a domain.
- ◆ Disk space requirements:
 - ◆ Minimum 700 MB if the PostgreSQL database is installed on the same server as the NFR Engine
 - ◆ Minimum 350 MB if the PostgreSQL database is installed on a different server

Depending on the size and frequency of your scans, these amounts might need to be significantly increased.

7.2 Prerequisites

- ◆ Install the following Novell Client software on the same Windows server where you install the NFR Engine:

- ◆ Novell Client 2 SP3 for Windows (IR5) or later

Having the Novell Client installed allows Novell File Reporter to connect to eDirectory and view the storage resources.

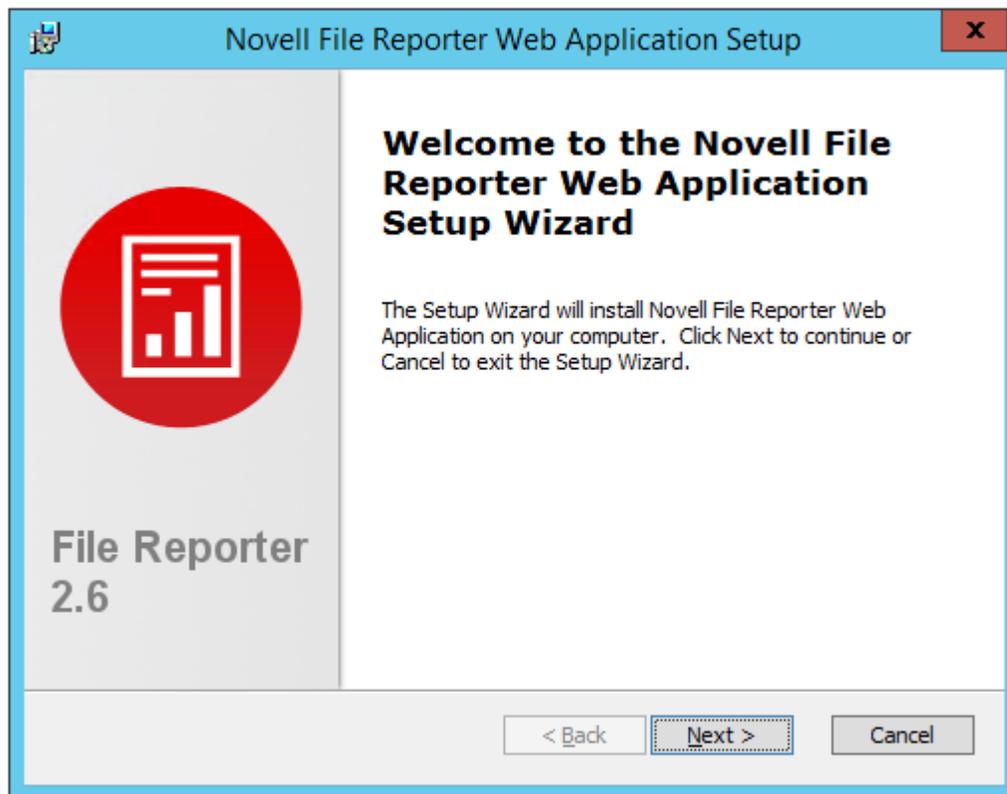
- ◆ On the same Windows server, configure the Service Location Protocol settings within the Novell Client software.
- ◆ Create a new host record in DNS for Novell File Reporter.

For example: `nfr.cctec.org`

- ◆ Review [Appendix A, “eDirectory Universal Password Settings,”](#) on page 109 and complete any necessary prerequisite eDirectory Universal Password configurations.

7.3 Installing and Configuring the NFR Engine

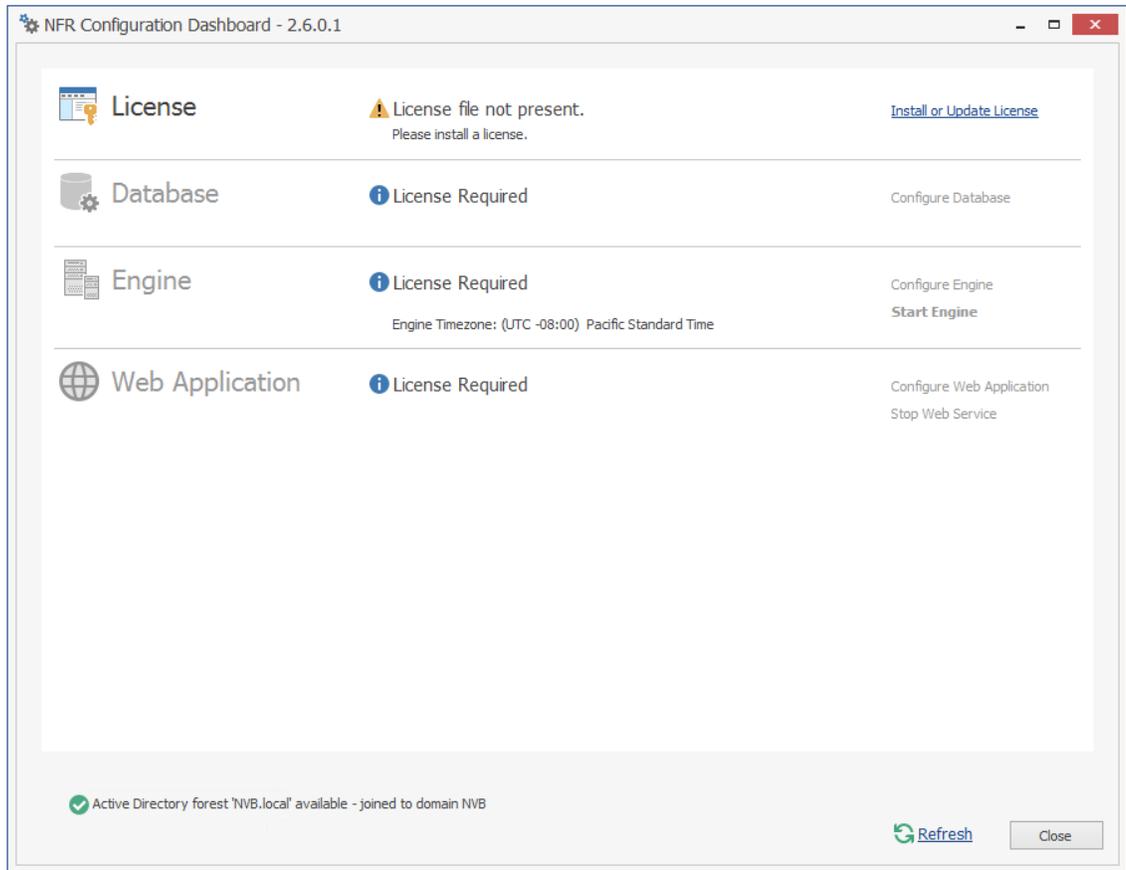
- 1 At the root of the `NFR_2_6_0.iso` image, double-click the `Windows` folder.
- 2 Double-click the `x86_64` folder.
- 3 Double-click `NFREngine-Installer-2.6-x64-xxxx`.
- 4 When you are asked if you want to run this file, click *Run*.
- 5 Agree to the license terms and conditions and click *Install*.



- 6 Click *Next*.

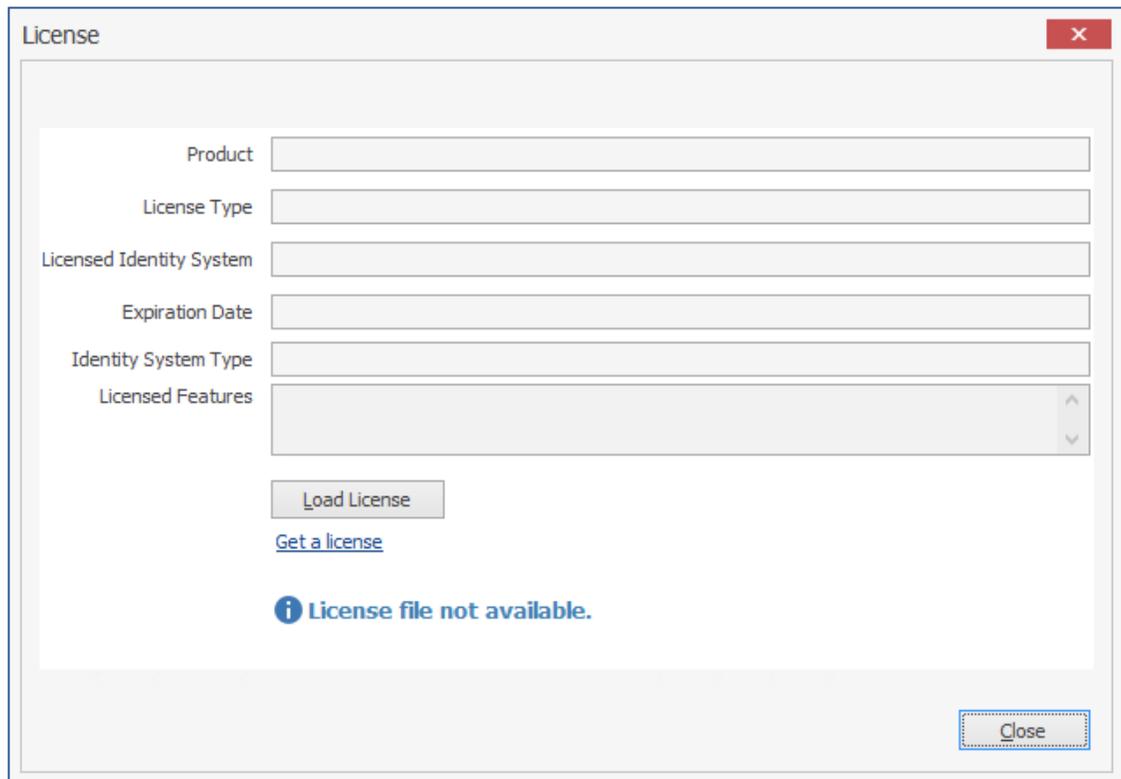
- 7 Accept the installation path or indicate a new path by using the *Browse* button.
- 8 Click *Install*.
- 9 Click *Finish*.
- 10 Click *Run Config Utility*.

The Novell File Reporter Configuration page appears.



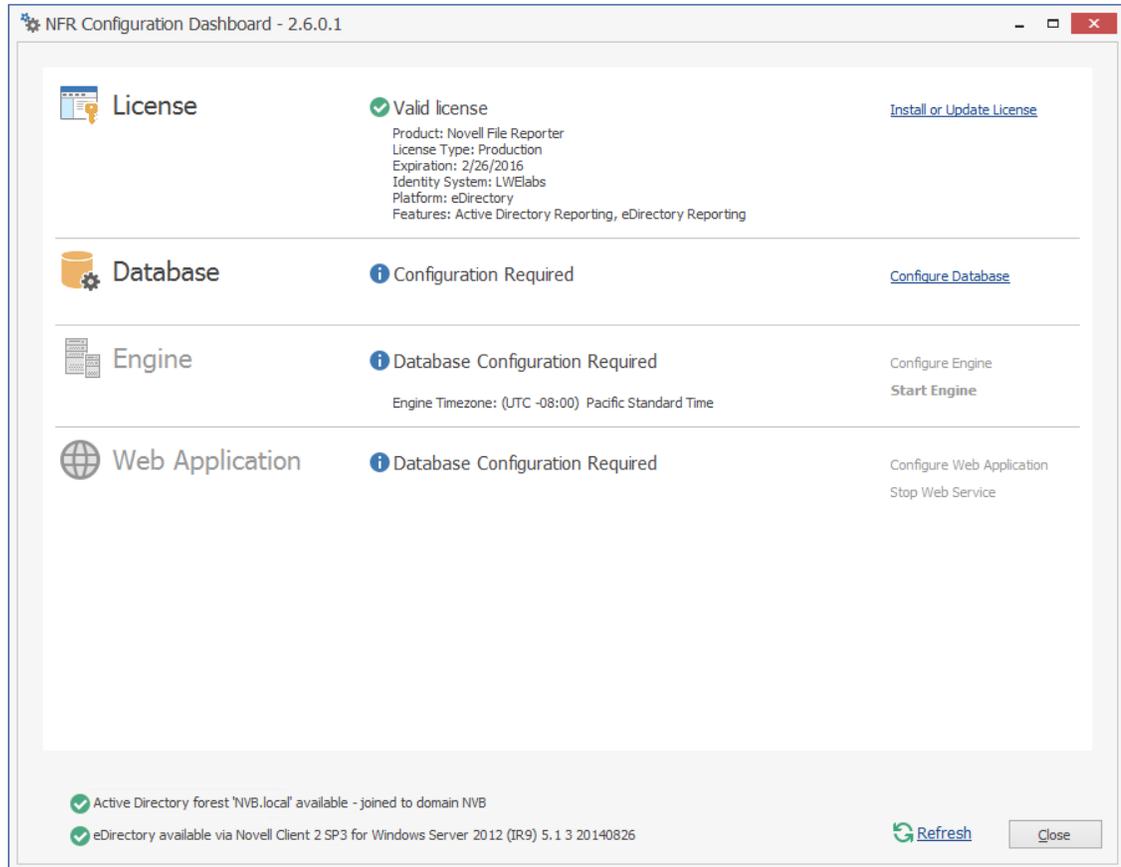
7.4 Install the License

- 1 Click *Install or Update License*.



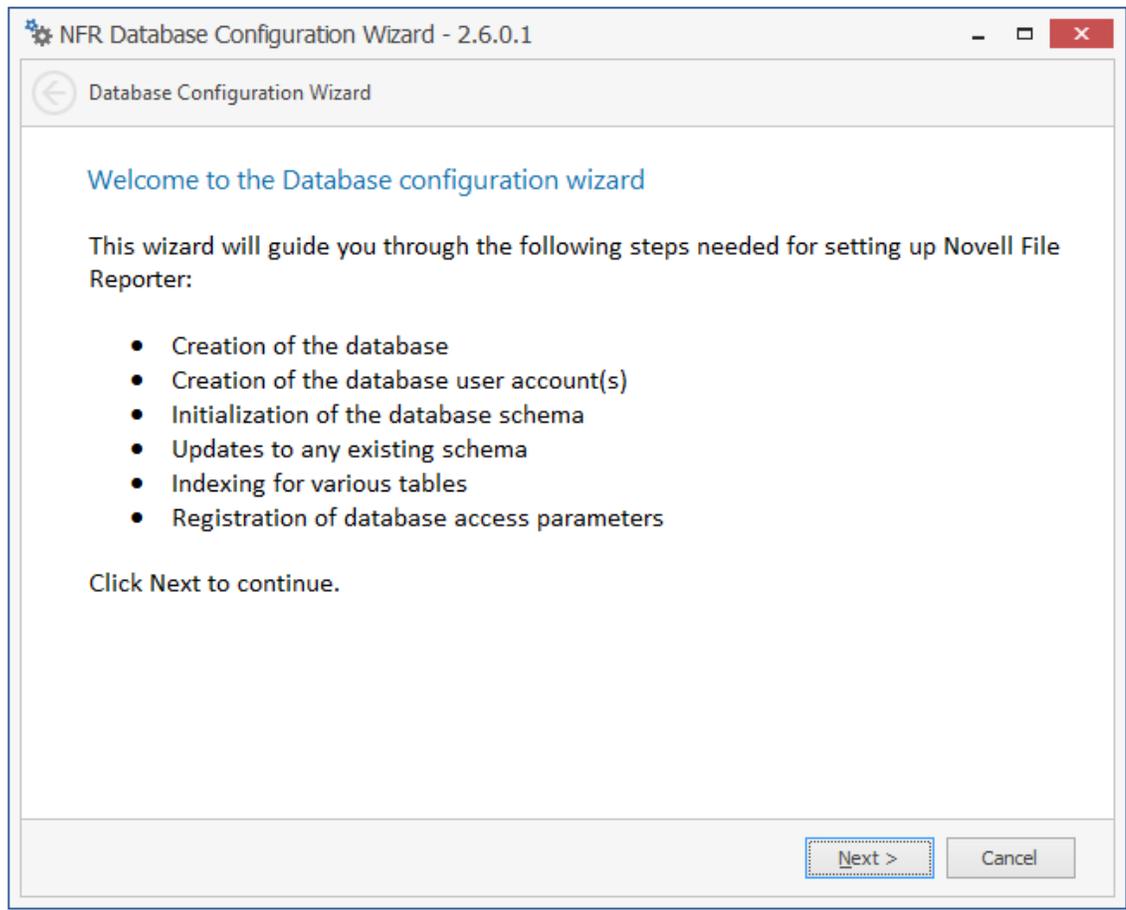
- 2 Click *Load License*, then browse to and select the license file.
You must have a Novell File Reporter license for eDirectory.
- 3 When the confirmation prompt appears, click *Yes*.

4 Click *Close*.



7.5 Configuring the Database

1 Click *Configure Database*.



The page indicates what database configuration tasks are to be completed in this wizard.

- 2 From the wizard page, read the overview of what will be configured and click *Next*.

The page lets you establish the settings needed for the NFR Engine and IIS to communicate with the database.

Database Properties: Displays information on the database name and version.

Type: Depending on the database you are using, select either *PostgreSQL 9.2* or *SQLServer 2012*.

NOTE: These selections specify the minimum supported versions of the databases. If you had Microsoft SQL Server 2014 for example, you would select *SQLServer 2012*.

Communication: Specifies address, port number, and name of the database.

Database Host Address: Specify the host address of the server where the database is installed.

Port: The default PostgreSQL database port setting is 5432. The default SQL Server port setting is 1433. If there is a port conflict, you can change it.

Initial Database: The default name of the Novell File Reporter database.

Database Service Accounts: Use this region to set authentication information for the Database Service User and Database Report User.

Database Service User: This field specifies the database account name that is used by Novell File Reporter to manage data in the database. This account has both read and write access to the database.

Set Password: Click *Set Password* to establish the password for the Database Service User.

Database Report User: This field specifies the database account name that Novell File Reporter uses to read data in the database while reporting.

Set Password: Click *Set Password* to establish the password for the Database Report User.

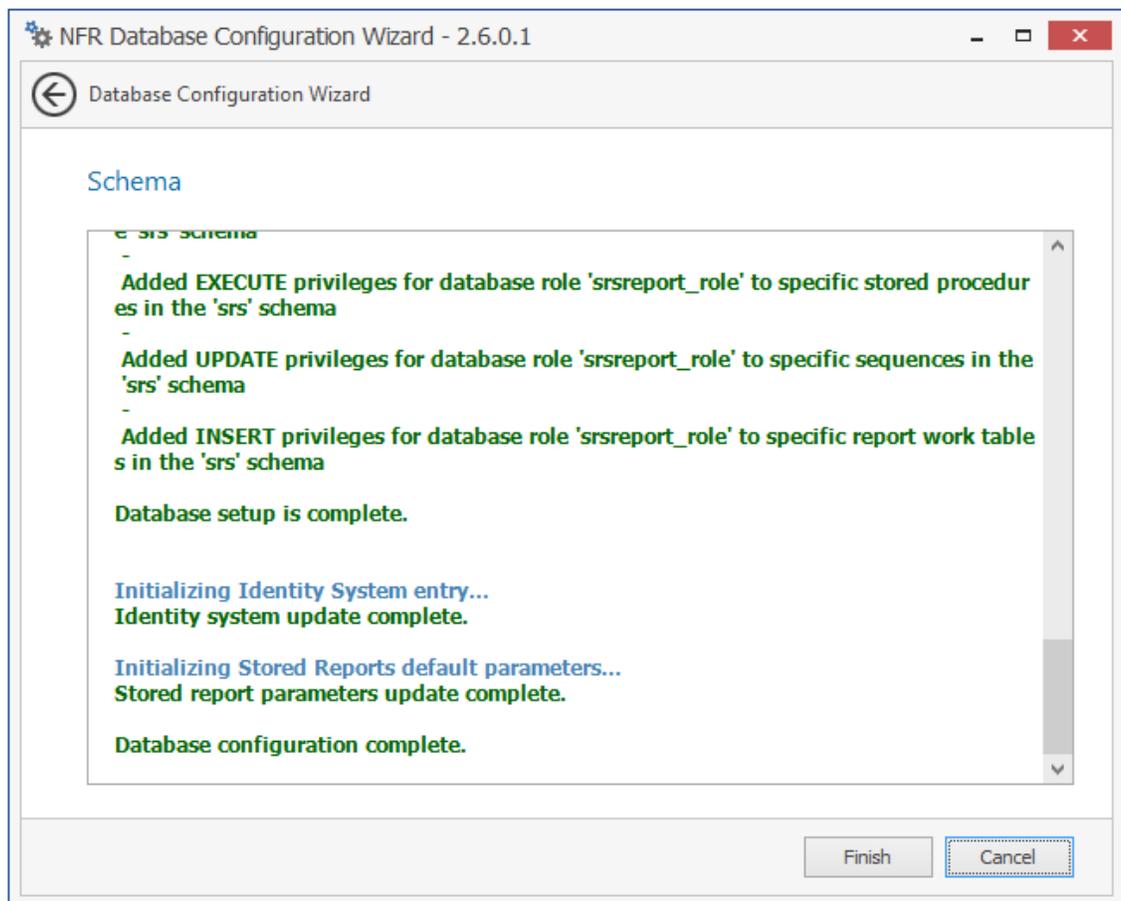
Database Report Role: This field specifies the account name of the role used to manage access for Report Users.

Database Admin Credentials: Use this region to establish the database administrator name and credentials.

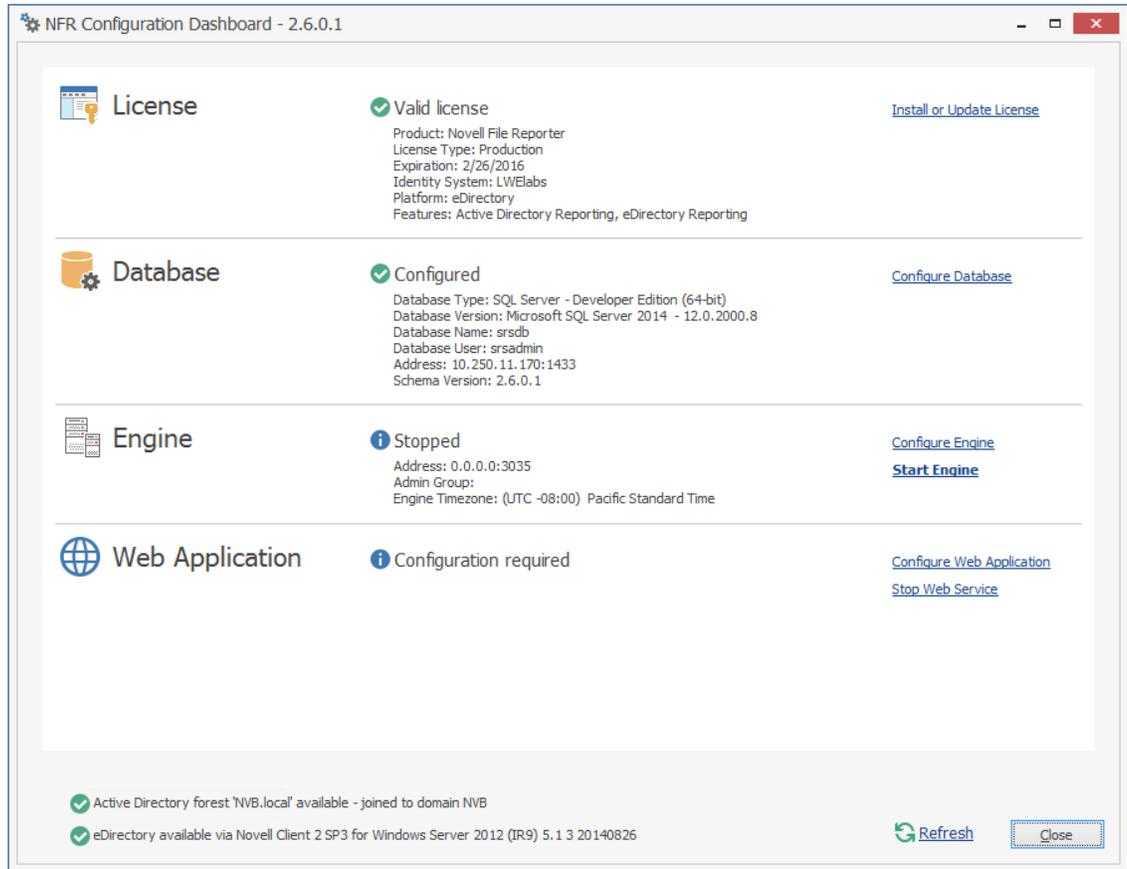
Database Administrator: If you are using a PostgreSQL database, specify the superuser name that you established in [Step 9 on page 27](#). If you are using an SQL Server 2012 database, specify the administrator name.

Password: If you are using a PostgreSQL database, specify the superuser password that you established in [Step 9 on page 27](#). If you are using an SQL Server 2012 database, specify the database administrator password.

3 Click *Next*.

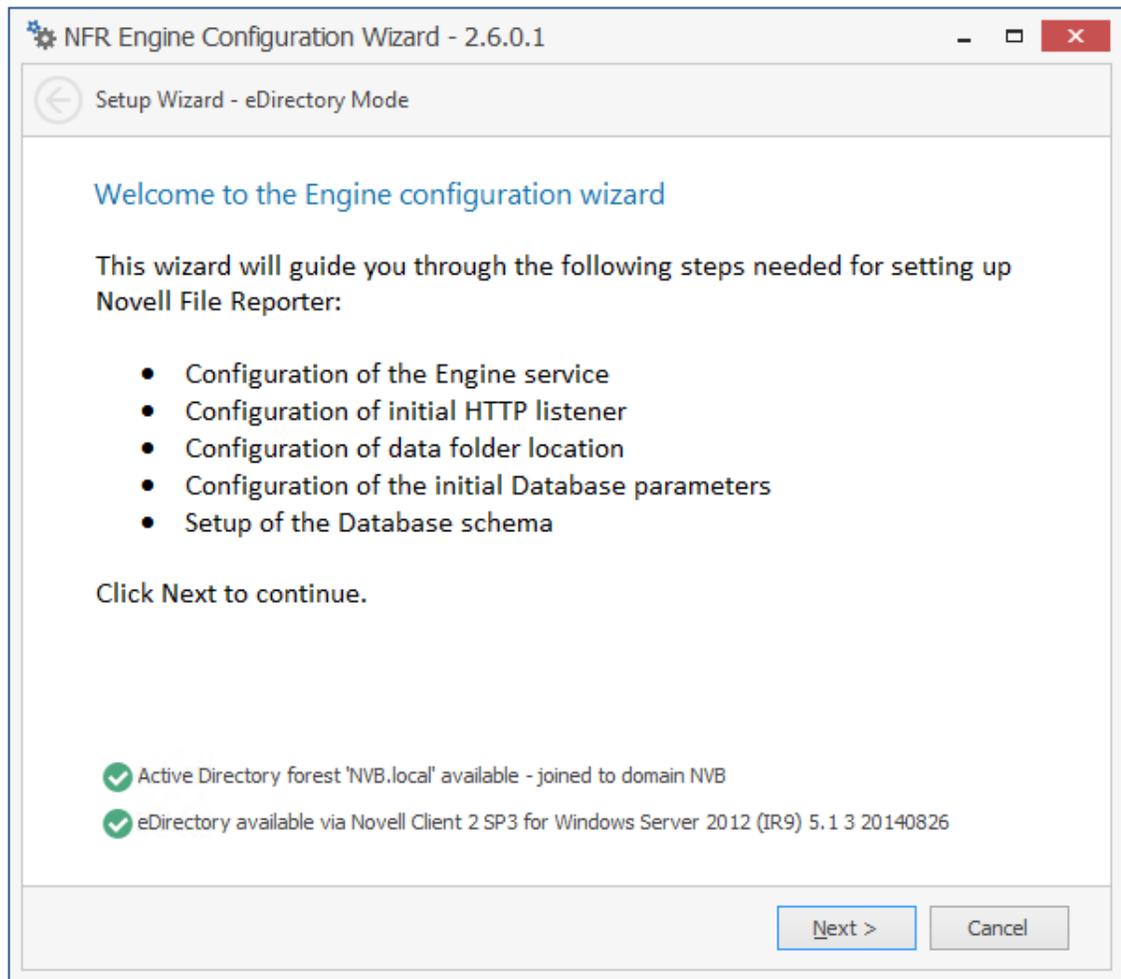


4 Review the configuration log and click *Finish*.



7.6 Configuring the NFR Engine

1 Click *Configure Engine*.



2 From the wizard page, read the overview of what will be configured and click *Next*.

Basic Options

HTTP Listener

Host Address: 0.0.0.0

SSL Port: 3035

SSL Certificate

Subject Name: NVB1

Expiration Days: 3,650 Expiration Date: 2/24/2025 9:33:40 AM

Key Length: 2048

Details Generate

Data

Data Folder: C:\ProgramData\Novell\File Reporter\Engine\data

Next > Cancel

This page lets you confirm or change basic NFR Engine configuration settings.

HTTP Listener: Communication parameters for the NFR Engine.

Host Address: Unless you want the NFR Engine to only listen on a certain IP address, leave this setting as it is.

SSL Port: Unless there is a port conflict, leave the setting at 3035.

SSL Certificate: Details for the SSL certificate that will be generated.

Subject Name: The name of the certificate that will be generated. The server name is listed by default.

Expiration Days: The life span of the security certificate, which is set at 10 years by default.

Key Length: The SSL certificate encryption setting, which is set at 2048 by default.

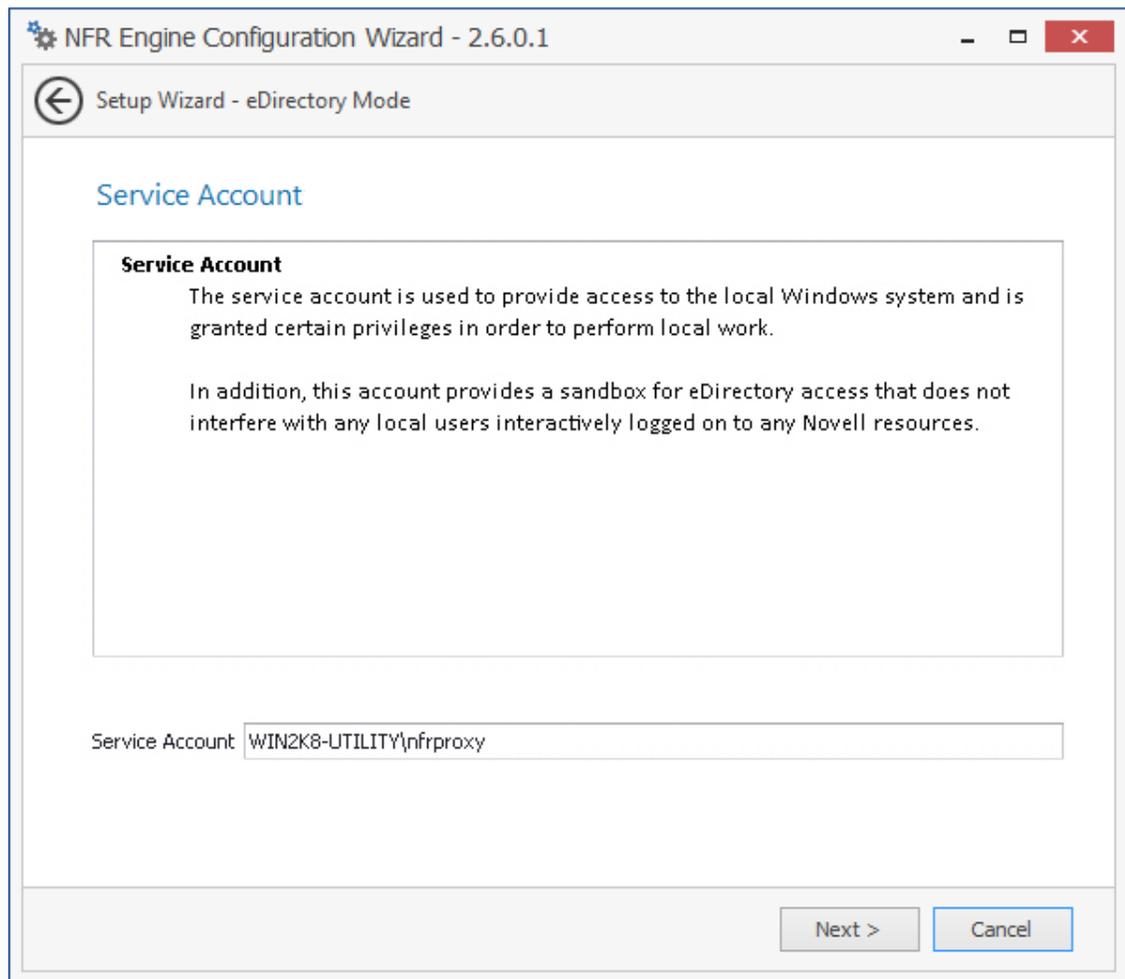
Details: Click the button to view the certificate data.

Generate: If you modify any of the settings in the SSL Certificate region, click this button to generate a new certificate.

Data Folder: The default location of the Data folder. The Data folder is used for a variety of tasks, including storing NFR Agent configuration data, serving as a temporary repository for scans, and mail spooling.

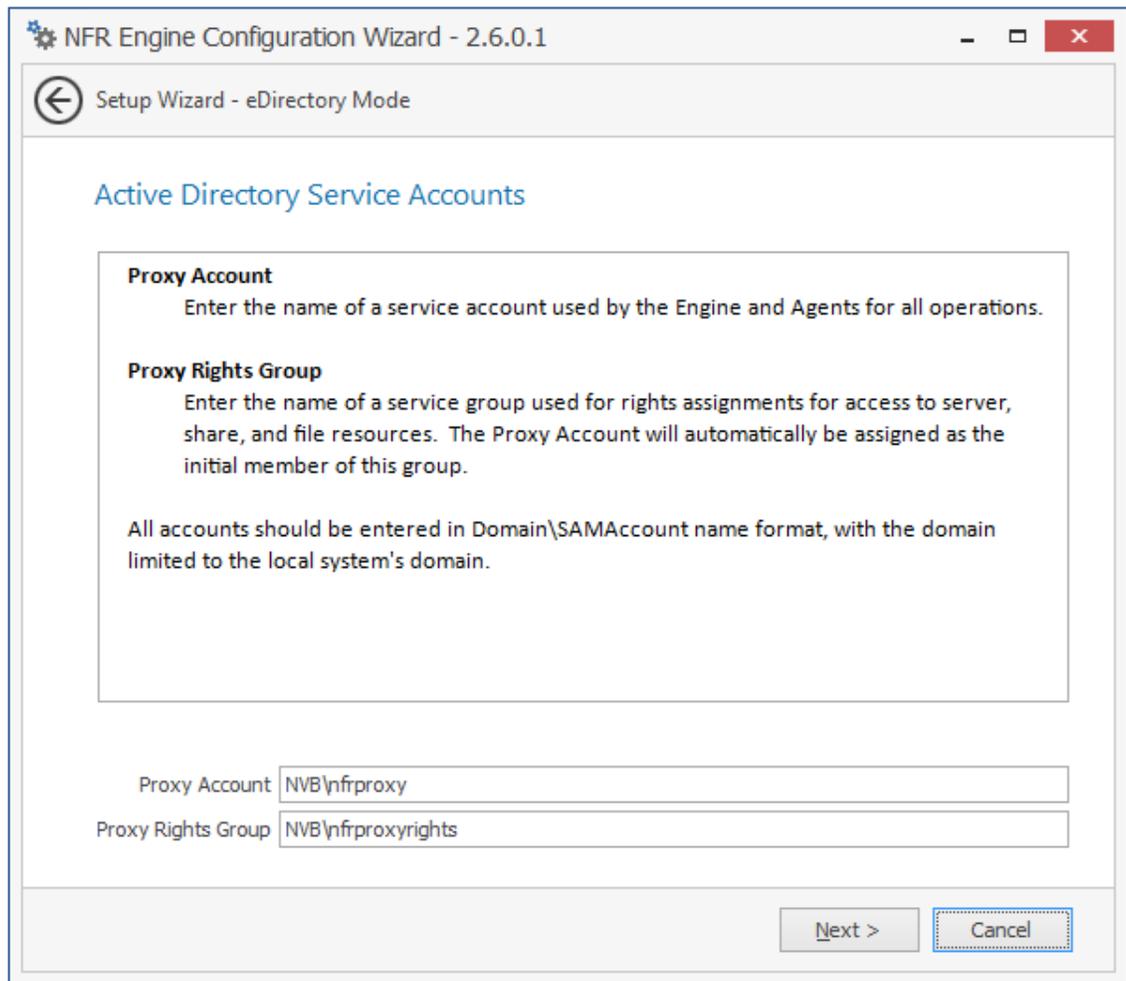
- 3 Edit any needed parameters settings and click *Next*.

If you have installed the NFR Engine and Web Application on a server that is not in a domain, the following page appears:



This page lets you establish a local service account.

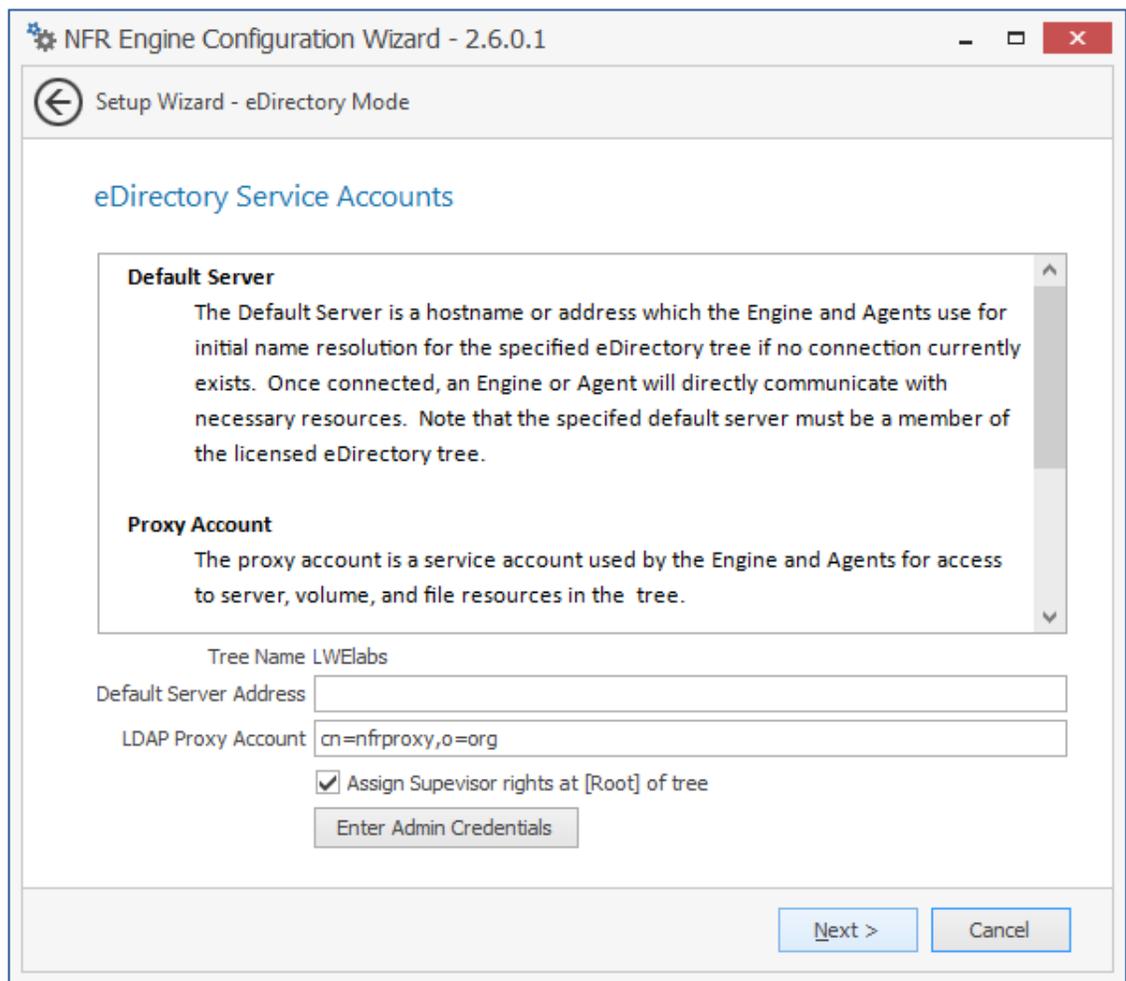
If, in addition to being logged in to eDirectory as the primary identity system, you are logged into Active Directory, the following page appears:



This page lets you establish a name for the proxy account and proxy rights group.

Novell File Reporter uses a proxy account so that NFR Agents can access all of the servers for reporting. A proxy rights group makes it easier to manage the rights of the proxy account.

- 4 Click *Next*.



In this page, you create the eDirectory service accounts. These service accounts are needed to access the file system for the files that Novell File Reporter reports on.

Tree Name: Displays the name of the eDirectory tree you are logged in to.

Default Server Address: Specify an IP address or DNS name to any server belonging to the eDirectory tree.

LDAP Proxy Account: Modify the typeful naming to correspond to your organizational structure.

For example, `cn=nfrproxy,o=system`

Assign Supervisor rights at [Root] of tree: By default, the proxy account has Supervisor rights at the [Root] of the directory tree and can therefore report on any network volume. If this option is not selected, Novell File Reporter can only report on volumes where the proxy account is assigned rights.

Enter Admin Credentials: Click this button to access the following dialog box:

The screenshot shows a dialog box titled "eDirectory LDAP Credentials". It contains the following fields and controls:

- LDAP Server Address:** A text input field.
- Port:** A spin box with the value "636".
- Connection Type:** A dropdown menu with "SSL" selected.
- LDAP Admin FDN:** A text input field.
- Password:** A text input field.
- Buttons:** "OK" and "Cancel" buttons at the bottom.

LDAP Server Address: Specify an IP address to any server belonging to the eDirectory tree.

Port: Unless there is a conflict, leave the port setting at 636.

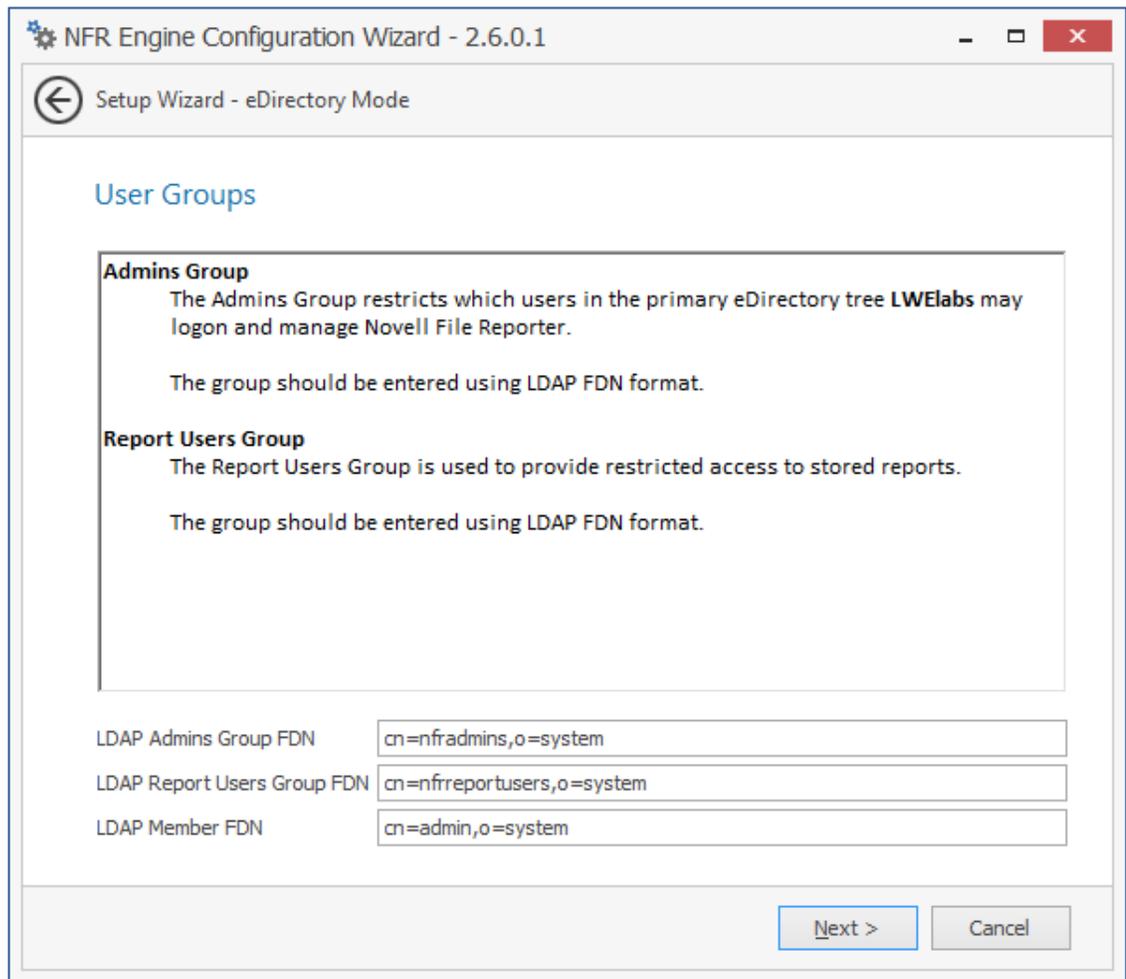
Connection Type: Verify that the setting is *SSL*.

LDAP Admin FDN: Specify the fully distinguished LDAP name for an administrator.

For example: *cn=admin,o=system*

Password: Specify the password for the administrator.

- 5 Specify the default server address, LDAP proxy account, and eDirectory LDAP credentials and click *Next*.



LDAP Admins Group FDN: Based on your organizational structure, modify the path for an admins group that Novell File Reporter will create with LDAP fully distinguished naming.

For example: `cn=nfradmins,o=system`

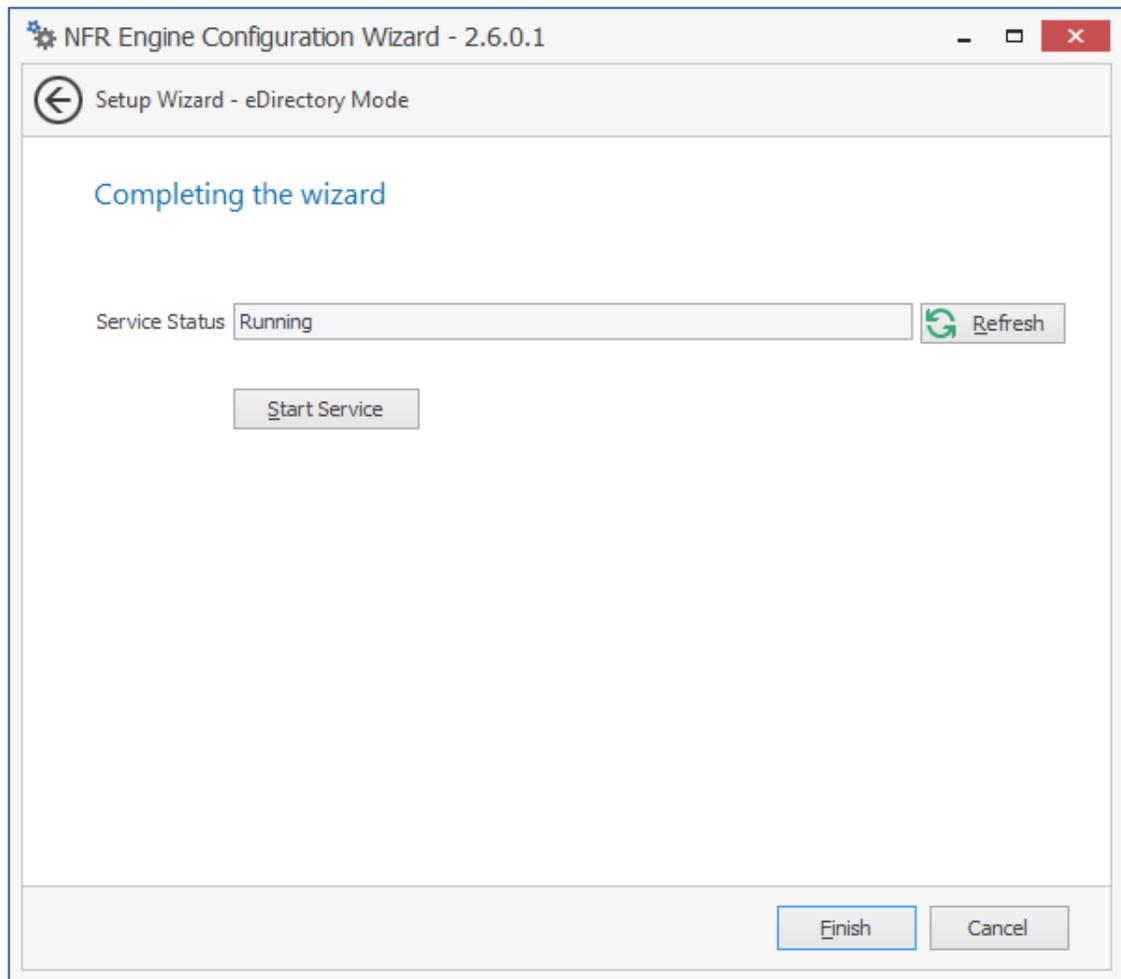
LDAP Report Users Group FDN: Based on your organizational structure, modify the path for a report users group that Novell File Reporter will create with LDAP fully distinguished naming.

For example: `cn=nfrreportusers,o=system`

LDAP Member FDN: Specify the LDAP fully distinguished name of an administrator.

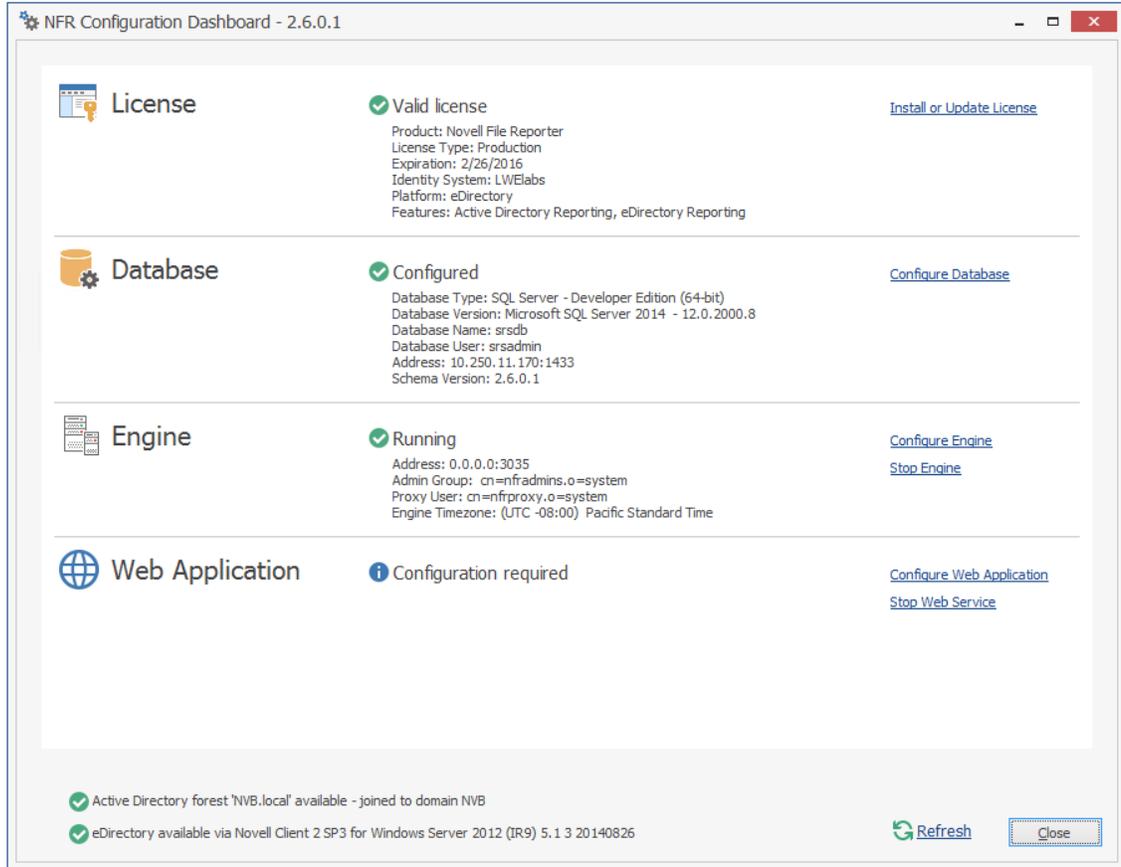
For example: `cn=admin,o=system`

- 6 Complete the fields and click *Next*.



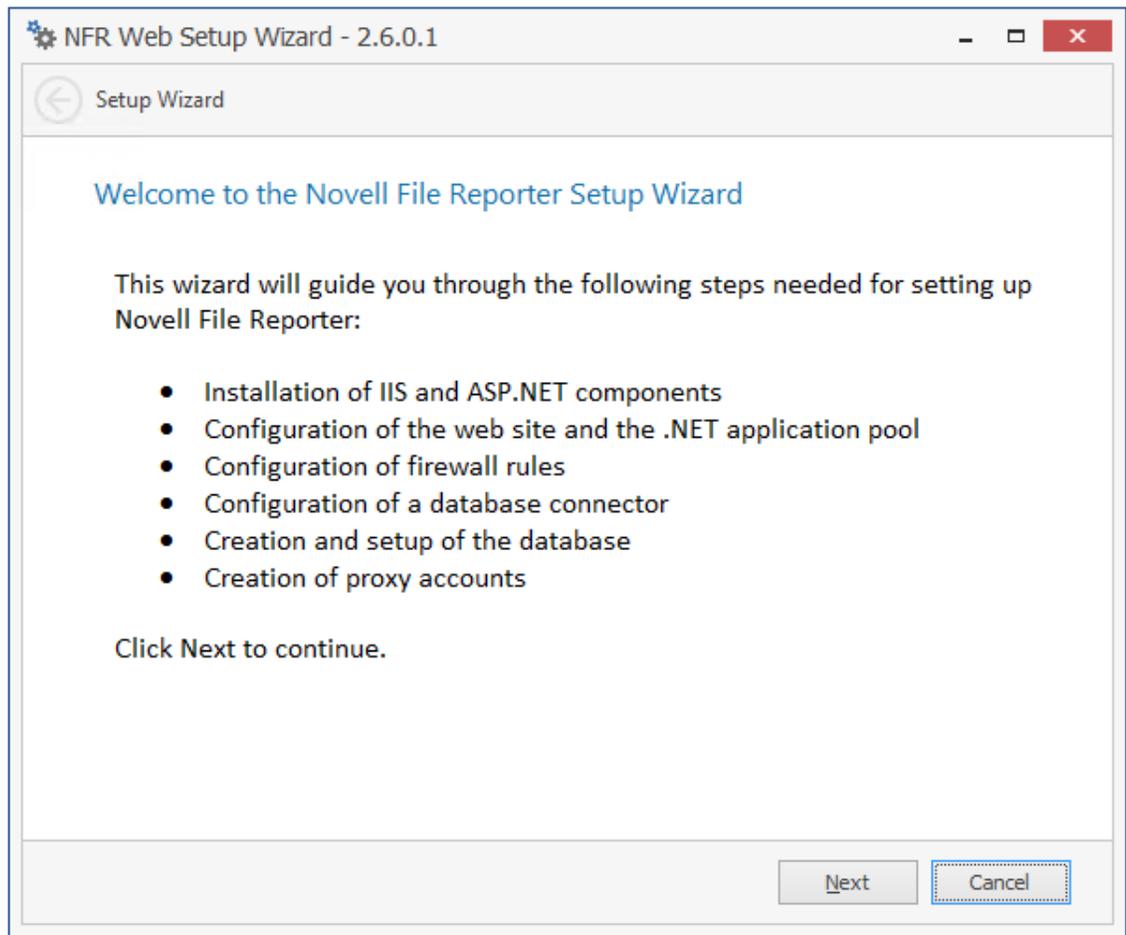
7 Click *Finish*.

The NFR Engine is now installed, configured, and running.

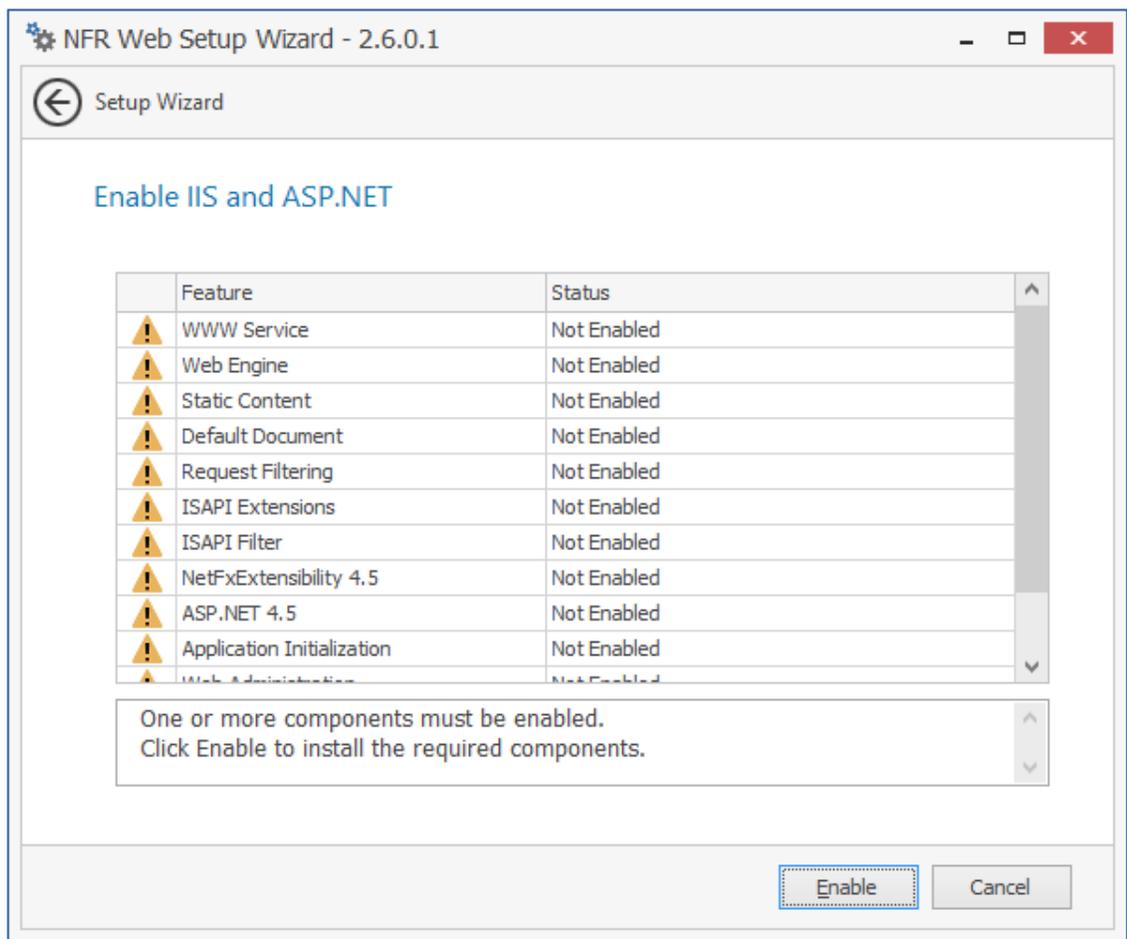


7.7 Configuring the Web Application

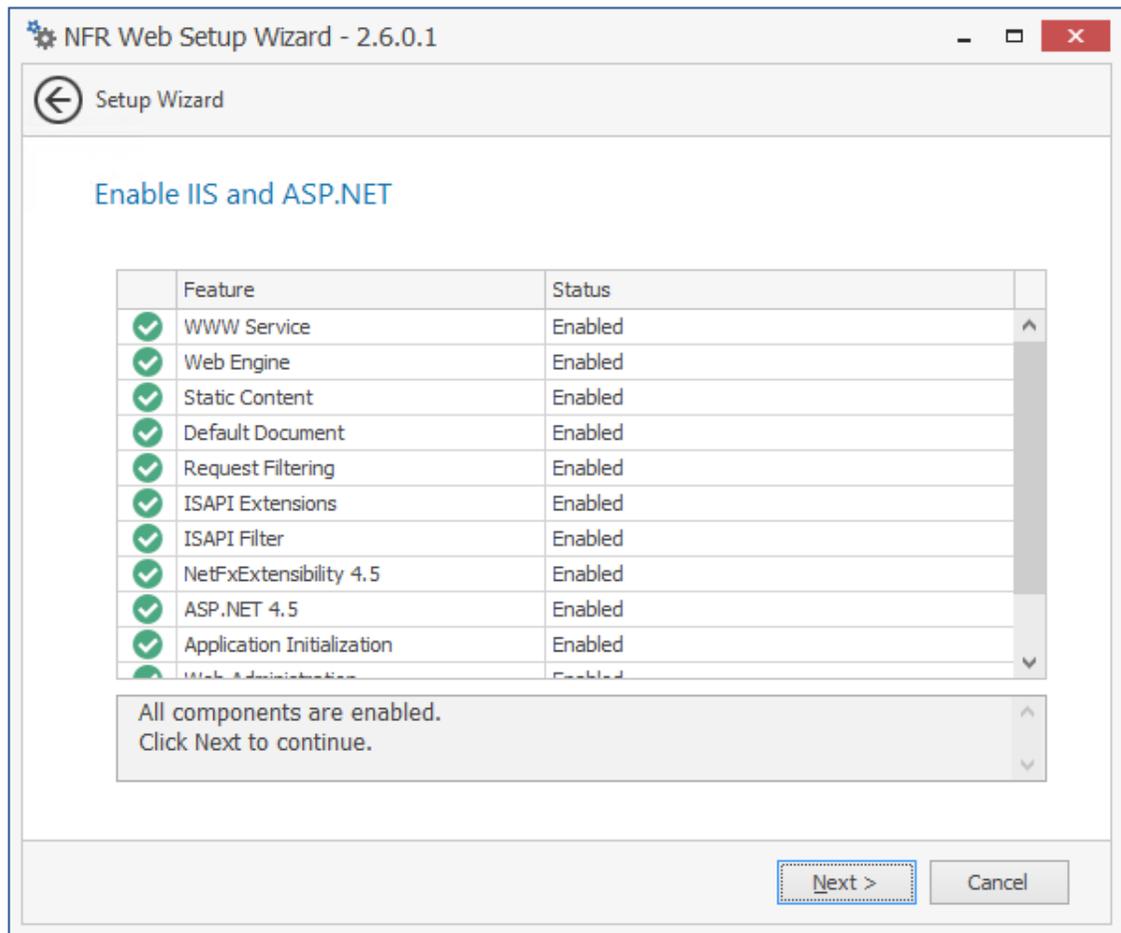
- 1 Click *Configure Web Application*.



- 2 From the wizard page, read the overview of what will be configured and click *Next*.



3 Click *Enable*.



4 Click *Next*.

Web Site Parameters

Web Site

Web Site: Novell File Reporter Site

Physical Path: C:\inetpub\srs_root\

IP Address: All Unassigned Addresses | SSL Port: 443

Host Name: nfr.NVB.local

Application Pool

Name: Novell File Reporter AppPool

Managed Pipeline Mode: Integrated

.NET Framework Version: v4.0

Next | Cancel

This page lets you review or edit settings applicable to the Novell File Reporter Web application. Unless there is a need to change a setting, we recommend that you leave the settings as they are currently established.

Web Site: Settings for the Microsoft IIS Web site.

Web Site: The default name for the Novell File Reporter Web site. If the default name does not conform to your organization’s naming standards, you can edit it.

Physical Path: This path was specified in [Step 7 on page 45](#) and is the location where files on the Web site are served up. You cannot edit this path.

IP Address: By default, this field indicates that Web requests will be responded to from any IP address available on the server. If the server has multiple IP addresses, you can specify which one you want to use.

SSL Port: The default port is 443. If there is a conflict, you can select another port.

Host Name: The host name as defined in DNS that you specified in [Section 7.2, “Prerequisites,” on page 68](#).

If a warning sign appears next to the Host Name entry, the host name is not fully resolved. Verify that there is a DNS entry for the Novell File Reporter Web application and that the resolved IP address or addresses are located on the host machine.

Application Pool: Settings pertaining to the Novell File Reporter application pool in Microsoft IIS.

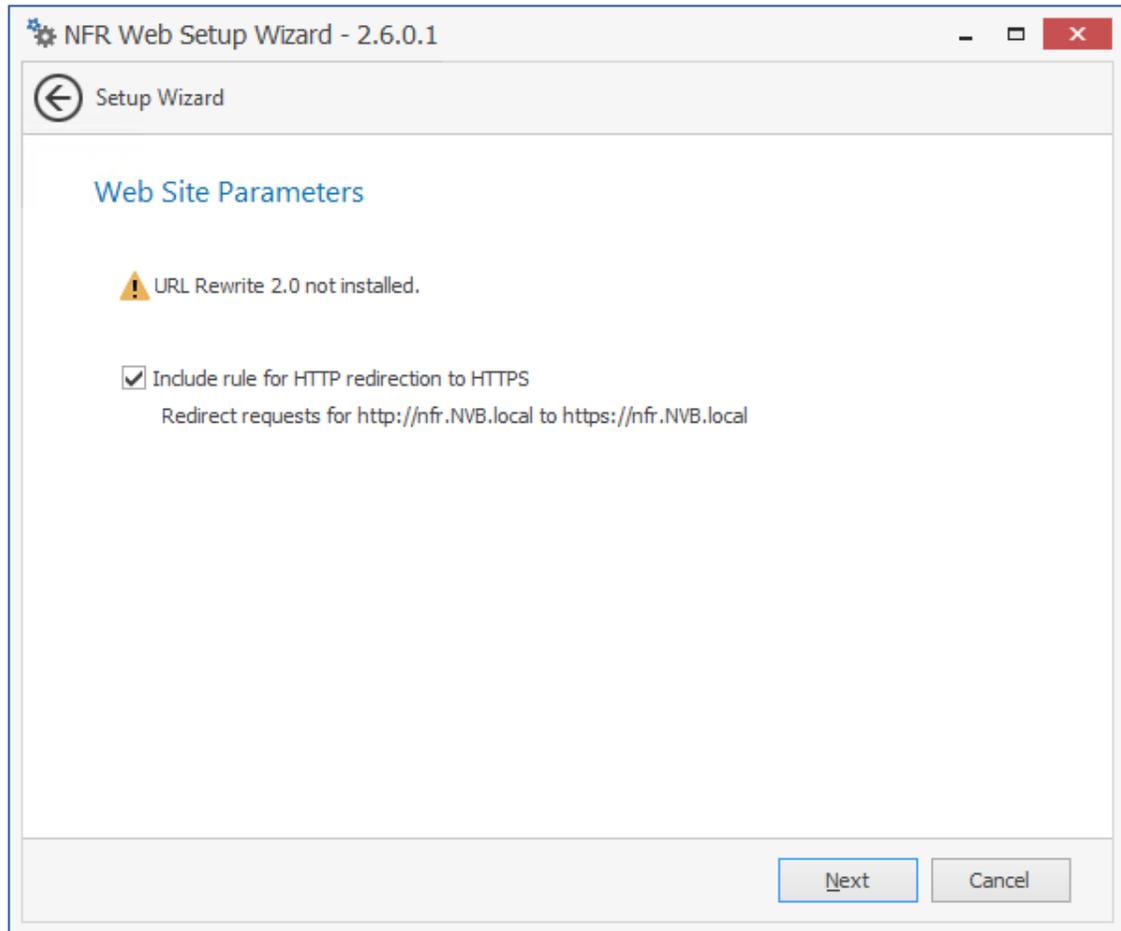
Name: The default name for the application pool. If the default name does not conform to your organization’s naming standards, you can edit it.

Managed Pipeline Mode: Microsoft IIS 7 and later uses the Integrated managed pipeline mode, meaning that requests are handled through a unified pipeline, rather than the classic mode in IIS 6 that utilized two pipelines.

.NET Framework Version: Novell File Reporter requires the .NET framework Version 4.5, which Novell File Reporter installs automatically.

Register ASP.NET with IIS: This appears only when you are installing on a Windows Server 2008 R2 machine. Unless you have a reason to deselect it, leave this option selected.

- 5 (Conditional) If the components are not enabled, click *Enable*.
- 6 Edit the fields as needed and click *Next*.

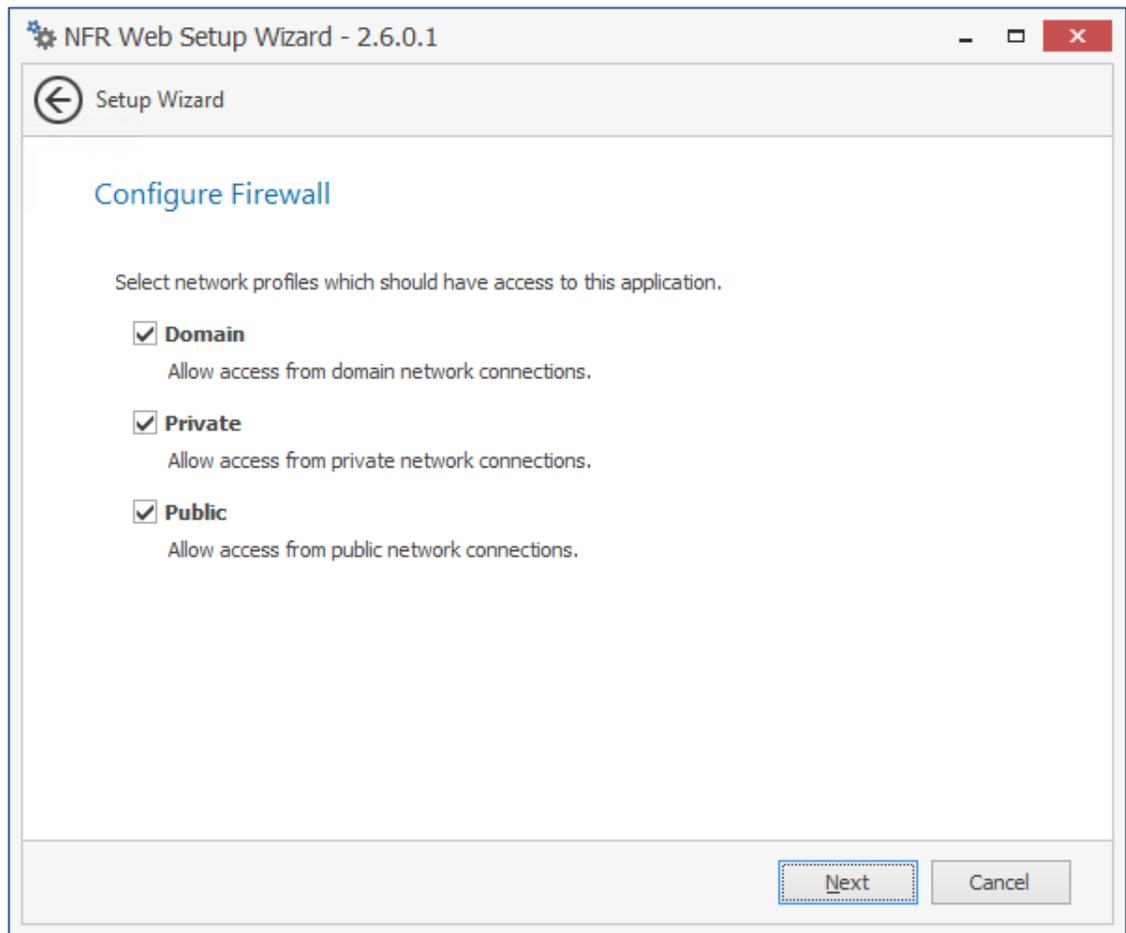


This page lets you install Microsoft IIS URL Rewrite Module 2.0, which will redirect the Novell File Reporter login page from an entered HTTP protocol, to HTTPS. For example, if you enter `http://nfr.nvb.local`, you would be redirected to the secure login page at `https://nfr.nvb.local`.

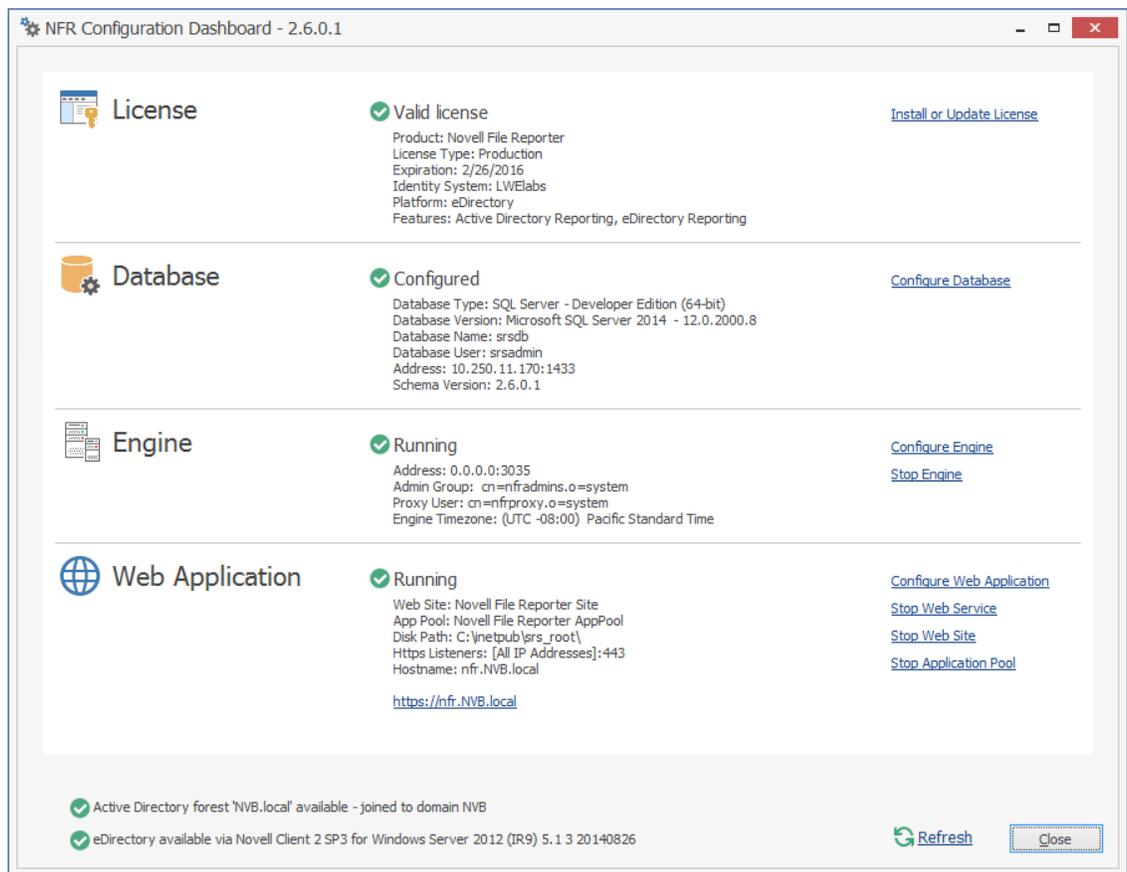
- 7 Unless your organization has a policy against redirects, leave the check box selected and click *Next*.



- 8 Accept the license terms and click *Install*.
- 9 Click *Finish* to close the IIS URL Rewrite Module 2 Setup wizard.



- 10 Set the network profiles according to your organization's security policies and click *Next*.
- 11 When you are notified that the initial setup for the Web Application is complete, click *Finish*.
The database, NFR Engine, and Web Application are now configured.



12 (Optional) Click the hyperlink to launch the Web-based administrative interface.

13 Install the NFR Agents by referring to the following chapters:

- ◆ To install NFR Agents on Windows servers, refer to [Chapter 8, "Installing and Configuring the Windows Agent,"](#) on page 93.
- ◆ To install NFR Agents on Linux servers, refer to [Chapter 9, "Installing and Configuring the Linux Agent,"](#) on page 99.

8 Installing and Configuring the Windows Agent

Procedures in this section include those needed for installing and configuring the Windows NFR Agent on a Windows server.

- ♦ [Section 8.1, “Remove NFR 1.0.x Agent Components \(Conditional\),” on page 93](#)
- ♦ [Section 8.2, “Minimum Requirements,” on page 93](#)
- ♦ [Section 8.3, “Active Directory Requirements,” on page 94](#)
- ♦ [Section 8.4, “Prerequisites,” on page 94](#)
- ♦ [Section 8.5, “Installing and Configuring the NFR Agent,” on page 94](#)

8.1 Remove NFR 1.0.x Agent Components (Conditional)

If you plan to install NFR Agents on Windows servers that had previously hosted NFR Agents for Version 1.0.x, you must:

- ♦ Uninstall all Novell File Reporter 1.0.x components on the server
- ♦ Delete the `C:\ProgramData\Novell\File Reporter` folder

8.2 Minimum Requirements

- ♦ Any of the following servers:
 - ♦ Windows Server 2003 R2 SP2 with a 32-bit or 64-bit processor
 - ♦ Windows Server 2008 with a 32-bit or 64-bit processor
 - ♦ Windows Server 2008 R2
 - ♦ Windows Server 2012
 - ♦ Windows Server 2012 R2

- ♦ The server must be in the Active Directory domain
- ♦ Minimum of 100 MB RAM per concurrent scan

For example, if you planned on your agent conducting scans on 4 volumes or shares concurrently, you would need a minimum of 400 MB of RAM.

NOTE: Performance depends not only the number of concurrent scans, but also the size of the directory structure for each volume or share. Adding more RAM than the minimum requirement can obviously increase performance.

- ♦ Minimum of 10 GB free disk space

Depending on the size and number of concurrent scans, this amount might need to be significantly increased.

8.3 Active Directory Requirements

Novell File Reporter supports a minimum forest functional level of Windows 2003 or later in native mode.

8.4 Prerequisites

- ♦ If you want to report on storage resources that reside in an eDirectory network, you must install the Novell Client software on the same Windows server where you install the NFR Agent:

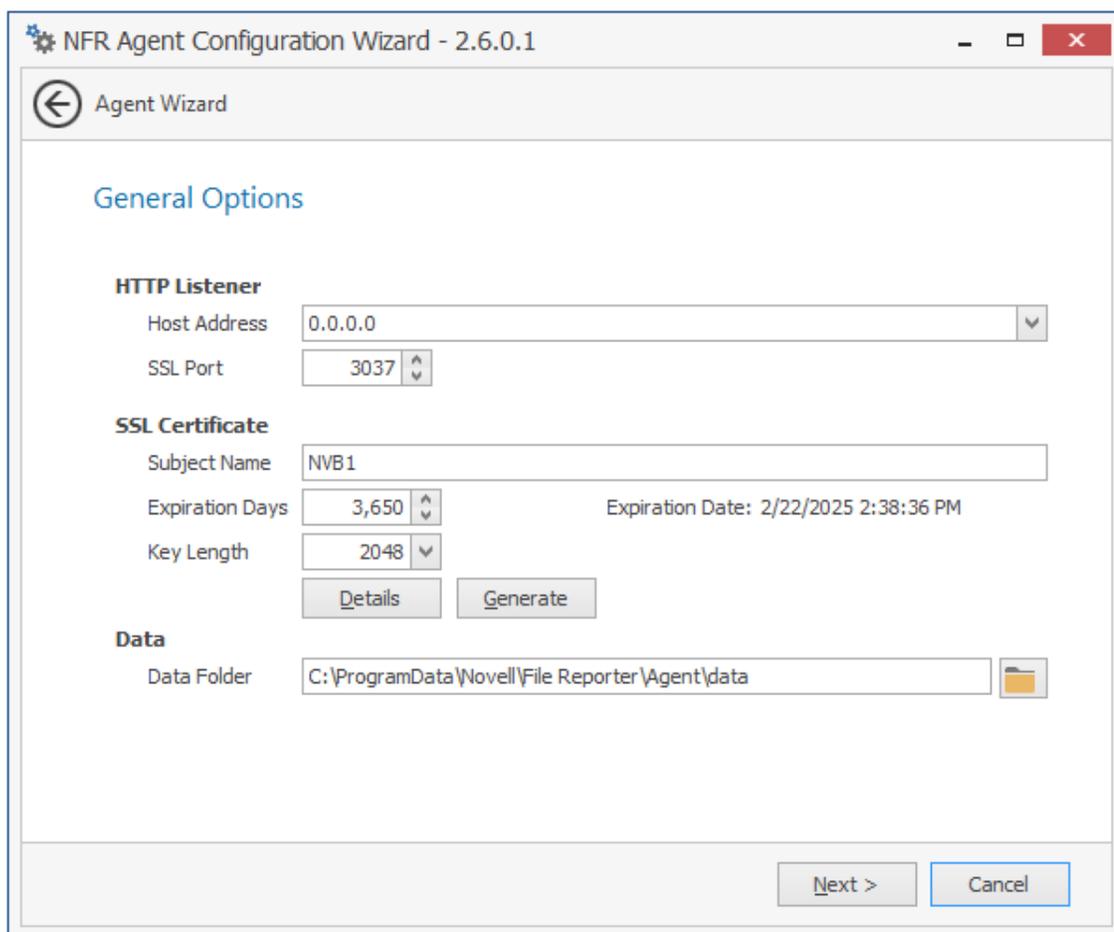
Having the Novell Client installed allows Novell File Reporter to connect to eDirectory and view the storage resources.

- ♦ At the same Windows server, configure the Service Location Protocol settings within the Novell Client software.

8.5 Installing and Configuring the NFR Agent

NOTE: As a courtesy for those users that might already be running an NFR Agent on a Windows Server 2003 R2 or a 32-bit Windows Server 2008, Novell is providing an updated 32-bit NFR Agent. With the exception of a critical bug fix, no further 32-bit NFR Agent development is planned for the future. All new NFR Agent enhancements will be offered only in updates to the 64-bit version of the NFR Agent.

- 1 At the root of the `NFR_2_6_0.iso` image, double-click the Windows folder.
- 2 Do one of the following:
 - ♦ If you are installing on a 64-bit computer, from the `x86_64` folder, double-click `NFRAgent-Installer-2.6.x64-xxxx`.
 - ♦ If you are installing on a 32-bit computer, from the `x86` folder, double-click `NFRAgent-Installer-2.6-x86-xxxx`.
- 3 When you are asked if you want to run this file, click *Run*.
- 4 Agree to the license terms and conditions and click *Install*.
- 5 When you are notified that the setup was successful, click *Run Setup Utility*.
- 6 From the wizard page, read the overview of what will be installed and configured and click *Next*.



This page lets you confirm or change basic NFR Agent configuration settings.

HTTP Listener: Communication parameters for the NFR Agent.

Host Address: Unless you want the NFR Agent to only listen on a certain IP address, leave this setting as it is.

SSL Port: Unless there is a port conflict, leave the setting at 3037.

SSL Certificate: Details for an SSL certificate that will be generated.

Subject Name: The name of the certificate that will be generated. The server name is listed by default.

Expiration Days: The life span of the security certificate, which is set at 10 years by default.

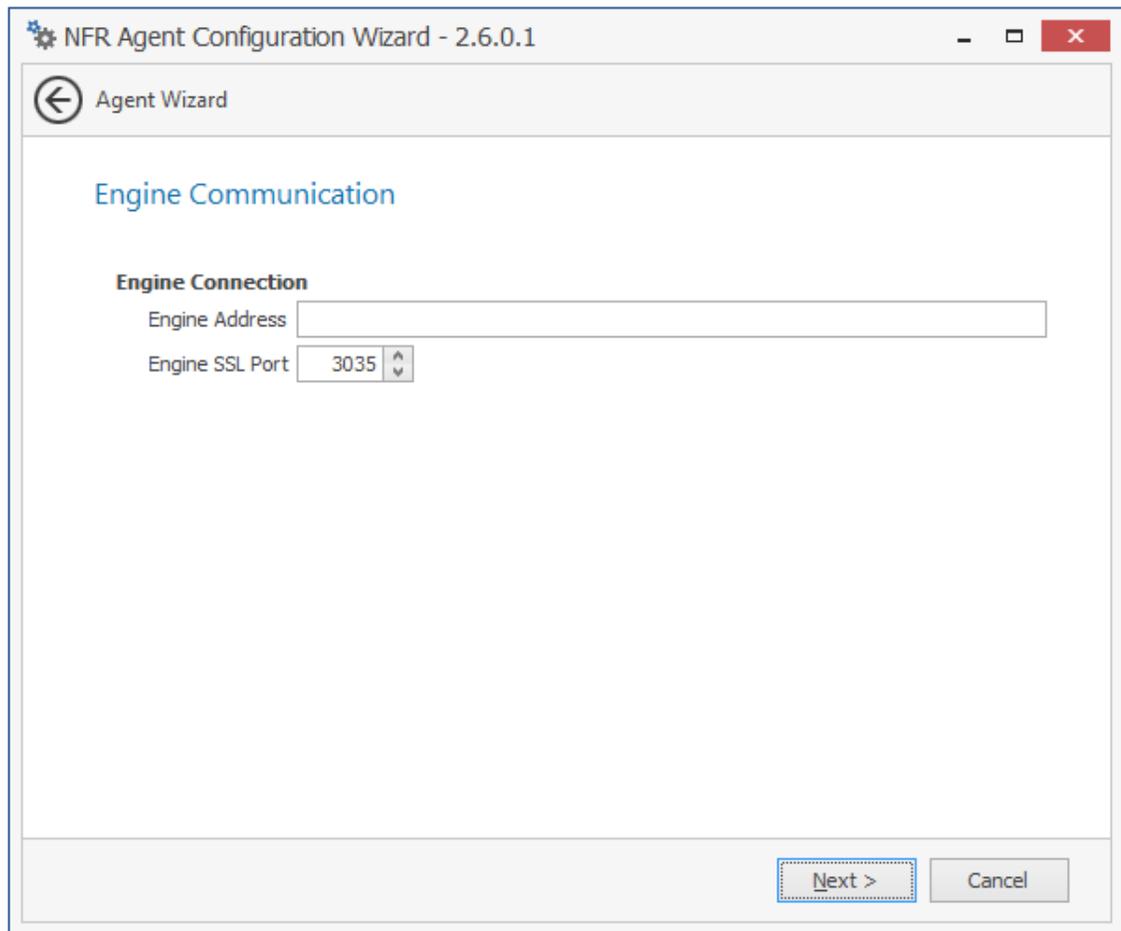
Key Length: The SSL certificate encryption setting, which is set at 2048 by default.

Details: Click the button to view the certificate data.

Generate: If you modify any of the settings in the SSL Certificate region, click this button to generate a new certificate.

Data Folder: The default location of the Data folder. The Data folder is used for a variety of tasks, including the storage of temporary scan data.

7 Edit any needed parameters settings and click *Next*.

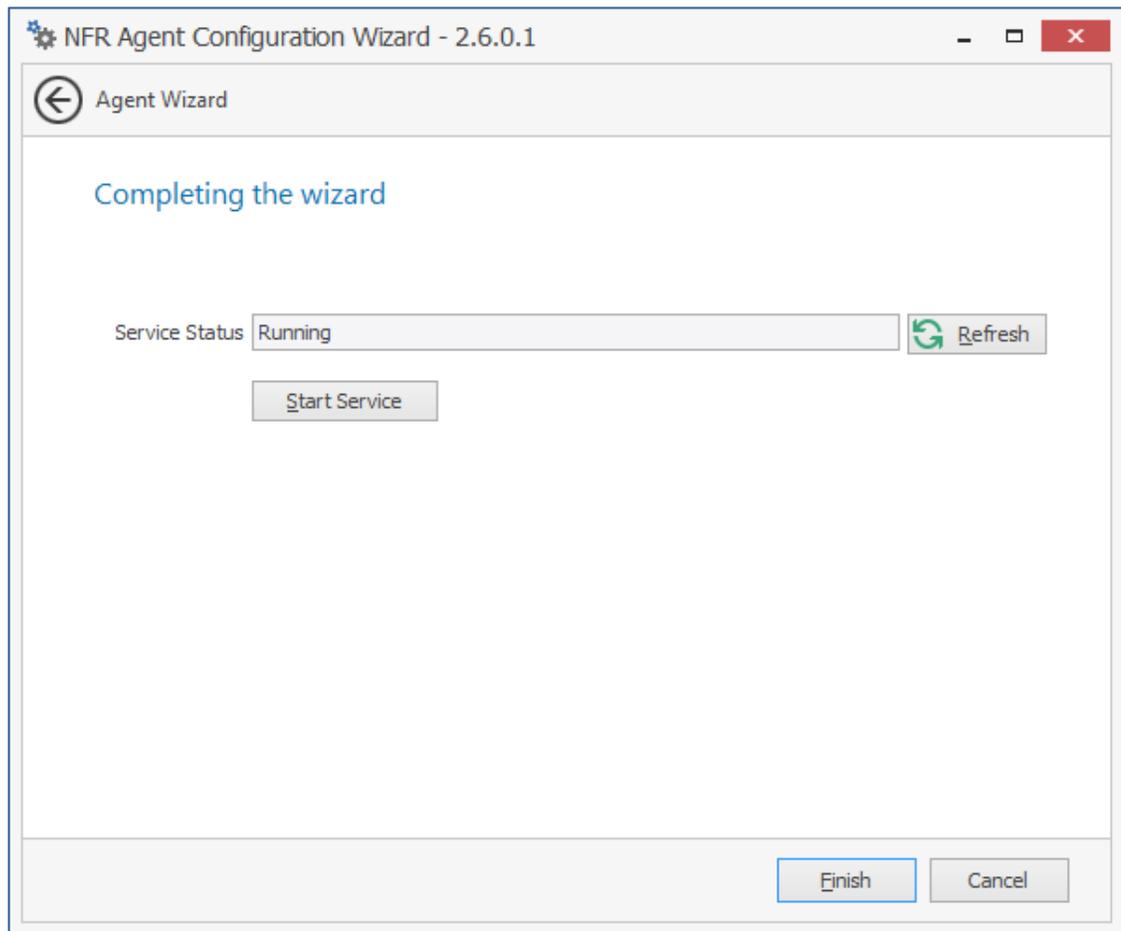


This page lets you set parameters for the NFR Agent to communicate with the NFR Engine.

Engine Address: Specify the DNS name or IP address to the server hosting the NFR Engine here.

Engine SSL Port: Specify the SSL port for the NFR Engine here.

- 8 Enter the NFR Engine connection settings and click *Next*.



9 Click *Finish*.

The NFR Agent is now installed, configured, and running.

9 Installing and Configuring the Linux Agent

Procedures in this section include those needed for installing and configuring the NFR Agent on a server running Novell Open Enterprise Server.

- ♦ [Section 9.1, “Remove NFR 1.0.x Agent Components \(Conditional\),” on page 99](#)
- ♦ [Section 9.2, “Minimum Requirements,” on page 99](#)
- ♦ [Section 9.3, “Installing and Configuring the NFR Agent,” on page 100](#)

9.1 Remove NFR 1.0.x Agent Components (Conditional)

If you plan to install NFR Agents on Novell Open Enterprise Server 2 machines that had previously hosted NFR Agents for Version 1.0.x, you must follow the procedures below to clean up all agent directories and files.

NOTE: Simply running the `rpm -e` command alone does not adequately remove the directories and files.

- 1 At the server, open a terminal session.
- 2 Run the following command:

```
rpm -e novell-filereporter- component
```

- 3 Run the following commands:

```
rm /opt/novell/filereporter/*
```

```
rm /etc/opt/novell/filereporter/*
```

```
rm /var/opt/novell/filereporter/*
```

9.2 Minimum Requirements

- ♦ Any of the following servers:
 - ♦ Novell Open Enterprise Server 11 with a 64-bit processor
 - ♦ Novell Open Enterprise Server 11 SP1 with a 64-bit processor
 - ♦ Novell Open Enterprise Server 11 SP2 with a 64-bit processor

- ♦ Minimum 100 MB RAM per concurrent scan

For example, if you planned on your agent conducting scans on 4 volumes or shares concurrently, you would need a minimum of 400 MB of RAM.

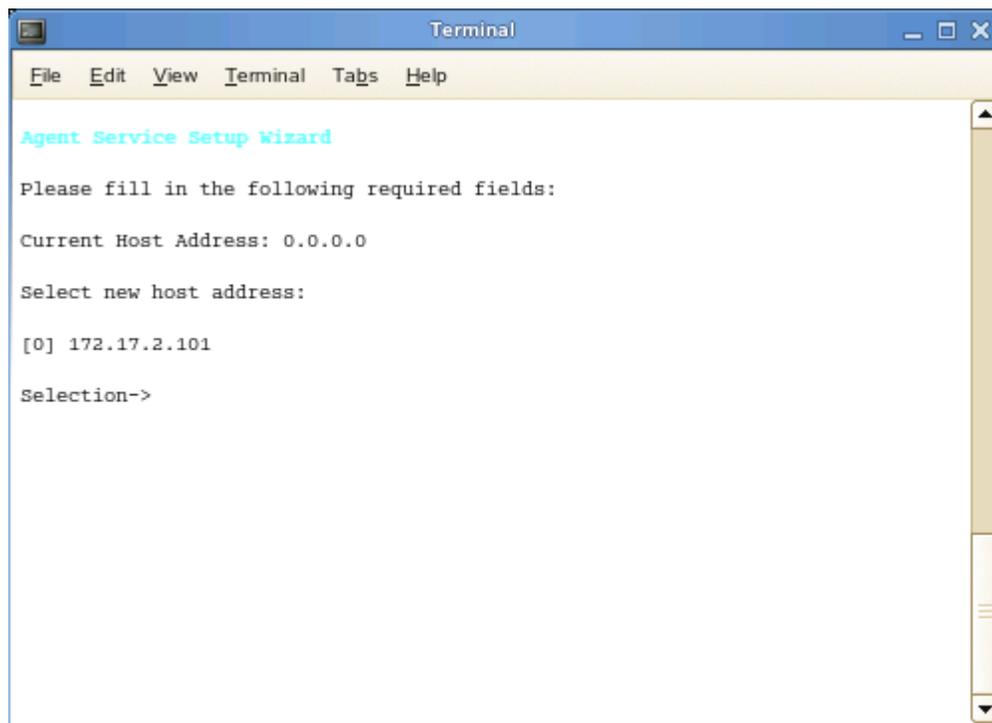
- ♦ Minimum of 10 GB free disk space

Depending on the size and number of concurrent scans, this amount might need to be significantly increased.

9.3 Installing and Configuring the NFR Agent

- 1 At the Open Enterprise Server machine, launch a terminal session.
- 2 At the terminal console, install the RPM by typing the following command: `rpm -Uvh novell-filereporter-agent-2.0.1-x.x86_64.rpm`
- 3 Type `nfragent-config` and press Enter.

The console is updated and appears similar to the one below.



- 4 Specify the IP address option you want (such as 0 in the example above) and press Enter.
- 5 When the HTTP Port [0] option appears, type 0 and press Enter.

The console is updated and looks similar to the one below:

```
Terminal
File Edit View Terminal Tabs Help

Agent Service Setup Wizard

Please fill in the following required fields:

Current Host Address: 0.0.0.0

Select new host address:

[0] 172.17.2.101

Selection->0
Configure Ports:
Enter new port values

For each of the following, enter a port number.
(Enter zero (0) to turn off a port listener or hit [Enter] to accept
the current value.)

Agent HTTP Port [0]:
Agent HTTPS Port [3037]:
```

- 6 Unless there is a conflict, accept the default HTTPS port number of 3037 by pressing Enter. If you need to use another port number, provide the new port number.
- 7 Accept the specified data path by pressing Enter.
- 8 When you are prompted to create the path, type `Y` and then press Enter.
- 9 Accept the specified scan data path by pressing Enter.
- 10 When you are prompted to create the path, type `Y` and then press Enter.
The console is updated and looks similar to the one below:

```
Terminal
File Edit View Terminal Tabs Help

Agent Service Setup Wizard

Please fill in the following required fields:

Current Host Address: 0.0.0.0

Select new host address:

[0] 172.17.2.101

Selection->0
Configure Ports:
Enter new port values

For each of the following, enter a port number.
(Enter zero (0) to turn off a port listener or hit [Enter] to accept
the current value.)

Agent HTTP Port [0]:
Agent HTTPS Port [3037]:

Current Data Path: /var/opt/novell/filereporter/agent/data
New Path->
Path does not exist. Create path? [Y/N]: y

Current Scan Data Path: /var/opt/novell/filereporter/agent/data/scan
New Path->
Path does not exist. Create path? [Y/N]: y

Engine Address: █
```

- 11 Type the IP address of the server hosting the NFR Engine and press Enter.
 - 12 Press Enter to accept the specified port number.
 - 13 When prompted to use SSL, type `Y` and then press Enter.
- The console is updated and looks similar to the one below:

```
Terminal
File Edit View Terminal Tabs Help

Please fill in the following required fields:

Current Host Address: 0.0.0.0

Select new host address:

[0] 172.17.2.101

Selection->0
Configure Ports:
Enter new port values

For each of the following, enter a port number.
(Enter zero (0) to turn off a port listener or hit [Enter] to accept
the current value.)

Agent HTTP Port [0]:
Agent HTTPS Port [3037]:

Current Data Path: /var/opt/novell/filereporter/agent/data
New Path->
Path does not exist. Create path? [Y/N]: y

Current Scan Data Path: /var/opt/novell/filereporter/agent/data/scan
New Path->
Path does not exist. Create path? [Y/N]: y

Engine Address: 172.17.2.150
Engine Port [3035] :
Use SSL (Y/N) [Y]: y

-----
Create OpenSSL Certificate

Use the default server name for the common name of the certificate? (oeslinux) (y/n) [n]
```

- 14 Do one of the following:
 - ◆ Type `Y` and then press Enter to select `oeslinux` as the name for the SSL certificate.
 - ◆ Type `N`, type a certificate name, and press Enter.
- 15 After the private key has been created, press Enter to continue.
- 16 After the certificate has been created, press Enter to continue.
- 17 When you are prompted to start the service, type `y` and then press Enter.
The Agent Service Config screen appears.
- 18 Type `q` and then press Enter to close the Agent Service Config screen.
The Linux NFR Agent is now installed, configured, and running on the server.

10 Installing the Client Tools

Novell File Reporter Client Tools are applications that allow you to design reports or view reports from a Windows desktop. These applications include:

- ♦ Report Designer
- ♦ Report Viewer

10.1 Minimum Requirements

- ♦ Any of the following 64-bit multi-core processor machines:
 - ♦ Windows Server 2012 R2
 - ♦ Windows Server 2012
 - ♦ Windows Server 2008 R2
 - ♦ Windows 7 SP1 or later workstation
 - ♦ Windows 8 workstation
 - ♦ Windows 8.1 workstation

- ♦ Minimum of 4 GB RAM.

Depending on the size of report loading, exporting, and processing, this number might need to be significantly increased.

- ♦ 110 MB disk space.
- ♦ Report Designer users must be members of the nfradmins group.
- ♦ Report Viewer users must be members of the nfrreportusers group.

10.2 Install the Client Tools

- 1 At the root of the `NFR_2_6_0.iso` image, double-click the `Windows` folder.
- 2 Double-click the `x86_64` folder.
- 3 Copy the `NFR-ClientTools-Installer-2.6-x64-xx` file to all Windows workstations where you will run the Client Tools.
- 4 From the Windows workstation, double-click `NFR-ClientTools-Installer-2.6-x64-xxxx`.
- 5 When you are asked if you want to run this file, click *Run*.
- 6 Agree to the license terms and conditions, then click *Install*.
- 7 When notified that the setup was successful, click *Close*.

The NFR Report Designer and NFR Report Viewer icons are installed on the desktop.

11 Installing the Data Analytic Tools

Novell is providing a “Technology Preview” of analytic tools that are still in development. While some features and capabilities will be introduced at a later time, many of these features and capabilities are available today.

The data analytic tools include the following Windows workstation applications:

- ♦ Heat Map
- ♦ Pivot Table

Each of the tools are run through separate executable files.

11.1 Minimum Requirements

- ♦ Any of the following multi-core processor machines:
 - ♦ Windows Server 2012 R2
 - ♦ Windows Server 2012
 - ♦ Windows Server 2008 R2
 - ♦ Windows 7 SP1 or later workstation
 - ♦ Windows 8 workstation
 - ♦ Windows 8.1 workstation
- ♦ Minimum of 4 GB RAM.

Depending on the size of report loading, exporting, and processing, this number might need to be significantly increased.

- ♦ 125 MB disk space.
- ♦ Both tools require membership in the `nfrreportusers` group.

11.2 Unzipping the Files

- 1 At the root of the `NFR_2_6_0.iso` image, double-click the `Windows` folder.
- 2 Double-click the `Technology Preview` folder.
- 3 Copy the `NFR_TechPreview-2.6.0.x.zip` file to all Windows machines where you will run the Data Analytic Tools.
- 4 From the Windows machine, unzip the `NFR_TechPreview.zip` file.

11.3 Enabling the Windows Machine to Run the Heat Map

- ♦ If you are utilizing a PostgreSQL database, from the `Dependencies` folder, run the `vcredist_x86-2010-sp1-xx.xxxxx.xx.exe` file.
- ♦ If you are utilizing a Microsoft SQL Server, from the `Dependencies` folder, run the `sqlncli-x86.msi` file.

11.4 Enabling the Windows Machine to Run the Pivot Table

- ♦ If your Windows machine is not already running .NET 4.5.1 or higher, update it before running the `DataAnalytics.exe` file.

A eDirectory Universal Password Settings

To function properly, Novell File Reporter proxy objects require that Universal Password Policy settings in eDirectory meet certain conditions.

A.1 Universal Password Policy Settings

If you will enable Novell File Reporter in eDirectory and you have Universal Passwords set up for all users in your tree, do the following before installing and configuring any Novell File Reporter components:

- 1 Before installing the NFR Engine, create a new container in eDirectory to store the NFR proxy objects.
- 2 Create a Universal Password Policy using Novell iManager.
- 3 Make sure that the following settings are met:
 - Number of days before password can be changed: 0 or not set
 - Number of days before password expires: 0 or not set
 - Use Microsoft complexity policy OR
 - Use Novell syntax with the following settings:
 - Maximum number of characters in password: 36 or greater
 - Minimum number of unique characters: 1+
 - Maximum number of times a specific character can be used: NOT SET
 - Maximum number of times a specific character can repeat sequentially: NOT SET
 - Allow the password to be case-sensitive
 - Allow numeric characters in password
 - Allow non-alphanumeric characters in the password
 - Allow non-US ASCII characters
- 4 Associate the Universal Password Policy with the new container you created in [Step 1](#).
- 5 When creating your proxy objects during the installation of the NFR Engine, make sure that you specify the FDN of this container.

B Deploying NFR Agents Remotely by Using the DeployAgents Tool

- ◆ [Section B.1, “Overview,” on page 111](#)
- ◆ [Section B.2, “Prerequisites,” on page 111](#)
- ◆ [Section B.3, “Copying the Component Installers,” on page 112](#)
- ◆ [Section B.4, “Creating the servernames.txt File,” on page 113](#)
- ◆ [Section B.5, “Deploying the Linux RPMs,” on page 114](#)
- ◆ [Section B.6, “Deploying the Windows EXE Files,” on page 115](#)

B.1 Overview

The DeployAgents tool lets you remotely install NFR Agents through a batch installation process. Installer formats vary, based on agent type and environment:

Table B-1 Installer Formats for Deploy Agents Tool Components

Component	Installer Format
File Reporter Agent for Windows	MSI in boot-strapped EXE
File Reporter Agent for Linux	RPM

NOTE: OpenSSL certificates are generated using the OpenSSL command line utilities, which have not been modified, and are distributed with permission. See the attribution provided in the `OpenSSL-License.txt` file for more details.

B.2 Prerequisites

- ◆ [Section B.2.1, “Windows PowerShell,” on page 111](#)
- ◆ [Section B.2.2, “Windows Agents,” on page 112](#)
- ◆ [Section B.2.3, “Linux Agents,” on page 112](#)

B.2.1 Windows PowerShell

On the Windows workstation where you are conducting the remote installations, verify that Windows PowerShell 2.0 or above is installed.

B.2.2 Windows Agents

- ♦ Verify that Windows PowerShell 2.0 or above is enabled on each Windows server where NFR Agents are being installed in an Active Directory environment.

DeployAgents uses Windows PowerShell version 2.0 or above for parsing text, hiding credentials from plain text, and remote installation, but requires that remote signed scripts be allowed.

- ♦ Verify that the ExecutionPolicy is set to something other than RESTRICTED.

Use the `Get-ExecutionPolicy PowerShell` command to determine how the current policy is set. The `Set-ExecutionPolicy RemoteSigned` command can be used to change the current policy to one that is compatible with this process.

B.2.3 Linux Agents

- ♦ Verify that SSH is enabled and the port is set to the default port 22.

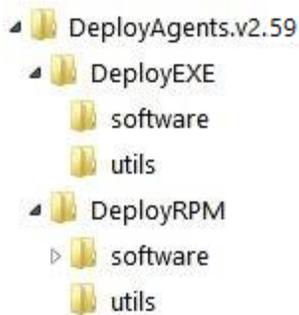
RPM installations require that all Linux servers are installed with default port numbers.

- ♦ Open Enterprise Server must be installed on the SUSE Linux Enterprise Server before installing the agent RPMs.

B.3 Copying the Component Installers

- 1 From the `NFR_2_6_0.iso`, copy the `DeployAgentv2.xx.zip` file to a folder of your choice.
- 2 Unzip the file.

The folder structure looks like the image below:



- 3 From the `NFR_2_6_0.iso`, copy all of the agent installation files you want to install into the `software` folder of the appropriate installer format.

For example, if you were going to do a batch installation of 32-bit and 64-bit Windows agents for Novell File Reporter, you would copy the following files into the `DeployEXE/software` folder:

- ♦ `Windows/x86/NFRAgent-Installer-x86-2.6.xx.exe`
- ♦ `Windows/x86/NFRAgent-Installer-x64-2.6.xx.exe`

Always copy both the 32-bit and 64-bit versions of the installer EXE to the local `software` folder. The DeployAgents tool determines the architecture of the server and installs the appropriate version.

For Linux agents, copy the entire `sles10` and `sles11` folders from the `NFR_2_6_0.iso` image to the `sles10` and `sles11` folders inside the `DeployRPM/software` folder. The `DeployAgents` tool determines the proper distribution and installs the appropriate component from the appropriate directory.

- 4 (Conditional) For Linux agents, verify that each `software` folder contains a `.conf` file.
- 5 In the configuration file, replace the sample IP address with the NFR Engine address.

The sample NFR Engine address to be edited looks like this:

```
<Engine HostAddress="192.168.17.11" Port="3035" Secure="1"
PollingIntervalHB="60000" />
```

B.4 Creating the `servername.txt` File

- ♦ [Section B.4.1, “Manually Creating the `servername.txt` File,” on page 113](#)
- ♦ [Section B.4.2, “Automatically Creating the `servername.txt` File,” on page 113](#)

This file specifies the names of all of the servers on which the NFR Agent software is to be deployed. The file is specific to each of the installer formats identified in [Table B-1 on page 111](#). For example, there should be an individual `servername.txt` file for EXE files and RPM files.

B.4.1 Manually Creating the `servername.txt` File

- 1 Launch a text editor such as Notepad.
- 2 On individual lines, type the names of each server where you want to deploy the NFR Agent software.

Depending on whichever is appropriate for your environment, you can use simple or DNS naming. We recommend DNS naming.

For example:

```
cclx1.cctec.org
cclx2.cctec.org
cclx3.cctec.org
```

- 3 Save the document as `servername.txt` to the root directory of the deployment folder for the installer format.

For example, if the `servername.txt` file listed Novell Open Enterprise Server machines, you would save the file to the `DeployRPM` folder.

B.4.2 Automatically Creating the `servername.txt` File

If you already have NFR Agents installed and you want to update them, the `DeployAgents` tool can automatically create a `servername.txt` file for you.

Simply copy the `agents.dat` file from its location on the NFR Engine to the root of `DeployEXE` or `DeployRPM` folders.

NOTE: The `agents.dat` file is located at: `C:\ProgramData\Novell\File Reporter\Engine\data\agents.dat`

When you provide either the `agents.dat` file, the `DeployAgents` tool parses the existing server names and creates the `servername.txt` file for you.

B.5 Deploying the Linux RPMs

- ♦ Section B.5.1, “External Utilities,” on page 114
- ♦ Section B.5.2, “Deployment Specifics,” on page 114
- ♦ Section B.5.3, “Using DeployAgentsRPM.cmd,” on page 114

B.5.1 External Utilities

Deploying Linux agent RPMs from a Windows workstation requires some extra tools. The DeployAgents tool uses two external utilities from the PuTTY software family: `plink.exe` and `pscp.exe` (<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>). Both utilities are distributed with permission and have not been modified. See (<http://the.earth.li/~sgtatham/putty/0.58/html/doc/AppendixC.html#licence>) for more details.

B.5.2 Deployment Specifics

For RPM deployments, the DeployAgents tool performs the following actions.

- ♦ Uses the RPM command line argument only as a guide to getting the proper component installed. The DeployAgents tool determines Novell Open Enterprise Server version and architecture, and installs the proper i586 or x86_64 RPM version from the `software/sles10` or `software/sles11` folder as required by the server.
- ♦ Uses PowerShell to hide the password from plain text view, but does not encrypt the password in memory. It also uses a User-based environment variable, and cleans up the password as soon as it finished.
- ♦ Uses PowerShell to parse the `agent.dat` or `servername.txt` file. The `agent.dat` file is XML-based, and is converted to a plain text list of servers named `servername.txt`. If an existing `servername.txt` file exists, the parser looks for leading and trailing spaces, and makes a copy of the original file in `servername.txt.original`.
- ♦ Uses the `/etc/SuSE-release` and `/etc/novell-release` files from the server to get Novell Open Enterprise Server and SUSE Linux Enterprise Server version information.
- ♦ Creates a temporary directory in `/tmp/ccsoftware` on the server as a local software repository, which is cleaned up at the end of the process.
- ♦ Uses the component’s default installation paths and configuration paths. For example, the configuration directory would follow this pattern: `/etc/opt/novell/filereporter/agent/config`
- ♦ Assumes that the root or provided administrative user account shares the same password across all servers in the `servername.txt` file.

B.5.3 Using DeployAgentsRPM.cmd

Usage:

```
DeployAgentsRPM.cmd <agents.dat> <linux admin username> <rpm to deploy>
```

Or

```
DeployAgentsRPM.cmd <servername.txt> <linux admin username> <rpm to deploy>
```

For an explanation on creating the `servername.txt` file, see [Section B.4, “Creating the servernames.txt File,”](#) on page 113.

The `<linux admin username>`, generally `root`, is needed to install software.

The `<rpm to deploy>` is just the RPM name without path information.

Example on a Single Command Line

```
DeployAgentsRPM.cmd agents.dat root novell-filereporter-agent-2.0.2-x.i586.rpm
```

Or

```
DeployAgentsRPM.cmd servernames.txt root novell-filereporter-agent-2.0.2-x.i586.rpm
```

B.6 Deploying the Windows EXE Files

- ♦ [Section B.6.1, “Deployment Specifics,”](#) on page 115
- ♦ [Section B.6.2, “Setting an Alternate Installation Path,”](#) on page 115
- ♦ [Section B.6.3, “Using DeployAgentsEXE.cmd,”](#) on page 116

B.6.1 Deployment Specifics

For EXE deployments, the DeployAgents tool performs the following actions:

- ♦ Employs wrapper scripts that work with the Novell File Reporter EXE agents.
- ♦ Utilizes scripts that rely on the `C$` admin share being available on the servers where the agent is to be installed, and that the `C:\temp` directory exists or can be created, and can be written to over the network by a domain administrator.
- ♦ Uses the installer name without path information.
- ♦ Uses the latest version by time and date in the `software` folder, regardless of the command line designation.

B.6.2 Setting an Alternate Installation Path

By default, DeployAgents installs the NFR Agent software to the following location:

```
C:\Program Files\Novell\File Reporter\Agent
```

You can change the default installation path for the NFR Agent software through the `AlternateInstallPath.txt` file.

- 1 In the root of the `DeployEXE` file, locate the `_AlternateInstallPath.txt` file.
- 2 Rename the file to `AlternateInstallPath.txt` by removing the underscore.

After it is renamed, the file can be edited via Notepad or another text editor.

The `AlternateInstallPath.txt` file uses a combination of text and variables so it can be used over and over.

- 3 Use Notepad or another text editor to edit the installation path.

You can change the drive letter, add additional path text, or change the text altogether to make the component best fit your environment.

Example:

Default path: `c:\%brand%\%product%\`

Modified path example: `e:\%brand%\%product%\`

- 4 Save the `AlternateInstallPath.txt` file.

B.6.3 Using `DeployAgentsEXE.cmd`

- 1 Launch the DOS Command Prompt utility.

- 2 Change to the `DeployEXE` directory.

- 3 Do one of the following:

- ♦ Enter: `deployAgentsEXE.cmd servernames.txt domain\administrator NFRAgent-2.6-x64-xx.exe engine IP address [engine port]`
- ♦ Enter: `deployAgentsEXE.cmd agents.dat domain\administrator NFRAgent-2.6-x64-xx.exe engine IP address [engine port]`

When you deploy EXEs through an `agents.dat` file, if a `servernames.txt` file already exists, you are asked if you want to use the `servernames.txt` file that already exists.

If you choose *No*, the `servernames.txt` file is deleted and a new one is created, based on the contents of the `agent.dat` file.

C Deploying Windows Agents Remotely Using Microsoft System Center Configuration Manager

In addition to the DeployAgents tool discussed in [Appendix B, “Deploying NFR Agents Remotely by Using the DeployAgents Tool,”](#) on page 111, another means of deploying Windows Agents remotely is through Microsoft System Center 2012 Configuration Manager (SCCM).

Parameters have been written that allow you to remotely install and configure the NFR Windows Agents “quietly” or without user intervention.

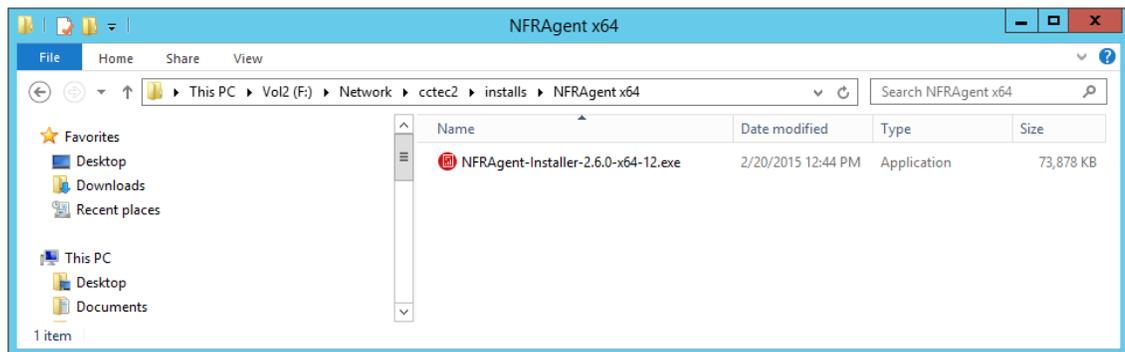
You must already have System Center 2012 Configuration Manager installed and configured before proceeding.

NOTE: This appendix covers the command line options needed to remotely deploy the NFR Windows Agent.

C.1 Creating an SCCM Application for Distribution

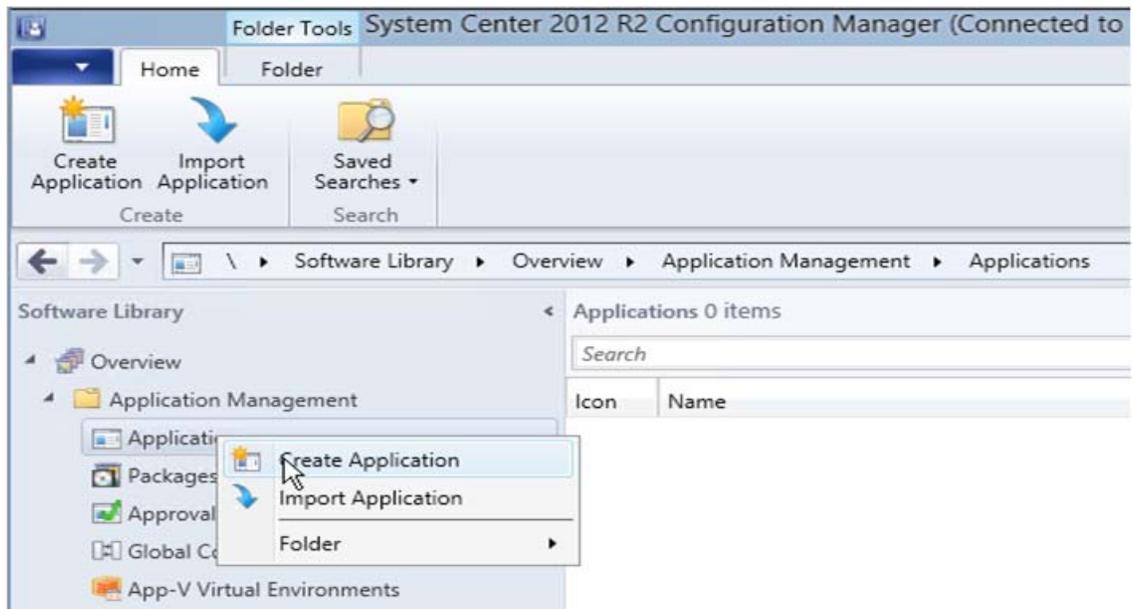
SCCM deploys software from a shared folder on the network. This shared folder is probably already defined by the SCCM administrator.

- 1 Copy the NFR Agent installation executable file to the already defined software distribution folder.

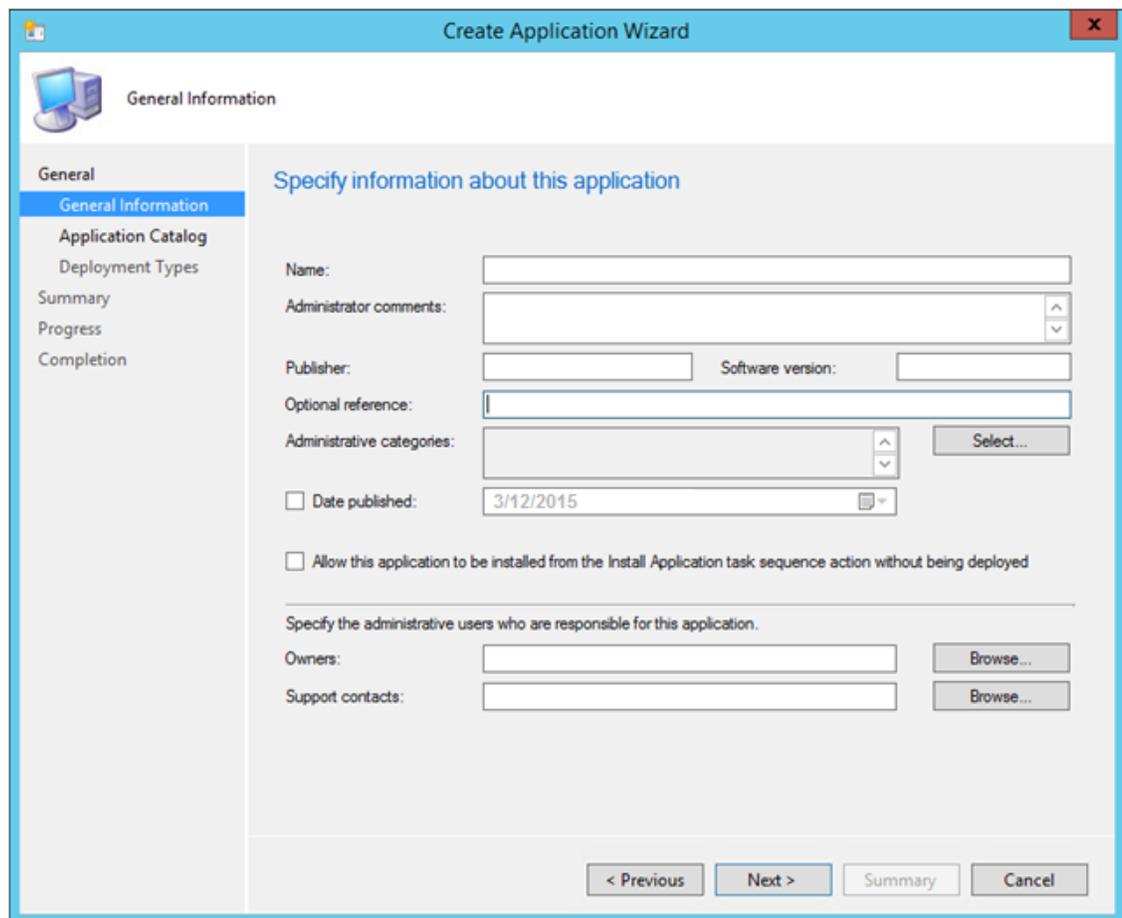


In this example, the shared folder is named `installs` and is located on a server named `CCTEC2`. An `NFRAgent x64` subfolder contains the `NFRAgent-Installer` package.

- 2 From System Center Configuration Manager, select *Software Library > Application Management*, then right-click and select *Create Application*.



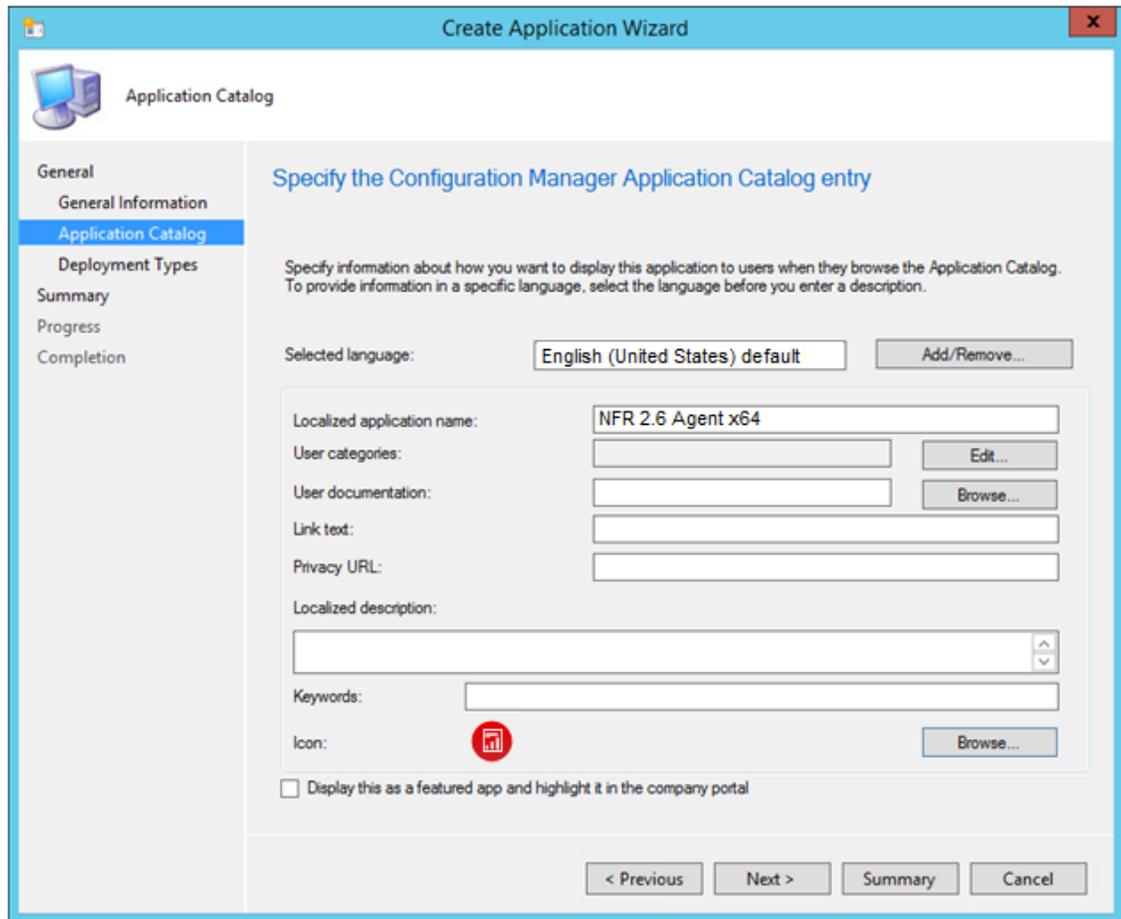
The Create Application wizard is launched.



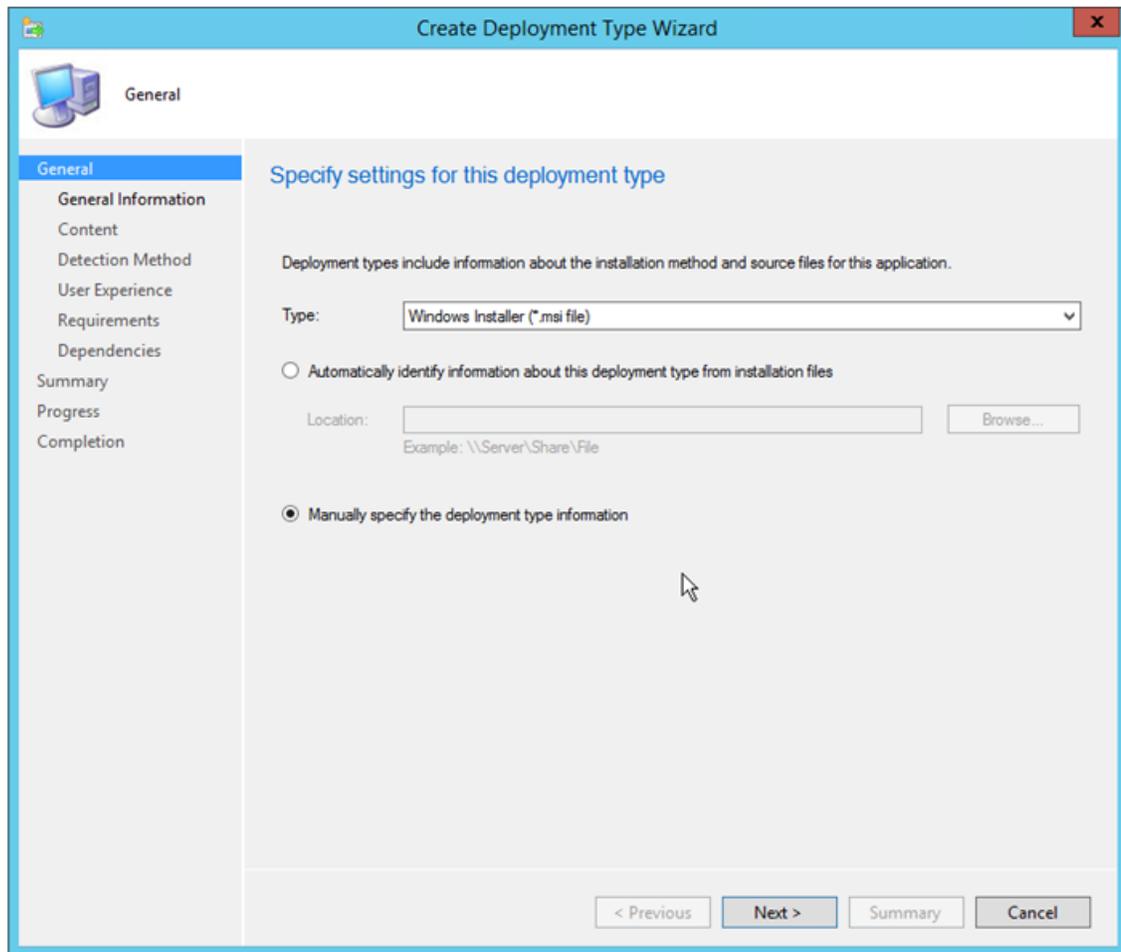
- 3 In the *Name* field, specify a descriptive name.
For example, NFR 2.6 Agent x64.

Completing the other fields is optional.

- 4 Click *Next*.
- 5 (Optional) In the Specify the Configuration Manager Application Catalog entry page, browse to display the Novell File Reporter Agent icon.

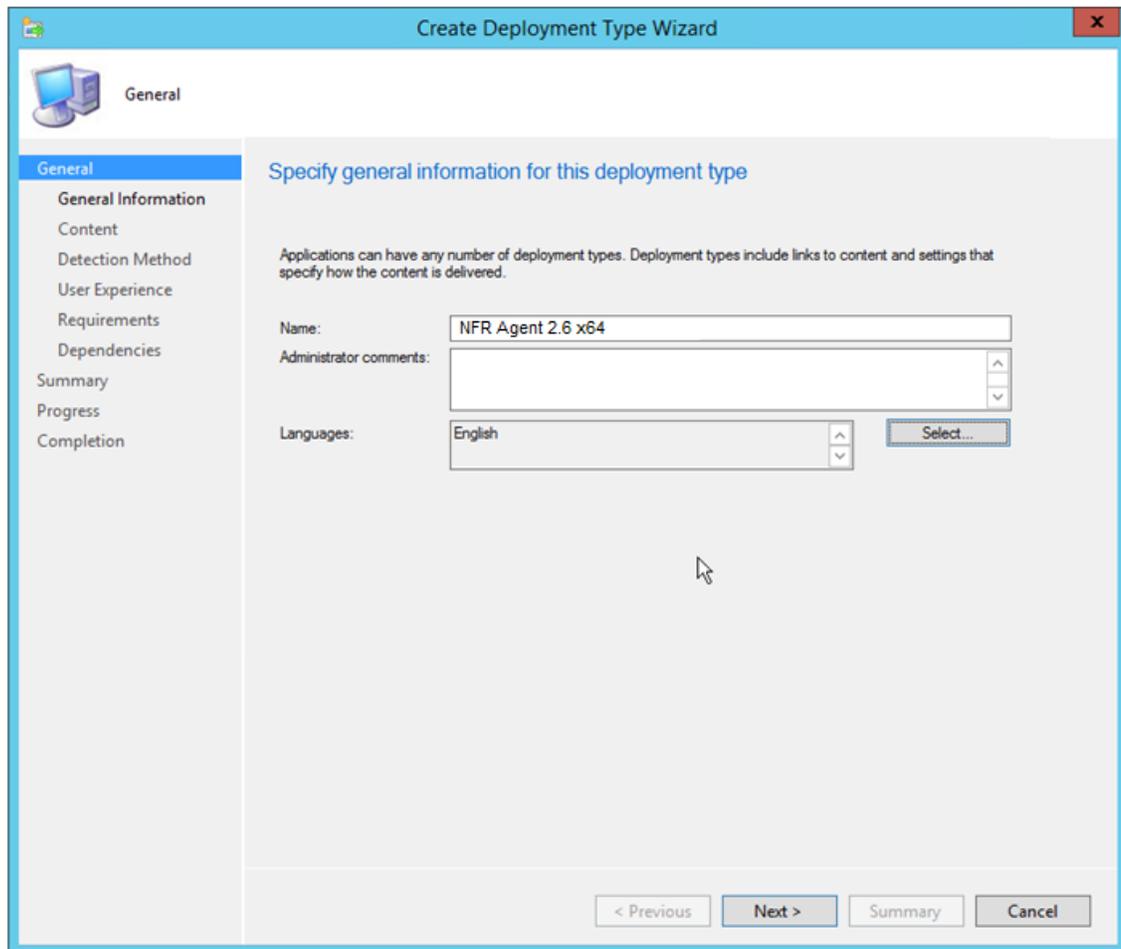


- 6 Click *Next*.
- 7 Select *Manually specify the deployment type information*.

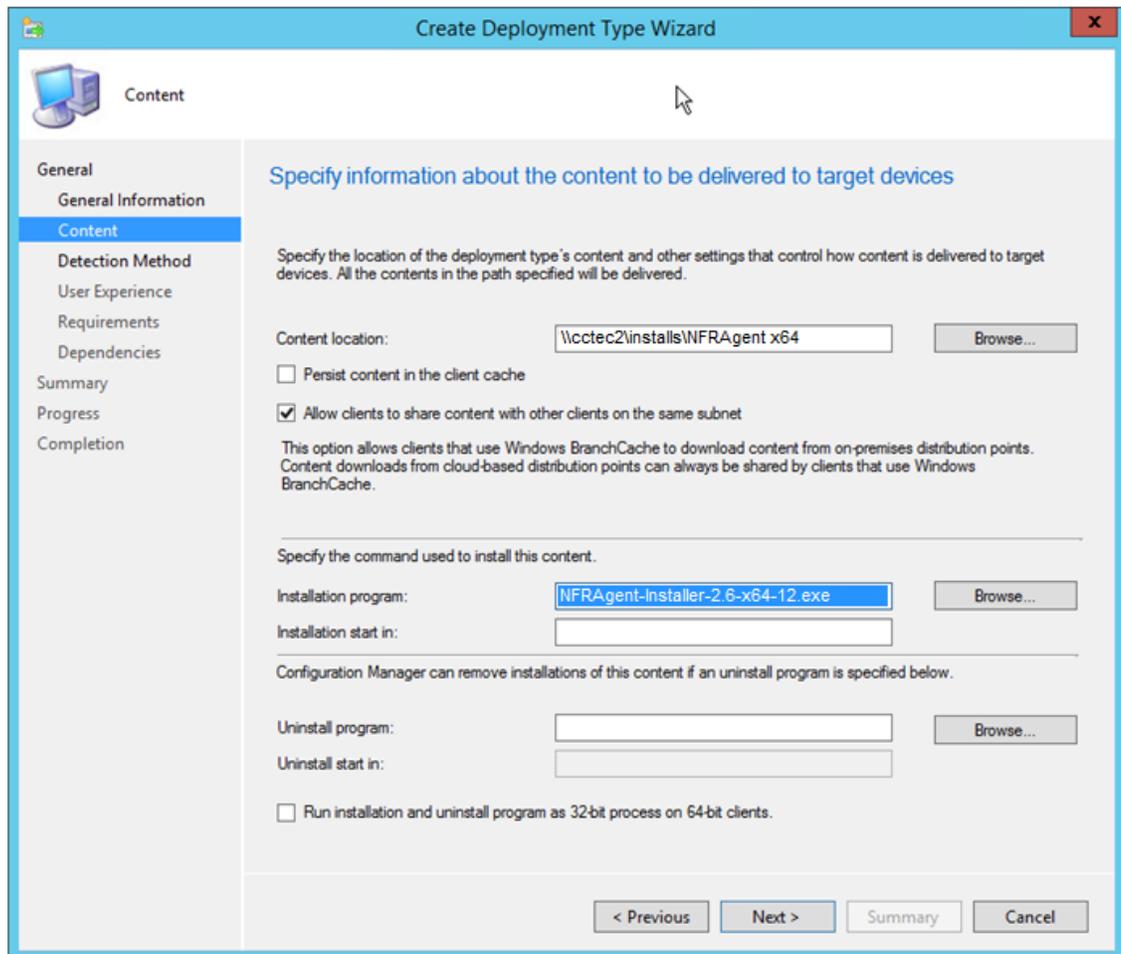


Because SCCM does not have an option for automatically detecting bootstrapped executable installation packages (such as the NFR Agent installation executable), you will need to manually specify the file.

- 8 Click *Next*.
- 9 In the *Name* field, give the deployment type a name.
For example, NFR Agent 2.6 x64.



10 Click *Next*.



11 In the *Content location* field, browse to the parent folder where the NFR Agent is located.

For example: \\cctec\installs\NFRAgent x64

12 In the *Installation program* field, browse for the installation file.

Because the dialog box is limited to displaying MSI files only, you will need to start typing the name of the installation executable in the *File name* field and then click the *Open* button.

The *Installation program* field displays the executable file in quotes, preceded by `msiexec /i` text.

13 In the *Installation program* field, remove the `msiexec /i` portion and the quotes.

14 Review the parameters and configuration options below before further modifying the parameters in the *Installation program* field.

Installation Program	NFRAgent-Installer-2.6-x64.x.exe
Standard Built-In Options	/quiet /install /norestart
Non-Standard Option:	INSTALL_FOLDER="full path to install to alternate install path"
	(Available with a new installation only, overridden by what is in the Registry.)
Added Alternate Installation Path Option	

The bootstrap technology sends these options on to the wrapped MSI after installing any dependencies such as a particular version of the DOTNET FRAMEWORK, the Visual Studio runtime, or some other prerequisite that you don't want to address. Other options are passed through the MSI all the way to the configuration utility.

Command Line Option	Parameter	Notes
ENGINE_ADDRESS=	<DNS or IP Address>	ENGINE_ADDRESS is required for any of the configuration options.
ENGINE_PORT=	3035	
DATA_PATH=	"full path to where the data path is configured"	This option could abandon an existing DATA_PATH, if used to upgrade, and a new path is chosen.

The configuration utility is responsible for creating the configuration file and SSL certificate needed by the Agent to communicate with the Engine. The configuration file contains information such as the Engine's IP Address or DNS Name, the IP port needed to communicate with the Engine, and where to place the DATA_PATH. The only required option is the ENGINE_ADDRESS; the other options have defaults.

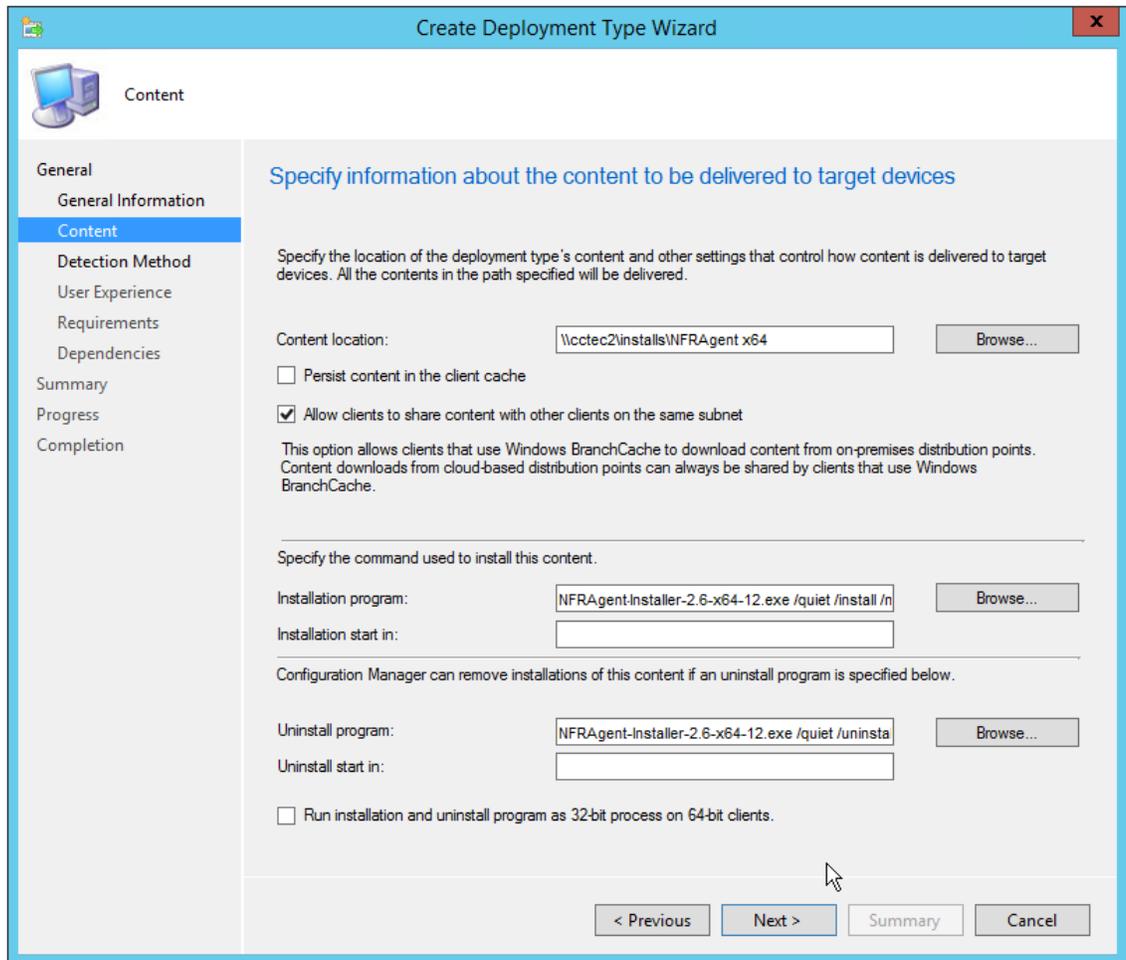
Example of combined options:

```
NFRAgent-Installer-2.6-x64-29.exe
/quiet
/install
/norestart
*INSTALL_FOLDER="C:\Program Files\Novell\File Reporter\Agent"
ENGINE_ADDRESS=10.1.1.10
*ENGINE_PORT=3035
*DATA_PATH="C:\ProgramData\Condrey Corporation\File Reporter\Agent\data"
* These options can be omitted if the default options are preferred.
```

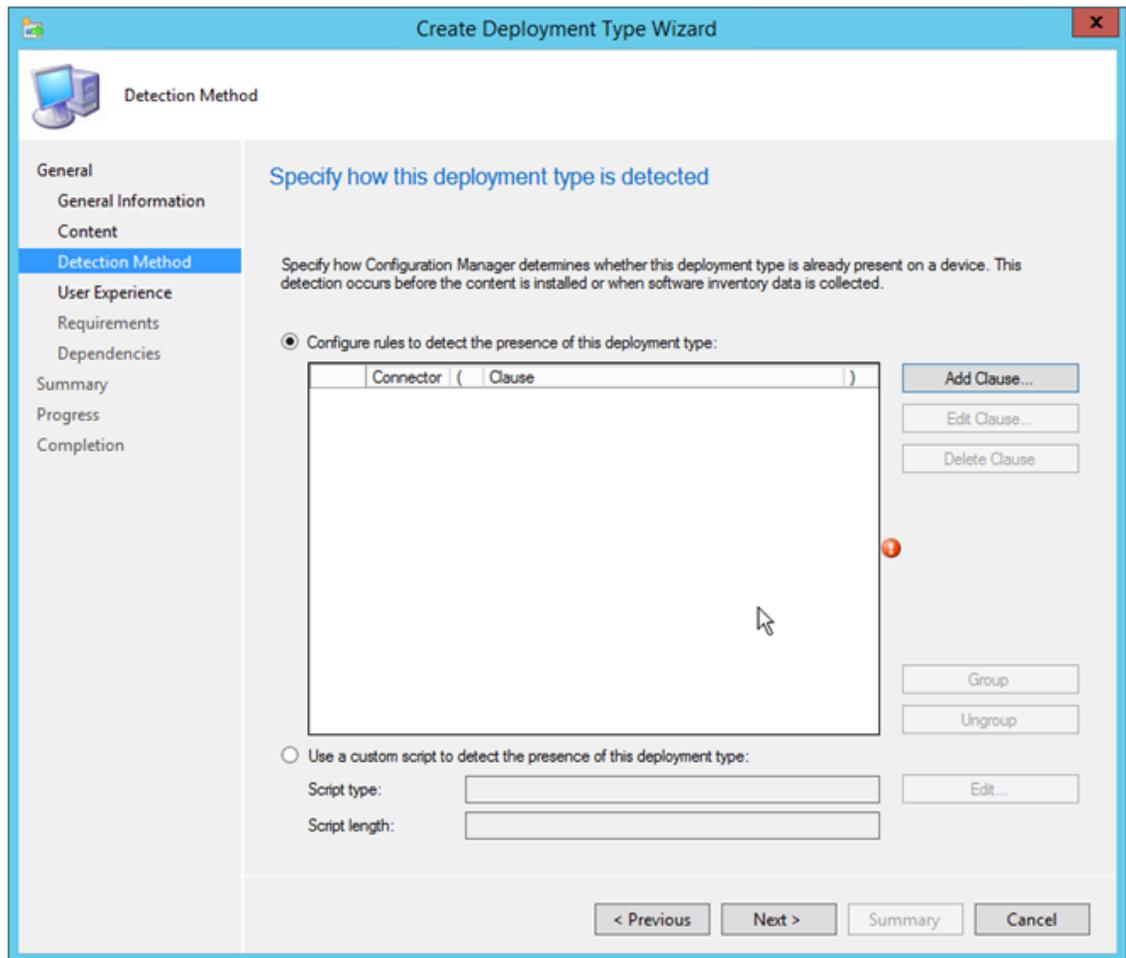
Example of Installation program field entry:

```
NFRAgent-Installer-2.6-x64-12.exe /quiet /install /norestart
ENGINE_ADDRESS=10.1.1.10
```

- 15 In the *Installation program* field, enter the specific combined parameters and commands necessary for remotely installing Agents.
- 16 (Optional) In the *Uninstall program* field, use the specific combined parameters and commands necessary for remotely uninstalling earlier versions of Agents.
Only the /quiet and /uninstall arguments are needed for uninstalling Agents.

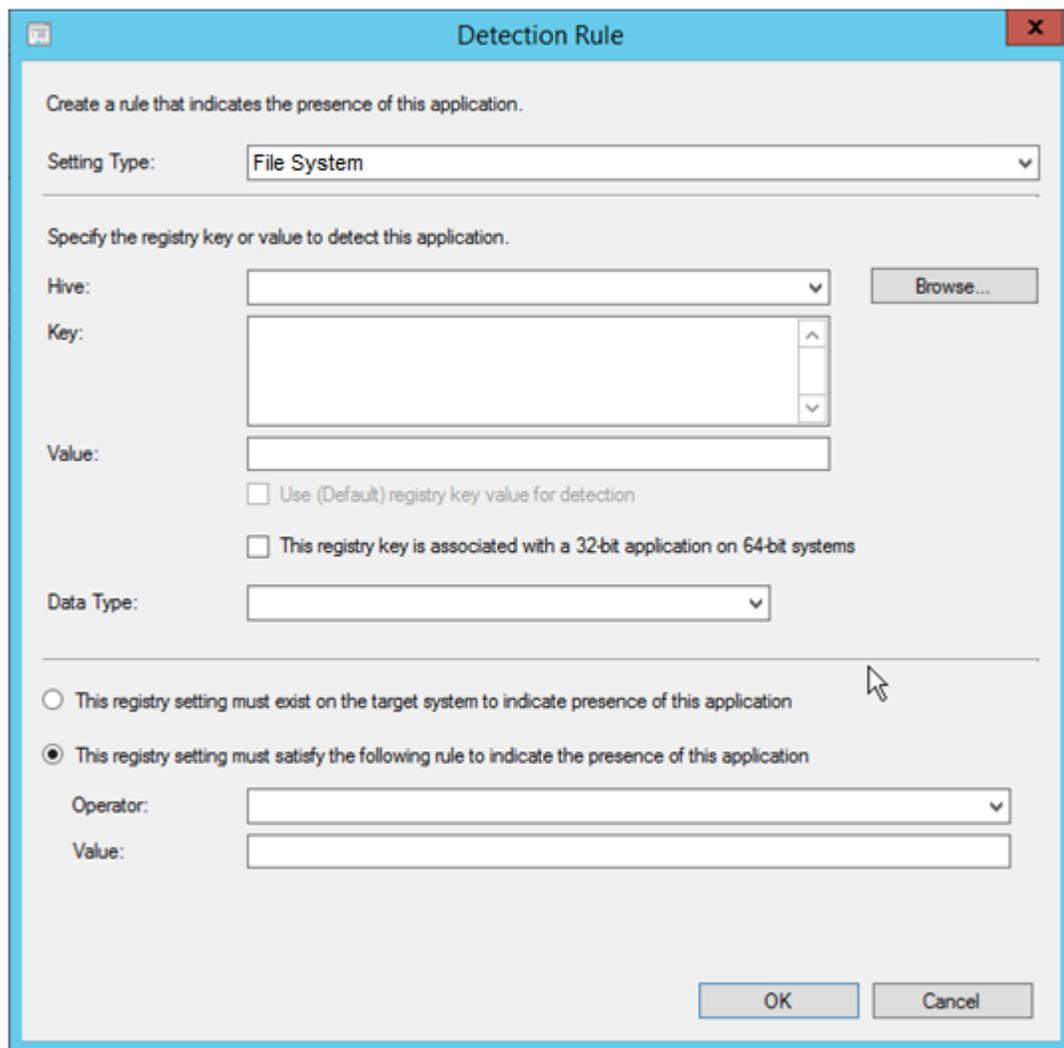


17 Click *Next*.



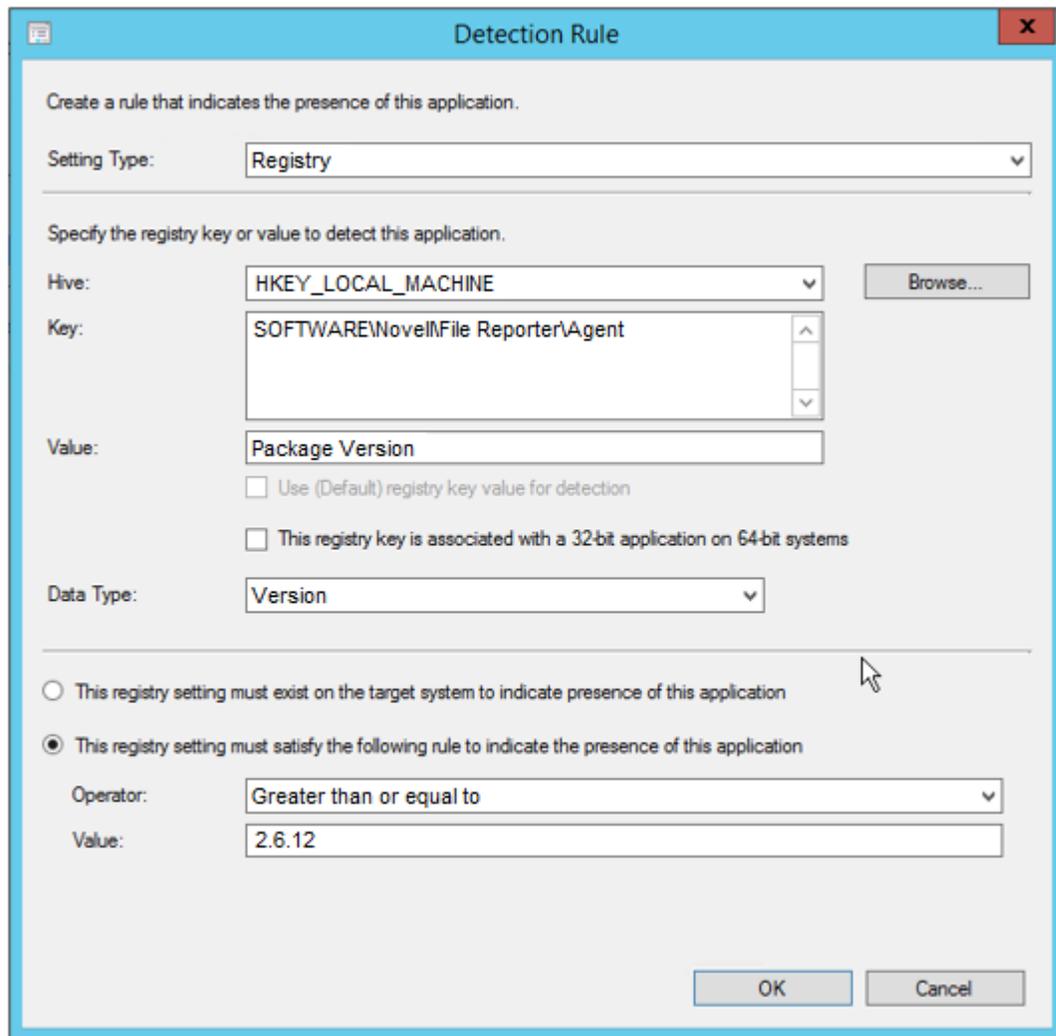
This page lets you specify how SCCM will determine if a package has already been installed.

18 Click *Add Clause*.



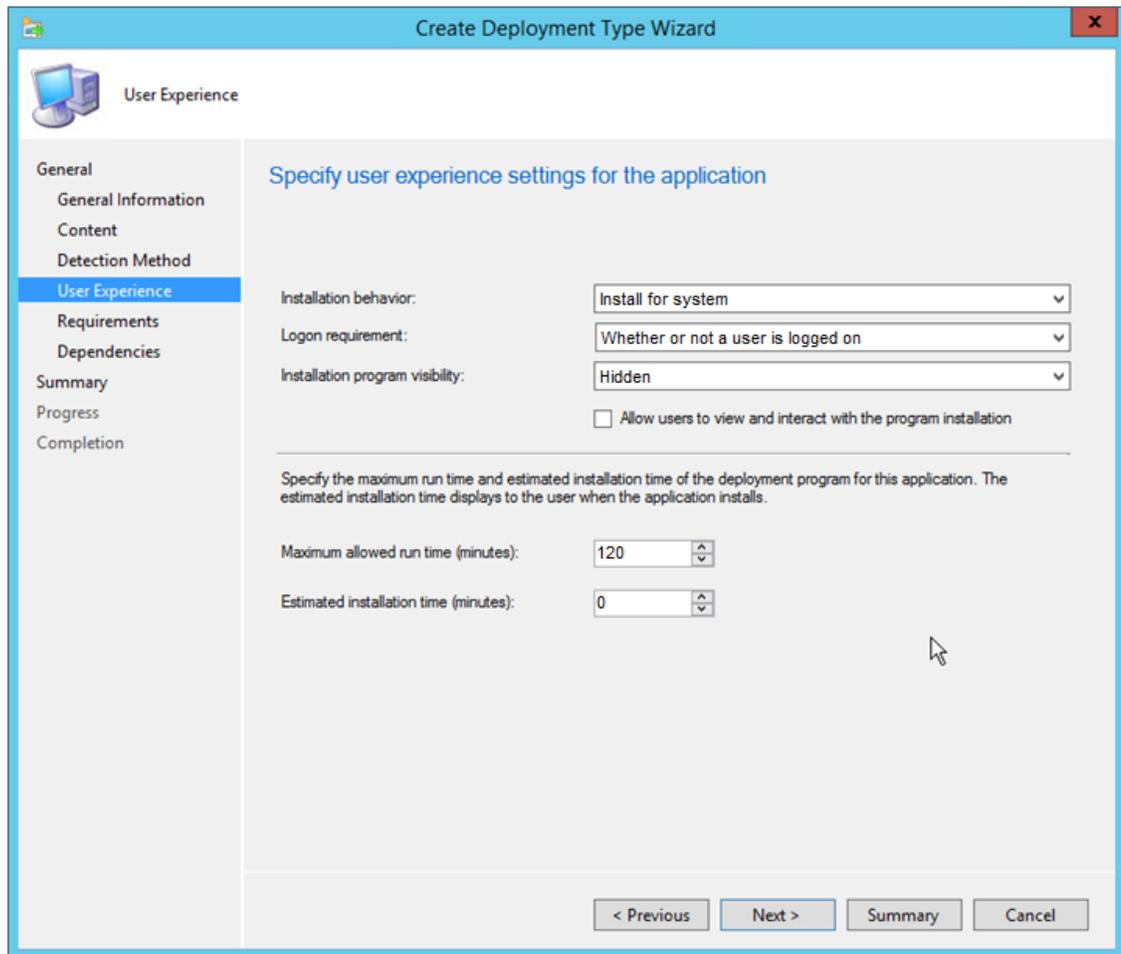
- 19 From the *Setting Type* drop-down menu, select *Registry*.
This populates other fields in the dialog box.
- 20 Verify that `HKEY_LOCAL_MACHINE` is displayed in the *Hive* field.
- 21 In the *Key* field enter:
`SOFTWARE\Novell\File Reporter\Agent`
- 22 From the *Data Type* drop-down menu, select *Version*.
- 23 Verify that the *This registry setting must satisfy the following rule to indicate the presence of this application* option is selected.
- 24 From the *Operator* drop-down menu, select *Greater than or equal to*.
- 25 In the *Value* field, enter an Agent version such as `2.6-12`.

In this example, you are specifying that you want this package to be detected and not installed if the value is greater than or equal to 2.6.12. This value can be found by right-clicking the Agent in Programs and Features and then selecting either the *Uninstall* or *Change* menu options.

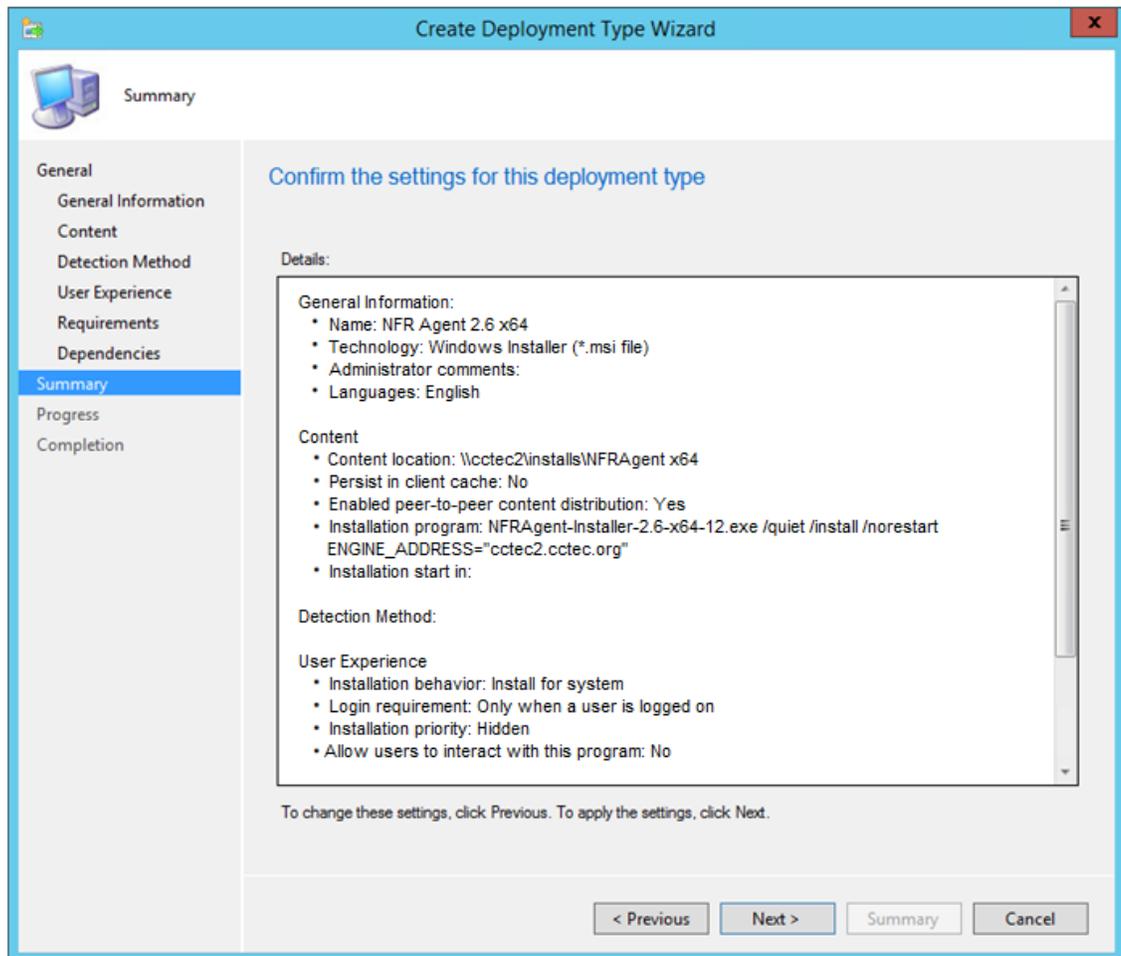


26 Click OK.

27 In the Specify user experience settings for the application page, make the following recommended settings:



- 28 Click *Next*.
- 29 Click *Next*.
- 30 Click *Next*.
- 31 Confirm the settings that are displayed.



32 Click *Next*.

33 When notified that the Create Deployment Type Wizard completed successfully, click *Close*.

D Documentation Updates

This section contains information about documentation content changes that were made in this *Novell File Reporter 2.6 Installation Guide* after the initial release of Novell File Reporter 2.0. The changes are listed according to the date they were published.

The documentation for this product is provided on the web in two formats: HTML and PDF. The HTML and PDF documentation are both kept up-to-date with the changes listed in this section.

If you need to know whether a copy of the PDF documentation that you are using is the most recent, the PDF document includes a publication date on the title page.

The documentation was updated on the following dates:

D.1 November 10, 2015

Updates were made to the following sections:

Location	Update Description
Installation requirements for PostgreSQL, Engine, Web Application, and Agents.	Removed references of support for these on Windows 7 and 8 workstations.

D.2 April 27, 2015

Updates were made to the following sections:

Location	Update Description
Section 2.3, "Database Deployment Recommendations," on page 15.	New section.
Section 5.2, "Minimum Requirements," on page 35.	New section.

D.3 October 7, 2014

Updates were made to the following sections:

Location	Update Description
Section 6.5, "Configuring the Database," on page 48.	Added descriptions of updated fields in the Database Configuration Wizard.
Section 6.7, "Configuring the Web Application," on page 58.	Provided procedures for installing the URL Rewrite Module 2.0 for IIS.
.Section 7.5, "Configuring the Database," on page 71.	Added descriptions of updated fields in the Database Configuration Wizard.

Location	Update Description
Section 7.7, "Configuring the Web Application," on page 84.	Provided procedures for installing the URL Rewrite Module 2.0 for IIS.
Chapter 10, "Installing the Client Tools," on page 105.	New section.
Chapter 11, "Installing the Data Analytic Tools," on page 107.	New section.
Appendix B, "Deploying NFR Agents Remotely by Using the DeployAgents Tool," on page 111.	Updated procedures.
Appendix C, "Deploying Windows Agents Remotely Using Microsoft System Center Configuration Manager," on page 117.	New section.

D.4 February 18, 2014

Updates were made to the following sections:

Location	Update Description
Section 2.1.4, "Decide Which Database to Utilize," on page 13.	New section.
Section 3.2, "Replacing a License," on page 18.	New procedures.
Chapter 5, "Installing an SQL Server Instance that Supports Novell File Reporter," on page 35.	New section.
Chapter 6, "Installing and Configuring the NFR Engine, Database, and Web Application in an Active Directory Environment," on page 43.	New procedures.
Section 6.2.1, "Prerequisites for Reporting on eDirectory Storage Resources," on page 44.	New section.
Chapter 7, "Installing and Configuring the NFR Engine, Database, and Web Application in an eDirectory Environment," on page 67.	New procedures.

D.5 November 26, 2013

Updates were made to the following sections:

Location	Update Description
Section 4.3.2, "Installing and Configuring the PostgreSQL Database," on page 28.	Inserted Step 13 on page 33.
Section 8.2, "Minimum Requirements," on page 93.	Changed the RAM requirements.

D.6 July 30, 2013

Updates were made to the following sections:

Location	Update Description
Appendix A, "eDirectory Universal Password Settings," on page 109.	Changed --- Maximum number of characters in password: 32 or greater to --- Maximum number of characters in password: 36 or greater
Section B.2.1, "Windows PowerShell," on page 111.	New section.

D.7 April 25, 2013

Updates were made to the following sections:

Location	Update Description
Chapter 1, "Upgrading from a Previous Version," on page 9.	New chapter.
Section 2.1.3, "Decide Where to Host the NFR Engine," on page 13.	Added that the NFR Engine can be hosted on a sufficiently enabled 64-bit Windows 7 or Windows 8 workstation. Inserted a recommendation to not install the NFR Engine on a Domain Controller.
Section 4.2.1, "Minimum Requirements," on page 23.	Updated requirements.
Section 4.3.1, "Minimum Requirements," on page 28.	Updated requirements.
Section 4.3.2, "Installing and Configuring the PostgreSQL Database," on page 28.	Updated the procedures.
Section 6.1, "Minimum Requirements," on page 43.	Updated requirements.
Section 7.1, "Minimum Requirements," on page 67.	Updated requirements.
Section 8.2, "Minimum Requirements," on page 93.	Updated requirements.
Section 9.1, "Remove NFR 1.0.x Agent Components (Conditional)," on page 99.	New section.
Section 9.2, "Minimum Requirements," on page 99.	Updated requirements.
Appendix A, "eDirectory Universal Password Settings," on page 109.	New appendix.

D.8 February 13, 2013

Updates were made to the following sections:

Location	Update Description
Section 4.3, "Installing the PostgreSQL Database on a Linux Server," on page 27.	Expanded the section to include procedures for installing the PostgreSQL database on a Linux host server.
