



# Micro Focus File Dynamics 6.5 Installation Guide

August 3, 2020

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The software is designed to run in an environment containing third party elements meeting certain prerequisites. These may include operating systems, directory services, databases, and other components or technologies. See the accompanying prerequisites list for details.

The software may require a minimum version of these elements in order to function. Further, these elements may require appropriate configuration and resources such as computing, memory, storage, or bandwidth in order for the software to be able to perform in a way that meets the customer requirements. The download, installation, performance, upgrade, backup, troubleshooting, and management of these elements is the responsibility of the customer using the third party vendor's documentation and guidance.

Third party systems emulating any these elements must fully adhere to and support the appropriate APIs, standards, and protocols in order for the software to function. Support of the software in conjunction with such emulating third party elements is determined on a case-by-case basis and may change at any time.

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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 Micro Focus File Dynamics 6.5.

- ♦ [Chapter 1, “Prerequisites,” on page 7](#)
- ♦ [Chapter 2, “Licensing the Product,” on page 13](#)
- ♦ [Chapter 3, “Installing and Configuring an SQL Server Instance,” on page 17](#)
- ♦ [Chapter 4, “Installing CouchDB,” on page 33](#)
- ♦ [Chapter 5, “Upgrading from Storage Manager 5.2, or File Dynamics 6.x to File Dynamics 6.5,” on page 37](#)
- ♦ [Chapter 6, “Installing File Dynamics 6.5,” on page 43](#)
- ♦ [Appendix A, “Documentation Updates,” on page 95](#)

## 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](http://www.novell.com/documentation/feedback.html) and enter your comments there.

## Documentation Updates

For the most recent version of the *Micro Focus File Dynamics 6.5 Installation Guide*, visit the [Micro Focus File Dynamics Documentation website \(https://www.novell.com/documentation/file-dynamics-60/\)](https://www.novell.com/documentation/file-dynamics-60/).

## Additional Documentation

For additional Micro Focus File Dynamics documentation, see the following guide at the [Micro Focus File Dynamics Documentation website \(https://www.novell.com/documentation/file-dynamics-60/\)](https://www.novell.com/documentation/file-dynamics-60/):

- ♦ [Micro Focus File Dynamics 6.5 Administration Guide](#)
- ♦ [Micro Focus File Dynamics 6.5 Cross-Empire Data Migration Guide](#)
- ♦ [Micro Focus File Dynamics 6.5 Data Owner Client Guide](#)



# 1 Prerequisites

This section provides procedures that you must do before installing the Micro Focus File Dynamics 6.5 components.

- ♦ Section 1.1, “Folder Redirection and DNS Names,” on page 7
- ♦ Section 1.2, “File Server Resource Manager,” on page 8
- ♦ Section 1.3, “Verifying Proper Configurations and Permissions,” on page 10
- ♦ Section 1.4, “Create a New Host Record in DNS for File Dynamics,” on page 10
- ♦ Section 1.5, “What’s Next,” on page 11

## 1.1 Folder Redirection and DNS Names

Micro Focus File Dynamics 6.5 exclusively uses DNS Fully Distinguished Names (FDNs) for server names in all UNC paths set in and by File Dynamics.

However, there are known bugs related to Folder Redirection when the DNS name for a server is used in a user’s home folder path (or any other path specified for folder redirection). These Windows bugs, which can result in loss of data in the redirected folders or the entire redirected folder, are described in the following Microsoft KB articles:

- ♦ “You are unable to update the target location of offline file shares in the Offline File client side cache without administrative permission in Windows Server 2008 R2 or in Windows 7.” <http://support.microsoft.com/kb/977229>
- ♦ “After you apply a GPO to redirect a folder to a new network share, the redirected folder is empty on client computers that are running Windows Vista or Windows Server 2008.” <https://support.microsoft.com/en-gb/help/2610379/the-folder-redirection-policy-does-not-work-if-a-previous-user-sets-a>

These KB articles specifically apply to users logging on through Windows Vista or Windows 7 computers, as well as users logging on interactively on Windows Server 2008 and Windows Server 2008 R2. Users on other operating systems might be affected as well, however.

Both of the KB articles above include links to hotfixes that help resolve these issues.

While this is not a File Dynamics issue *per se*, File Dynamics’ exclusive use of DNS FDNs in UNC paths can exacerbate this problem, or introduce it into an environment that was previously exclusively using NetBIOS naming for servers and using folder redirection.

---

**IMPORTANT:** If your environment uses folder redirection, we strongly recommend reading the KB articles above and applying any relevant hotfixes before managing storage with File Dynamics. (In fact, we strongly recommend applying these hotfixes if you use folder redirection in your AD environment with the affected operating systems, even if you are not managing user storage with File Dynamics. Microsoft’s continuing push to move away from NetBIOS and WINS may eventually introduce this issue into your environment with or without File Dynamics installed.)

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## 1.2 File Server Resource Manager

Microsoft File Server Resource Manager is a suite of tools from Microsoft that allows administrators to better understand, control, and manage the quantity and type of data stored on their servers. File Dynamics uses File Server Resource Manager to enable quota management.

---

**NOTE:** You must install FSRM on all servers where File Dynamics will be managing quotas, including the server that will host the Engine. Even if the Engine host does not contain shares that will be managed, FSRM is still required because the FSRM COM interfaces must be present for the Engine to call them remotely on other servers.

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### 1.2.1 Installing File Server Resource Manager

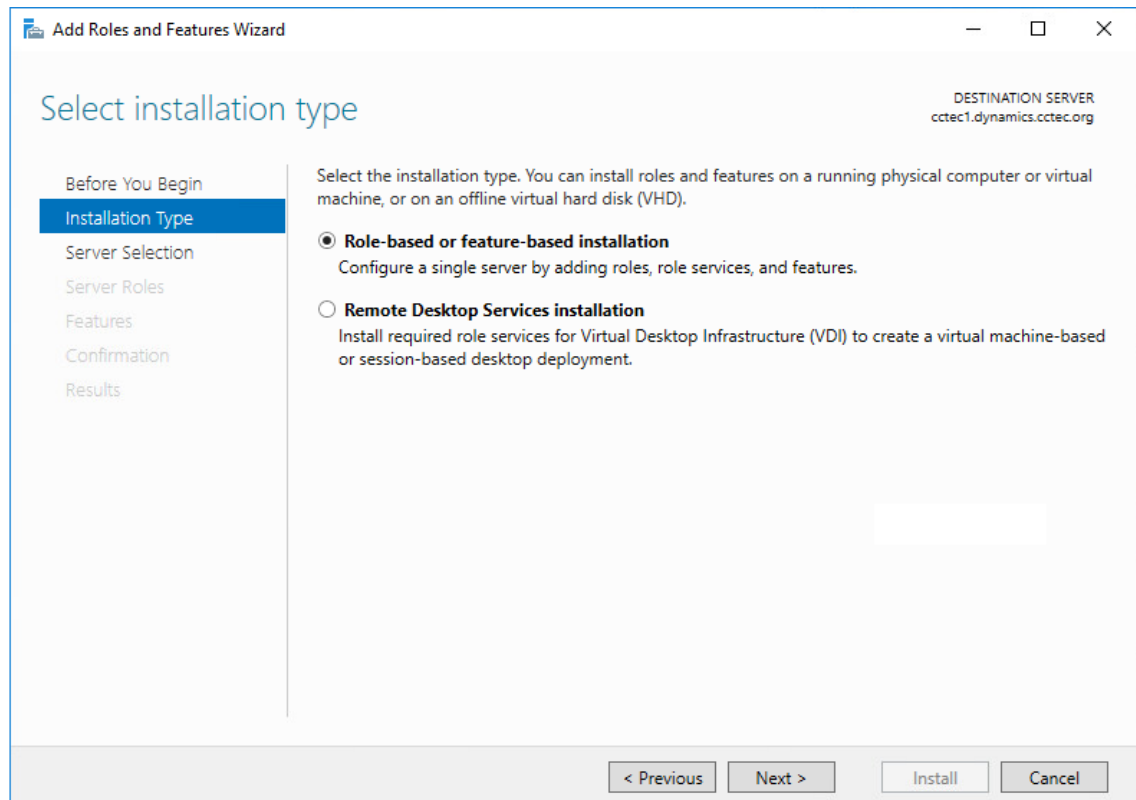
Quotas for user and collaborative storage can be managed through File Dynamics on all versions of Windows Server from 2008 and beyond. You need to install File Server Resource Manager on every server or active node that will be hosting user or collaborative quota-managed storage.

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**NOTE:** These procedures are specific to Windows Server 2016. Procedures vary for each version of Windows Server.

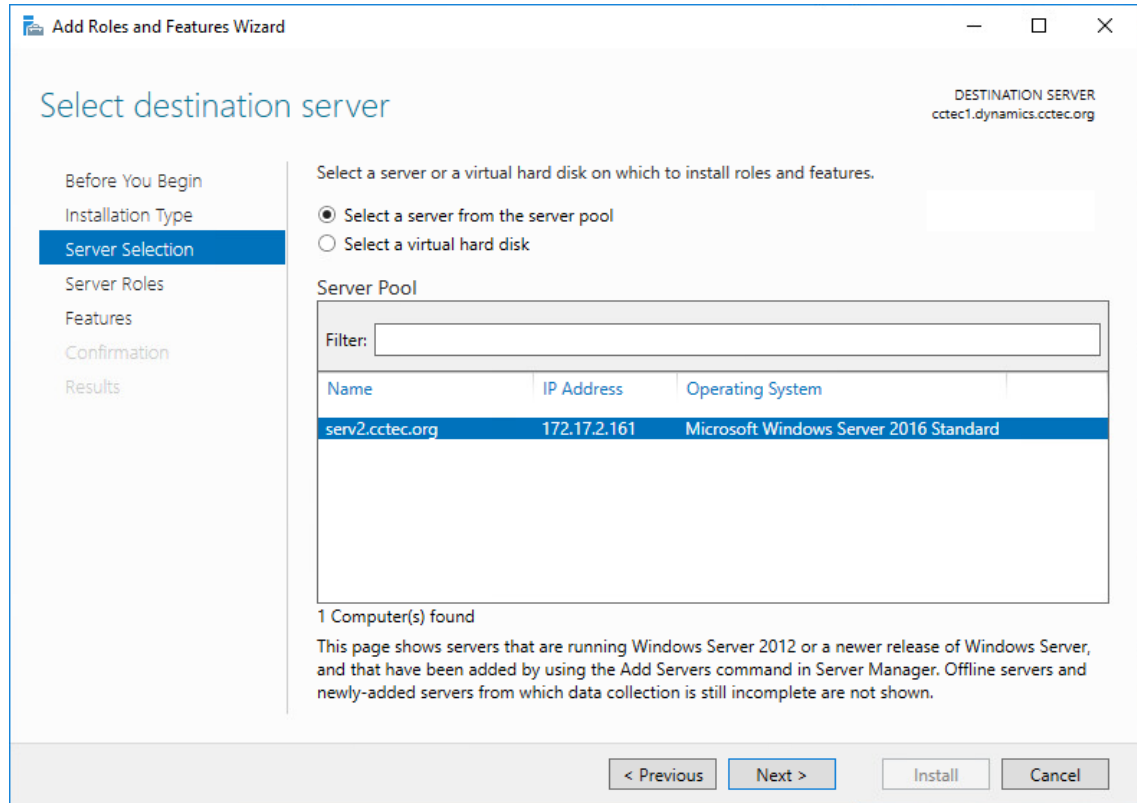
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- 1 Launch Server Manager.
- 2 Click **Add roles and features**.  
This launches the Add Roles and Features Wizard.
- 3 Click **Next**.

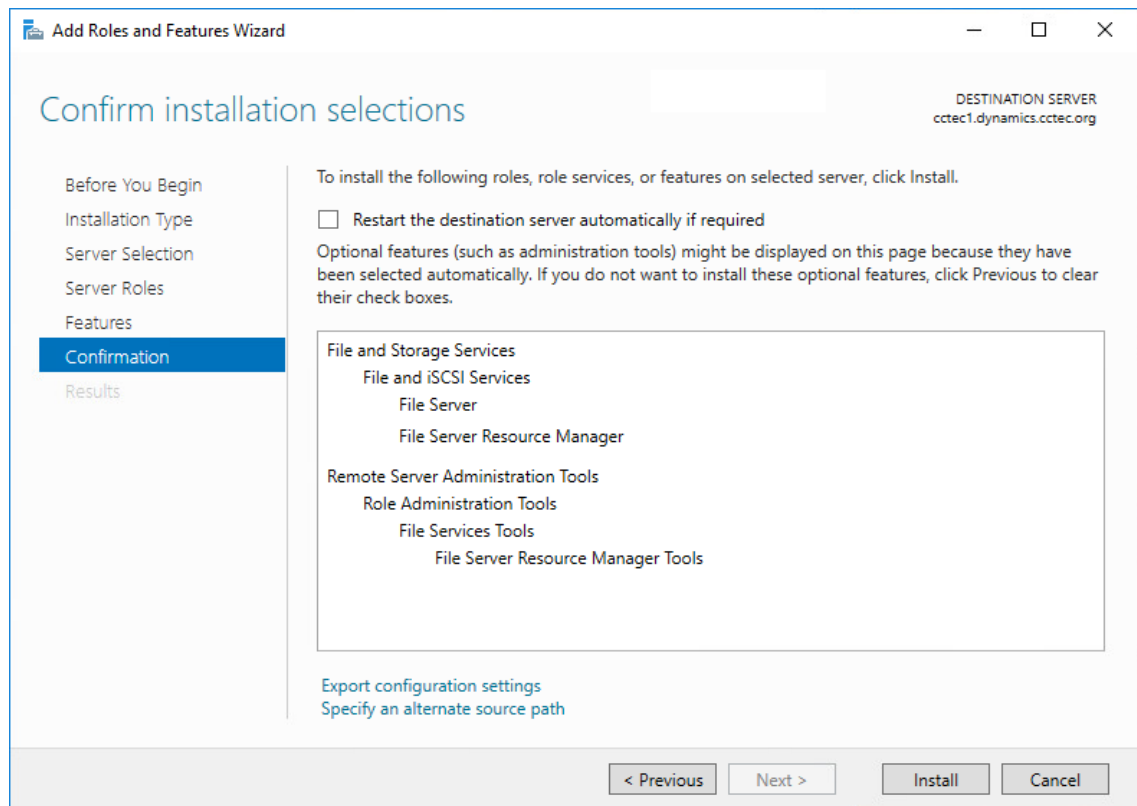




- 4 Verify that **Role-based or feature-based installation** is selected and click **Next**.



- 5 Select the server where you are going to install the Engine and click **Next**.
- 6 From the list of roles, expand **File and Storage Services**.
- 7 Expand **File and iSCSI Services**.
- 8 Select the **File Server Resource Manager** check box.



9 Click **Add Features**.

10 Click **Next**.

11 Click **Next**.

12 Click **Install**.

## 1.3 Verifying Proper Configurations and Permissions

In some cases, you might find that you are unable to install a File Dynamics component because of an improper configuration or permissions setting. Micro Focus recommends that you review the following sections in the *Micro Focus File Dynamics 6.5 Administration Guide* and make any needed adjustments before proceeding:

- ♦ [Windows Firewall Requirements](#)
- ♦ [LSA Rights and Privileges](#)
- ♦ [ProxyRights Group Permissions](#)

## 1.4 Create a New Host Record in DNS for File Dynamics

For example `fdfileviewer.dynamics.cctec.org`

This is needed during the configuration of the Microsoft IIS Website for the Epoch File Viewer.

## 1.5 What's Next

If you are upgrading from Storage Manager 5.x to File Dynamics 6.5:

1. Proceed with [Chapter 2, "Licensing the Product,"](#) on page 13.
2. Follow the procedures in [Chapter 5, "Upgrading from Storage Manager 5.2, or File Dynamics 6.x to File Dynamics 6.5,"](#) on page 37.

If you are installing File Dynamics 6.5:

1. Proceed with [Chapter 2, "Licensing the Product,"](#) on page 13.
2. Follow the procedures in [Chapter 3, "Installing and Configuring an SQL Server Instance,"](#) on page 17 to install an SQL Server instance that File Dynamics supports.
3. Complete the installation by following the procedures in [Chapter 6, "Installing File Dynamics 6.5,"](#) on page 43.



# 2 Licensing the Product

This section provides an overview of license types and procedures for obtaining the product software and an evaluation license file.

- ♦ [Section 2.1, “License Overview,” on page 13](#)
- ♦ [Section 2.2, “License Version,” on page 13](#)
- ♦ [Section 2.3, “Obtaining a Product Activation Key,” on page 14](#)
- ♦ [Section 2.4, “Obtaining a License File,” on page 14](#)
- ♦ [Section 2.5, “Updating a License File,” on page 16](#)

## 2.1 License Overview

Micro Focus File Dynamics has the following license types:

**Table 2-1** File Dynamics License Types

License Type	Product Capabilities
Core	Network file system management through Identity-Driven, Target-Driven, and Workload policies.
Core + eDirectory to Active Directory Cross-Empire Data Migration	Core features of File Dynamics plus the ability to migrate the contents, rights, security, and metadata of user and group network directories from an Open Enterprise Server or NetWare platform, to a Microsoft network platform.  Once the migration is complete, you can use the core features of File Dynamics to manage your Microsoft network file system.
Core + Active Directory to Active Directory Cross-Empire Data Migration	Core features of File Dynamics plus the ability to migrate the contents, permissions, security, and metadata of user and group network folders from one Active Directory forest to another.  Once the migration is complete, you can use the core features of File Dynamics to manage your Microsoft file system.

For individuals evaluating File Dynamics, you can obtain a full-featured 60-day license of the core product.

## 2.2 License Version

File Dynamics 6.5 requires a File Dynamics 6.0 license.

## 2.3 Obtaining a Product Activation Key

- 1 In a web browsers, go to <https://www.microfocus.com/customercenter>
- 2 Enter you username and password, then click **Login**.
- 3 Click **Software**.
- 4 In the page, locate **File Dynamics**.
- 5 Click **Keys**.
- 6 Highlight and copy the alphanumeric characters in the displayed activation key.  
You will be required to paste the activation key into a form to obtain a production license.

## 2.4 Obtaining a License File

Micro Focus File Dynamics requires a production license file or evaluation license file that you obtain from Micro Focus.

- 1 In a web browser, go to <https://www.filedynamicssupport.com>.
- 2 On the top banner of the web page, click **License**.  
A new web page appears with options for obtaining the license.

**FD** File Dynamics Home License Software Documentation Support File Reporter Support

## License

Enter the required information below and click 'Submit' to generate your license file. After verification, a link to the license file will be sent to the e-mail address entered below.

**Customer Details**

Organization Name:

**Contact**

First Name:

Last Name:

Email:

Telephone:

**Address**

Street:

Street2:

City:

State/Province:  Zip/Postal Code:

Country:

**Product Version**

Product:

Version:

**License Details**

Directory Service:  Active Directory

**Active Directory Info**

Forest Root Name:

The license keys are based on the distinguished name of the forest root domain in Active Directory. Example: ad.example.com

[ADForestRootName Utility](#)  
For help in determining the correct domain name to use, download and run.


License Type:  Evaluation  Activation

**Evaluation License Policy**



Notice: Evaluation licenses are for the express purpose of product evaluation and testing. All features of the software may not be active or available when using evaluation licenses. Any use of the product using this license in a production network for production purposes or work is expressly prohibited.

I certify acceptance of this policy on behalf of my company, school, or organization.

**Form Verification**

Verify: 

Enter the text above in the box below.

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**3 Complete the fields.**

**3a** In the **Directory Service** region, verify that the **Active Directory** option is selected.

File Dynamics works only in a Microsoft Active Directory network.

**3b** In the **License Type** region, select **Activation** and in the **Activation Code** field, paste the activation key that you received from Micro Focus.

**4 Click **Submit**.**

An e-mail from File Dynamics Support is automatically sent to you with an embedded link for accessing the license.

**5 In the email, click **Download License File**.**

A new Access web page is opened.

- 6 From the Access page, select the listed license file and click the arrow icon to download the license.
- 7 Note where the license file is saved.  
You need the license file to complete Engine setup wizard.

## 2.5 Updating a License File

After you have installed File Dynamics, you can update your evaluation license or production license by simply replacing the old license file with the new one. For more information, see [Section 6.4, "Installing the License,"](#) on page 46.



# 3 Installing and Configuring an SQL Server Instance

This section provides procedures for installing a Microsoft SQL Server instance with the settings needed to support Micro Focus File Dynamics.

File Dynamics requires a Microsoft SQL Server as the database and does not support the SQLite database that was utilized in previous versions of Storage Manager for Active Directory.

---

**IMPORTANT:** SQL Server is a fully-featured database service, and as such requires installation and maintenance planning before deployment. While a complete analysis of this maintenance is beyond the scope of this product's documentation, we strongly recommend that you review Microsoft's SQL Server documentation to plan for separation of data and transaction logs, regular database backups, and transaction log and data growth.

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- ◆ [Section 3.1, “Minimum Supported Versions of SQL Server,” on page 17](#)
- ◆ [Section 3.2, “Determine Which Version of SQL Server to Use,” on page 18](#)
- ◆ [Section 3.3, “Install SQL Server Express,” on page 18](#)
- ◆ [Section 3.4, “Install a New Instance of SQL Server,” on page 25](#)
- ◆ [Section 3.5, “SQL Server Post Configuration Considerations,” on page 31](#)

## 3.1 Minimum Supported Versions of SQL Server

File Dynamics 6.5 supports the following versions of SQL Server:

- ◆ SQL Server 2019 (Windows or Linux)
- ◆ SQL Server 2017 (Windows or Linux)
- ◆ SQL Server 2016 SP1
- ◆ SQL Server 2014 SP3 (64-bit)

While SQL 2014 SP2 is currently supported, SQL Server 2016 will be the minimum supported version in the next major release.

---

**NOTE:** SQL Server 2012 SP4 will work but is considered deprecated and will be removed completely in a later version. Please consider upgrading.

If you are upgrading from a previous version of File Dynamics, you can do so with a SQL Server 2012 SP4 installation. New installations of File Dynamics should use a supported version of SQL Server listed above.

---

File Dynamics 6.5 supports all editions of SQL Server including Express.

## 3.2 Determine Which Version of SQL Server to Use

- ♦ If you do not already own SQL Server, you can use SQL Server Express. You can download SQL Server 2017 Express for free at: <https://www.microsoft.com/en-us/sql-server/sql-server-editions-express>. After downloading the software, proceed with “Install SQL Server Express.”

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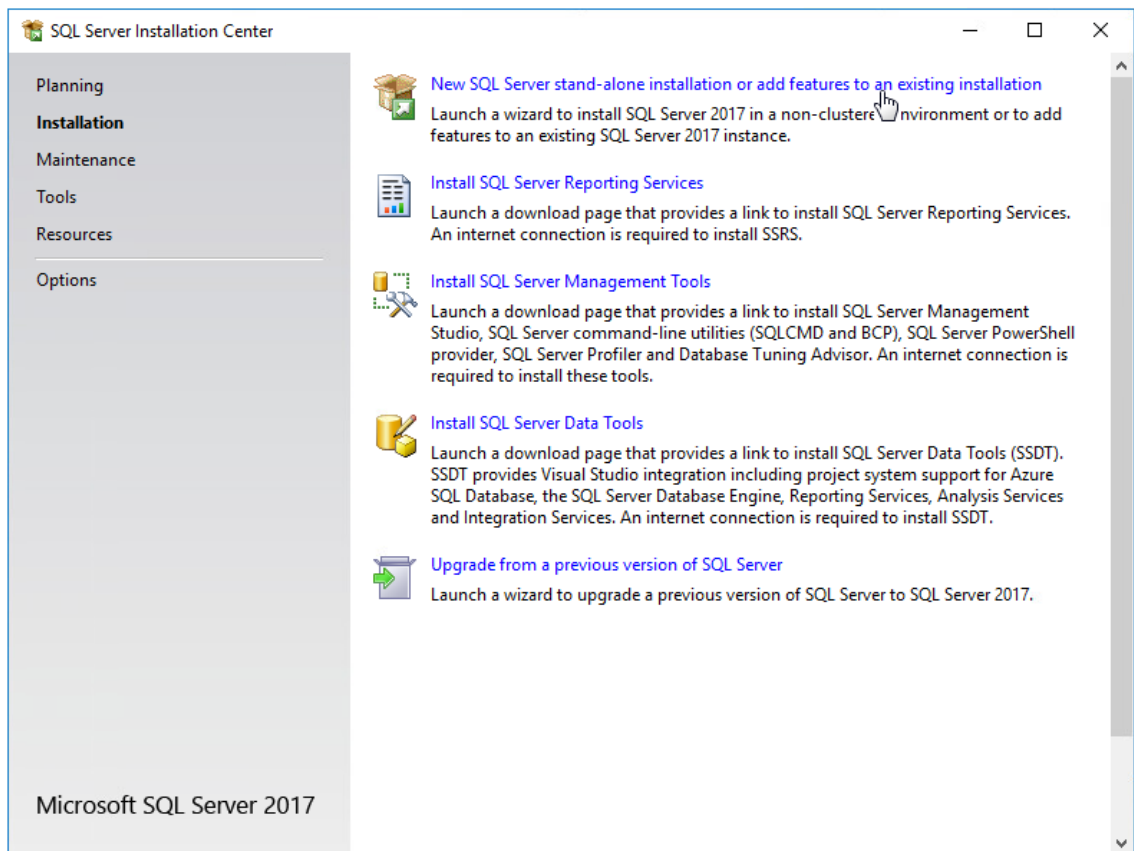
**IMPORTANT:** We do not recommend that you install the Engine on the same server running SQL Server. If you will be using SQL Server Express, you can run it on the same server host, but you will most likely experience better performance if they are running on a separate server.

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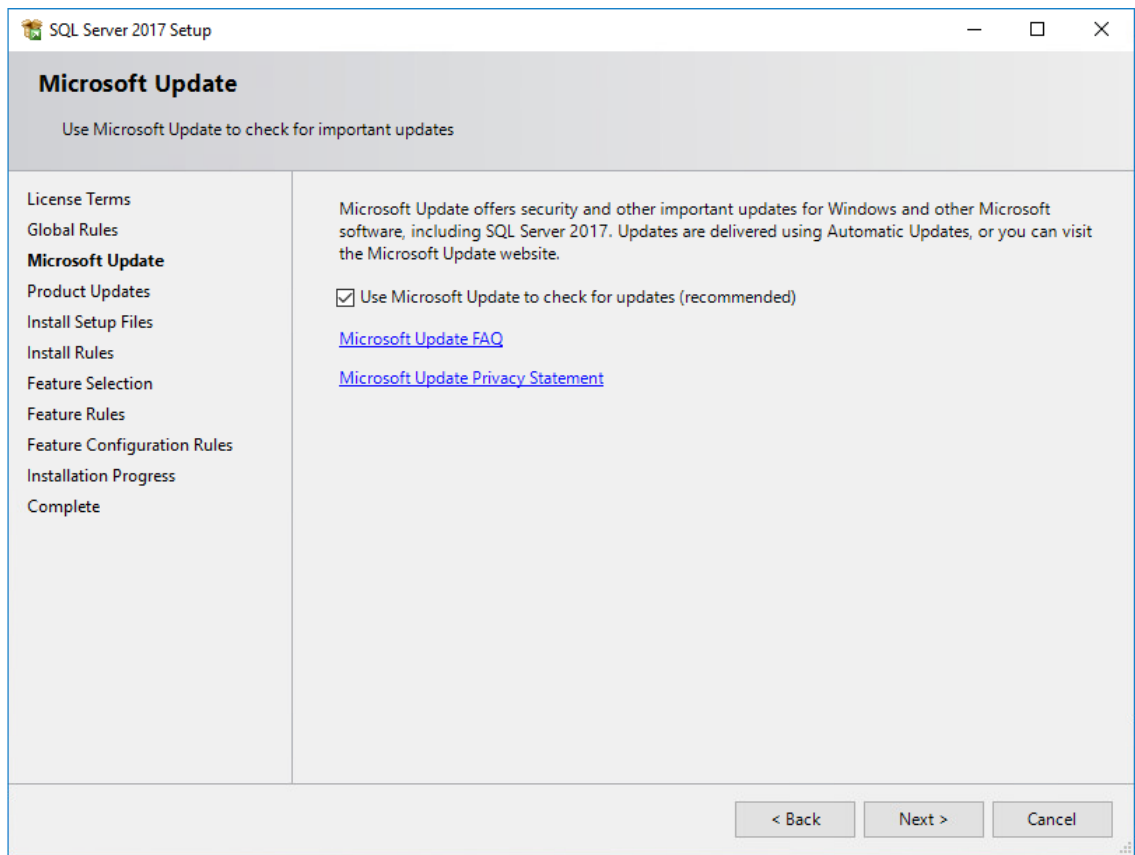
- ♦ If you already own a version of SQL Server, proceed with [Section 3.4, “Install a New Instance of SQL Server,”](#) on page 25.

## 3.3 Install SQL Server Express

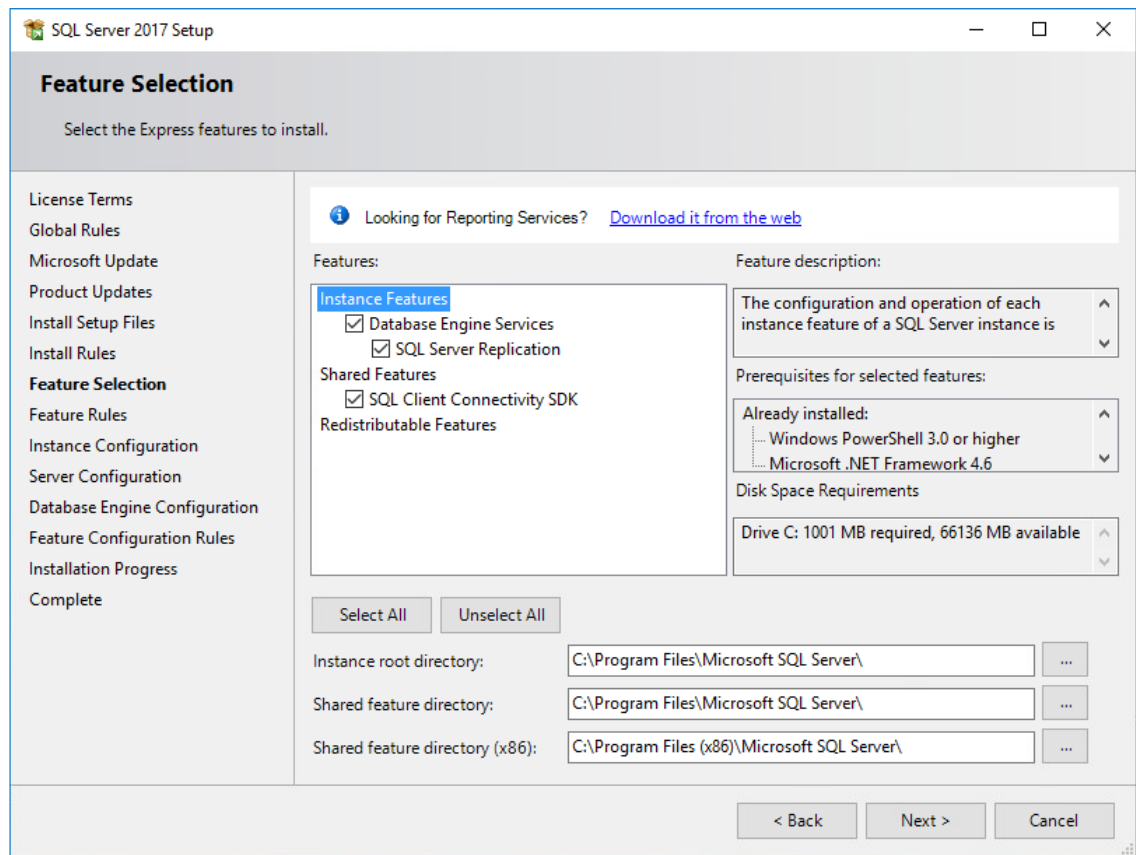
- 1 Launch the SQL Server Express installation file.
- 2 Choose a directory for the extracted files and click **OK**.
- 3 Select **New SQL Server stand-alone installation or add features to an existing installation**.



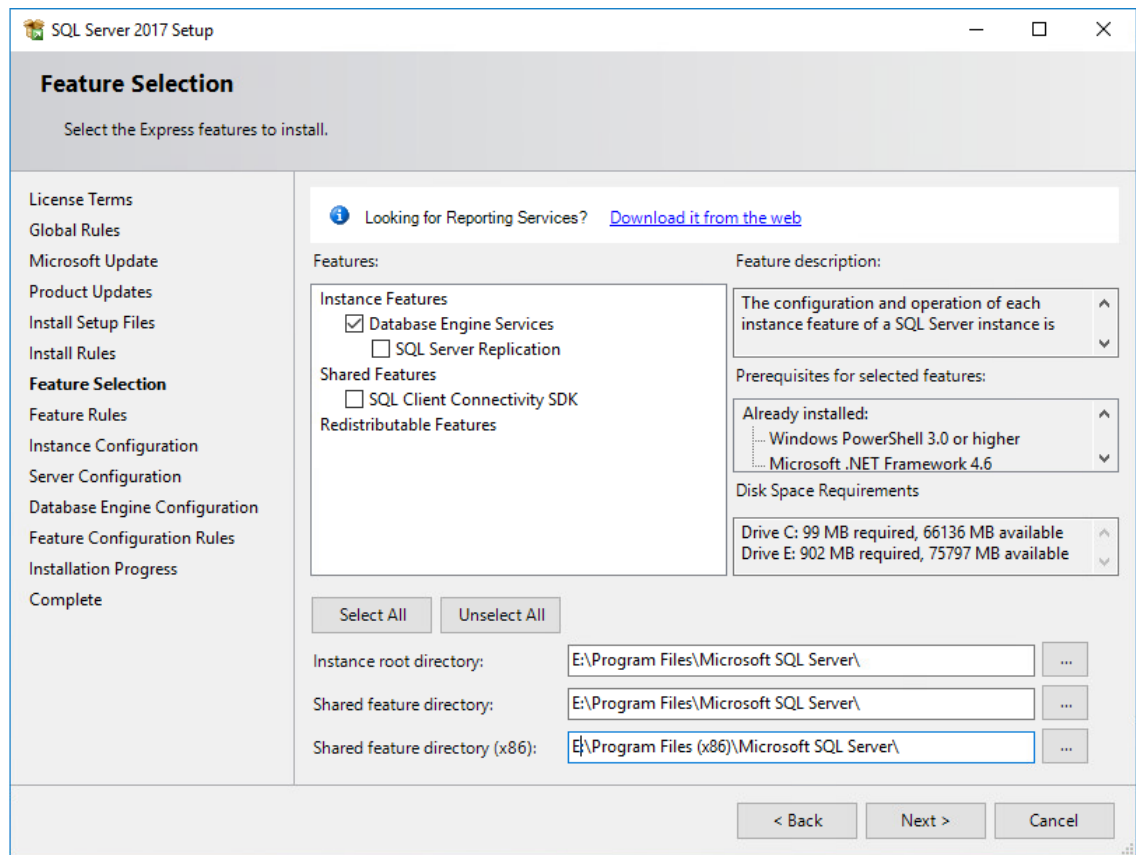
- 4 In the License Terms page, accept the license terms and click **Next**.
- 5 In the Product Updates page, click **Next**.
- 6 Select **Use Microsoft Update to check for updates (recommended)**, then click **Next**.



7 In the Install Rules page, click **Next**.



- 8 Click **Unselect All**.
- 9 Select the **Database Engine Services** check box.
- 10 In the **Instance root directory**, **Shared feature directory**, and **Shared feature directory (x86)** fields, specify the path where you want to SQL instance to reside.

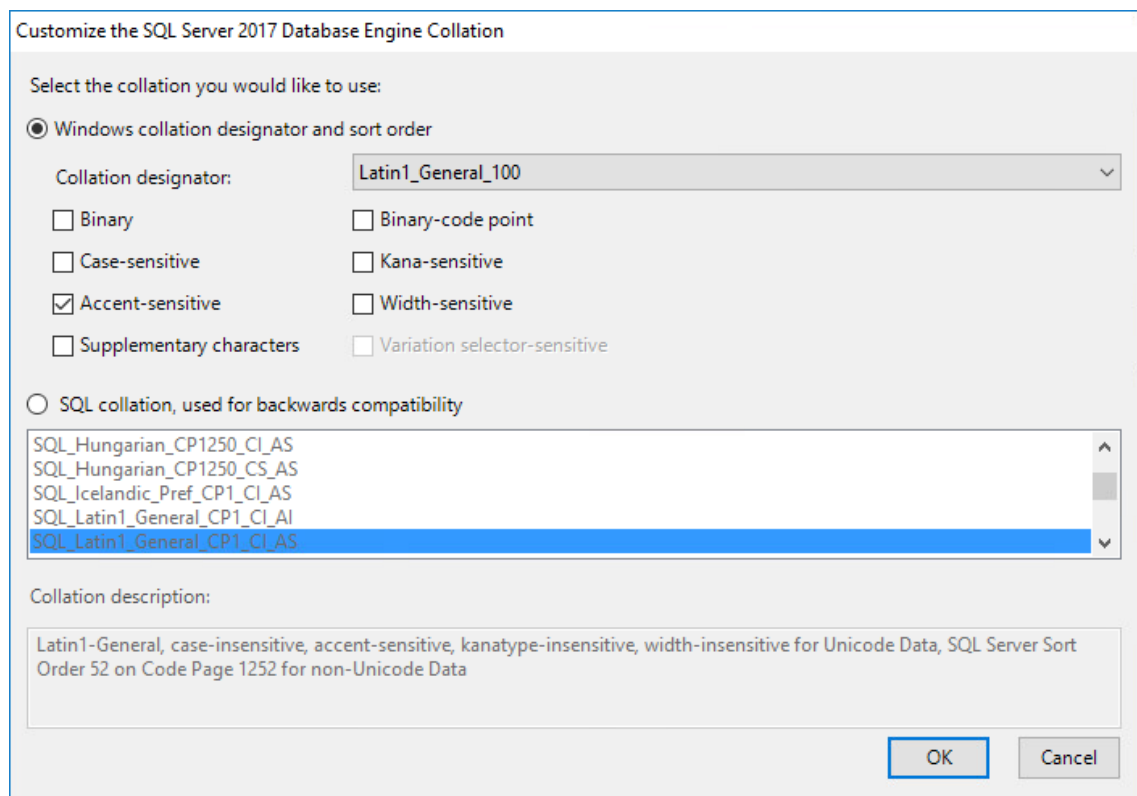


- 11 Click **Next**.
- 12 In the Feature Rules page, click **Next**.
- 13 In the Instance Configuration page, click the **Named instance** option and specify a descriptive name for the instance such as `FSFDB` and click **Next**.
- 14 In the Server Configuration page, click the **Collation** tab and then click **Customize**.
- 15 Click the **Windows collation designator and sort order** option.
- 16 From the **Collation designator** drop-down menu, select an acceptable collation and settings for your locale.

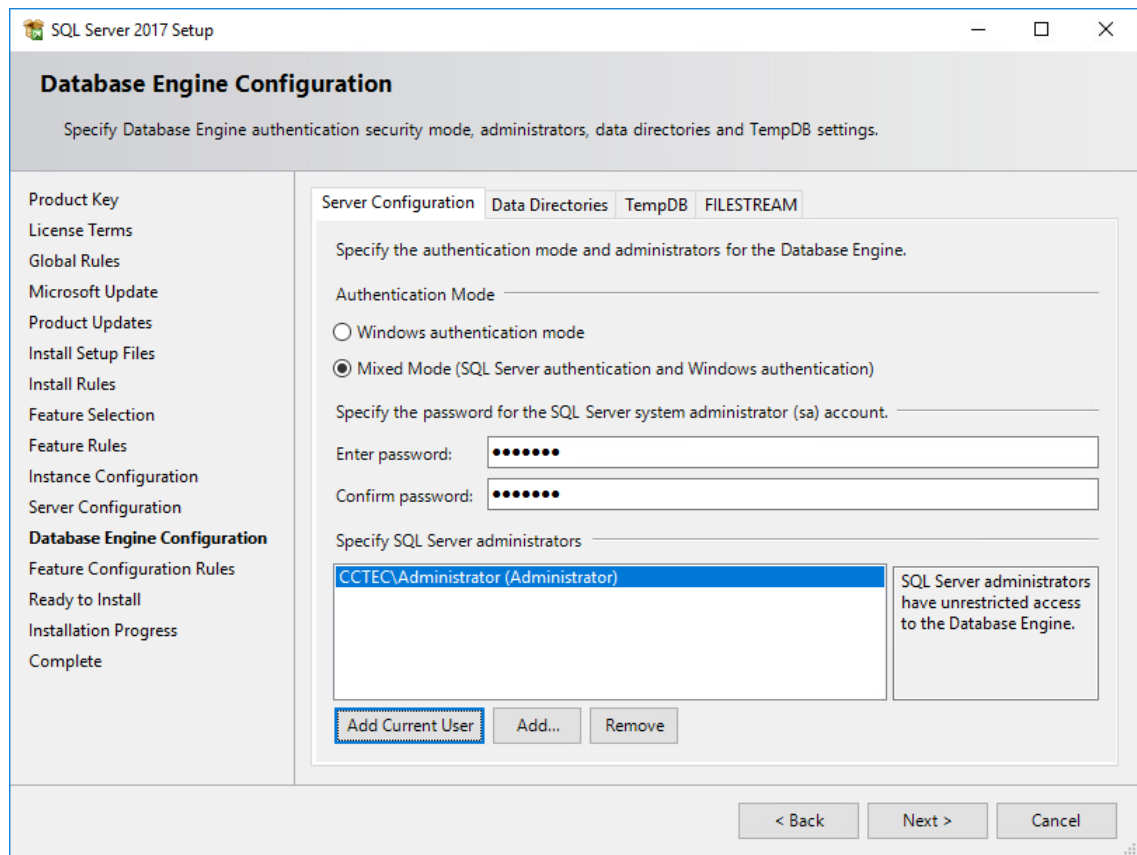
For example, in North America, an acceptable collation would be **Latin1\_General\_100** with the **Accent-sensitive** check box selected.

We recommend that you select a collation that aligns with the Windows locale of the server where the Engine is installed.

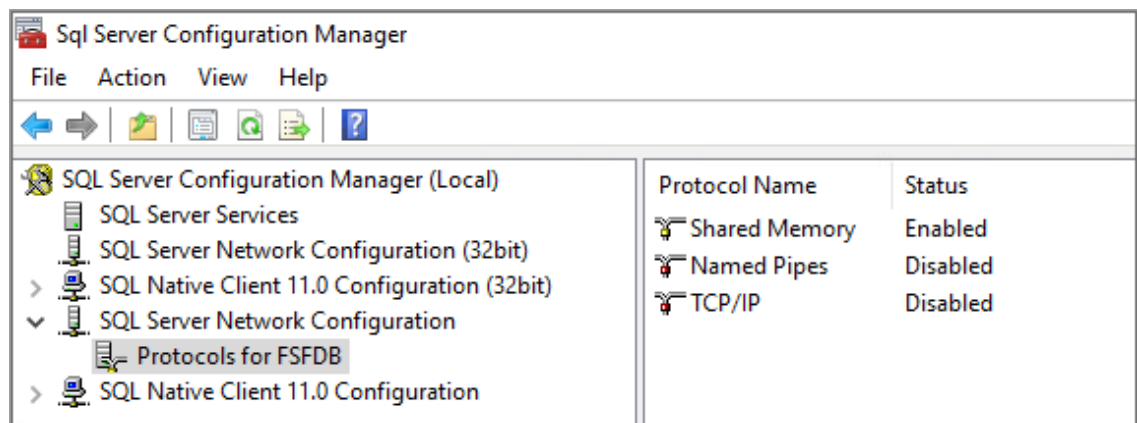
For more information on collation and locales, refer to [this Microsoft document \(http://technet.microsoft.com/en-us/library/ms175194%28v=sql.105%29.aspx\)](http://technet.microsoft.com/en-us/library/ms175194%28v=sql.105%29.aspx).



- 17 Click **OK**.
- 18 Click **Next**.
- 19 Select the **Mixed Mode (SQL Server authentication and Windows authentication)** option, enter and confirm an SQL Server administrator password, and then click **Add Current User**.

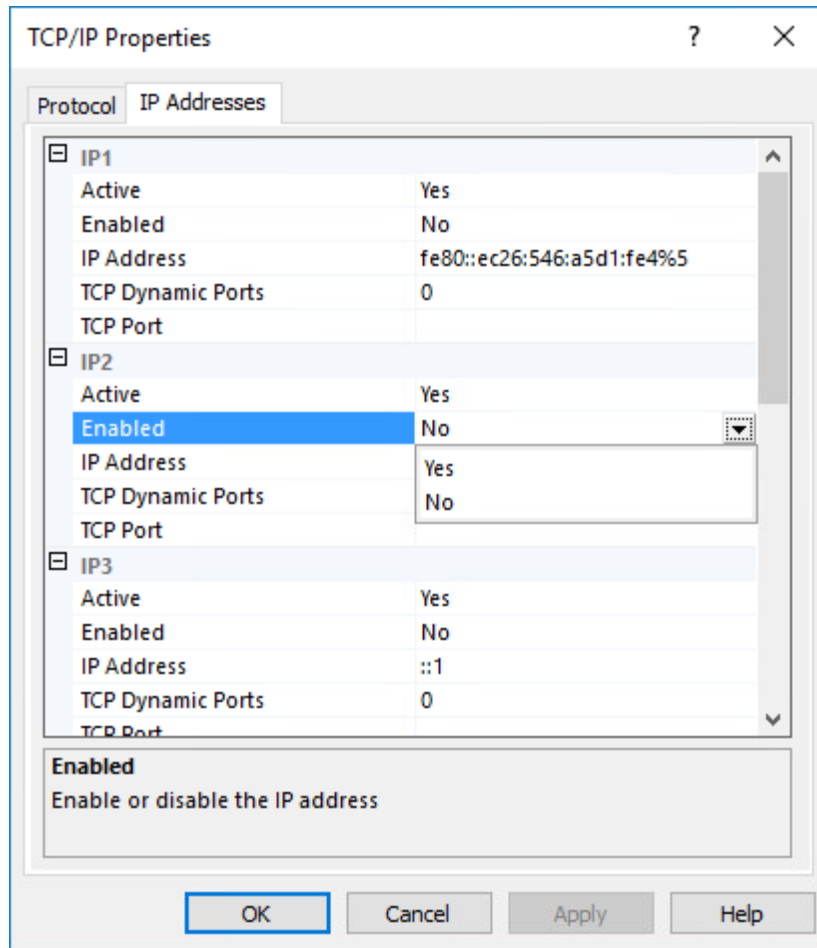


- 20 Click **Next**.
- 21 In the Complete page, click **Close**.
- 22 Launch SQL Server Configuration Manager.
- 23 In the left pane, expand **SQL Server Network Configuration**.
- 24 Click **Protocols for FSFDB** (or the name of the database instance you chose earlier).



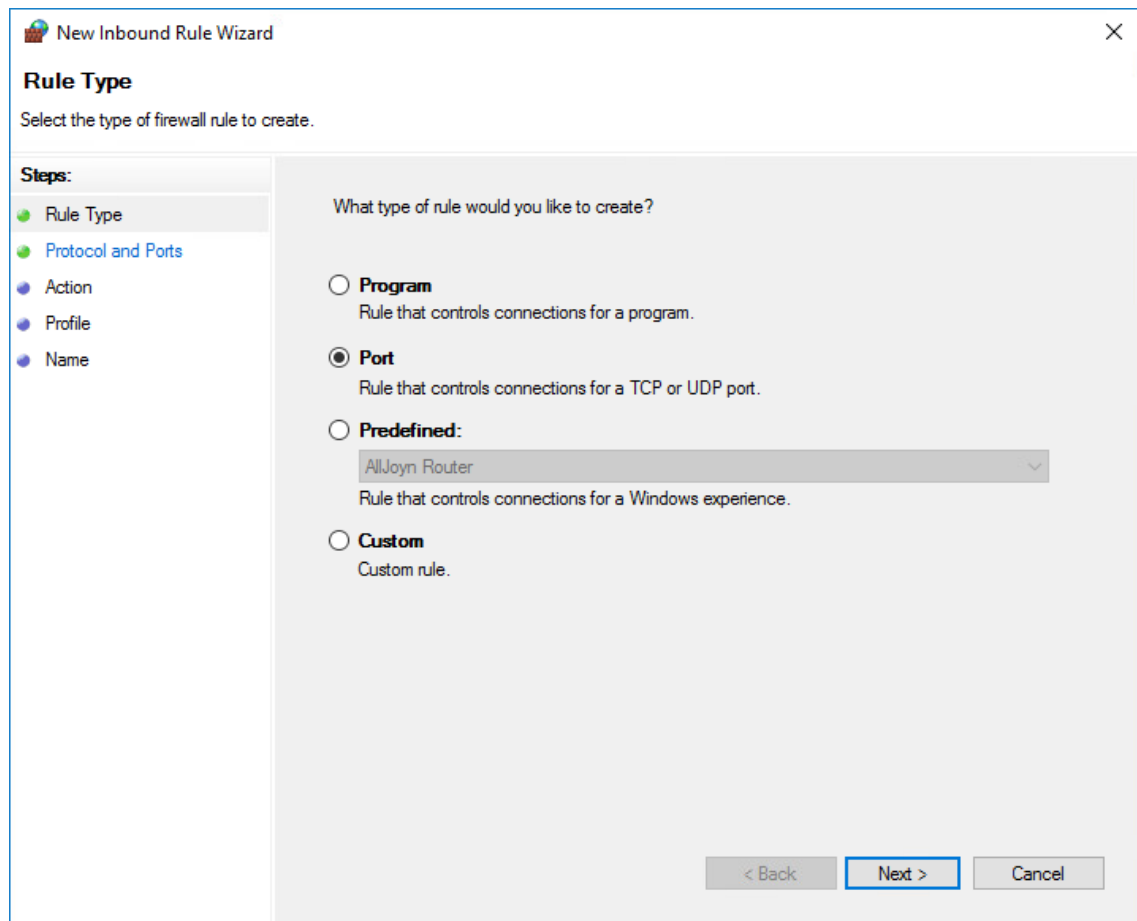
- 25 In the right pane, right-click **TCP/IP** and select **Enable**.
- 26 In the warning dialog box, click **OK**.
- 27 Right-click **TCP/IP** again and select **Properties**.

- 28 Under the **IP2** heading, for the **Enabled** field, right-click to select the drop-down menu and change the setting to **Yes**.



- 29 Select **TCP Dynamic Ports** and clear the field so there is no number associated to it.
- 30 Scroll down to the **IPALL** heading and for the **TCP Port** field, and enter 1433.
- 31 Click **Apply**.
- 32 When the warning dialog box appears, click **OK**.
- 33 Click **OK** to close the TCP/IP Properties page.
- 34 In the SQL Server Configuration Manager, click **SQL Server Services**.
- 35 Right-click **SQL Server (FSFDB)** and select **Restart**.
- 36 Close the SQL Server Configuration Manager.
- 37 Launch Windows Firewall with Advanced Security.
- 38 From the left column, click **Inbound Rules**.
- 39 From the **Actions** column, click **New Rule**.
- 40 In the Rule Type page, select **Port**.



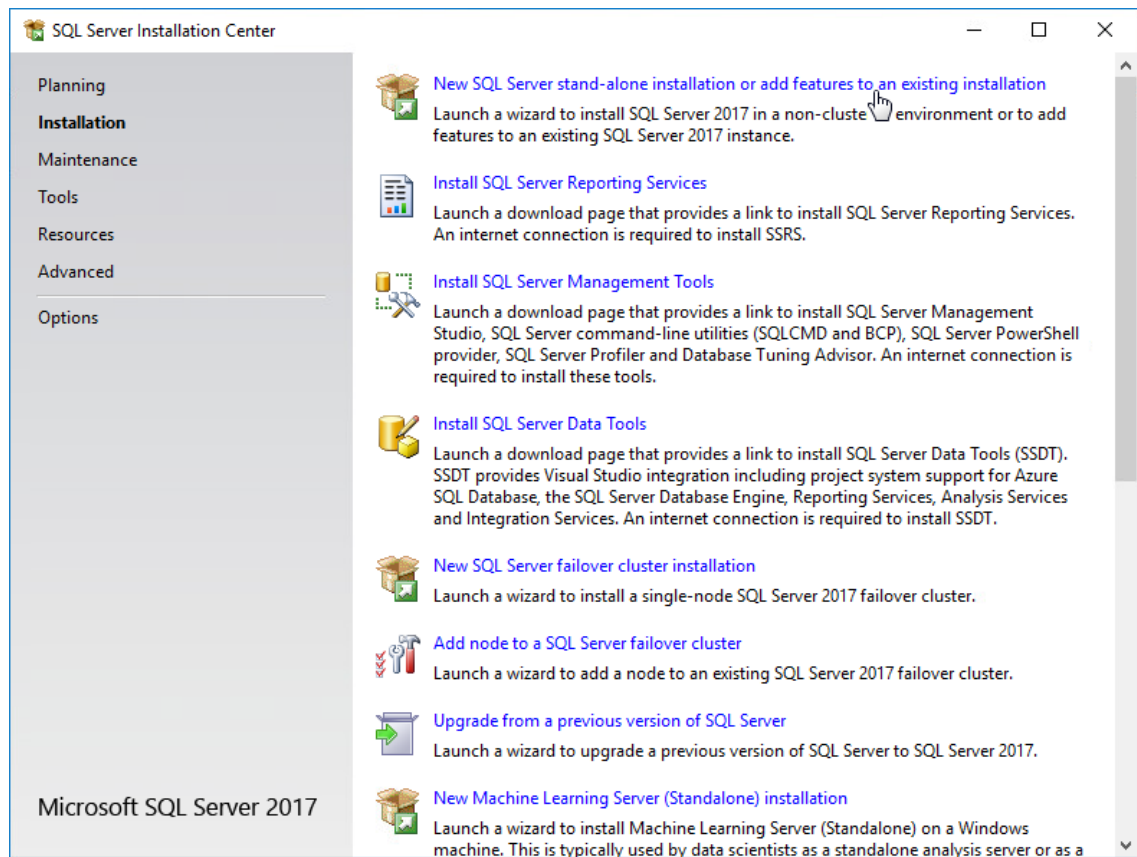


- 41 Click **Next**.
- 42 In the Protocol and Ports page, enter 1433 in the **Specific local ports** field, then click **Next**.
- 43 In the Action page, accept the default setting by clicking **Next**.
- 44 In the Profile page, accept the default settings by clicking **Next**.
- 45 In the Name page, specify a name for the new inbound rule in the **Name** field.  
For example `SQL Server Express`.
- 46 Click **Finish**.

## 3.4 Install a New Instance of SQL Server

The following procedures are specific to Microsoft SQL Server 2017. Procedures will vary based on your version of SQL Server.

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

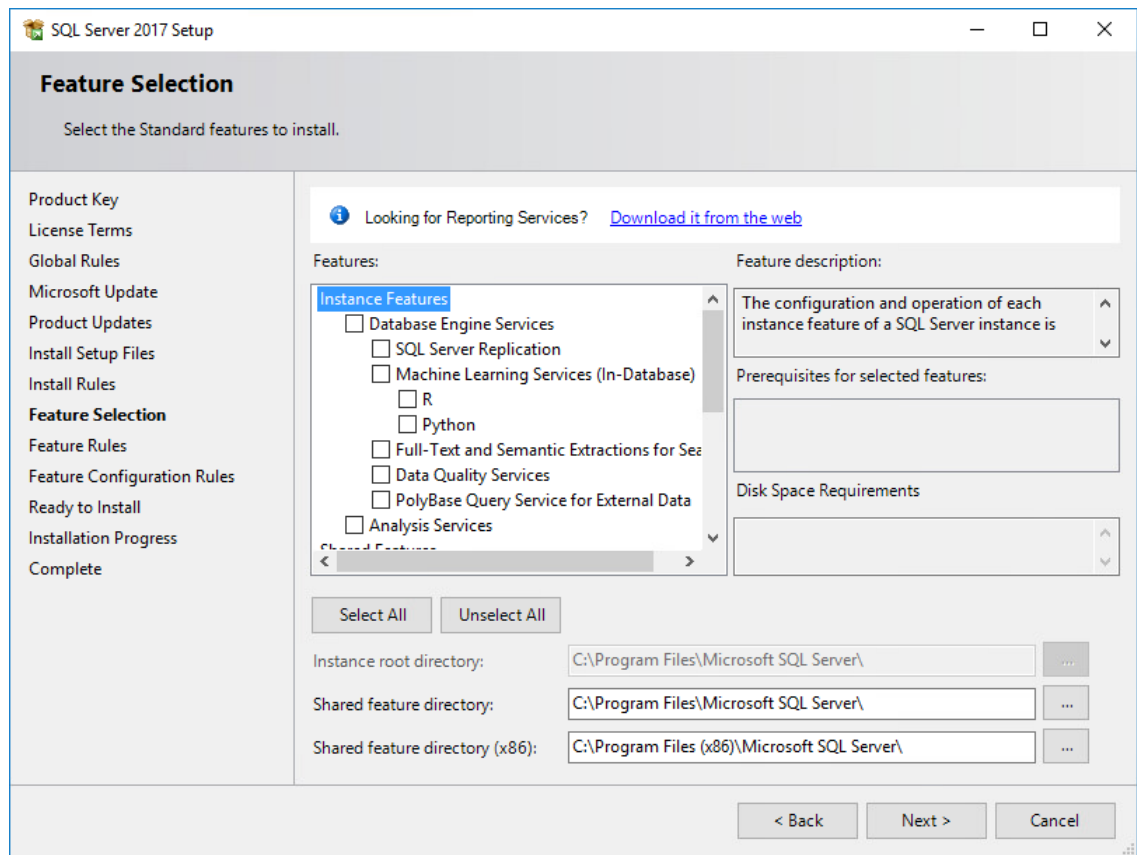


The Setup Support Rules operation is run.

- 4 When the operation has completed, click **OK**.
- 5 When prompted, enter your product key, then click **Next**.
- 6 Accept the license terms and 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**.

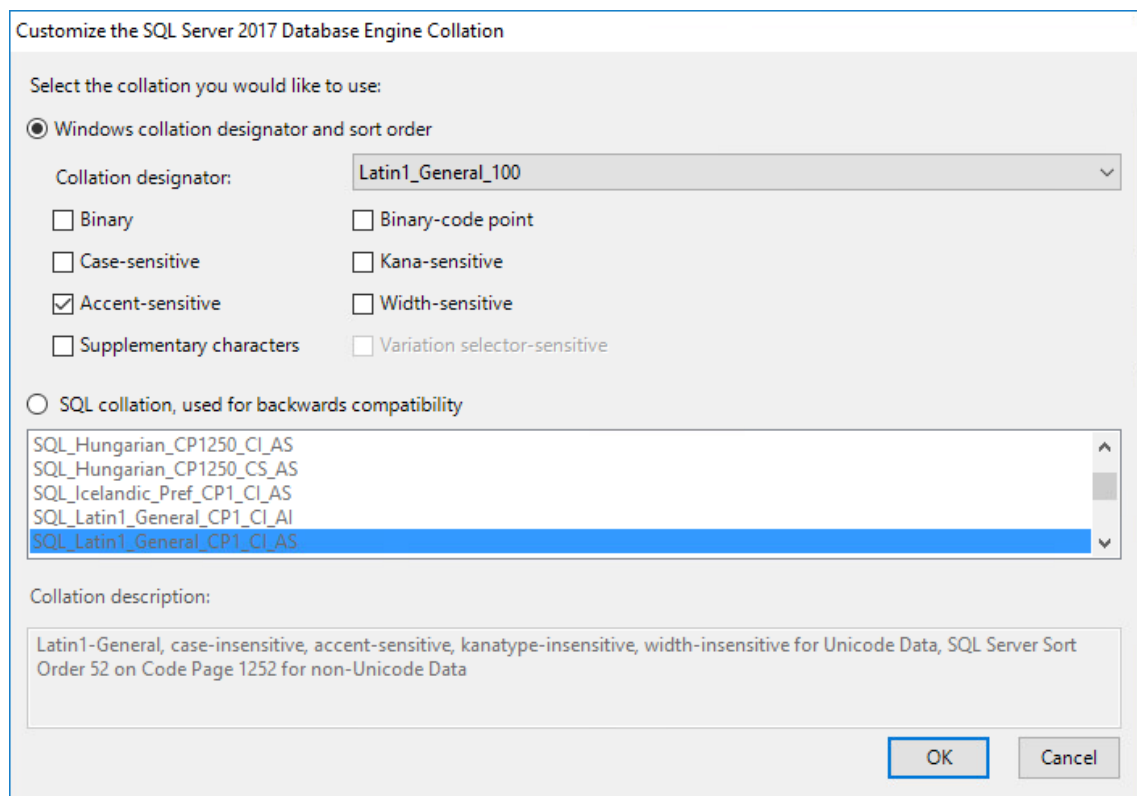


- 9 On the Feature Selection page, select **Database Engine Services**.
- 10 In the **Instance root directory**, **Shared feature directory**, and **Shared feature directory (x86)** fields, specify the path where you want to SQL instance to reside, then click **Next**.
- 11 In the Instance Configuration page, click the **Named instance** option and specify a descriptive name for the instance such as **FSFDDB** and click **Next**.
- 12 On the Server Configuration page, click the **Collation** tab.
- 13 Click **Customize**.
- 14 Click the **Windows collation designator and sort order** option.
- 15 From the **Collation designator** drop-down menu, select an acceptable collation and settings for your locale.

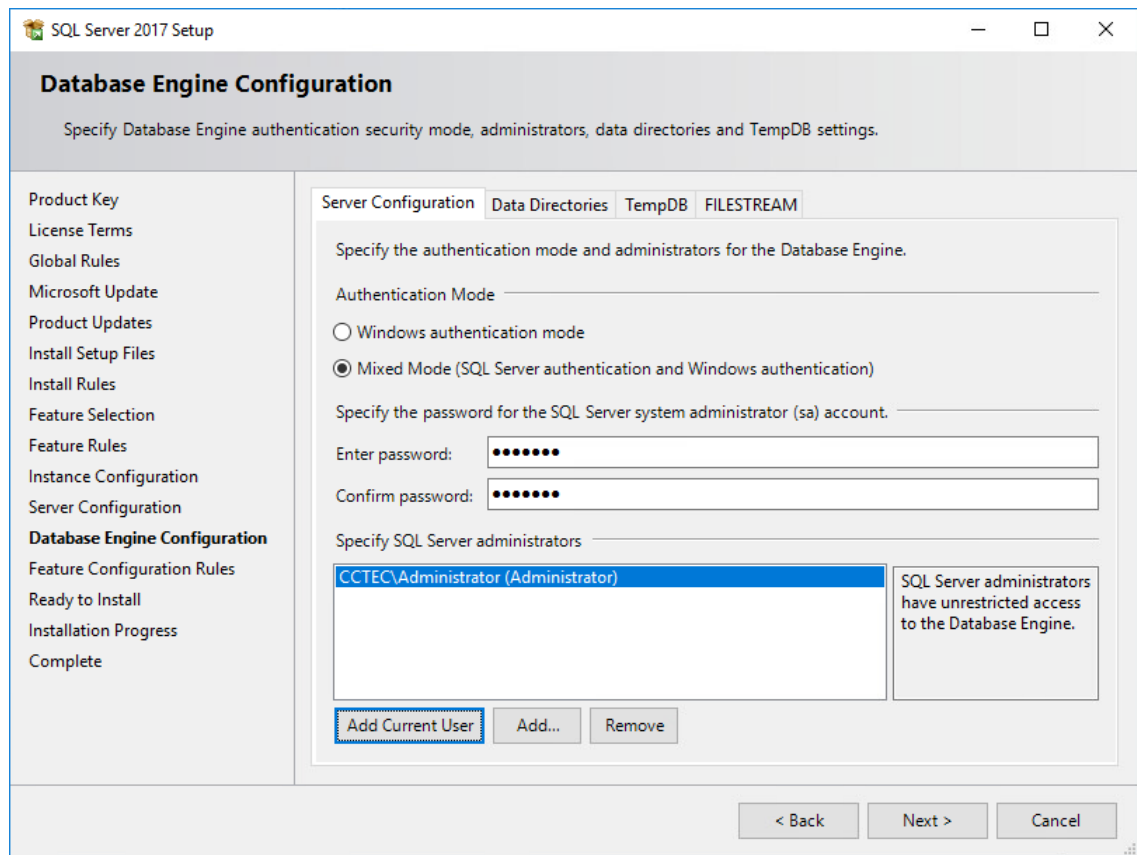
For example, in North America, an acceptable collation would be **Latin1\_General\_100** with the **Accent-sensitive** check box selected.

We recommend that you select a collation that aligns with the Windows locale of the server where the Engine is installed.

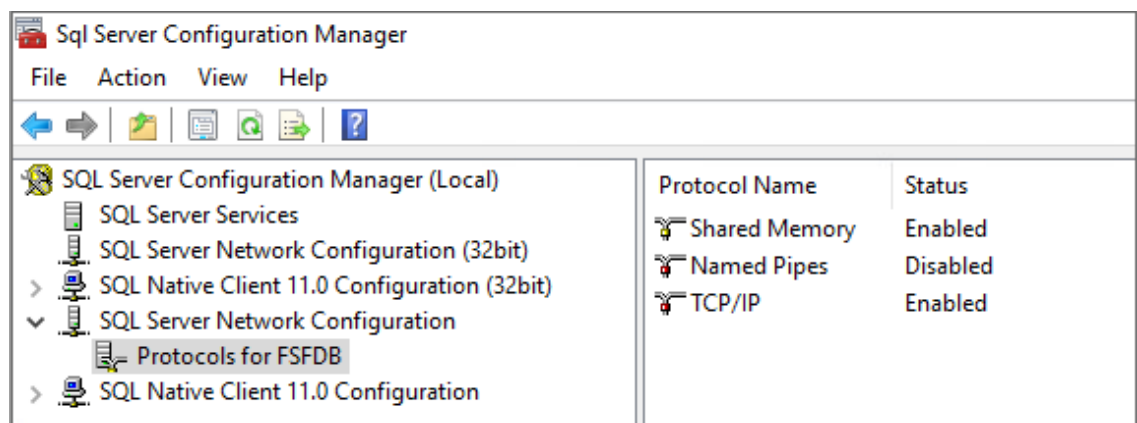
For more information on collation and locales, refer to [this Microsoft document \(http://technet.microsoft.com/en-us/library/ms175194%28v=sql.105%29.aspx\)](http://technet.microsoft.com/en-us/library/ms175194%28v=sql.105%29.aspx).



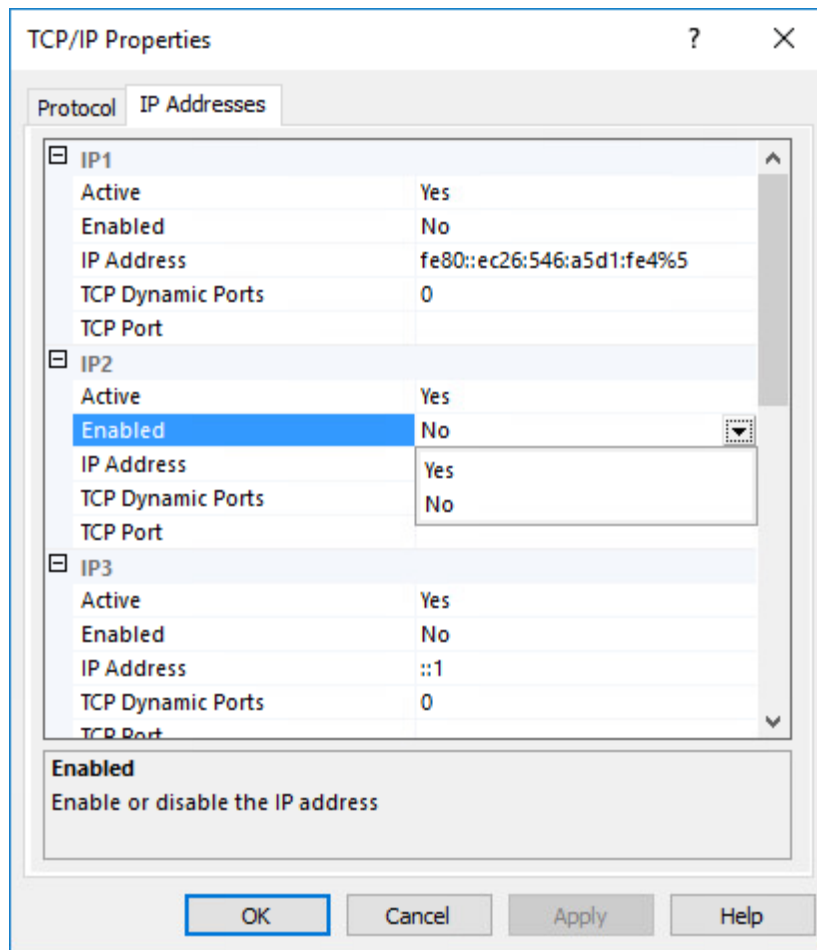
- 16 Click **OK**.
- 17 Click **Next**.
- 18 On the Database Engine Configuration page, select the **Mixed Mode (SQL Server authentication and Windows authentication)** option, enter and confirm the SQL Server administrator password, then click **Add Current User**.



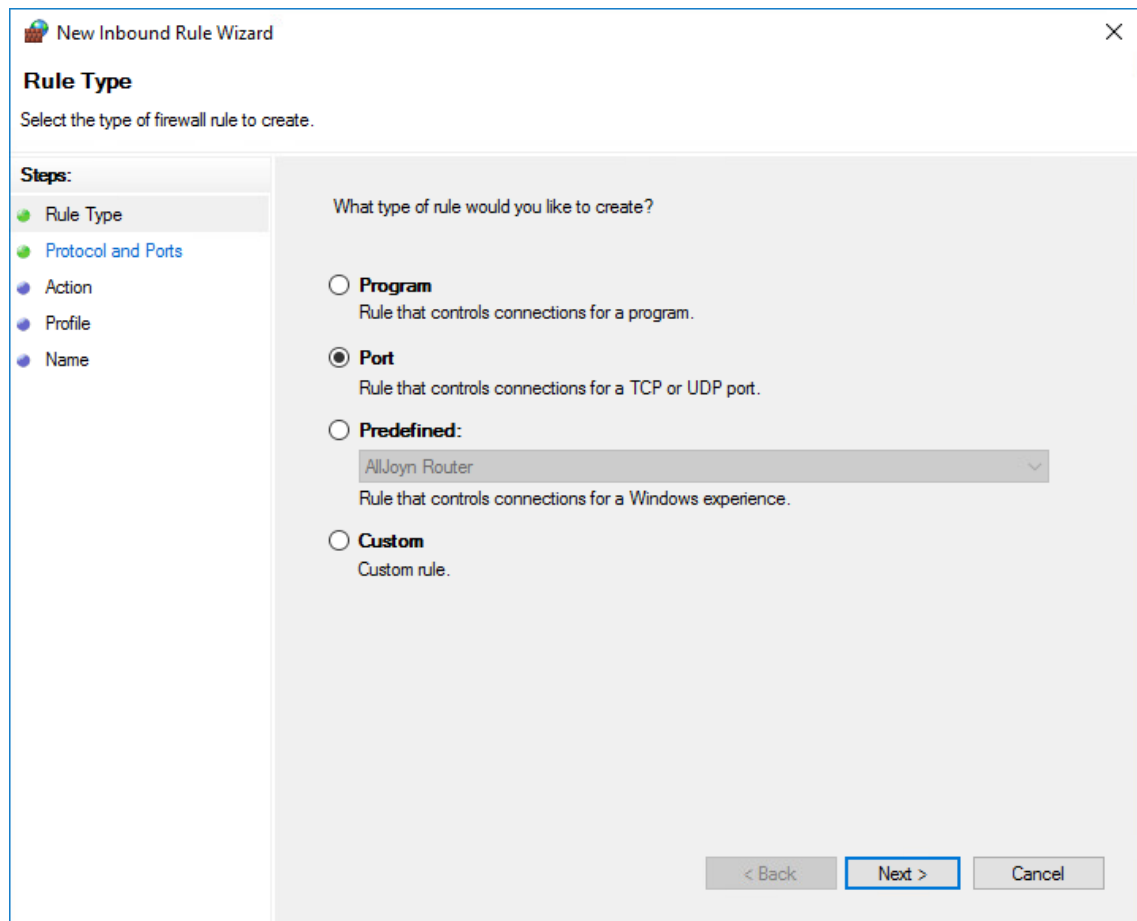
- 19 Click **Install**.
- 20 When the installation has completed, click **Close** to close the wizard.
- 21 Launch SQL Server Configuration Manager.
- 22 In the left pane, expand **SQL Server Network Configuration**.
- 23 Click **Protocols for FSFDB** (or the name of the database instance you chose earlier).



- 24 Right-click **TCP/IP** and select **Properties**.
- 25 Click the **IP Addresses** tab.
- 26 Under the **IP2** heading, for the **Enabled** field, right-click to select the drop-down menu and change the setting to **Yes**.



- 27 Select **TCP Dynamic Ports** and clear the field so there is no number associated to it.
- 28 Scroll down to the **IPALL** heading and for the **TCP Dynamic Ports** field, clear the field so there is no number associated to it.
- 29 In the **TCP Port** field, and enter 1433.
- 30 Click **Apply**.
- 31 When the warning dialog box appears, click **OK**.
- 32 Click **OK** to close the TCP/IP Properties page.
- 33 Close the SQL Server Configuration Manager.
- 34 Launch Windows Firewall with Advanced Security.
- 35 From the left column, click **Inbound Rules**.
- 36 From the **Actions** column, click **New Rule**.
- 37 In the Rule Type page, select **Port**.



- 38 Click **Next**.
- 39 In the Protocol and Ports page, enter 1433 in the **Specific local ports** field, then click **Next**.
- 40 In the Action page, accept the default setting by clicking **Next**.
- 41 In the Profile page, accept the default settings by clicking **Next**.
- 42 In the Name page, specify a name for the new inbound rule in the **Name** field.  
For example, SQL Server.
- 43 Click **Finish**.

## 3.5 SQL Server Post Configuration Considerations

Review these points and make any needed adjustments to your SQL database settings before installing and configuring the Engine:

- ♦ The SQL Server service must be listening via TCP/IP v4, because the Engine requires TCP/IP via port number 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.





# 4 Installing CouchDB

Apache CouchDB is the NoSQL database that File Dynamics uses for:

- ♦ Work Log reports
- ♦ Epoch Data Protection policies
- ♦ Security policies
  - ♦ Security Notification policies
  - ♦ Security Lockdown policies
  - ♦ Security Fencing policies

As a document-oriented database (as opposed to a relational database) it is ideal for fast data analysis.

If you do not plan to initially create any of these policies, there is no need to install CouchDB. However, we recommend that you do so anyway so that your system will be ready once you decide to do so.

## 4.1 Install CouchDB

### Recommendations

- ♦ Disk space requirements depend on a number of variables including the number of HVTs being archived, the number of files in each HVT, and the frequency of archives. A good estimate is allocating 30 MB per 100,000 file instances.
- ♦ Micro Focus recommends that the CouchDB host be a multi-processor system with a minimum of 4 GB of RAM. If you host CouchDB on a server that also hosts the Engine, Event Monitor, or SQL Server, the RAM requirements are in addition to the RAM for those services.

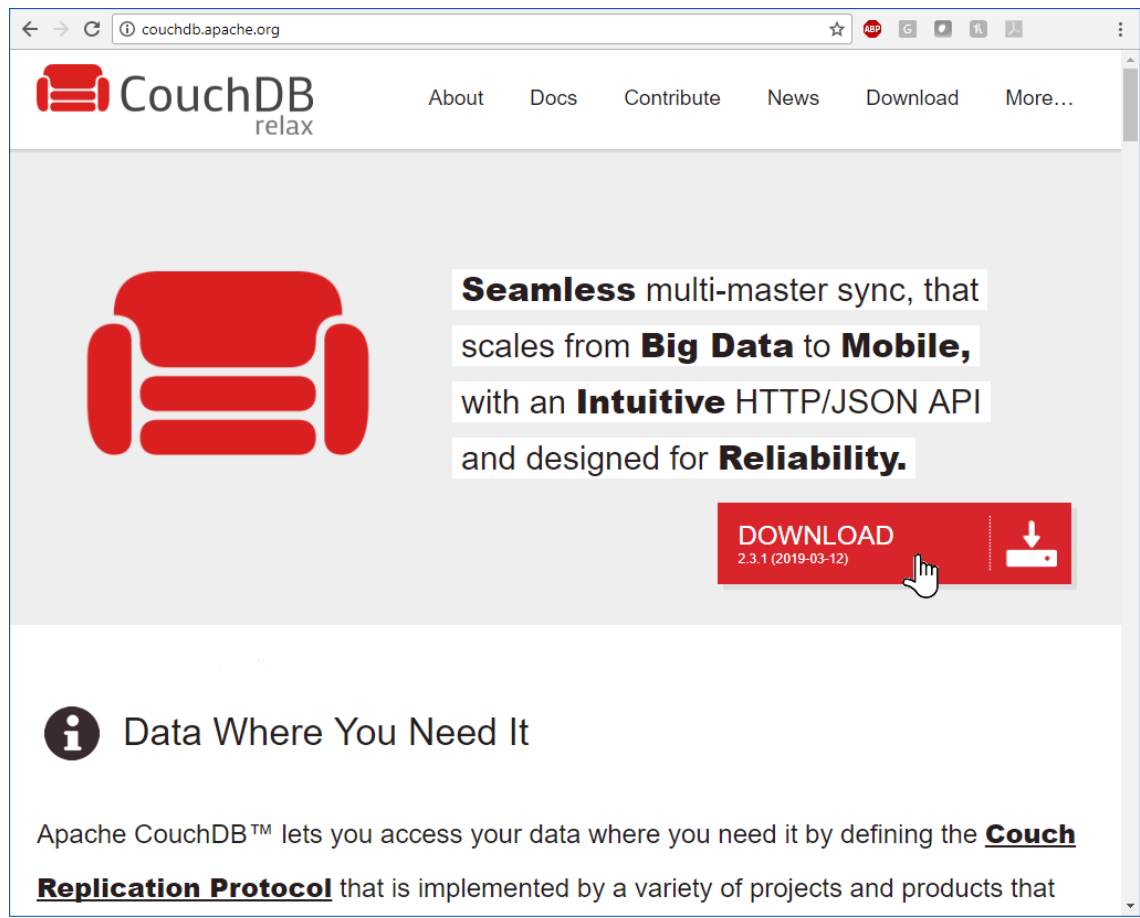
---

**IMPORTANT:** Management of CouchDB is done through the Fauxton management tool, which is run through a web browser. As of this writing, Fauxton is not supported by either Microsoft Explorer or Edge. If you use either of these browsers on the host server, and do not want to install a browser that supports Fauxton, for example Chrome or any Mozilla-based browser, you can run Fauxton remotely from a workstation running a supported browser. For configuration details, see <http://docs.couchdb.org/en/2.1.1/config/http.html>.

---

The following are a minimal set of procedures for installing CouchDB. For more detailed procedures, refer to the [Apache CouchDB installation documentation \(http://docs.couchdb.org/en/2.1.1/install/index.html\)](http://docs.couchdb.org/en/2.1.1/install/index.html).

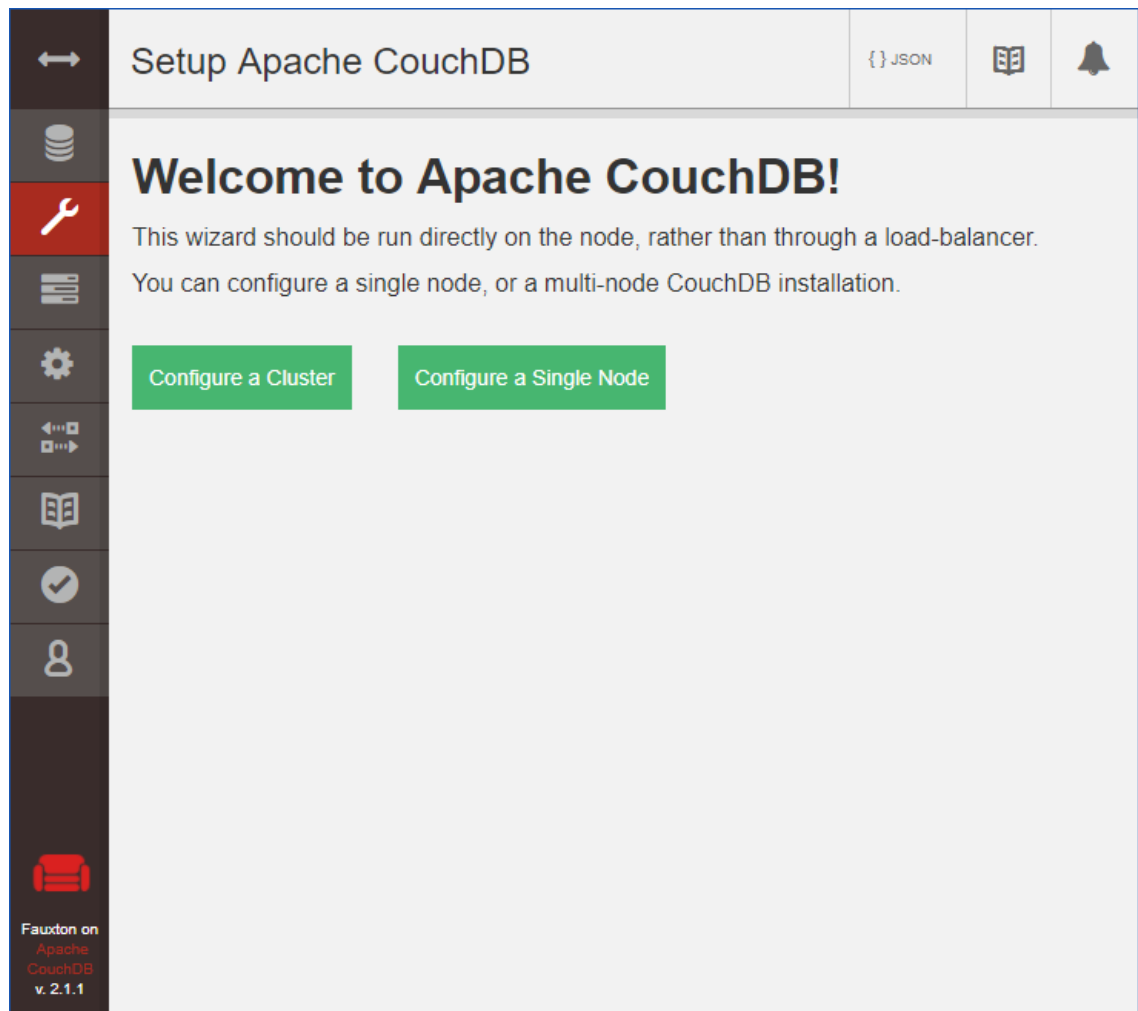
- 1 From [couchdb.apache.org](http://couchdb.apache.org), download the platform version of CouchDB 2.3.1 for the server that will host the CouchDB database.



- 2 Launch the downloaded installation file.
- 3 Follow the wizard steps to complete the installation.
- 4 (Conditional) If you are logged in as a built-in administrator, you must log out and then log in as a user with administrative permissions.

CouchDB requires that the database be administered through a user account with administrative permissions rather than through the server's built-in administrator.
- 5 Launch Apache CouchDB Fauxton.

This launches the Apache CouchDB administrative interface in a web browser.
- 6 Click **Setup** (the wrench icon).



7 Click **Configure Single Node**.

Setup Apache CouchDB

Username Password

Bind address the node will listen on

IP Address

Port that the node will use

5984

Configure Node

Fauxton on  
Apache  
CouchDB  
v. 2.1.1

- 8 Specify a new administrator username and password, leave the IP address setting open, and leave the Port setting at 5984, then click **Configure Node**.
- 9 In the Admin Client, configure the CouchDB settings by referring to the appropriate section in the *File Dynamics 6.5 Administration Guide*:
  - ◆ For Security and Workload policies, see [Establishing the CouchDB Settings in the Admin Client](#).
  - ◆ For the Work Log, see [Establishing the Work Log Database Settings in the Admin Client](#).

# 5 Upgrading from Storage Manager 5.2, or File Dynamics 6.x to File Dynamics 6.5

File Dynamics 6.5 lets you upgrade from versions as early as Storage Manager for Active Directory 5.2. The upgrade process will:

- ◆ Convert existing policies so that they will work in a File Dynamics 6.5 environment.
- ◆ Change the names of proxy accounts (if upgrading from Storage Manager 5.2).
- ◆ Change the location of files from a Novell folder to a Micro Focus folder (if upgrading from Storage Manager 5.2).
- ◆ Change the classification of Security Notify policies to Security Notification policies (if upgrading from File Dynamics 6.x).

## 5.1 Upgrading from Storage Manager 5.2

Upgrading from Storage Manager 5.2 to File Dynamics 6.5 generally follows the same procedures as those for a new installation. You will need to update the license, configure the database, configure the Engine, and install the Epoch File Viewer.

For procedures, see [Chapter 6, “Installing File Dynamics 6.5,” on page 43](#).

### 5.1.1 Micro Focus File Dynamics Essentials

Beginning with Version 6.5, Micro Focus is introducing an optional setup of File Dynamics named Essentials. Essentials provides customers with the opportunity to run an installation of File Dynamics that has approximate feature parity with Micro Focus Storage Manager for Active Directory Version 5, the predecessor to File Dynamics.

Essentials has been created for existing Storage Manager for Active Directory customers that do not yet wish to take advantage of the advanced features of Dynamics but still run on a more advanced code base with a number of improvements. These advanced features still exist in the product installed and are visible, but disabled, in the administrative interface.

The full product and Essentials are the same product installed from the same installation package. The feature functionality difference is delineated by the product license installed. Therefore, customers have the ability to move from Essentials to the full product simply by changing the license.

Micro Focus highly encourages Storage Manager customers to:

- ◆ Move to the full product as soon as possible as rapid feature development is being brought to market
- ◆ Give the full product a try by requesting an time-based evaluation license

## Upgrade Process

File Dynamics provides a simple and automated upgrade from a Storage Manager for Active Directory installation with configuration and policy definitions moving seamlessly to the new product and Storage Manager customers will be familiar with concepts and processes within the File Dynamics interface.

## Licensing

To activate a license for Essentials, customers will use the same [filedynamicssupport.com](http://filedynamicssupport.com) website, but will use an activation code for Essentials taken from the Micro Focus Customer Care portal, where the Essentials activation code should be shown alongside their existing Storage Manager activation code.

## Documentation

This product documentation is primarily intended for full product installations in that all feature functionality is documented. Customers can easily determine if they are running under an Essentials license by checking the “License Features” section within the AdminUI after installation or within the Configuration Dashboard during product installation as shown below respectively, where only “Core” is enabled.

**Figure 5-1** License Features Region of the Admin Client

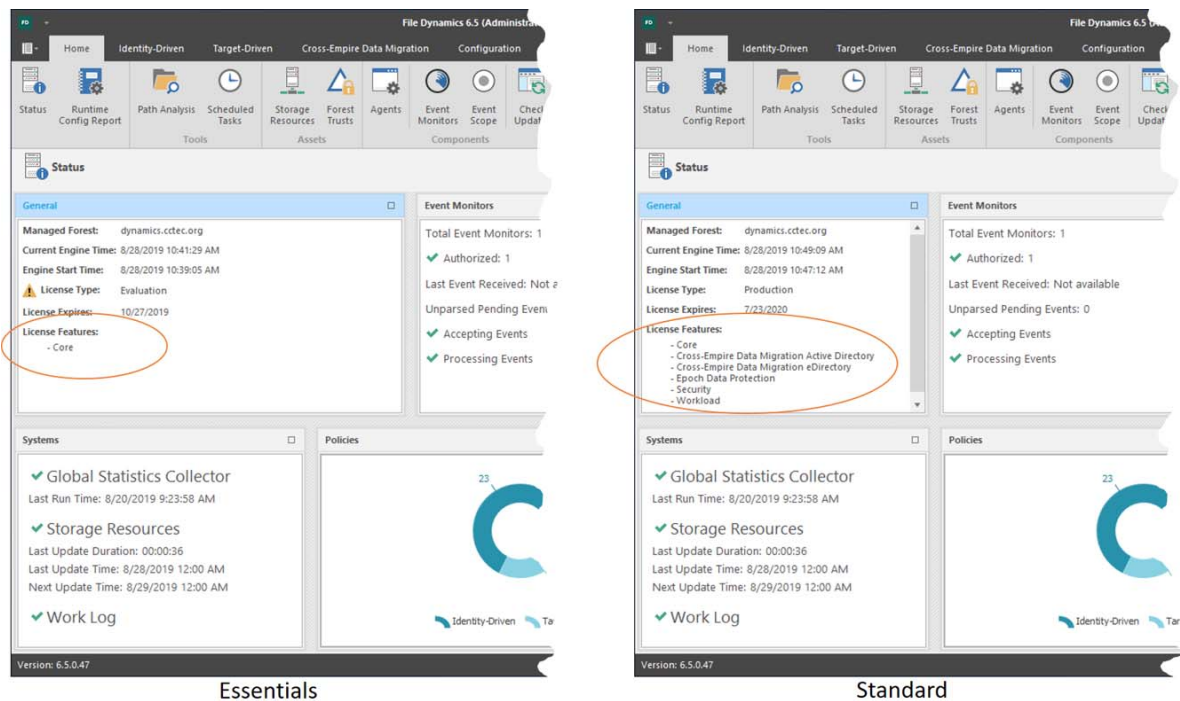
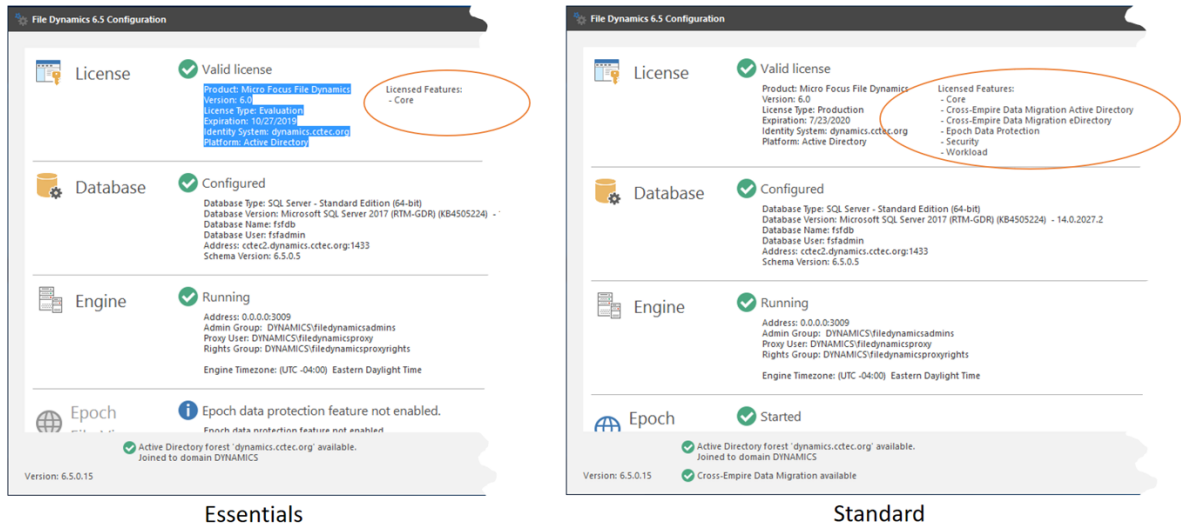


Figure 5-2 Configuration Dashboard



## 5.1.2 Upgrading from Storage Manager for Active Directory to File Dynamics Essentials

Follow the procedures in this section to upgrade Storage Manager for Active Directory to File Dynamics Essentials.

### Obtain the License Key and Software

A license key gives you access to the File Dynamics Essentials license file which is required during the product installation.

- 1 From a web browser, go to: [support.microfocus.com](http://support.microfocus.com).
- 2 In the upper-right corner area of the website, click **Support Login**.
- 3 Click the **Customer Center** option.
- 4 Enter your username and password, then click **Login**.
- 5 Click **Software**.

You will see a list of Micro Focus purchased software.

- 6 Click **Entitled Software**.

**File Dynamics Essentials 6.5** will be listed under the **Micro Focus Storage Manager** heading.

---

**NOTE:** Entitled software appears only if you are up to date on your Micro Focus Maintenance Agreement.

---

- 7 Click the **Keys** link associated with **File Dynamics 6.5 Essentials**.

A dialog box appears with the unique key number that you will need for accessing your license.

- 8 Copy the key number to a text file.
- 9 Click the download button next to the Key link to download the File Dynamics 6.5 Essentials software.

## Obtain the Product License

Obtain your File Dynamics Essentials license by completing and submitting a request form where you specify your license key number.

- 1 From a web browser, go to: [filedynamicsupport.com](http://filedynamicsupport.com).
- 2 From the top banner, click **License**.
- 3 Complete the form.
  - 3a In the **License Type** region, select the **Activation** option.
  - 3b In the **Activation Code** field, paste the key number that you previously copied to a text file.
- 4 Once you have completed the form, click **Submit**.

You will be emailed a link to download the product license.

- 5 From the email, click the link and save the license file to a location on the server that will host the File Dynamics 6.5 Essentials Engine.

In most cases, this will be the server currently hosting the Storage Manager for Active Directory Engine.

You will need to locate and specify this license when you go through the license installation procedure.

## Update and Configure Components

The upgrade process updates the Storage Manager for Active Directory code base to the File Dynamics code base while maintaining all of the existing policies, settings, pending events, schedules, etc. that you established with Storage Manager for Active Directory.

Upgrading generally follows the same order and procedures as those for a new installation. You will need to update the license, configure the database, configure the Engine, install and configure the Event Monitor, and install and configure the File System Agents (previously referred to simply as Agents).

For procedures, see [Chapter 6, “Installing File Dynamics 6.5,” on page 43](#).

## 5.2 Upgrading from File Dynamics 6.x

Upgrading from File Dynamics 6.x to 6.5 involves some required upgrades to components, along with some optional component upgrades.

---

**NOTE:** It is not necessary to upgrade the Event Monitor following the upgrade, although you might want to do so to have the latest version. You must upgrade the existing Agents, which are now referred to as “File System Agents.”

---

### 5.2.1 Required Component Upgrades

- ♦ Admin Client



- ◆ Engine
  - ◆ Configure the database to support Security Notify policies
  - ◆ Configure the Engine to repair the firewall rule

- ◆ Phoenix Agents

This is necessary to support Security Notify policies and so that you can set ownership on files via Workload.

## 5.2.2 Optional Component Upgrades

- ◆ Event Monitor
- ◆ File System Agents
  - ◆ Configure the FS Agents to repair the firewall rule
- ◆ Data Owner Client

## 5.2.3 Upgrading the CouchDB Schema

Existing Security Notify policies can be upgraded to what are now referred to as Security Notification policies. To do so, you must first extend the schema of the CouchDB database.

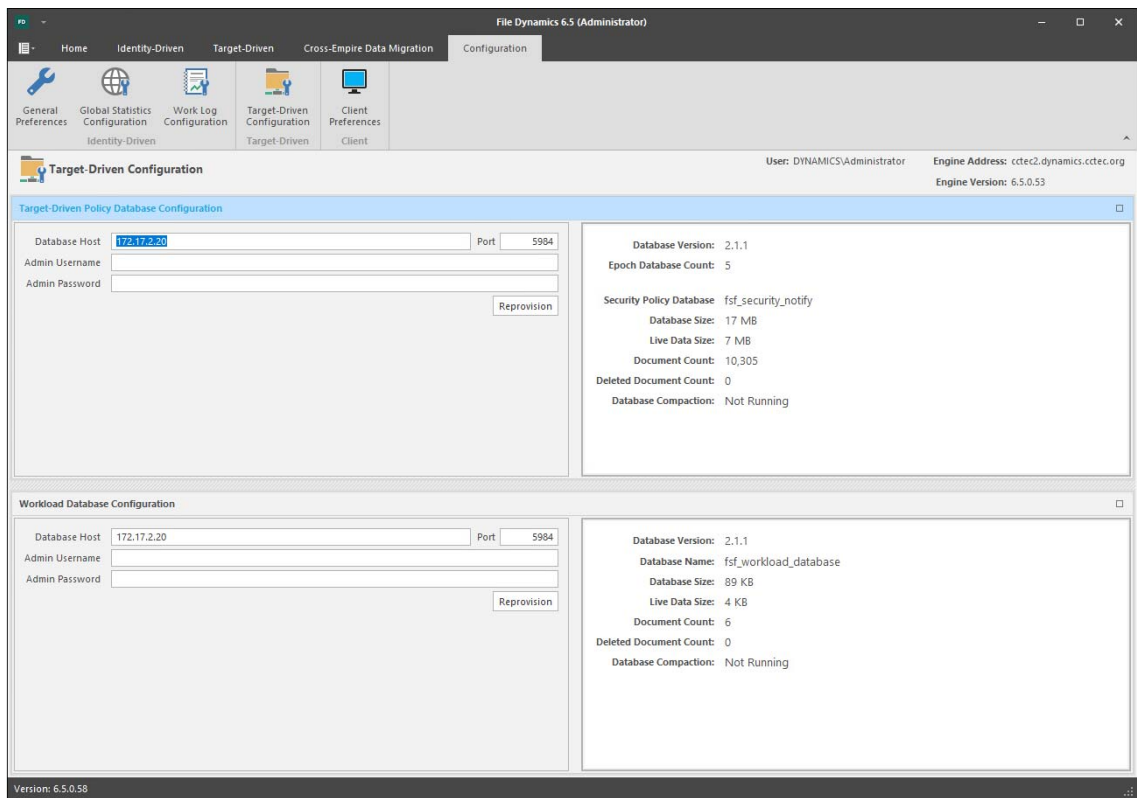
Furthermore, all Security Notify policies will need to be updated individually. For more information, see [Upgrading Old Security Notify Policies](#) in the *File Dynamics 6.5 Administration Guide*.

### Prerequisites

- ◆ Install the File Dynamics 6.5 Admin Client.

For procedures, see [Section 6.13, “Installing the Admin Client,”](#) on page 90.

- 1 Launch the Admin Client.
- 2 Click the **Configuration** tab.
- 3 Click **Target-Driven Configuration**.



- 4 In the **Target-Driven Policy Database Configuration** region, enter the CouchDB administrator username and password and click **Reprovision**.
- 5 When notified that the database settings have been saved, click **OK**.

# 6 Installing File Dynamics 6.5

This section provides procedures for installing and configuring the Engine, database, Epoch File Viewer, Event Monitor, Agents, and Admin Client. For information on how these components work in a File Dynamics deployment, see [The Directory](#) in the *File Dynamics 6.5 Administration Guide*.

You should follow these procedures only after you have performed the prerequisite tasks in [Chapter 1, “Prerequisites,” on page 7](#), obtained a File Dynamics 6 product license as indicated in [Chapter 2, “Licensing the Product,” on page 13](#), and installed an SQL Server instance as specified in [Chapter 3, “Installing and Configuring an SQL Server Instance,” on page 17](#).

- ◆ [Section 6.1, “Domain Administrator Permissions,” on page 43](#)
- ◆ [Section 6.2, “Accessing the Product Contents,” on page 44](#)
- ◆ [Section 6.3, “Installing the Engine,” on page 44](#)
- ◆ [Section 6.4, “Installing the License,” on page 46](#)
- ◆ [Section 6.5, “Configuring the Database,” on page 47](#)
- ◆ [Section 6.6, “Configuring the Engine,” on page 50](#)
- ◆ [Section 6.7, “Configure the Epoch File Viewer,” on page 58](#)
- ◆ [Section 6.8, “Active Directory Schema,” on page 68](#)
- ◆ [Section 6.9, “Setting Rights and Privileges on Managed Storage,” on page 71](#)
- ◆ [Section 6.10, “Installing and Configuring the Event Monitor,” on page 74](#)
- ◆ [Section 6.11, “Installing and Configuring the File System Agents,” on page 79](#)
- ◆ [Section 6.12, “Installing and Configuring the Phoenix Agents,” on page 85](#)
- ◆ [Section 6.13, “Installing the Admin Client,” on page 90](#)
- ◆ [Section 6.14, “Authorizing the Event Monitor,” on page 91](#)
- ◆ [Section 6.15, “Authorizing the Agents,” on page 91](#)
- ◆ [Section 6.16, “Configuring Your Storage Resources,” on page 92](#)
- ◆ [Section 6.17, “Installing the Data Owner Client,” on page 92](#)
- ◆ [Section 6.18, “Administering File Dynamics,” on page 94](#)

This section also provides procedures for assigning rights and privileges to the `filedynamicsproxyrights` group that is created when you install the Admin Client.

## 6.1 Domain Administrator Permissions

In order to successfully configure the Engine, Event Monitor, and Agents, you must be logged in to the computer as a domain administrator. If you are not, the permissions are not sufficient.

## 6.2 Accessing the Product Contents

- 1 On the Windows server that will host the Engine, copy to a directory the `FileDynamics_6.5.0.iso` file that was made available to you following your purchase of Micro Focus File Dynamics 6.5.
- 2 Mount the `FileDynamics_6.5.0.iso` file.
- 3 Note the location of the mounted ISO.

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

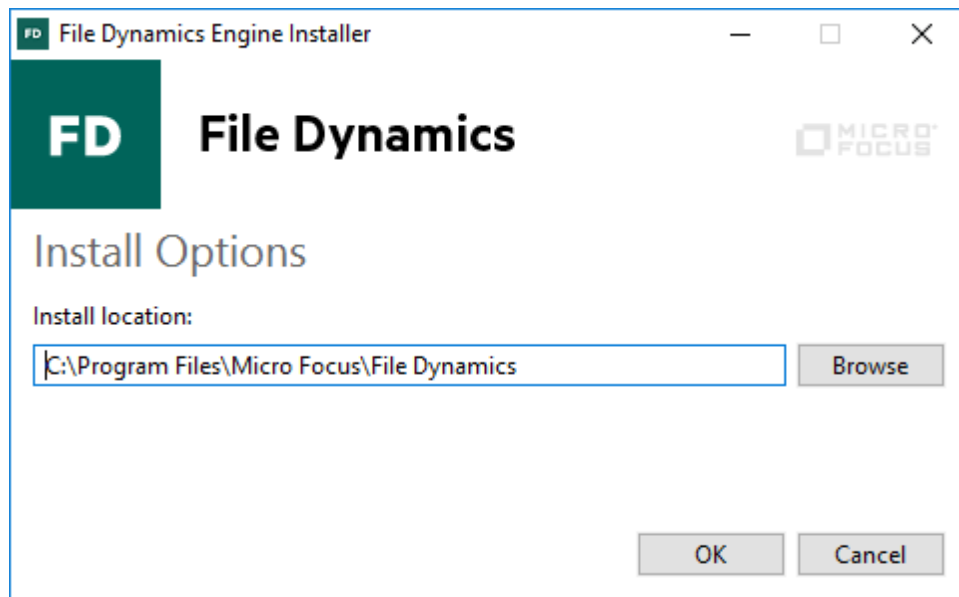
## 6.3 Installing the Engine

File Dynamics uses only one Engine per forest. The Engine can be installed on host server that meets the following minimum requirements:

- ◆ Microsoft Windows Server 2019 (Member Server)
- ◆ Microsoft Windows Server 2016 (Member Server)
- ◆ Microsoft Windows Server 2012 R2 (Member Server)
- ◆ At least 4 GB RAM
- ◆ For quota management, Microsoft File System Resource Manager (FSRM) must be installed; see [Section 1.2, “File Server Resource Manager,” on page 8](#).
- ◆ Forest functional level of Windows Server 2003 or later

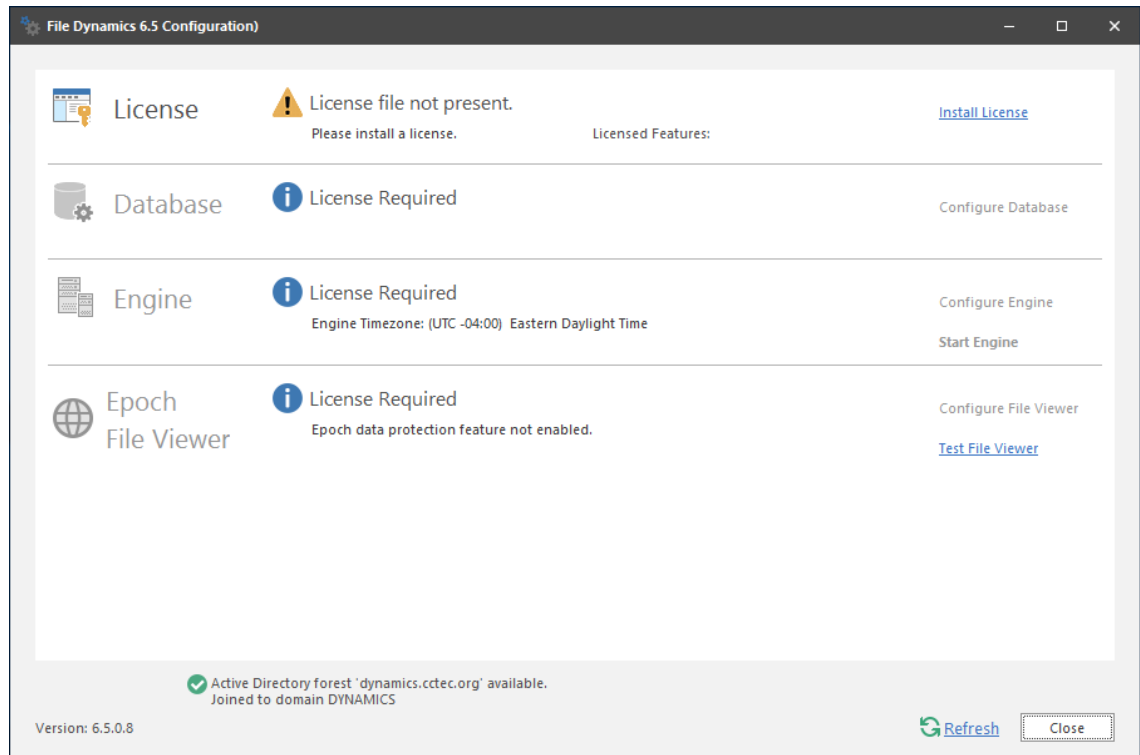
Other notable information about the Engine:

- ◆ The Engine runs as a native NT service that is configured to start by using the Local System account
  - ◆ The default Engine port is 3009
  - ◆ The firewall inbound rule is added during the Engine installation
- 1 At the root of the `FileDynamics_6.5.0.iso` image, double-click `FileDynamics-Engine-6.5-xx.exe`.
  - 2 When you are asked if you want to run this file, click **Run**.
  - 3 Agree to the licensing terms and conditions.
  - 4 (Conditional) If you want to install the Engine to a location other than the default path, click **Options**.



- 5 In the **Install location** field, specify the new path and click **OK**.
- 6 Click **Install**.  
The File Dynamics File Viewer Setup Wizard is launched.
- 7 Read the overview on the initial page of the wizard and click **Next**.
- 8 For the Web Application and the Config Utilities, accept the installation paths or indicate a new path by using the **Browse** button.
- 9 Click **Install**.
- 10 Click **Finish** to close the wizard.  
The Install Successful message indicates that the Web Application and Config Utilities were installed successfully.
- 11 Click **Run Configuration Utility**.

The Configuration Utility is launched.

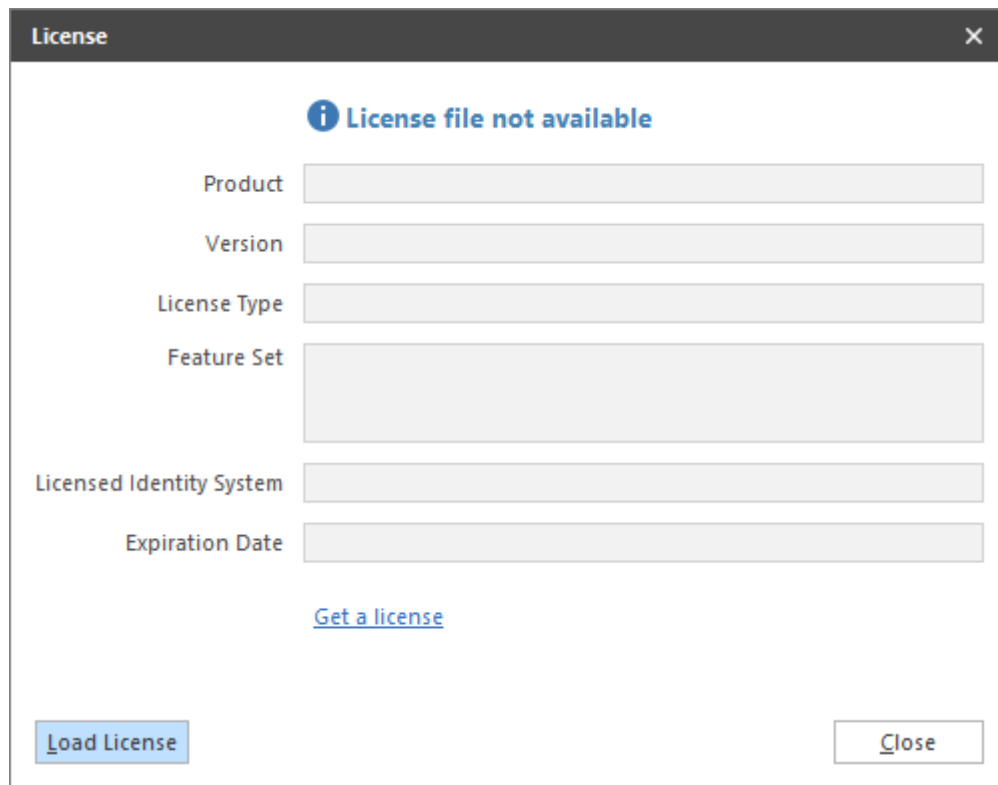


## 6.4 Installing the License

- 1 In the Configuration Utility, click **Install or Update License**.

The License dialog box appears.

If no license is found, the license properties will be empty.



2 (Conditional) If you don't have a trial or production license, click **Get a license** where you will be taken to the License page of the File Dynamics Support Site.

The License page is the means of requesting a trial license or activating a production license.

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

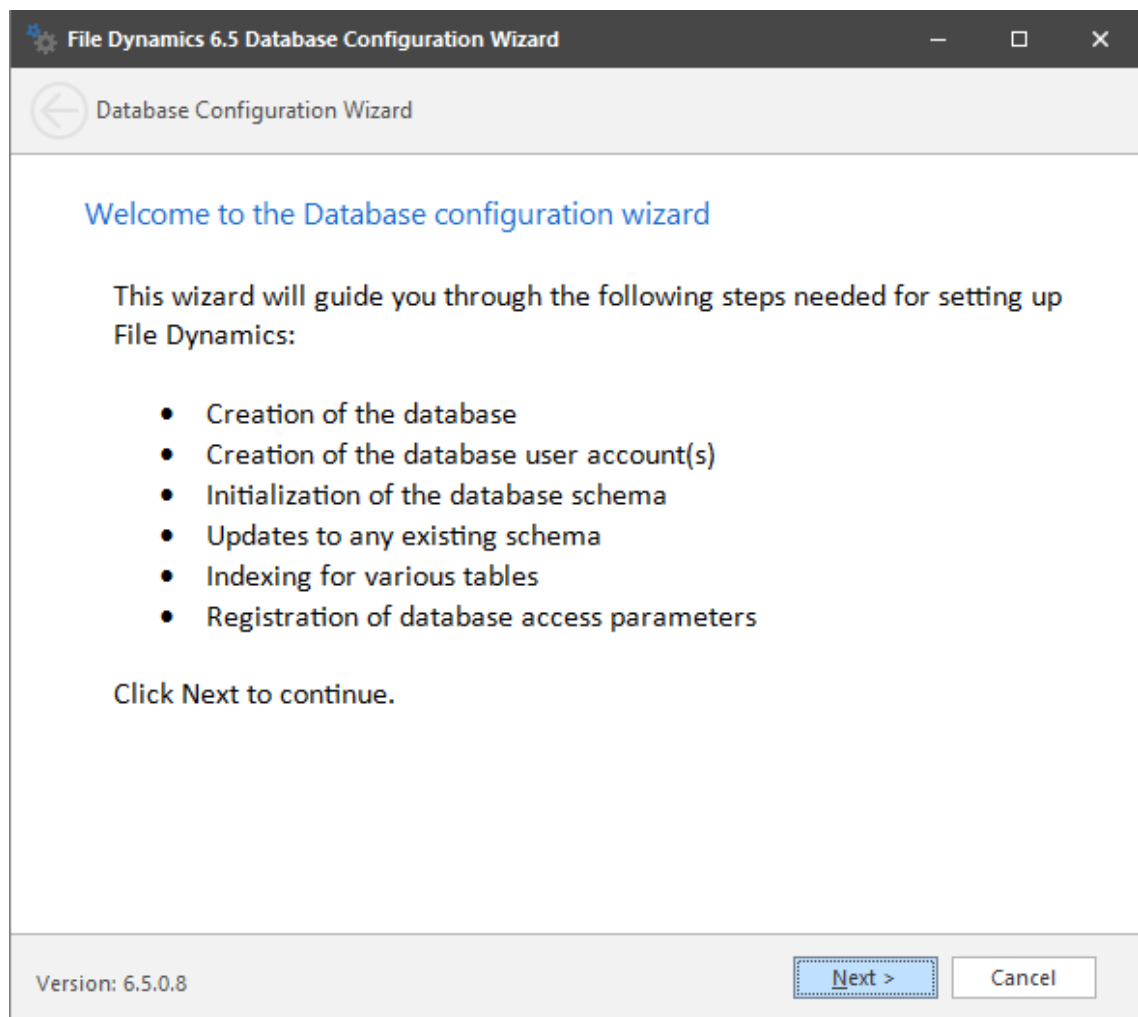
4 When the confirmation prompt appears, click **Yes**.

5 Examine the license properties to ensure that the license is valid.

6 Click **Close**.

## 6.5 Configuring the Database

1 In the Configuration Utility, 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 following page appears:



**File Dynamics 6.5 Database Configuration Wizard**

Database Configuration Wizard

### Database Connection

**Database Properties**

Type: SQL Server

**Communication**

Database Host Address: cctec2.dynamics.ctec.org Port: 1433

Initial Database: fsfdb

**Database Service Account - Enter the name of a database account for this application.**

Database Account Name: fsfadmin

Password: [ ]

Verify Password: [ ]

**Database Admin Credentials - Enter the credentials needed for provisioning the database.**

Use Windows Authentication

Database Administrator: sa

Password: [ ]

Version: 6.5.0.8

Next > Cancel

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

**Database Properties:** Displays information on the database.

**Type:** Displays the supported database.

**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 SQL Server port setting is 1433. If there is a port conflict, you can change it.

**Initial Database:** The default name of the File Dynamics database.

**Database Service Account:** Use this region to set authentication information for the database service account, which is the database account that the Engine uses to sign in to the database.

**Database Account Name:** By default, the database account is fsfadmin, which you can change in this field.

**Password:** Specify a password for the service account to connect to the database.

**Verify Password:** Specify the password again in this field.

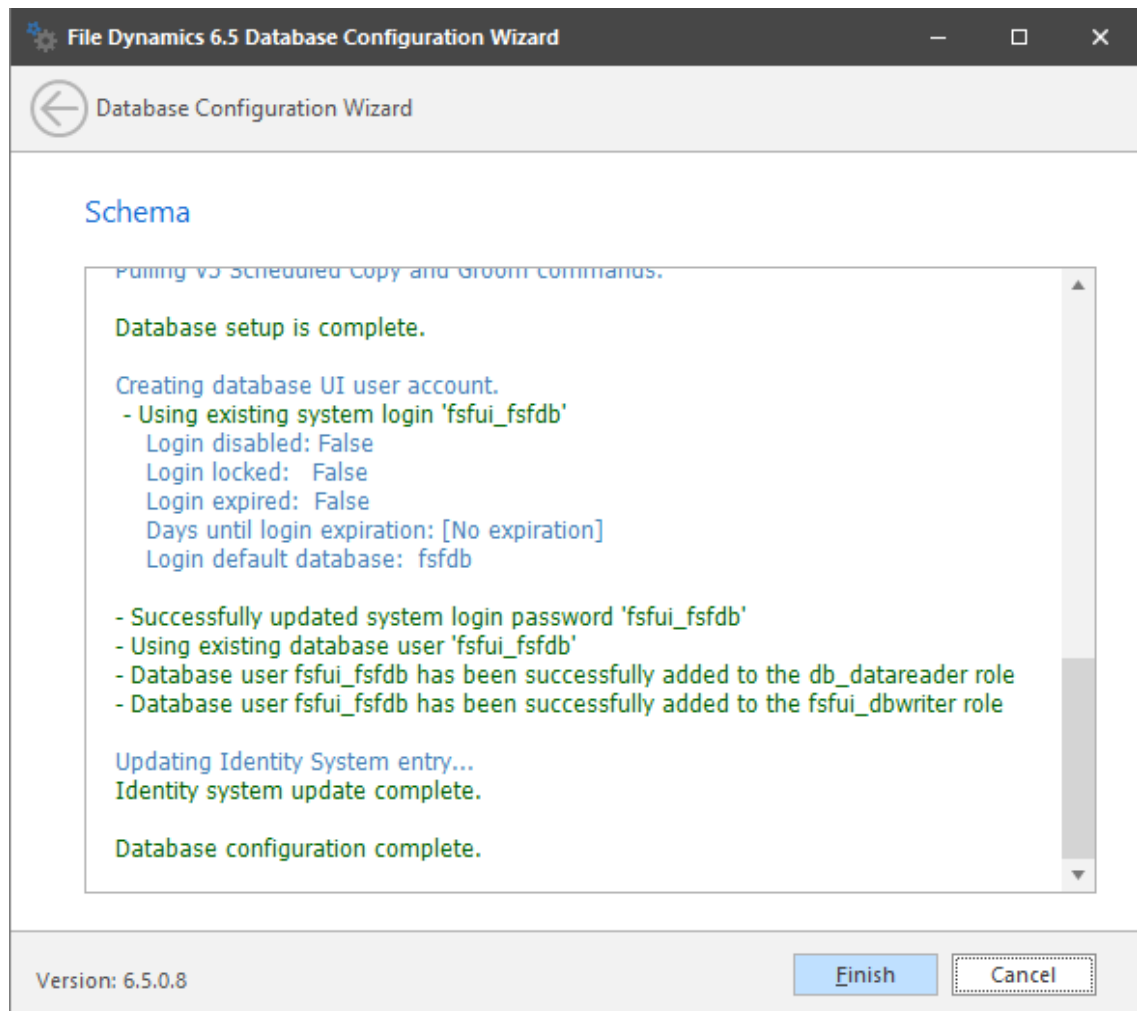
**Database Admin Credentials:** Use this region to establish the database administrator name and credentials.

**Use Windows Authentication:** Selecting this check box specifies that you want to configure the database using the authentication credentials of a Windows network administrator, rather than the credentials of an SQL Server database administrator. Selecting this check box disables the Database Administrator and Password fields.

**Database Administrator:** Specify the SQL Server administrator name.

**Password:** Specify the SQL Server administrator password.

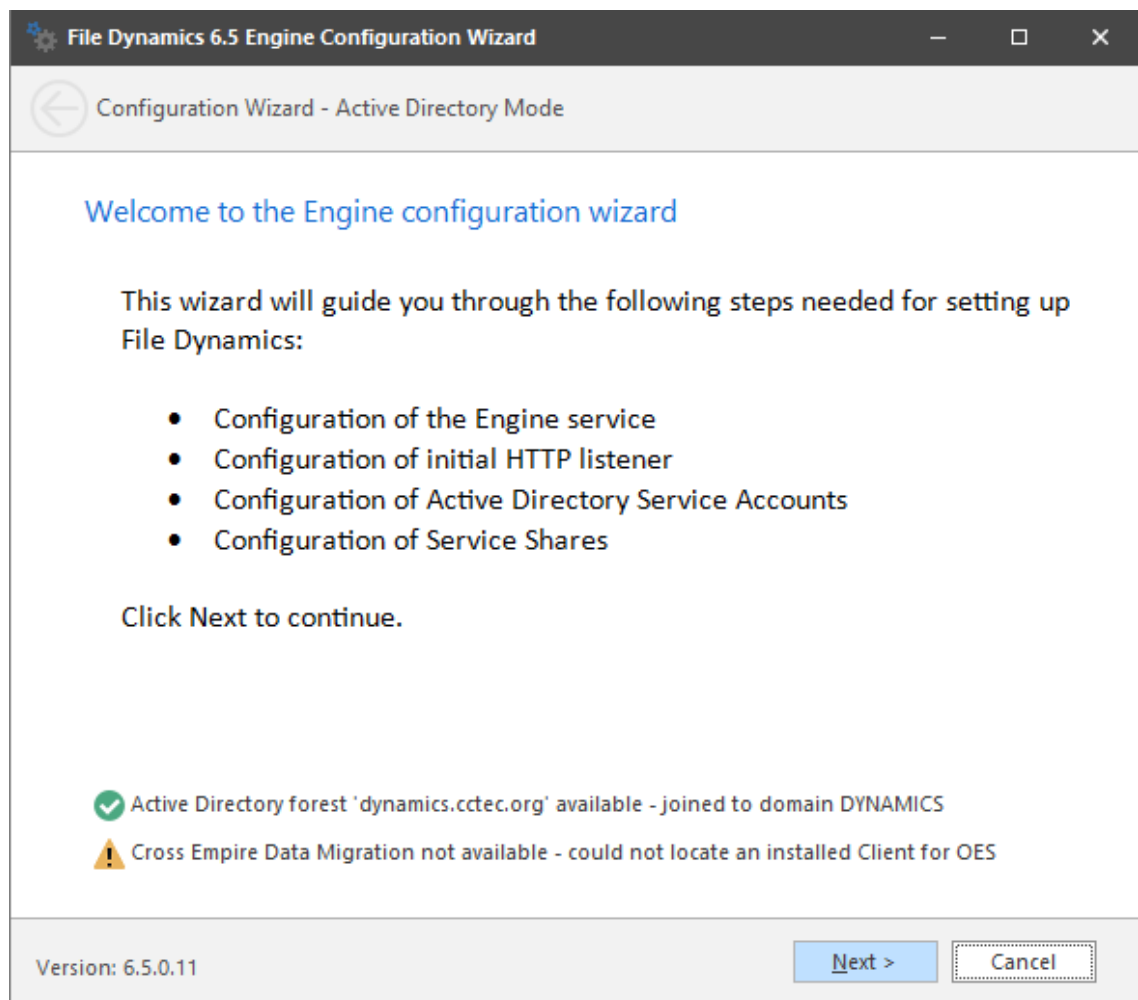
- 3 Complete the fields and click **Next**.



- 4 Review the configuration log and click **Finish**.

## 6.6 Configuring the Engine

- 1 In the Configuration Utility, click **Configure Engine**.



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

**File Dynamics 6.5 Engine Configuration Wizard**

Configuration Wizard - Active Directory Mode

### Basic Options

**HTTP Listener**

Host Address: 0.0.0.0

Port: 3009

**SSL Certificate**

Subject Name: cctec2.dynamics.cctec.org

Expiration Days: 3,653      Expiration Date: 7/24/2029 9:15:16 AM

Key Length: 4096

Details      Generate

Version: 6.5.0.11      Next >      Cancel

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

**HTTP Listener:** Communication parameters for the Engine.

**Host Address:** To listen to all addresses, leave the setting at 0.0.0.0. To limit listening to a specific address, enter the address here.

**Port:** The default port is 3009.

**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.

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

**File Dynamics 6.5 Engine Configuration Wizard**

Configuration Wizard - Active Directory Mode

### Active Directory Service Accounts

**Proxy Account**  
Enter the name of a service account used by the Engine and Agents for all operations.

**Proxy Rights Group**  
Enter the name of a service group used for rights assignments for access to server, share, and file resources. The Proxy Account will automatically be assigned as the initial member of this group.

**Admins Group**  
The Admins Group is used to restrict access to logon and manage File Dynamics.  
Note that the current logged on user **DYNAMICS\Administrator** will be added to

Proxy Account:

Proxy Rights Group:

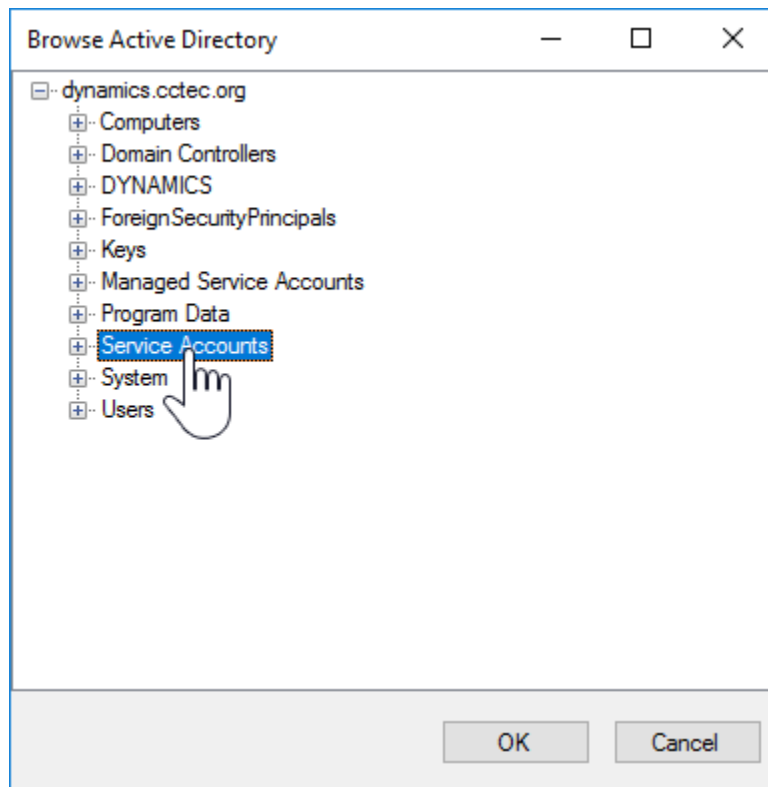
Admins Group:

Accounts Container:

Version: 6.5.0.11

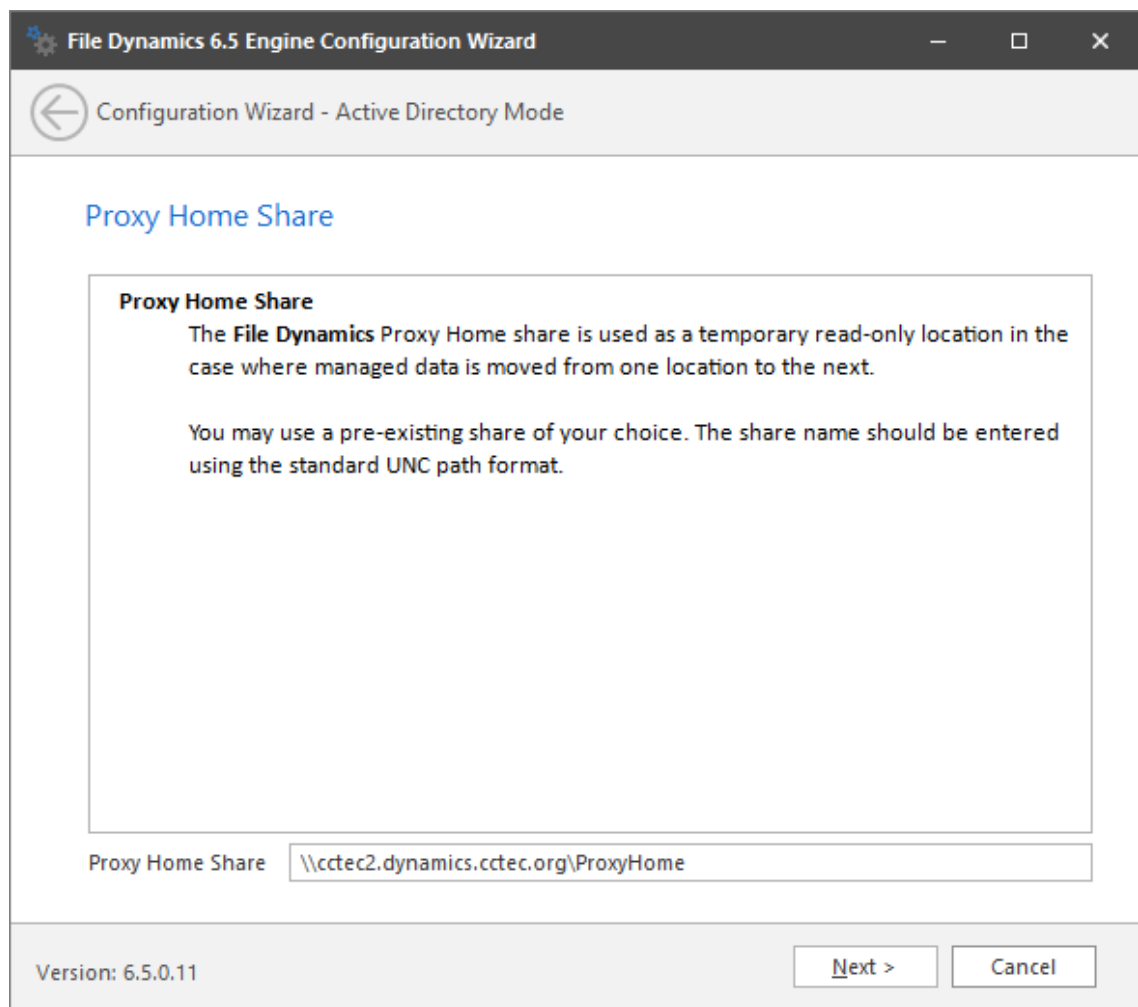
This page lets you establish a name for the Proxy Account, Proxy Rights, and Admins Groups. File Dynamics uses proxy accounts so that it can perform tasks necessary for storage management.

Because you will want to create the proxy objects in an Active Directory container appropriate to your environment, you can specify the container using the **Browse** button.



In this example, the proxy objects are being created in the `Service Accounts` container.

- 4 Establish your proxy account settings and click **Next**.



The Proxy Home Share that you establish in this page is the read-only location where users' managed path attributes are temporarily set when data is moved because of a change in policy.

- 5 Click **Next**.

**File Dynamics 6.5 Engine Configuration Wizard**

Configuration Wizard - Active Directory Mode

### SMTP Settings

**Mail Listener**

Host Address: 127.0.0.1      Port: 25

Connection Type: TLS

**Mail Options**

From Address: fsf-alerts@localhost

Use Authentication

Username: \_\_\_\_\_

Password: \_\_\_\_\_

Email Address: \_\_\_\_\_ **Send Test Email**

Version: 6.5.0.11      **Next >**      **Cancel**

Target-Driven security policies allow for email notifications to be sent to designated recipients. These notifications are sent to your email server to be relayed.

Completing fields in this page is optional.

**Mail Listener:** These fields specify information pertaining to the mail server that is sending alerts.

**Host Address:** Specify the IP address or DNS name of the mail server.

**Port:** Specify the port number for the mail server.

**Connection Type:** From the drop-down menu, select the encryption type used by your mail server.

**Mail Options:** These fields specify additional mail information.

**From Address:** This field specifies the default address where the alerts come from.

**Use Authentication:** In most cases, SMTP will require authentication. Selecting this check box activates the **Username** and **Password** fields where you can enter the credentials for authenticating to the SMTP server.

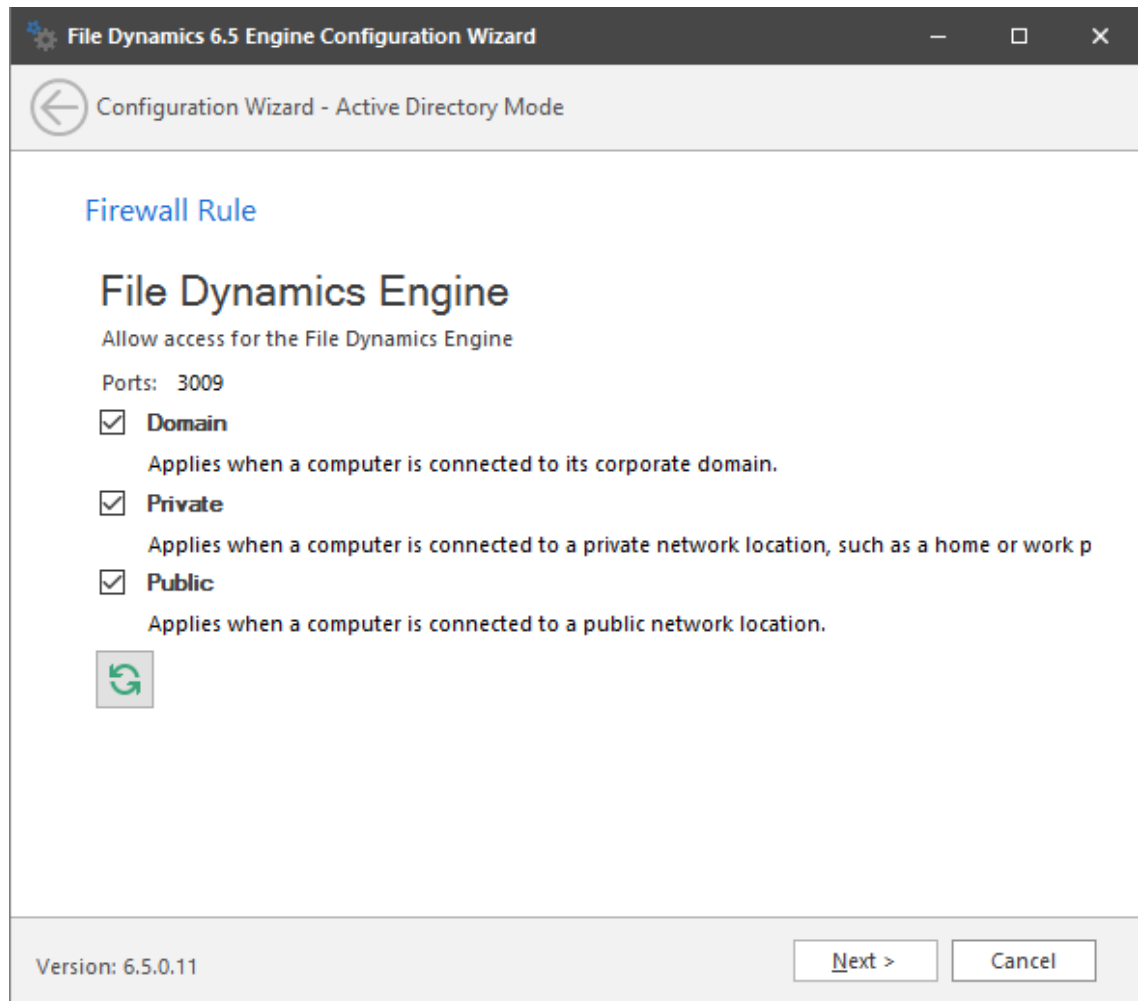
**Email Address:** Specify an email address for a test alert.

**Send Test Email:** Click this button to send a test email to the recipient specified in the **Email Address** field.



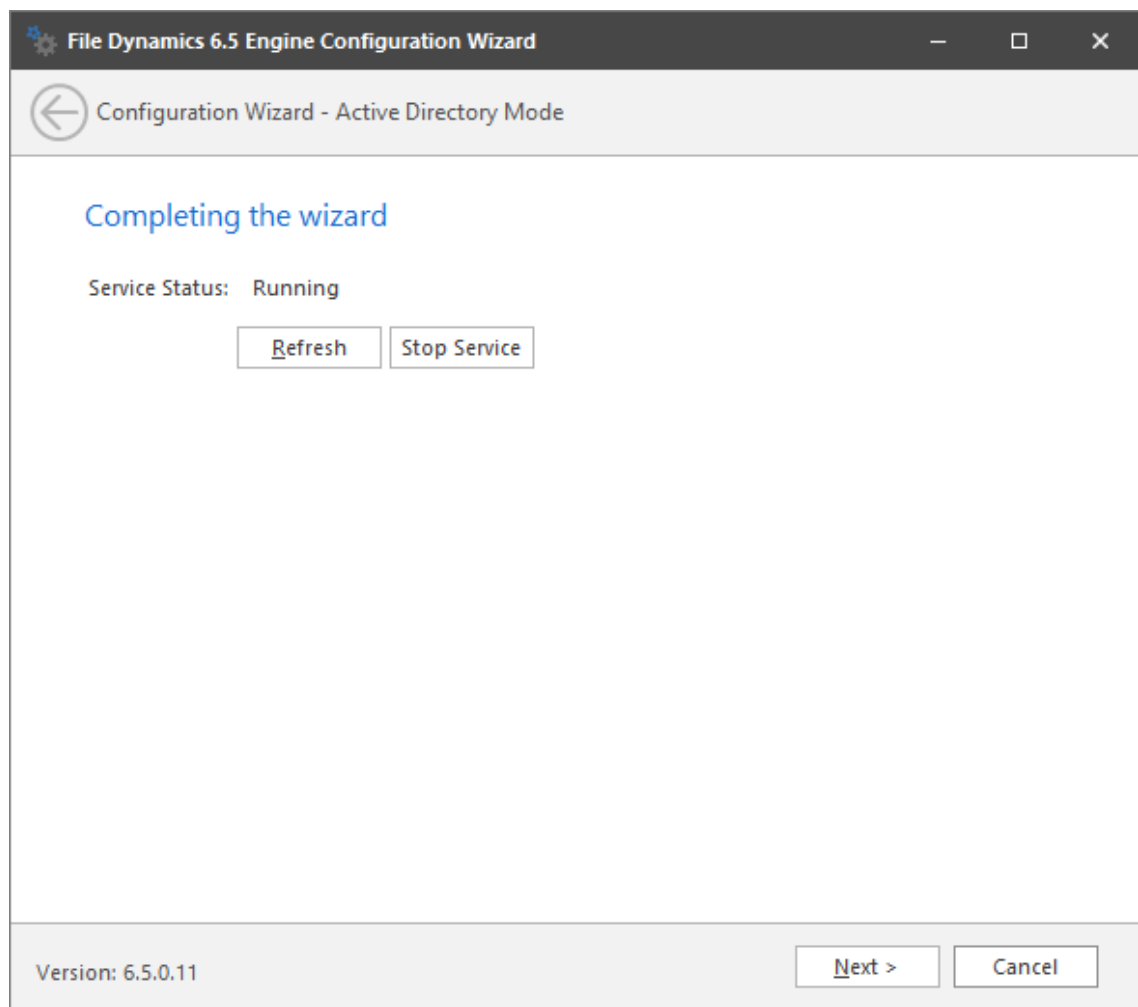
Micro Focus recommends that a specialized email account be used such as an alerts@domain or no-reply@domain account if authentication is required for relay. You might need to contact your email administrator for the correct settings.

- 6 Establish your SMTP settings and click **Next**.



This page displays the current Windows firewall rules that pertain to the Engine. You can enable or disable these profiles as needed.

- 7 Click **Next**.



- 8 Click **Finish**.

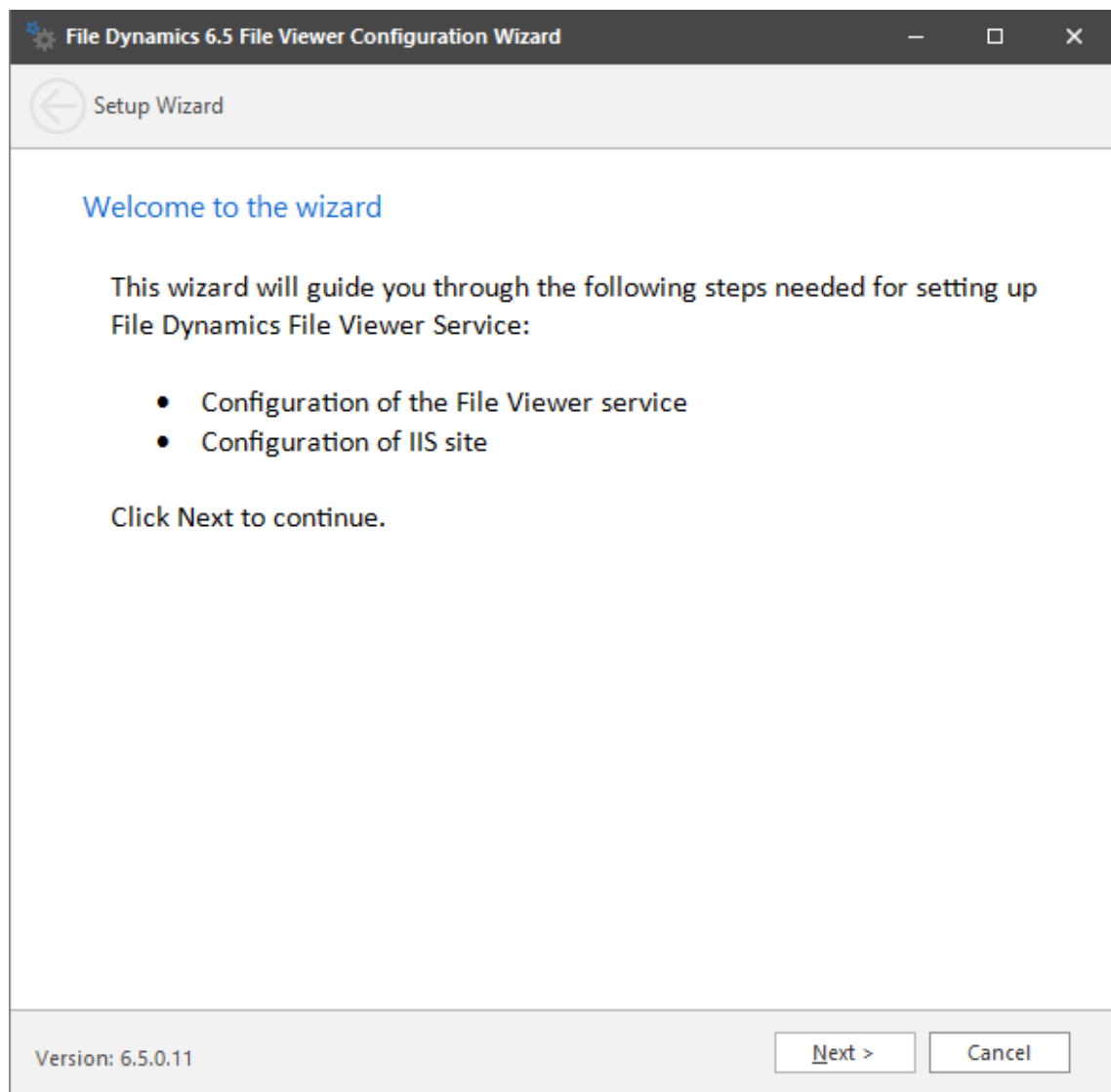
## 6.7 Configure the Epoch File Viewer

The Epoch File Viewer is what the Data Owner Client (needed for Epoch Data Protection) uses to see a rendering of a file before it is recovered. This procedure sets up Microsoft IIS and ASP.NET.

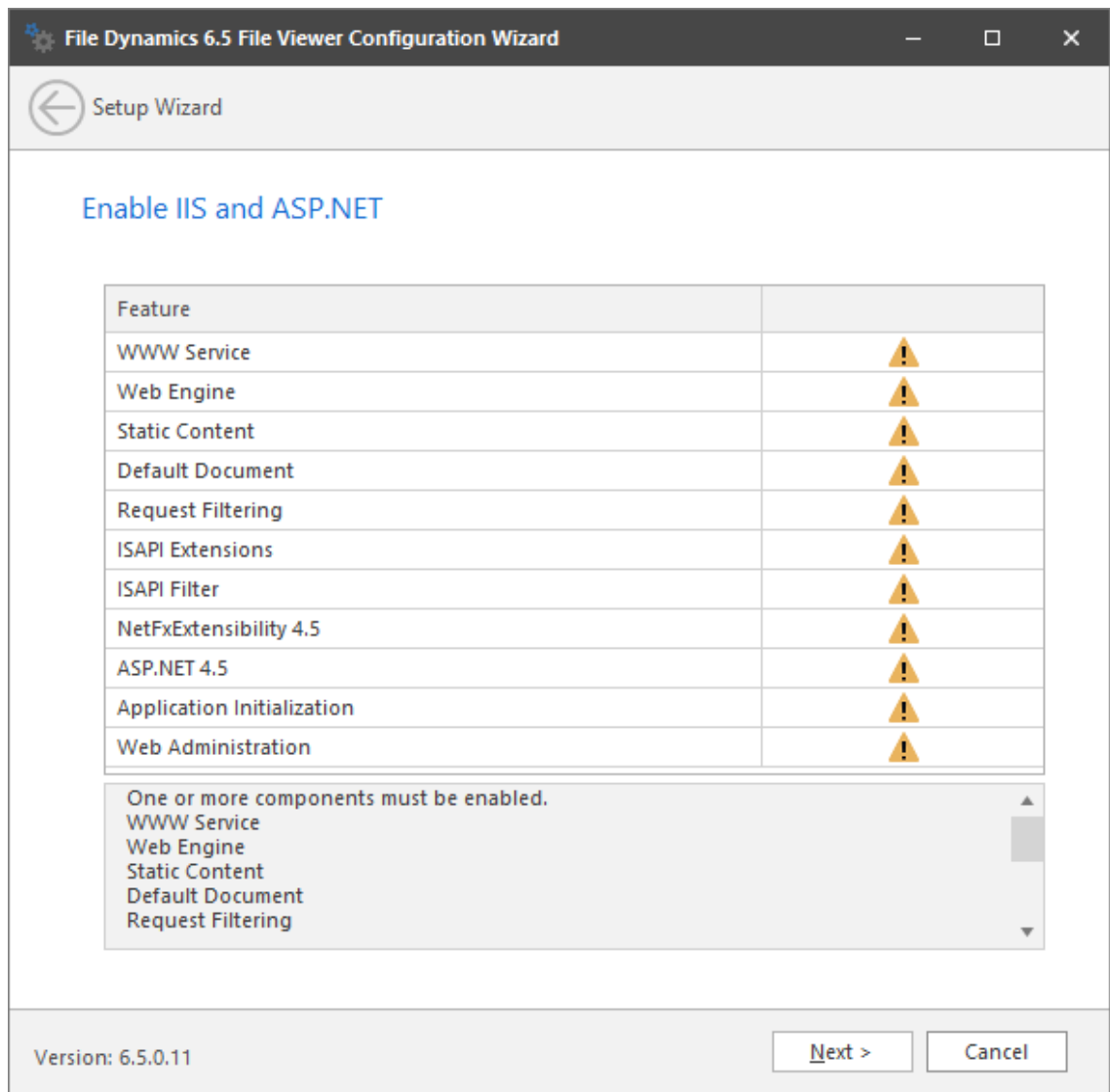
Configuring the Epoch File Viewer is required only if you will be establishing Epoch Data Protection policies.

Configuring the Epoch File Viewer will, in the process, install and configure Microsoft IIS.

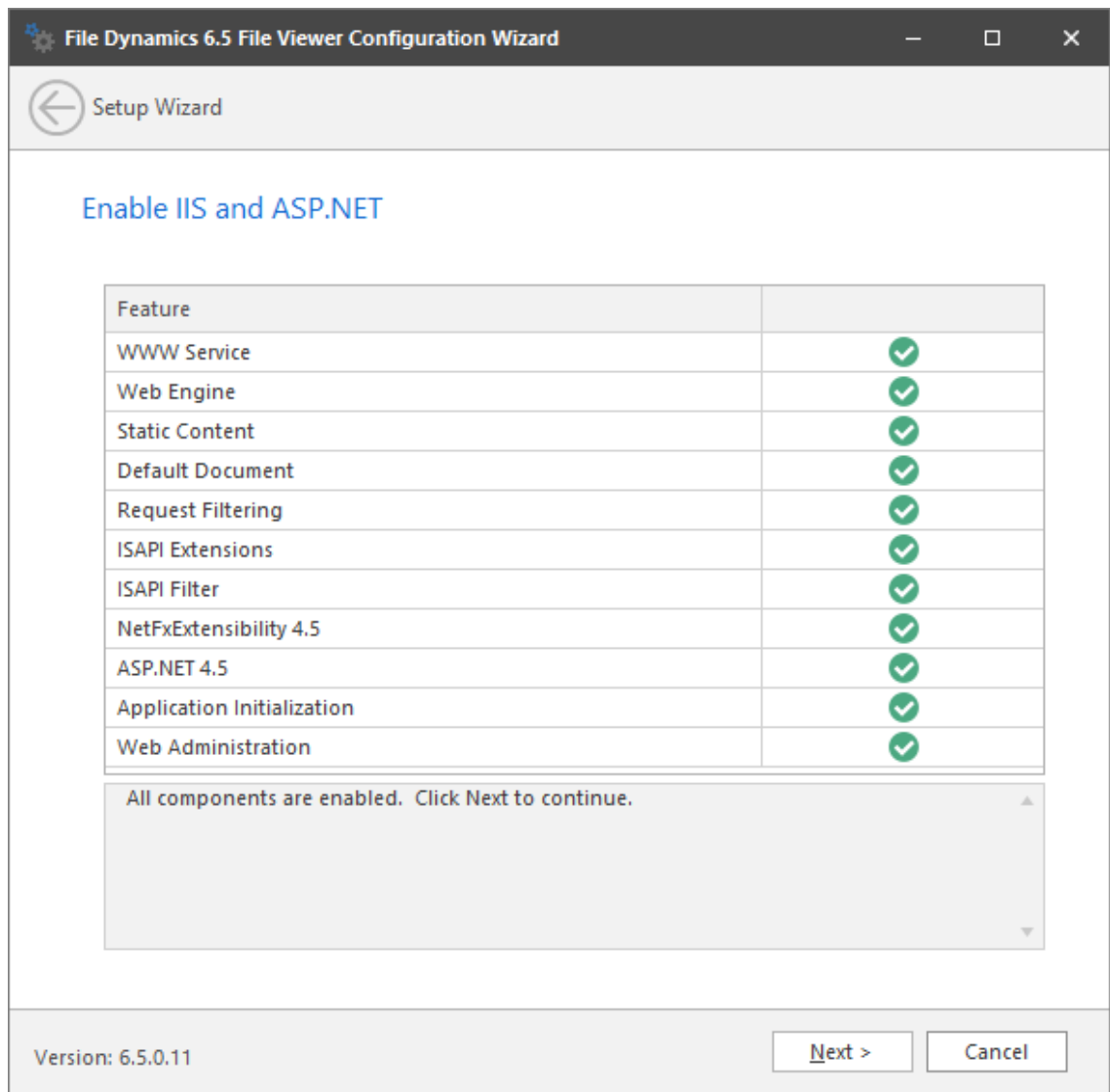
- 1 Click **Configure File Viewer**.
- 2 When the confirmation prompt to stop the Engine appears, click **Yes**.



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



4 Click Next.



5 Click Next.

**File Dynamics 6.5 File Viewer Configuration Wizard**

Setup Wizard

### Configure IIS Site

**Web Site**

Web Site: File Dynamics File Viewer

Physical Path: C:\inetpub\File DynamicsFileViewer\_root\

IP Address: All Unassigned Addresses | SSL Port: 443

Host Name: FDfileviewer.dynamics.cctec.org

**Application Pool**

Name: File Dynamics FileViewer

**Service Account**

Service Account: FDFileViewSvc

Password: [Masked]

Password Confirm: [Masked]

New Account Container: CN=Users,DC=dynamics,DC=cctec,DC=org | Browse

Version: 6.5.0.11 | Next > | Cancel

This page lets you review or edit settings applicable to the Microsoft IIS configuration. 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 website.

**Web Site:** The default name for the File Dynamics file viewer 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 during the installation of the Engine and is the location where files on the website are served up.

**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 [Chapter 1, “Prerequisites,” on page 7](#) of this manual.

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 File Dynamics Epoch File Viewer and that the resolved IP address or addresses are located on the host machine.

**Application Pool:** Settings pertaining to the File Dynamics 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.

**Service Account:** Authentication settings that the application pool will be using with Active Directory.

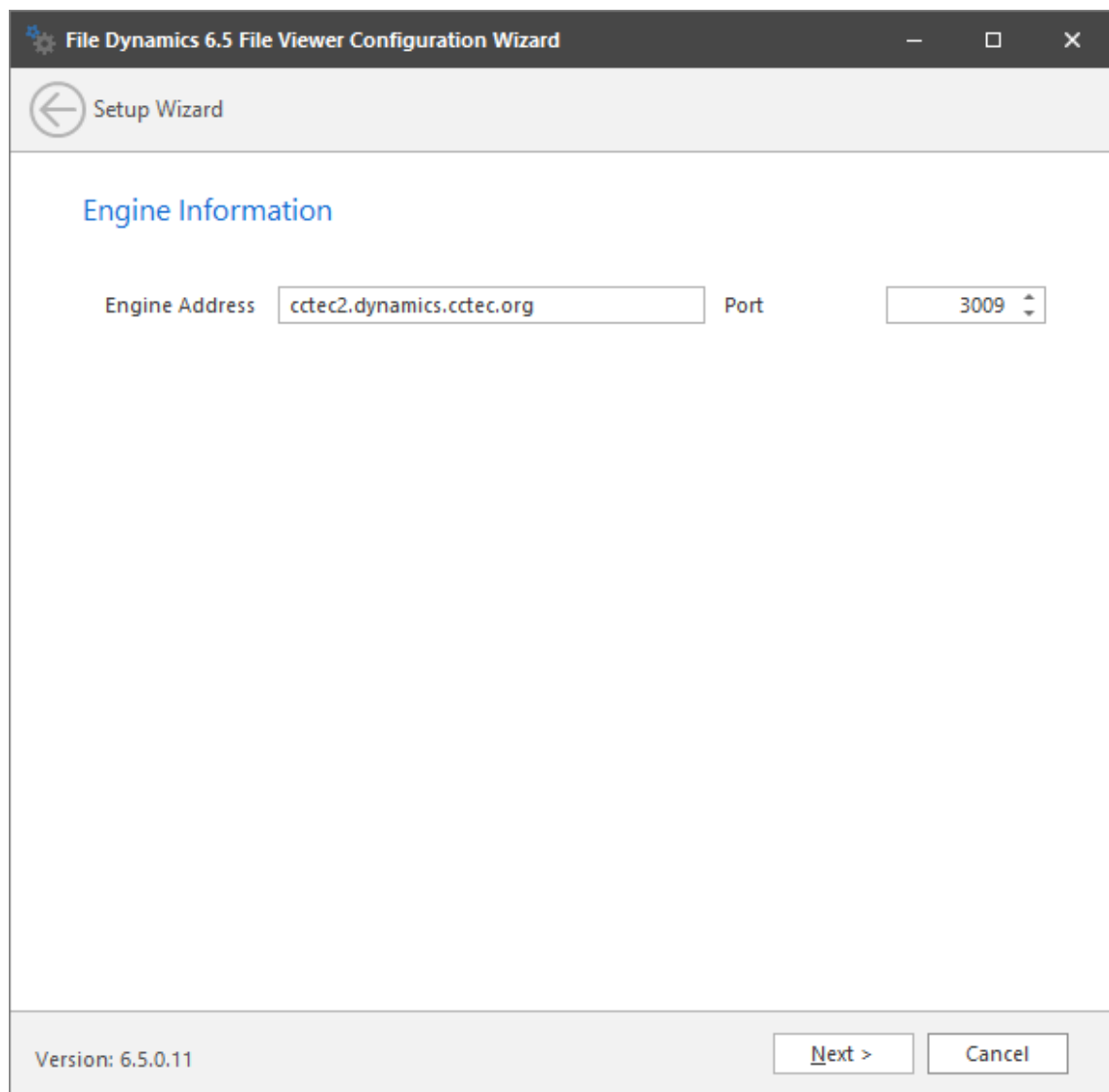
**Service Account:** The default name of the service account. If the default name does not conform to your organization's naming standards, you can edit it.

**Password:** A randomly-generated password for the service account. You do not need to know or remember this password.

**Confirm Password:** The randomly-generated password is duplicated in this field.

**New Account Container:** A default LDAP path is displayed where the service account will be created. If you do not have rights to the displayed container, you can use the **Browse** button to change the path.

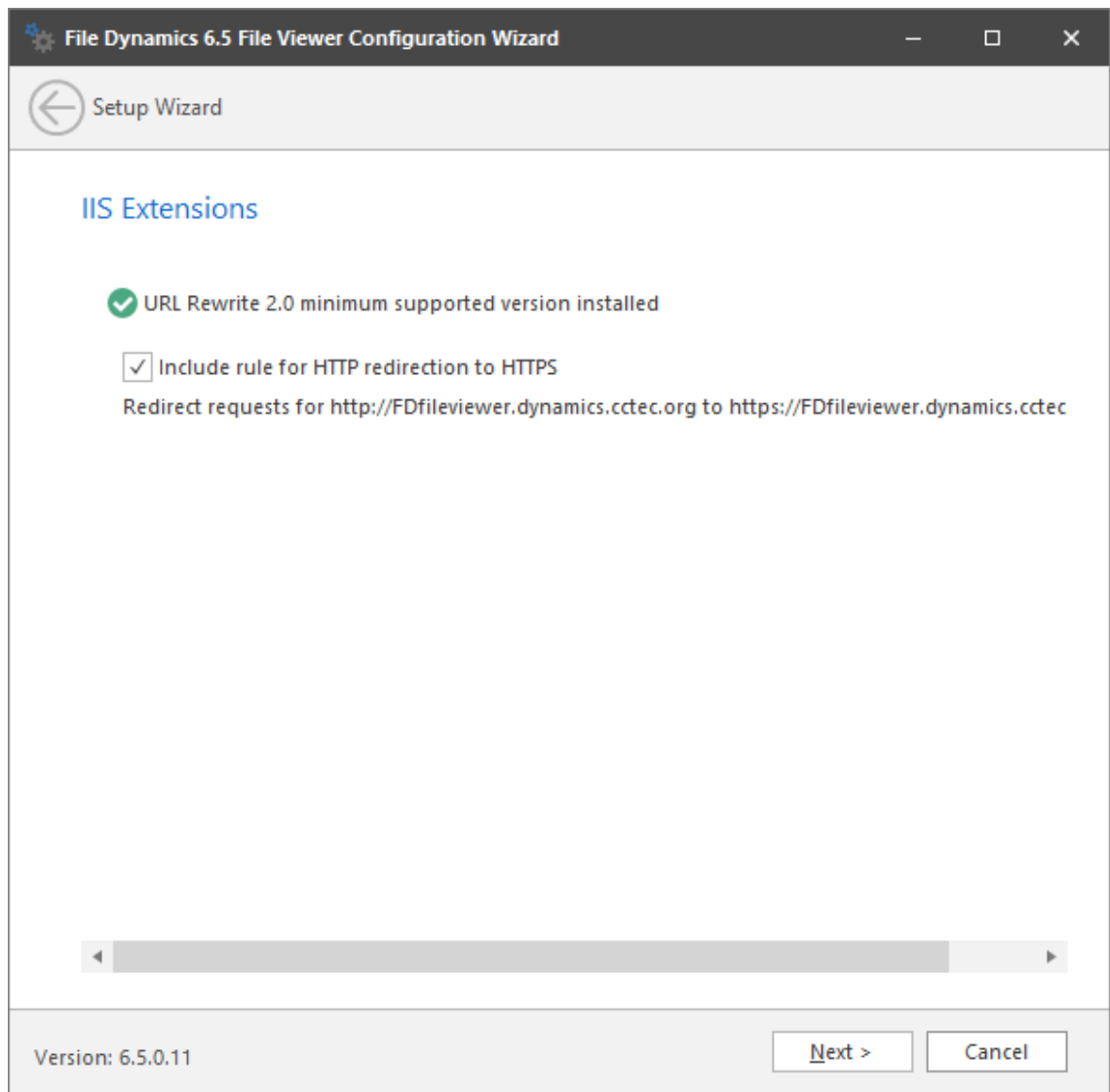
6 Modify any settings you need to, then click **Next**.



This page displays the Engine address and port number. The name be either in FQDN format or as an IP address.

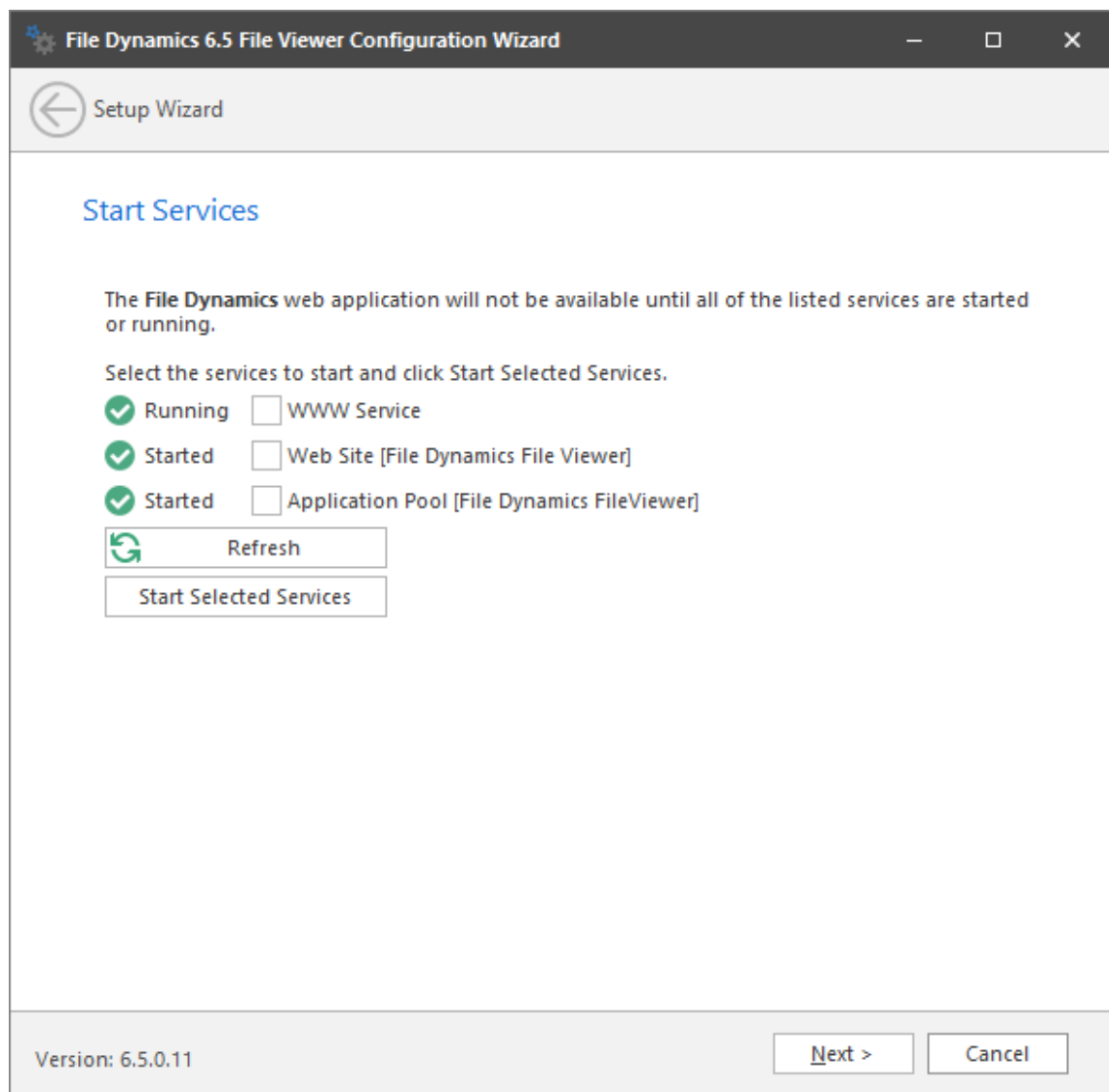
- 7 Click **Next**.





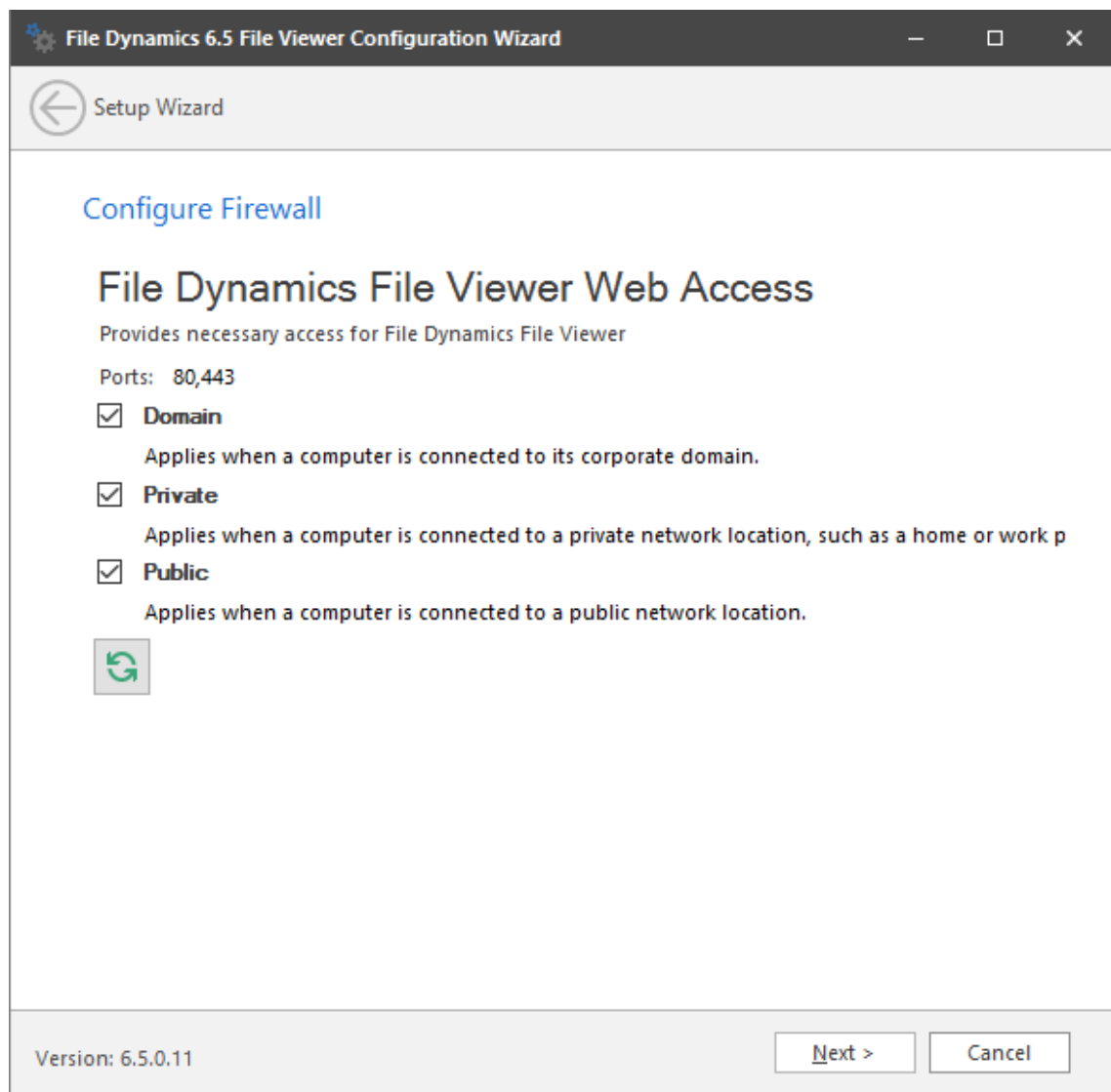
This page lets you install Microsoft IIS URL Rewrite Module 2.0, which will redirect the File Dynamics login page from an entered HTTP protocol, to HTTPS.

- 8 Click **Next**.

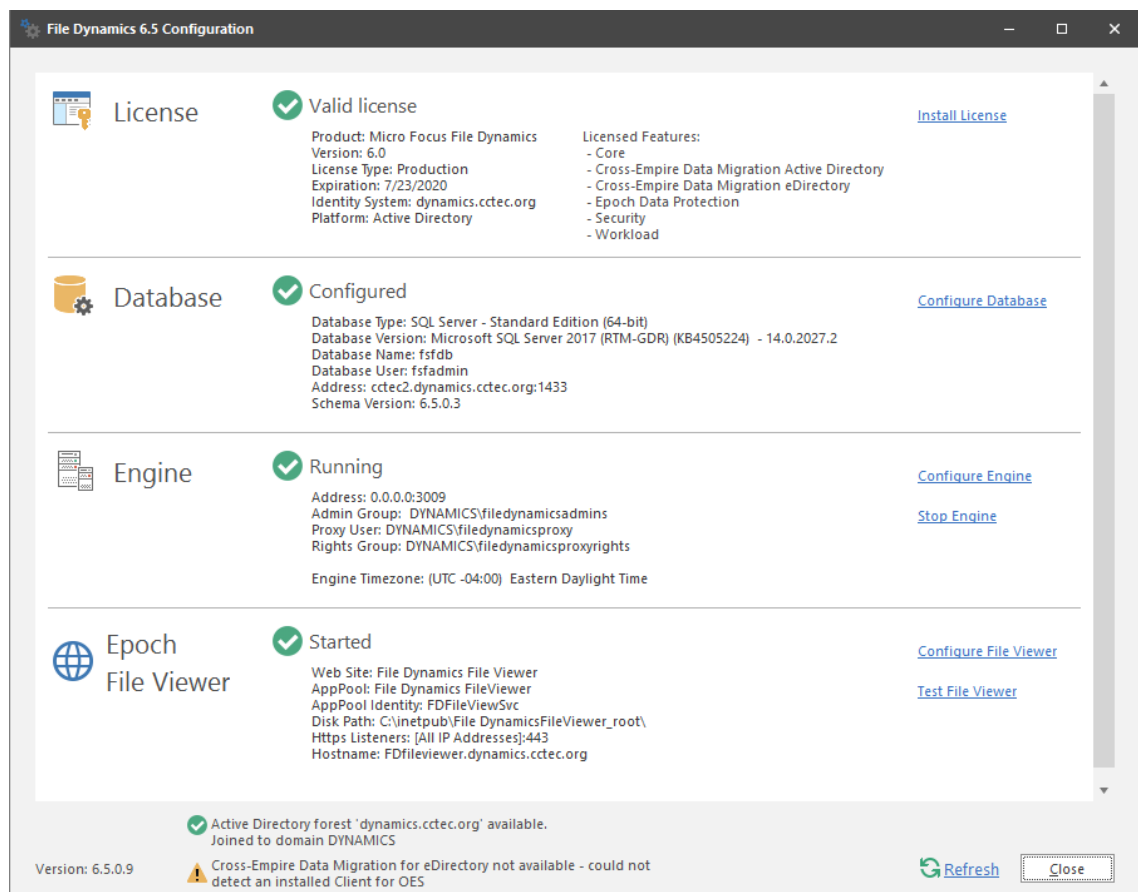


In most cases, all three listed services should be running. If a service is not running and you need to start one manually, you can do so.

9 Click **Next**.



- 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, Engine, and Epoch File Viewer are now configured.



12 Click **Test File Viewer**.

13 Do one of the following:

- ◆ If you are notified through the File Viewer Test page that “It worked!”, the communication between the IIS Server and the Engine is working.
- ◆ If you are prompted for a security exception, accept it and follow the procedures for establishing `https://fdfileviewer.domain` as a trusted website.

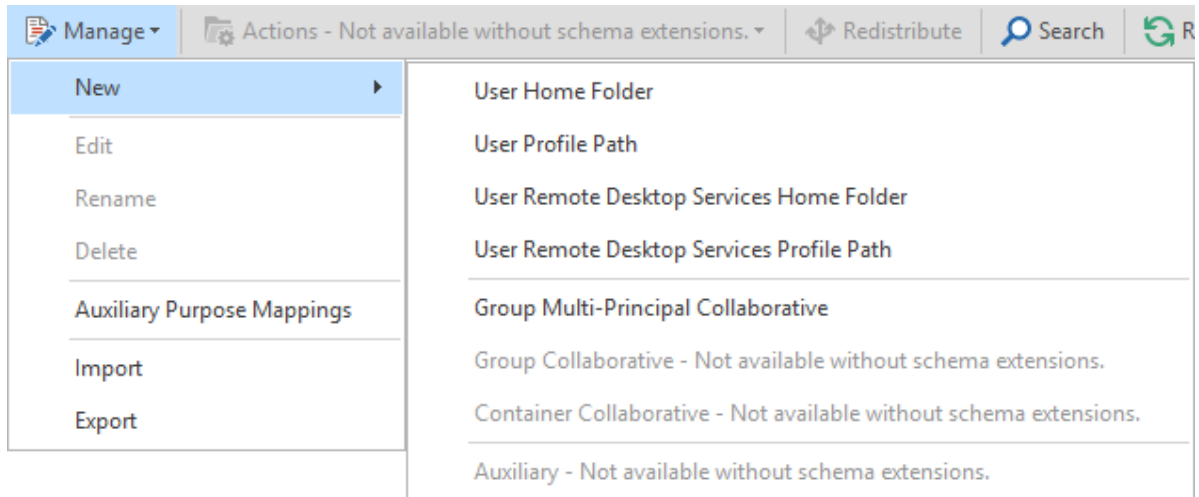
## 6.8 Active Directory Schema

The Microsoft Active Directory schema contains formal definitions of every object class that can be created in an Active Directory forest. The schema also contains formal definitions of every attribute that can exist in an Active Directory object.

To enable collaborative storage or auxiliary storage management, File Dynamics extends the Active Directory schema to enable File Dynamics attributes. These attributes are specified in [Active Directory Schema Extensions](#) in the *Micro Focus File Dynamics 6.5 Administration Guide*.

The dimmed options in the menu in [Figure 6-1 on page 69](#) display which policy types require that the Active Directory schema be extended.

**Figure 6-1** Menu Options Dimmed Until Schema is Extended



For example, User Home Folder policies do not require an Active Directory schema extension; Group Collaborative policies do.

## 6.8.1 Extending the Active Directory Schema

- 1 Log in to the forest or domain as a user with Schema administration privileges.  
You can do this by being a member of the Schema Admins group.
- 2 From the **Start** menu, select **File Dynamics > File Dynamics Schema Utility**.
- 3 When you are asked if you want to run this file, click **Run**.

```
File Dynamics Schema Utility

Starting FileDynamics-SchemaTool version 6.5.0.1
Attempting to resolve current Domain...
Accessing current schema for AD Forest 'dynamics.cctec.org'
Obtained handle to schema

Current Forest Mode Level = 7
Current Forest Level 'Windows2016Forest' is good.

Checking for File Management attribute schema extensions...
-> ccx-FSFAuxiliaryStorage : does not exist
-> ccx-FSFManagedPath : does not exist

Checking for existing File Management class schema extensions...
-> ccx-FSFManagedAttributes : does not exist

One or more schema definitions need extending.

Perform File Management schema extensions? [Y/N]:
```

4 Type Y to extend the schema.

```
File Dynamics Schema Utility

Starting FileDynamics-SchemaTool version 6.5.0.1
Attempting to resolve current Domain...
Accessing current schema for AD Forest 'dynamics.cctec.org'
Obtained handle to schema

Current Forest Mode Level = 7
Current Forest Level 'Windows2016Forest' is good.

Checking for File Management attribute schema extensions...
-> ccx-FSFAuxiliaryStorage : does not exist
-> ccx-FSFManagedPath : does not exist

Checking for existing File Management class schema extensions...
-> ccx-FSFManagedAttributes : does not exist

One or more schema definitions need extending.

Perform File Management schema extensions? [Y/N]: y

Extending any missing File Management schema...
Successfully added attribute 'ccx-FSFAuxiliaryStorage'
Successfully added attribute 'ccx-FSFManagedPath'
Successfully added class 'ccx-FSFManagedAttributes'
Setting Attribute Security GUID to: cd55682f-3987-446d-a18e-cfd8d53b95f2
Setting Attribute Security GUID to: cd55682f-3987-446d-a18e-cfd8d53b95f2
All File Management schema successfully extended!
Refreshing schema cache...
Press any key to exit
```

## 6.9 Setting Rights and Privileges on Managed Storage

File Dynamics must have the proper rights set on each network share that it will manage; this is, shares that contain managed home folders or collaborative storage. In addition, certain privileges must be granted to File Dynamics on each server where storage will be managed.

### 6.9.1 Granting Rights

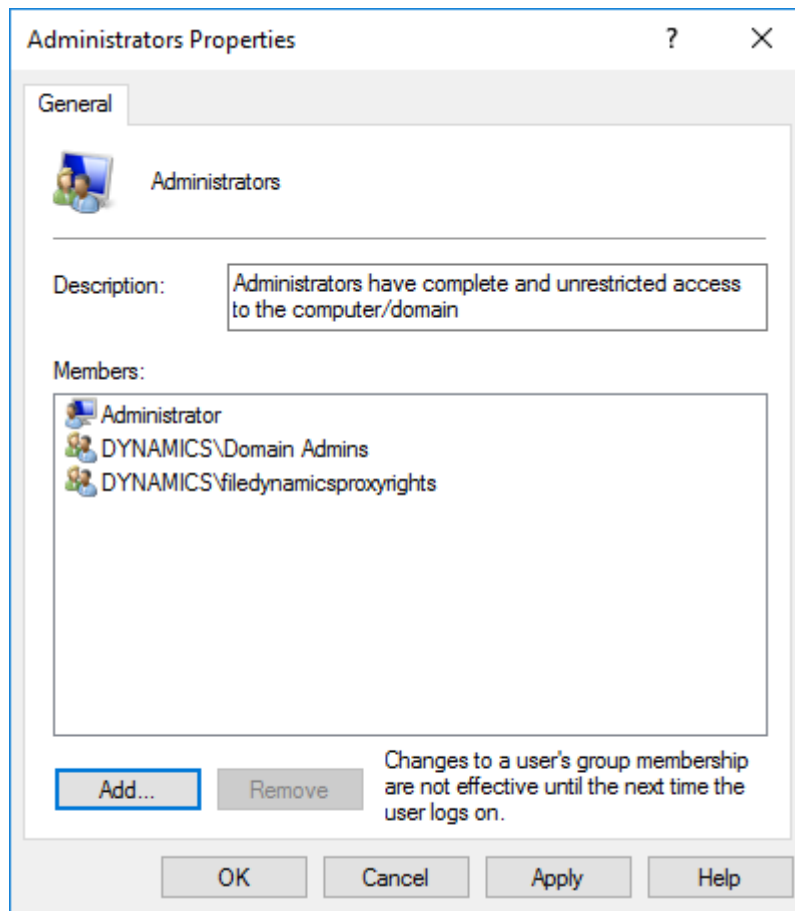
Every share to be managed by File Dynamics must have proper rights assigned to the `filedynamicsproxyrights` group.

- 1 As a user with privileges to manage shares, authenticate to the server where the storage is located.
- 2 Grant Full Control sharing privileges to the `filedynamicsproxyrights` group for each share that File Dynamics will manage.
- 3 Do one of the following:
  - ♦ If you are proxying storage on a member server, go to [Section 6.9.2, “Granting Privileges on a Member Server,”](#) on page 71.
  - ♦ If you are proxying storage on a domain controller, go to [Section 6.9.3, “Granting Privileges on a Domain Controller,”](#) on page 72.

### 6.9.2 Granting Privileges on a Member Server

Every server that has storage managed by File Dynamics must have certain privileges granted to the `filedynamicsproxyrights` group. If you install the Agent on a server, this privilege assignment is made automatically. If you use the Agent on one server to act as a Proxy Agent on another server—rather than installing an Agent on that server—you need to manually assign these privileges on that server.

- 1 Authenticate to a domain controller within the domain where the storage is located.  
Be sure to log in as a domain administrator.
- 2 At any domain controller or any computer where the Admin or Remote Server administration tools are installed, click **Start > Administrative Tools > Active Directory Users and Computers**.  
This brings up the Active Directory Users and Computers page.
- 3 In the left pane, select the container where the server is so that it is listed in the right pane.
- 4 In the right pane, right-click the server and select **Manage**.  
This brings up the Computer Management page.
- 5 In the left pane, expand **Local Users and Groups**.
- 6 Select **Groups**.
- 7 In the right pane, double-click **Administrators**.  
This brings up the Administrators Properties dialog box.
- 8 Click **Add**.  
This brings up the Select Users, Computers, or Groups dialog box.
- 9 In the **Enter the object names to select** field, type:  
`domain_name\filedynamicsproxyrights`.



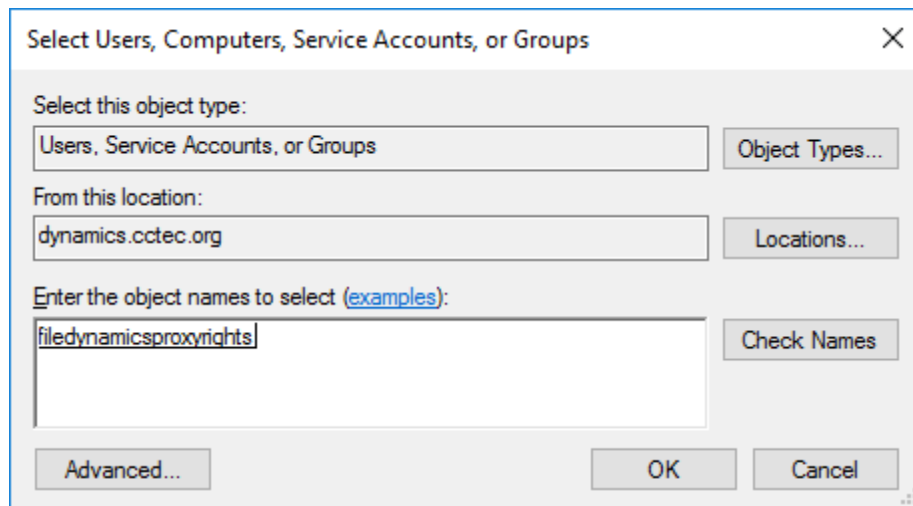
- 10 Click **OK** to save the setting.
- 11 Proceed with [Section 6.10, “Installing and Configuring the Event Monitor,”](#) on page 74.

### 6.9.3 Granting Privileges on a Domain Controller

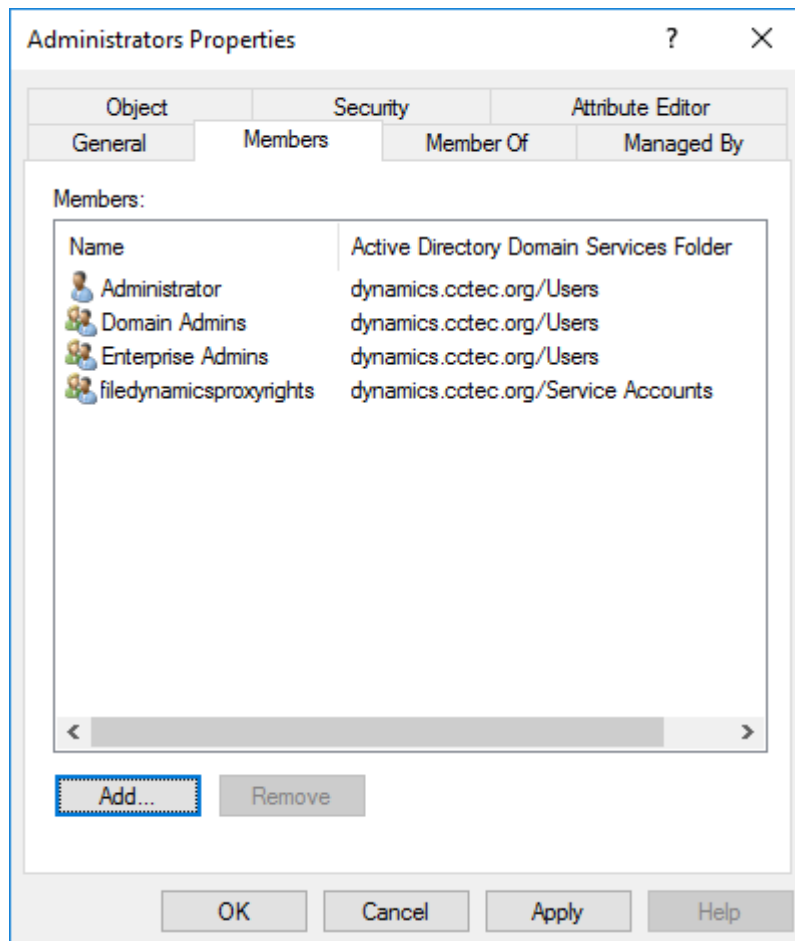
Every server that has storage managed by File Dynamics must have certain privileges granted to the `filedynamicsproxyrights` group. If you install the Agent on a server, this privilege assignment is made automatically. If you use the Agent on one server to act as a Proxy Agent on another server—rather than installing an Agent on that server—you need to manually assign these privileges on that server.

- 1 Authenticate to a domain controller within the domain where the storage is located.  
Be sure to log in as a domain administrator.
- 2 Launch Active Directory Users and Computers.  
This brings up the Active Directory Users and Computers page.
- 3 In the left pane, select **Builtin**.
- 4 In the right pane, double-click the **Administrators** group.
- 5 Click the **Members** tab.
- 6 Click **Add**.
- 7 In the **Enter the object names to select** field, type: `filedynamicsproxyrights`





- 8 Click Check Names.
- 9 Click OK.



- 10 Click OK.

## 6.10 Installing and Configuring the Event Monitor

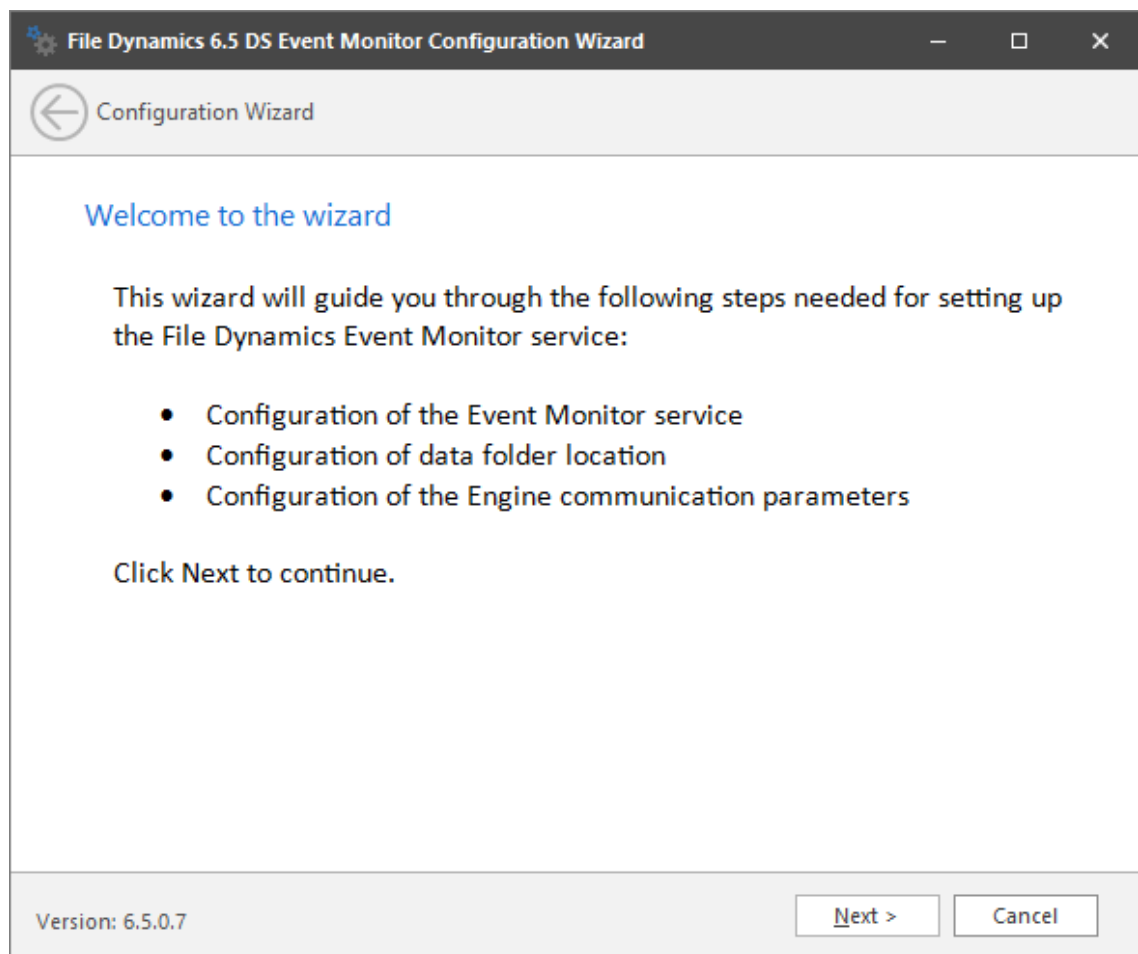
The Event Monitor can be installed on a Windows Server machine that meets the following minimum requirements:

- ◆ Microsoft Windows Server 2019 (Member Server)
- ◆ Microsoft Windows Server 2016 (Member Server)
- ◆ Microsoft Windows Server 2012 R2 (Member Server)
- ◆ At least 4 GB RAM
- ◆ Forest functional level 2003 or later in native mode

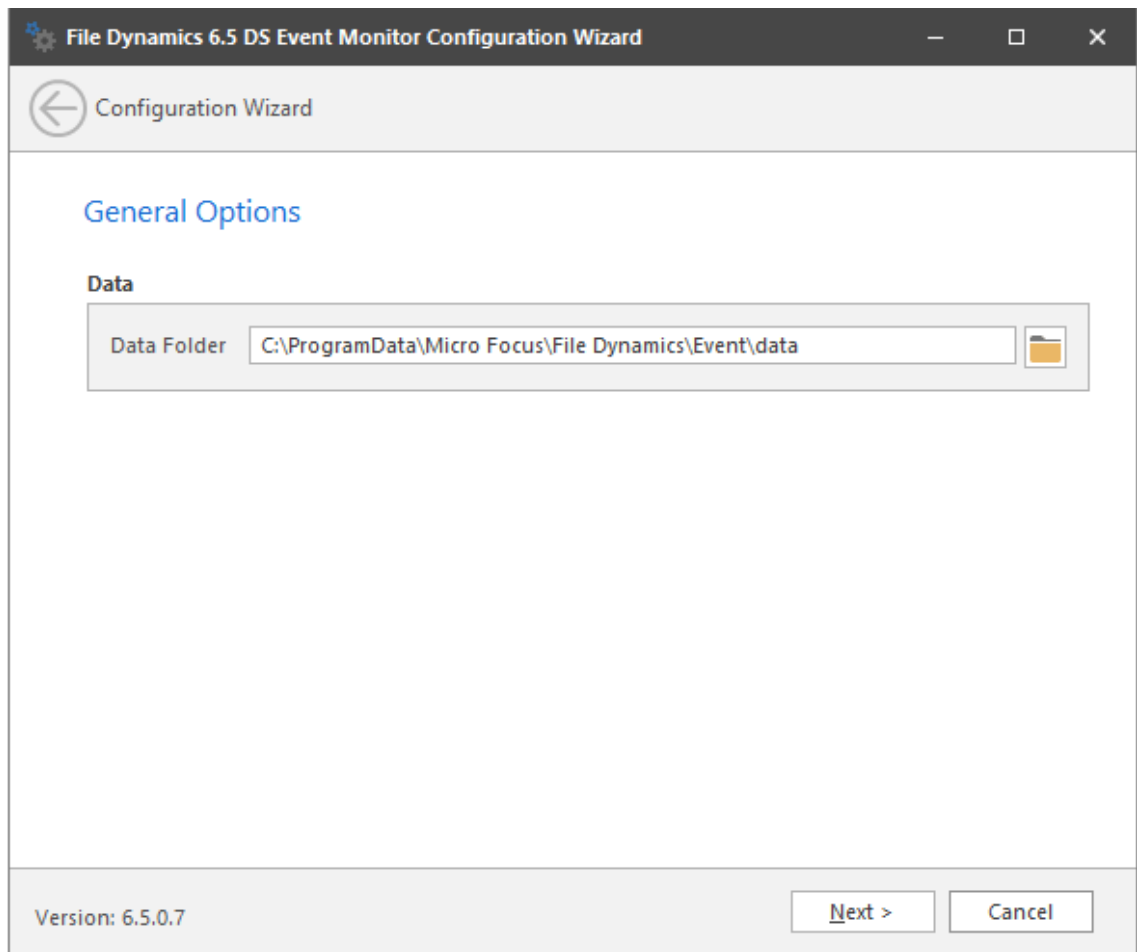
Other notable information about the Event Monitor:

- ◆ There is only one Event Monitor per domain
- ◆ The Event Monitor runs as a native NT service that is configured to start by using the Local System account
- ◆ The Event Monitor must be permitted to make outbound connections through the firewall

- 1** On the Windows server that will host the Event Monitor, copy to a directory the `FileDynamics_6.5.0.iso`.
- 2** Mount the `FileDynamics_6.5.0.iso` file.
- 3** At the root of the `FileDynamics_6.5.0.iso` image, double-click `FileDynamics-EventMonitor-6.5-xx.exe`.
- 4** When you are asked if you want to run this file, click **Run**.
- 5** Agree to the licensing terms and conditions and click **Install**.
- 6** When notified that the setup was successful, click **Run Configuration Utility**.

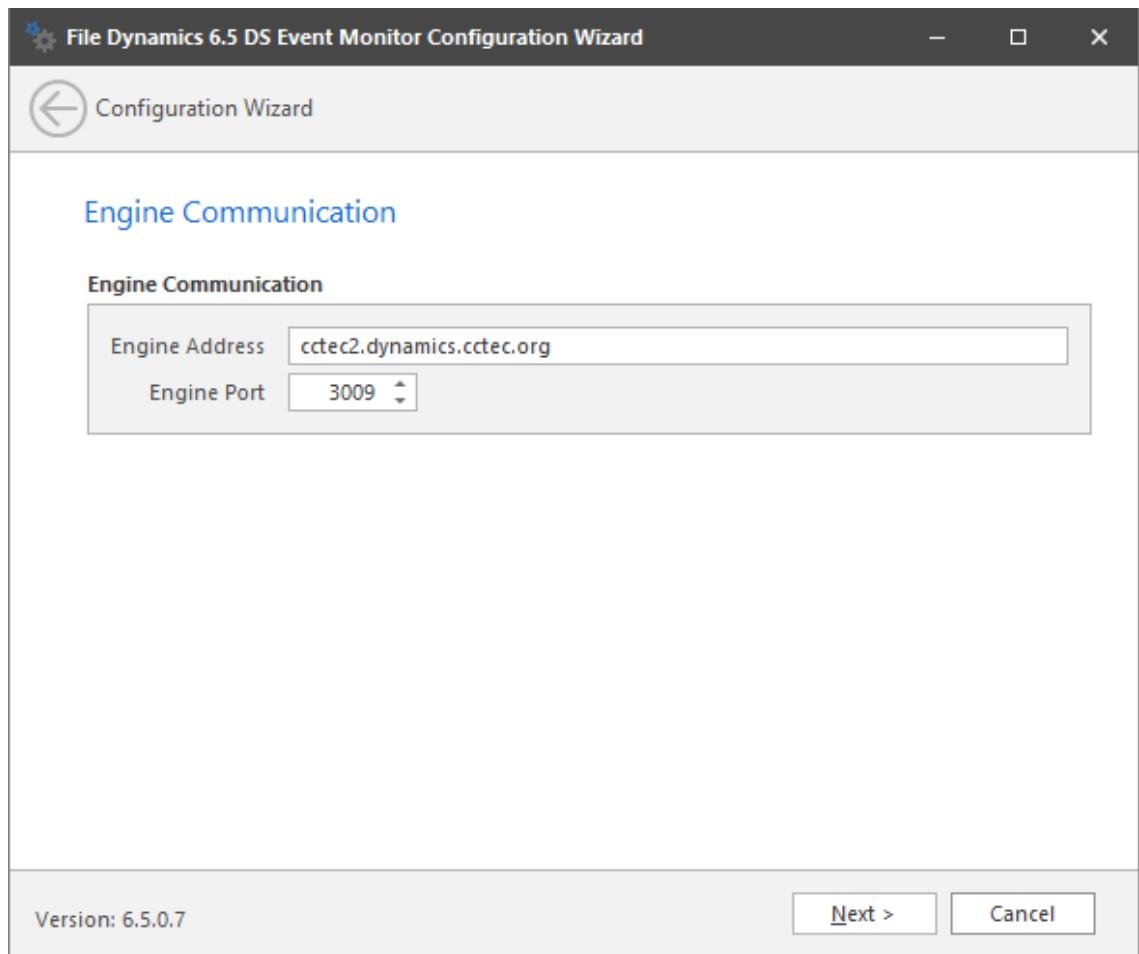


7 From the wizard page, read the overview of the setup steps and click **Next**.



The default path of the Data Folder is displayed, which you can edit. The Data folder contains application data needed by File Dynamics.

- 8 Click **Next**.

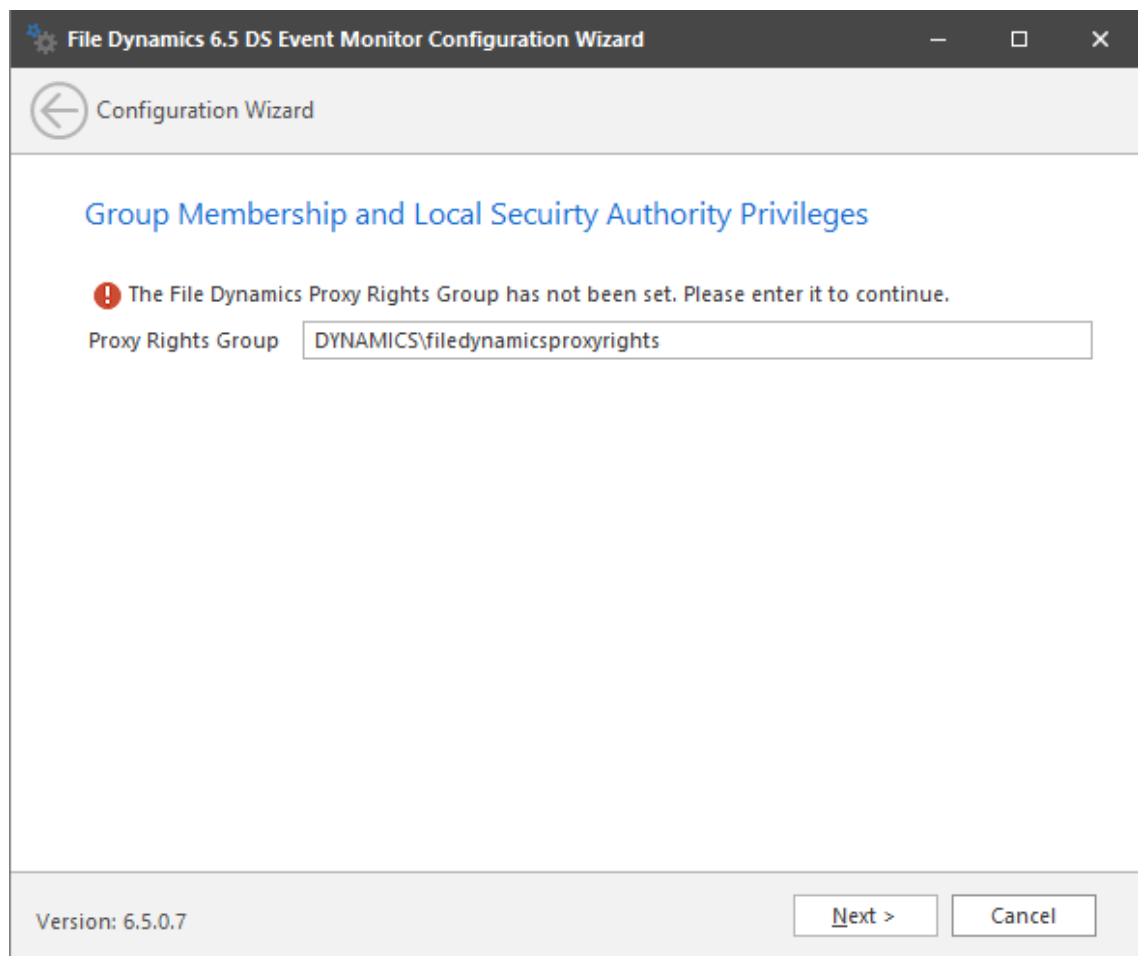


This page lets you set parameters for the Event Monitor to communicate with the Engine.

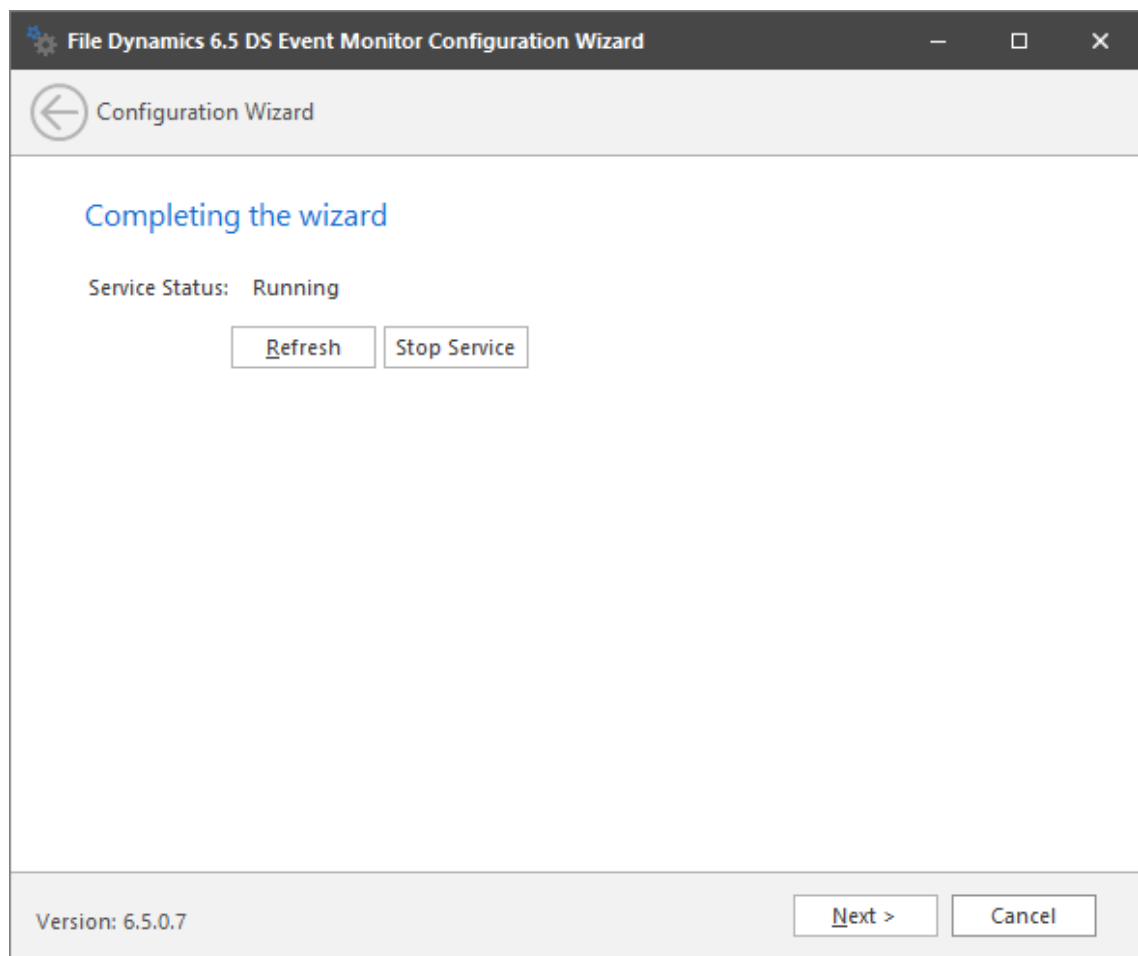
**Engine Address:** Specify the DNS name or IP address to the server hosting the Engine here.

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

- 9 Enter the Engine connection settings and click **Next**.



- 10 (Conditional) If you chose a name that was not the default name for the File Dynamics Proxy Rights group, enter the name in the **Proxy Rights Group** field.
- 11 Click **Next**.



**12** Click **Finish**.

The Event Monitor is now installed and running. You must still authorize it using the Admin Client. For procedures, see [Section 6.14, “Authorizing the Event Monitor,” on page 91](#).

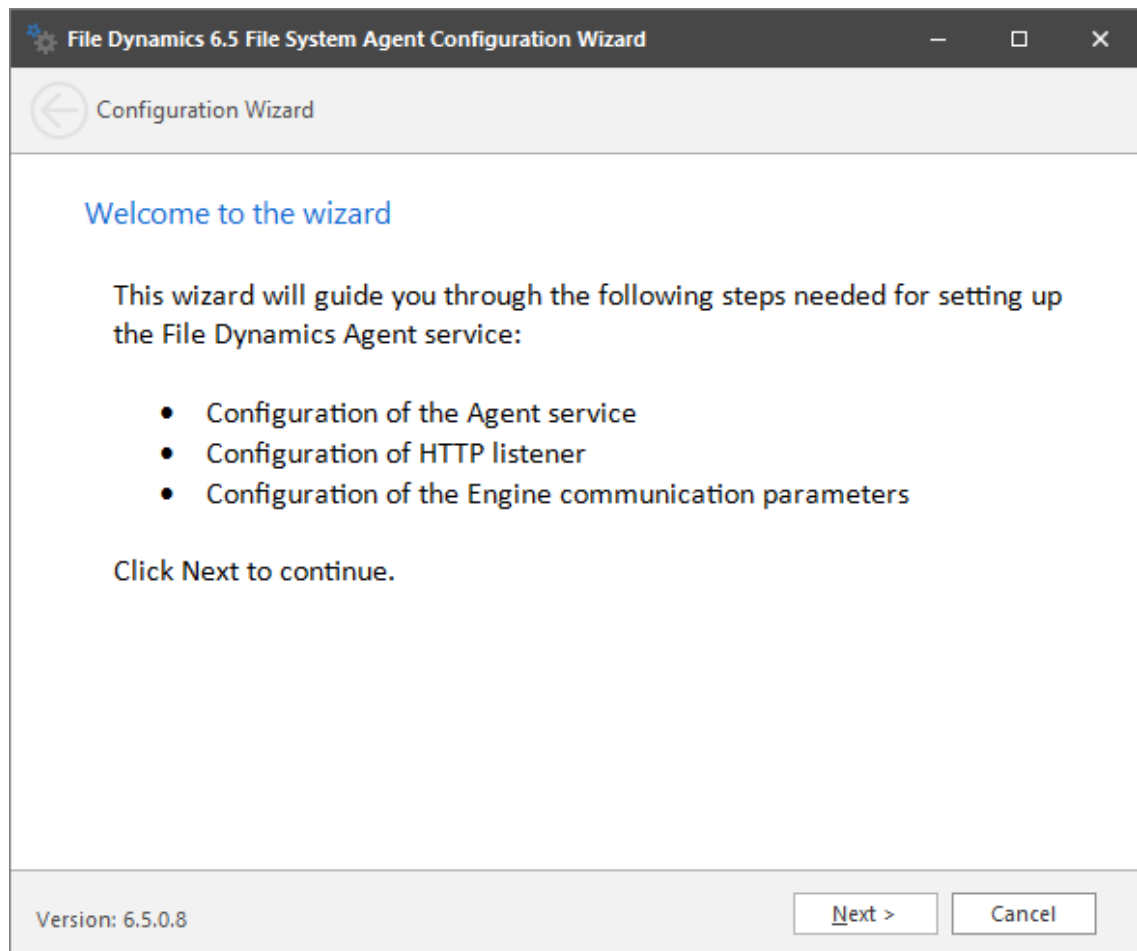
## 6.11 Installing and Configuring the File System Agents

A File System Agent can be installed on a Windows Server machine that meets the following minimum requirements:

- ◆ Microsoft Windows Server 2019 (Member Server)
- ◆ Microsoft Windows Server 2016 (Member Server)
- ◆ Microsoft Windows Server 2012 R2 (Member Server)
- ◆ Microsoft Windows Server 2012 (Member Server)
- ◆ Microsoft Windows Server 2008 R2 (Member Server)
- ◆ At least 4 GB RAM
- ◆ For quota management, Microsoft File System Resource Manager (FSRM) must be installed. See [Section 1.2, “File Server Resource Manager,” on page 8](#).

Other notable information about File System Agents:

- ◆ A File System Agent runs as a native NT service that is configured to start by using the Local System account
  - ◆ The default File System Agent port is 3011
  - ◆ A firewall inbound rule for the File System Agent is created during the installation
- 1 On the Windows server that will host the File System Agent, copy to a directory the `FileDynamics_6.5.0.iso`.
  - 2 Mount the `FileDynamics_6.5.0.iso` file.
  - 3 At the root of the `FileDynamics_6.5.0.iso` image, double-click `FileDynamics-FileSystemAgent-6.5-xx.exe`.
  - 4 When you are asked if you want to run this file, click **Run**.
  - 5 Agree to the licensing terms and conditions and click **Install**.
  - 6 When notified that the setup was successful, click **Run Configuration Utility**.



- 7 From the wizard page, read the overview of the setup steps and click **Next**.



**File Dynamics 6.5 File System Agent Configuration Wizard**

Configuration Wizard

### General Options

**HTTP Listener**

Host Address: 0.0.0.0

Port: 3011

**SSL Certificate**

Subject Name: cctec2.dynamics.cctec.org

Expiration Days: 3,653      Expiration Date: 7/24/2029 11:58:07 AM

Key Length: 2048

Details      Generate

Version: 6.5.0.8      Next >      Cancel

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

**HTTP Listener:** Communication parameters for the File System Agent.

**Host Address:** To listen to all addresses, leave the setting at 0.0.0.0. To limit listening to a specific address, enter the address here.

**Port:** The default port is 3011.

**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.

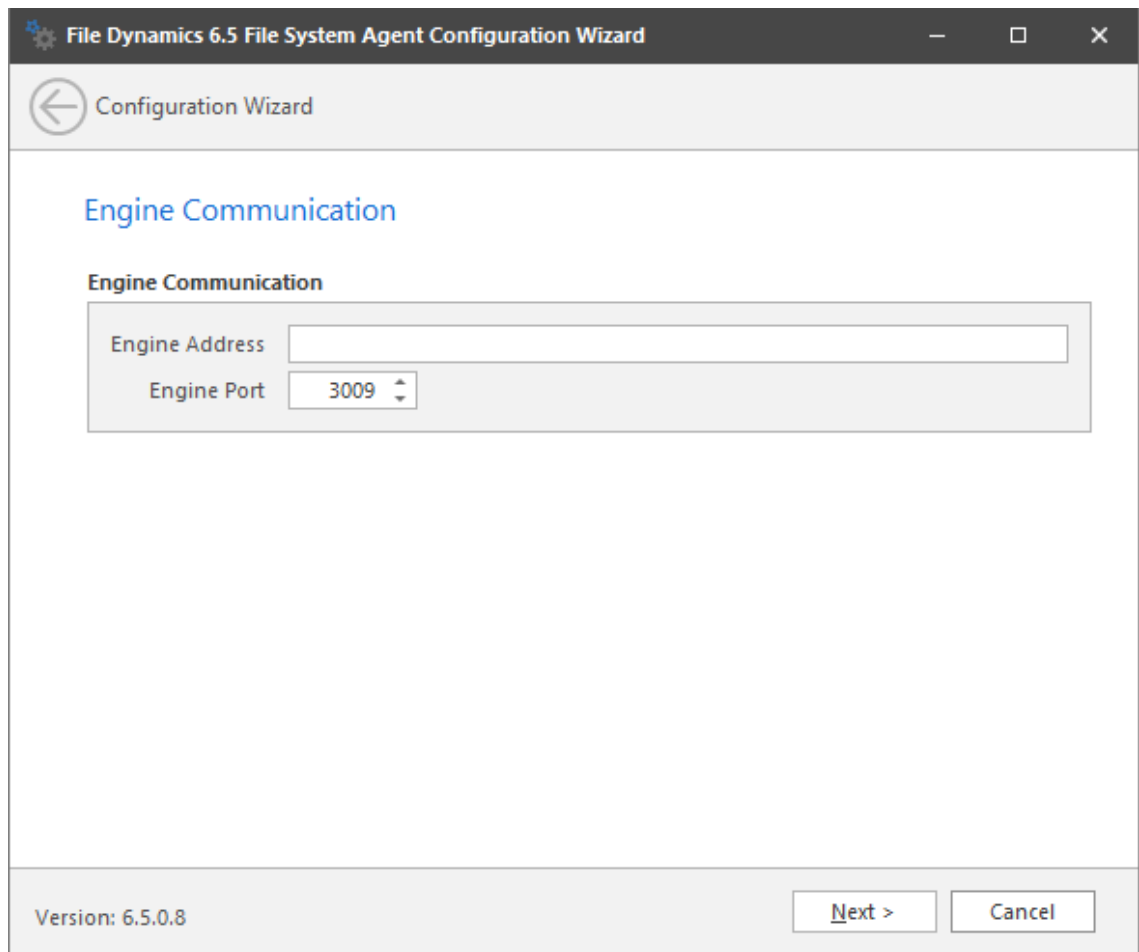
**Expiration Days:** The life span of the security certificate, which is set at 10 years by default.

**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.

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

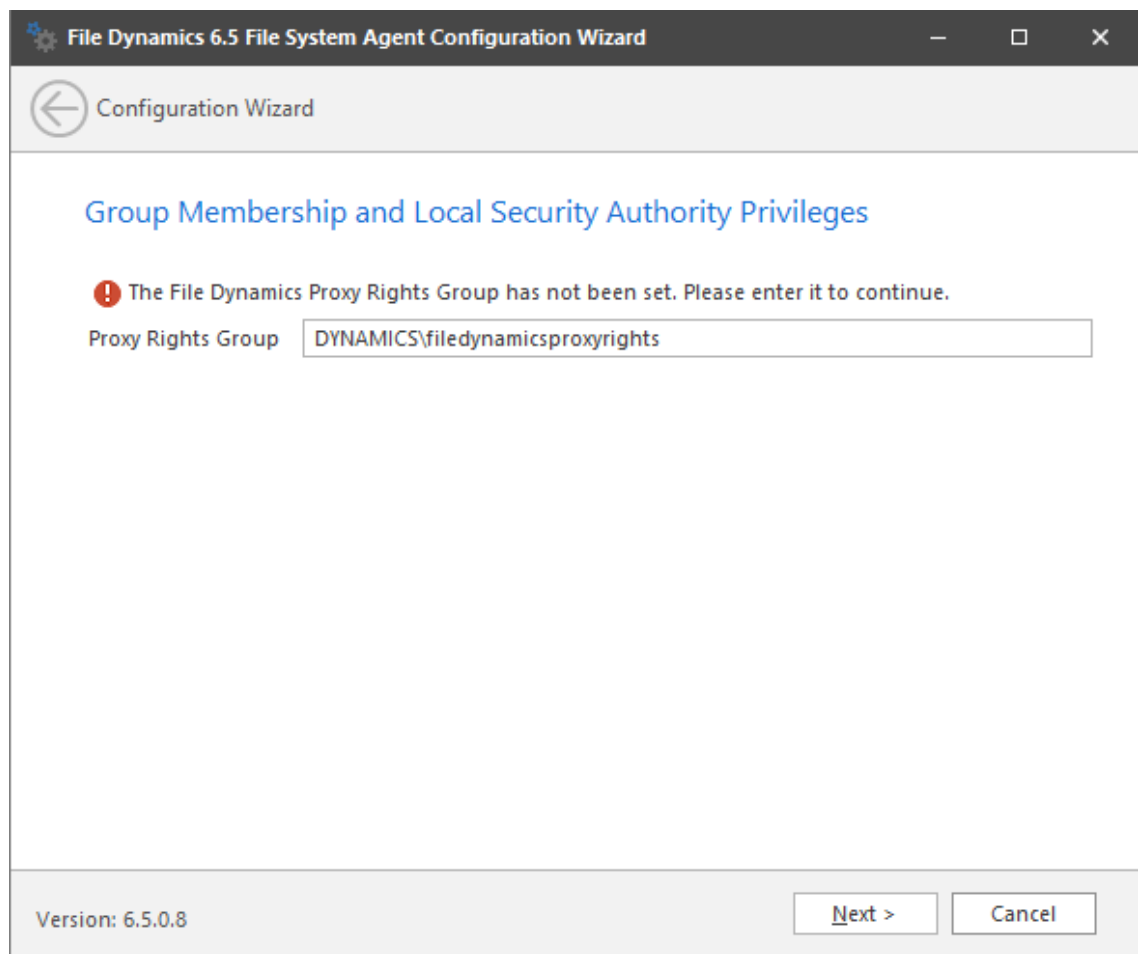


This page lets you set parameters for the File System Agent to communicate with the Engine.

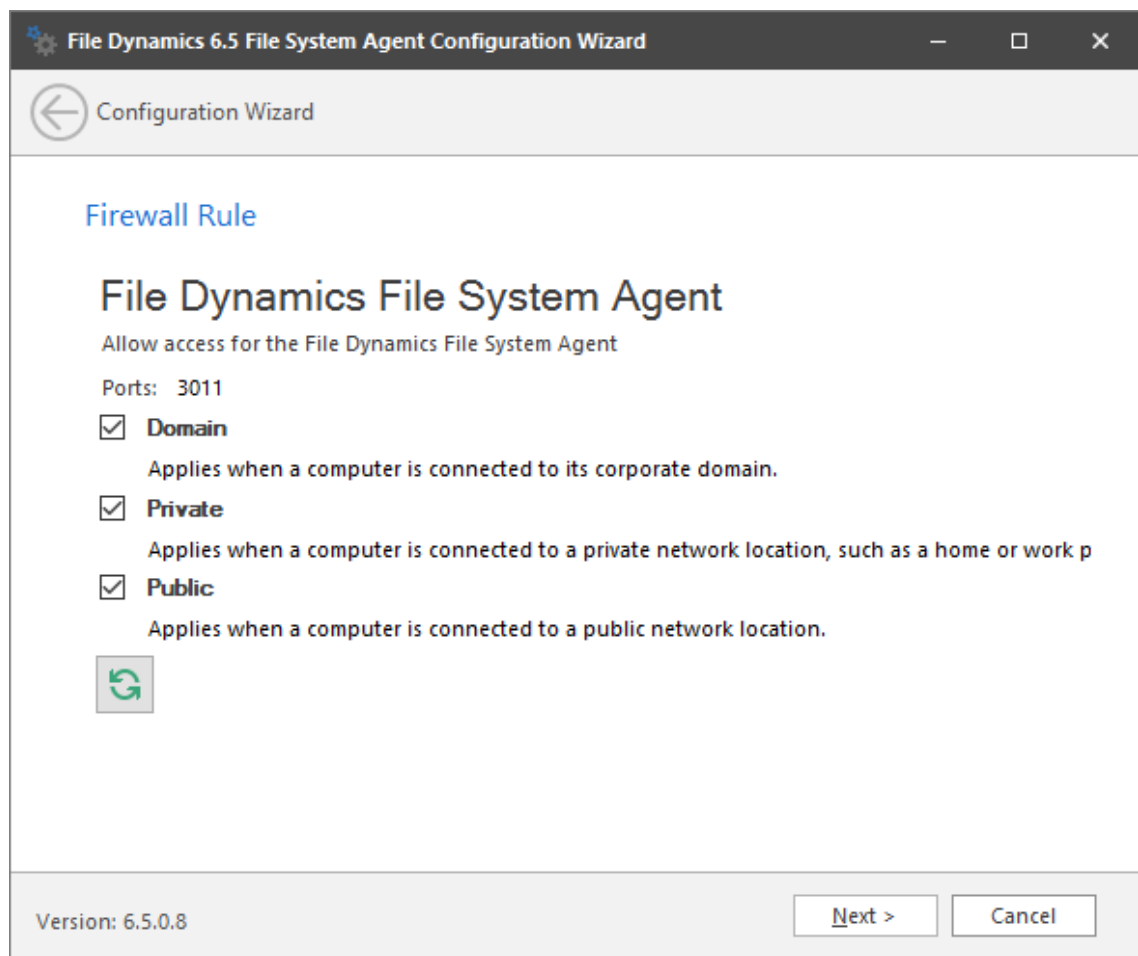
**Engine Address:** Specify the DNS name or IP address to the server hosting the Engine here.

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

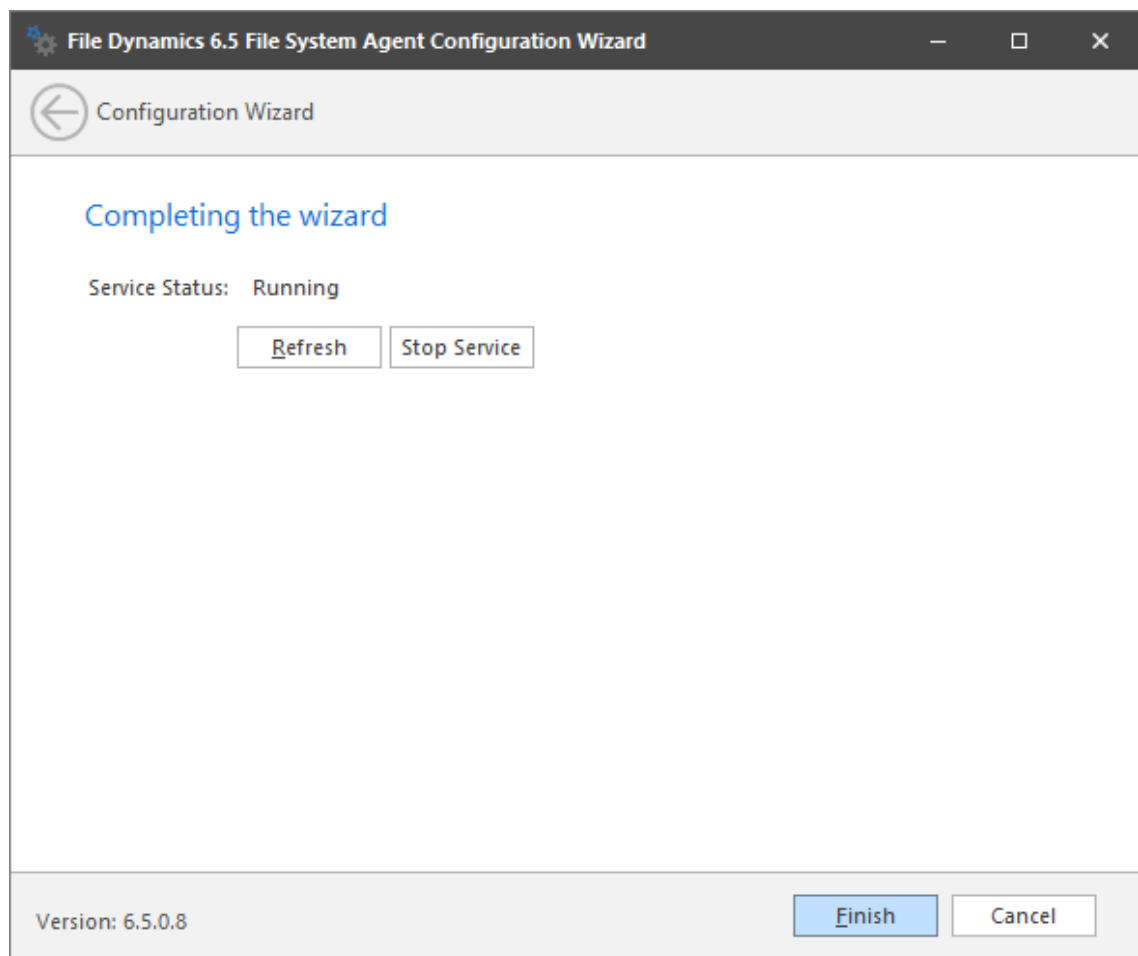
- 9 Enter the Engine connection settings and click **Next**.



- 10 (Conditional) If you chose a name that was not the default name for the File Dynamics Proxy Rights group, enter the name in the Proxy Rights Group field.
- 11 Click **Next**.



12 Set the network profiles according to your organization's security policies and click **Next**.



**13** Click **Finish**.

The File System Agent is now installed, configured, and running. You must still authorize it using the Admin Client. For procedures, see [Section 6.15, “Authorizing the Agents,”](#) on page 91.

## 6.12 Installing and Configuring the Phoenix Agents

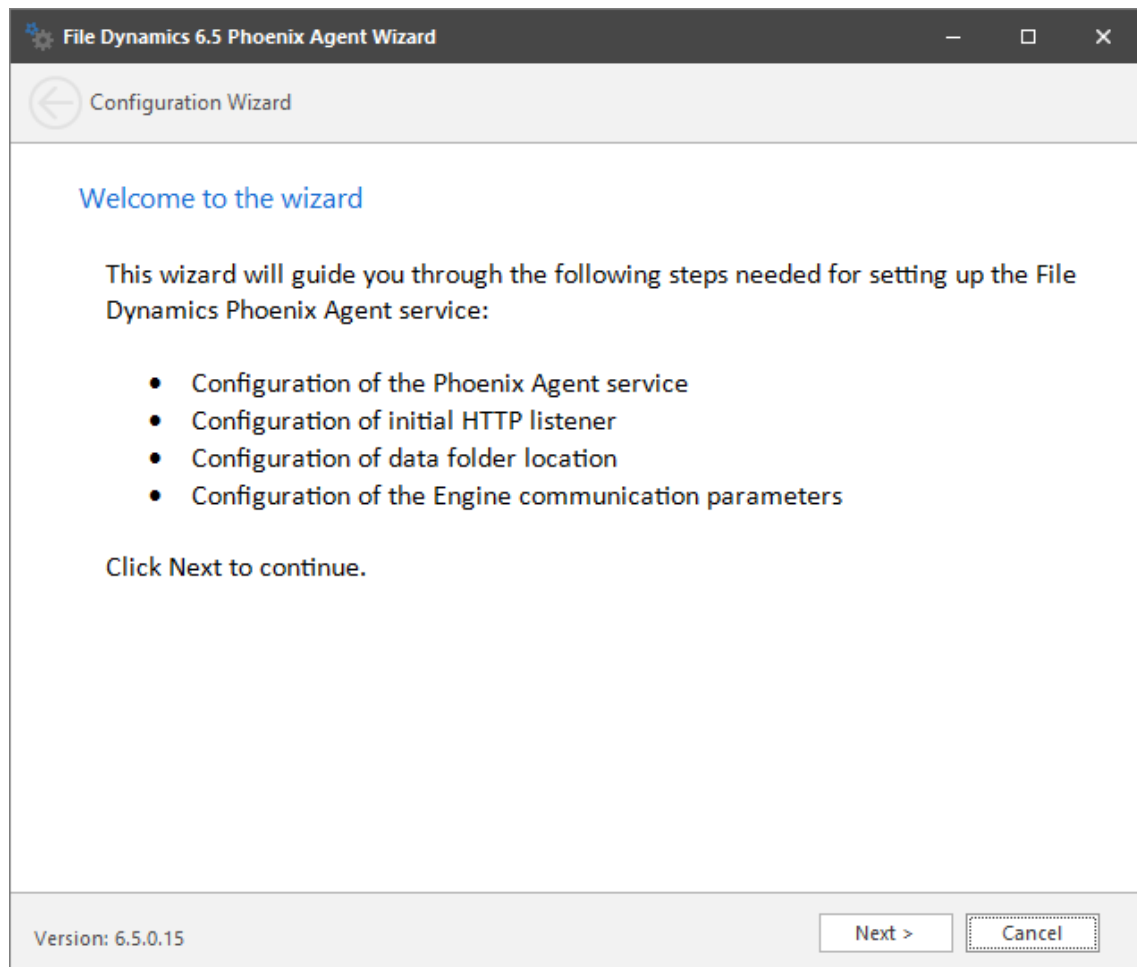
Phoenix Agents execute the jobs necessary for Epoch Data Protection policies that are managed by the Engine as well as performing scans for Security Notification policies. If you are deploying Epoch Data Protection, a Phoenix Agent must be either deployed on or associated to (via proxy assignment) each server or NAS device where protected High-Value Targets are located on the network.

A Phoenix Agent can be installed on a Windows Server machine that meets the following minimum requirements:

- ◆ Microsoft Windows Server 2019 (Member Server)
- ◆ Microsoft Windows Server 2016 (Member Server)
- ◆ Microsoft Windows Server 2012 R2 (Member Server)
- ◆ Microsoft Windows Server 2012 (Member Server)
- ◆ Microsoft Windows Server 2008 R2 (Member Server)
- ◆ At least 4 GB RAM

Other notable information about Phoenix Agents:

- ◆ A Phoenix Agent runs as a native NT service that is configured to start by using the Local System account
  - ◆ The default Phoenix Agent port is 3013
  - ◆ A firewall inbound rule for the Phoenix Agent is created during the installation
- 1 On the Windows server that will host the Phoenix Agent, copy to a directory the FileDynamics\_6.5.0.iso.
  - 2 Mount the FileDynamics\_6.5.0.iso file.
  - 3 At the root of the FileDynamics\_6.5.0.iso image, double-click FileDynamics-PhoenixAgent-6.5-xx.exe
  - 4 When you are asked if you want to run this file, click **Run**.
  - 5 Agree to the licensing terms and conditions and click **Install**.
  - 6 When notified that the setup was successful, click **Run Configuration Utility**.



- 7 From the wizard page, read the overview of the setup steps and click **Next**.

File Dynamics 6.5 Phoenix Agent Wizard

Configuration Wizard

### General Options

**HTTP Listener**

Host Address: 0.0.0.0

Port: 3013

Certificate: CN=cctec2.dynamics.cctec.org

Details Generate

**Engine Communication**

Engine Address:

Engine Port: 3009

Version: 6.5.0.15

Next > Cancel

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

**HTTP Listener:** Communication parameters for the Phoenix Agent.

**Host Address:** To listen to all addresses, leave the setting at 0.0.0.0. To limit listening to a specific address, enter the address here.

**Port:** The default port is 3013.

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

**Details:** Click the button to view the certificate data.

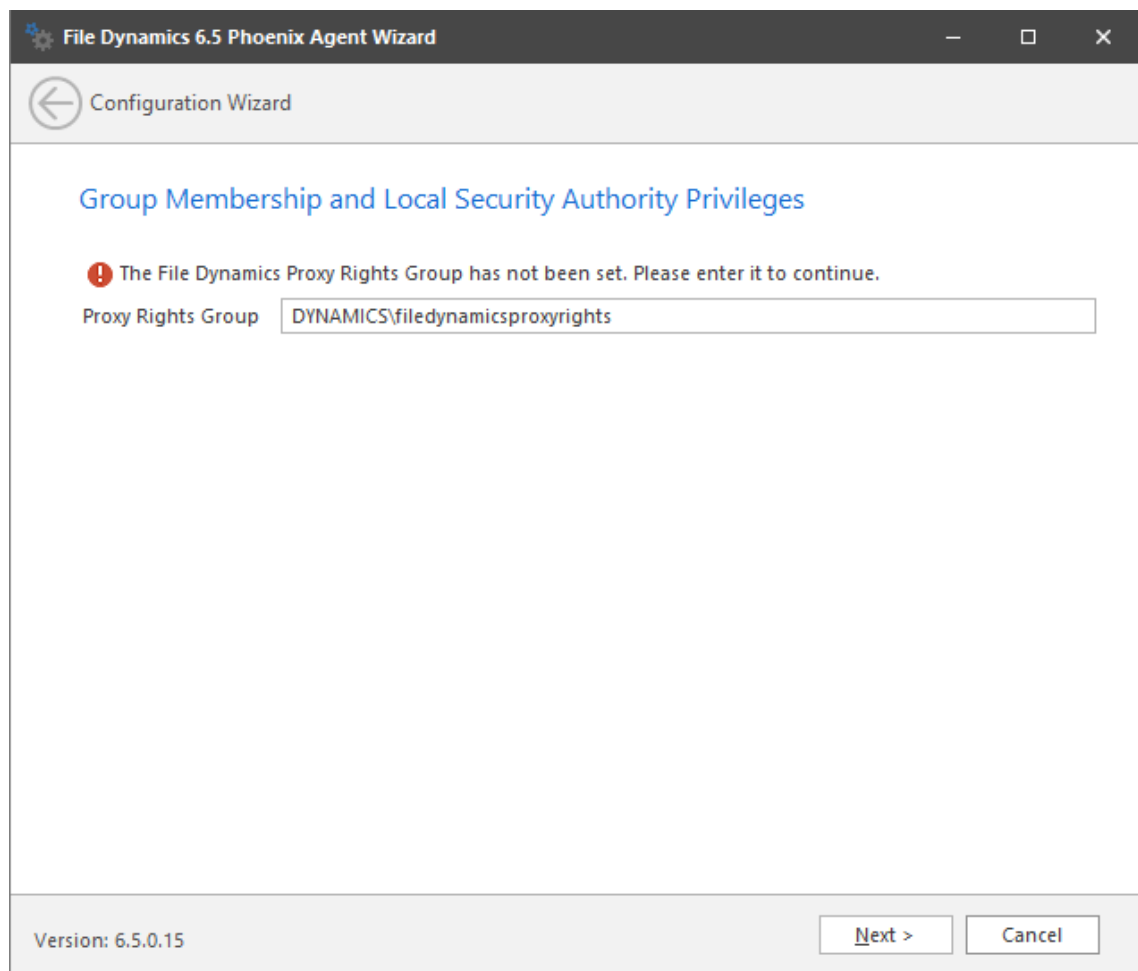
**Generate:** If you modify any of the settings in the **SSL Certificate** region, click this button to generate a new certificate.

**Engine Communication:** Communication information for the Engine host.

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

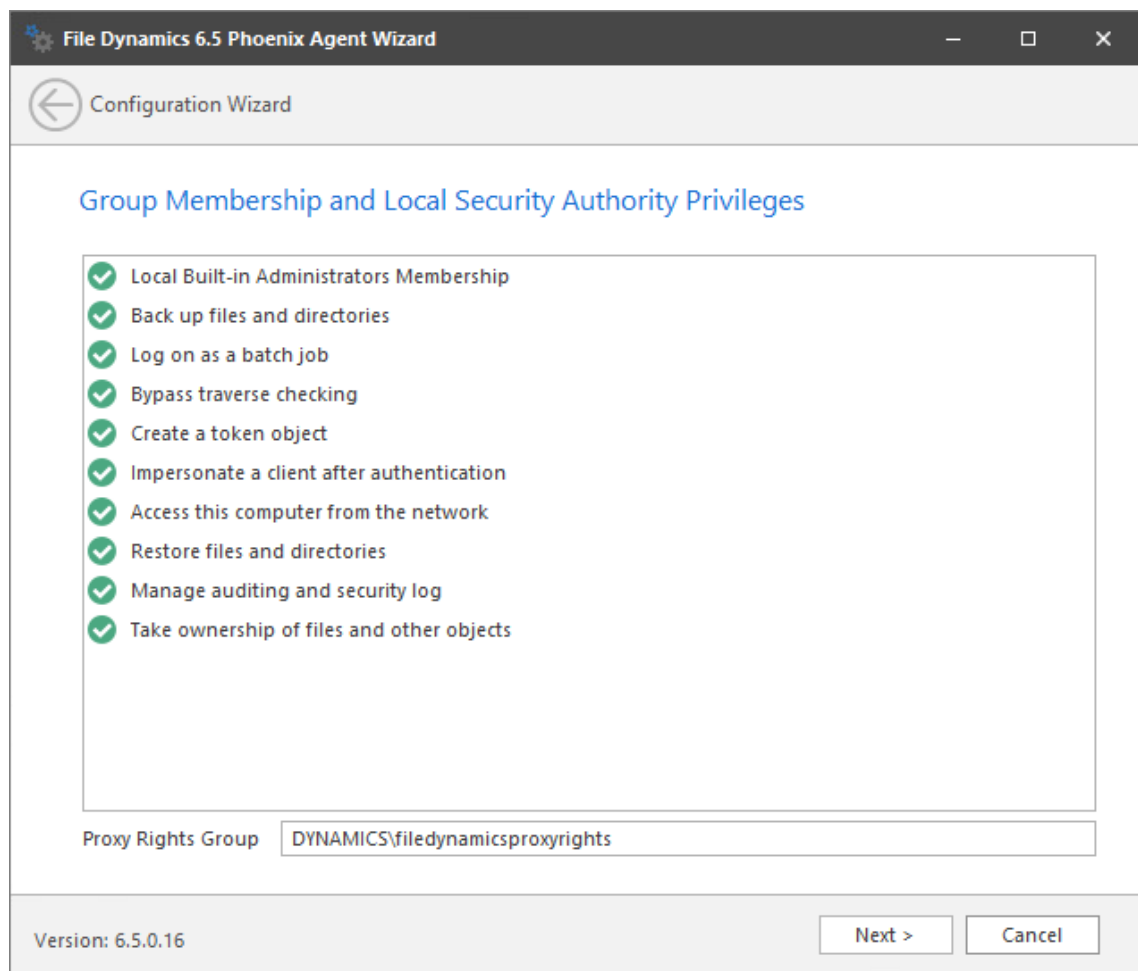
**Engine Port:** Specify the SSL port for the Engine here.

- 8 Enter the parameter settings and click **Next**.

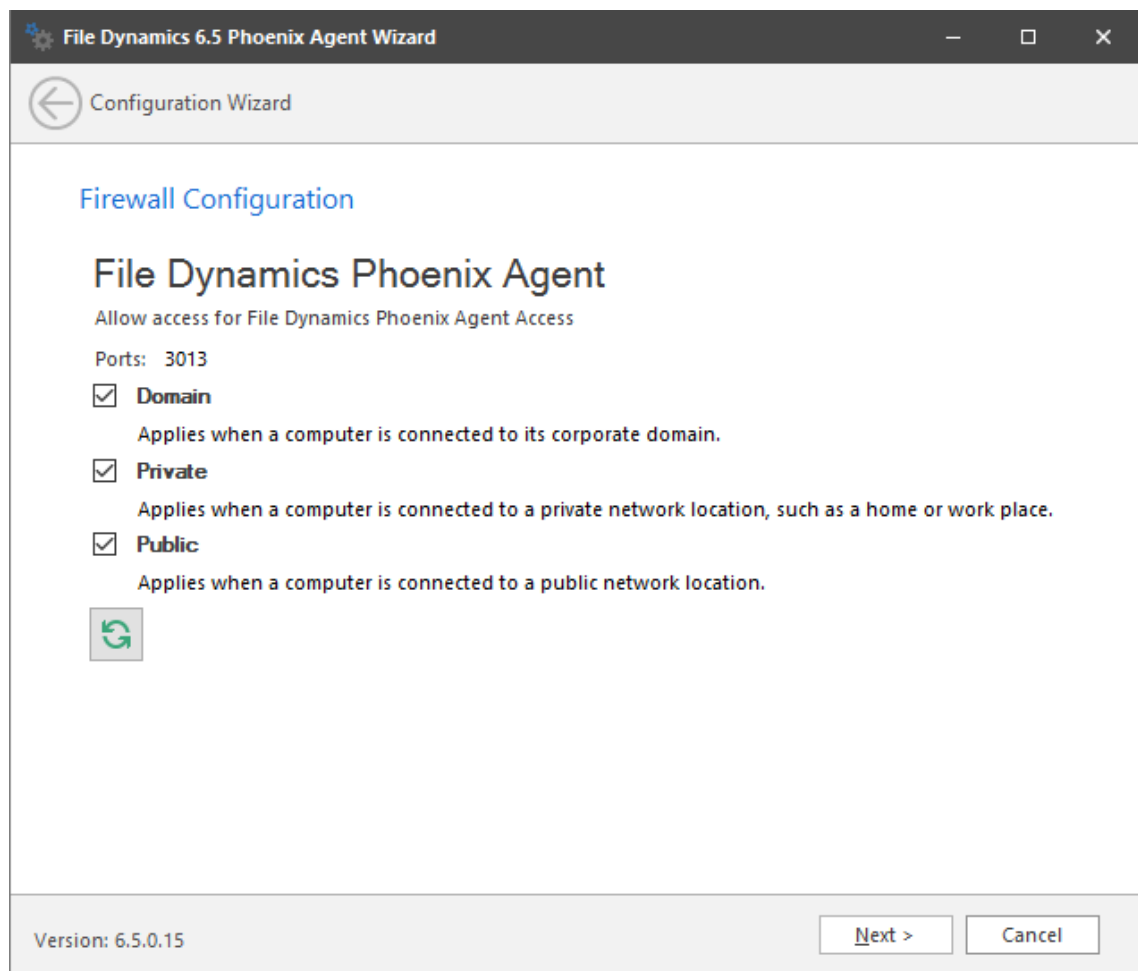


- 9 (Conditional) If you chose a name that was not the default name for the File Dynamics Proxy Rights group, enter the name in the **Proxy Rights Group** field.
- 10 Click **Next**.
- 11 (Conditional) If permissions for the proxyrightsgroup have already been established (such as when you upgrading an Agent), the following page will appear:





**12** (Conditional) Review the privileges and click **Next**.

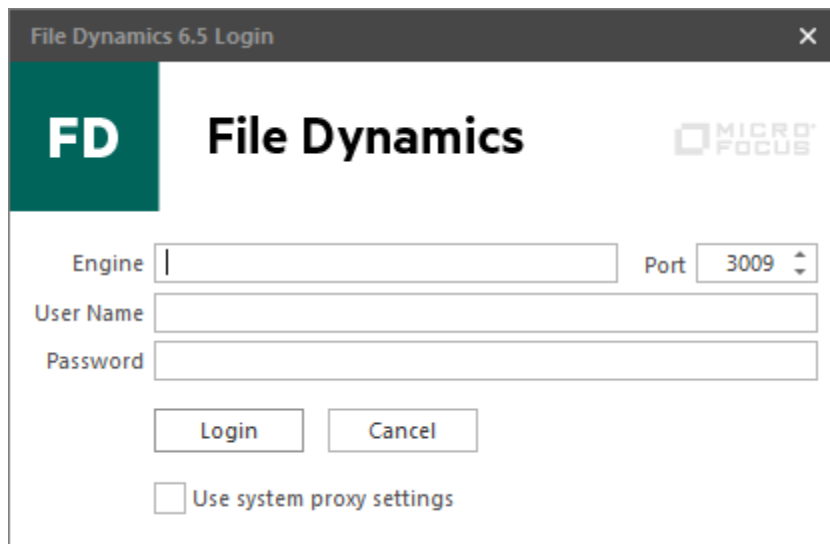


- 13 Set the network profiles according to your organization's security policies and click **Next**.  
The wizard indicates that the Phoenix Agent service is running.
- 14 Click **Finish**.

## 6.13 Installing the Admin Client

The Admin Client is the administrative interface for File Dynamics. It can be installed on any platform where .NET 4.6.2 can run.

- 1 On the Windows server or workstation where you will run the Admin Client, copy to a directory the `FileDynamics_6.5.0.iso`.
- 2 Mount the `FileDynamics_6.5.0.iso` file.
- 3 At the root of the `FileDynamics_6.5.0.iso` image, double-click `FileDynamics-Admin-6.5-xx.exe`.
- 4 When you are asked if you want to run this file, click **Run**.
- 5 Agree to the licensing terms and conditions and click **Install**.
- 6 When notified that the setup was successful, click **Run Admin Client**.  
The Admin Client login dialog box appears.



- 7 In the **Engine** field, specify the DNS name or IP address.
- 8 In the **Port** field, specify the secure port number.  
The default setting is 3009.
- 9 Specify the username and password.  
The user must be a member of the fdadmins group to be able to log in.
- 10 Click **Login**.

## 6.14 Authorizing the Event Monitor

- 1 In the Admin Client, click the **Home** tab.
- 2 Click **Event Monitors**.
- 3 Select the listed domain.
- 4 Click **Authorize**.
- 5 When you are asked if you want to authorize the selected event monitor, click **Yes**.
- 6 When the Results page appears, click **Close**.

## 6.15 Authorizing the Agents

- 1 In the Admin Client, click the **Home** tab.
- 2 Click **Agents**.
- 3 Select a listed server.
- 4 Click **Authorize**.
- 5 When you are asked if you want to authorize the selected event monitor, click **Yes**.
- 6 When the Results page appears, click **Close**.
- 7 Repeat Steps 3-6 for all File System Agents and Phoenix Agents.

## 6.16 Configuring Your Storage Resources

Before File Dynamics can manage, protect, and report on your network storage, you must first configure your storage resources and in the process, specify what servers to include for scoping and those to ignore.

- 1 In the Admin Client, click the **Home** tab.
- 2 Click **Storage Resources**.
- 3 In the **Scope** region, browse to locate the containers or servers you want included and drag them to the **Include** frame.

If you do not specify the containers or servers to include, File Dynamics will process all of the servers on your network, which can affect the ability of File Dynamics to perform management and reporting tasks.

- 4 (Optional) From the Include frame, right click a server and select **Share** to view information on the shares of that server.
- 5 Click **Save**.
- 6 When asked if you want to start the update of the storage resources, click **Yes**.

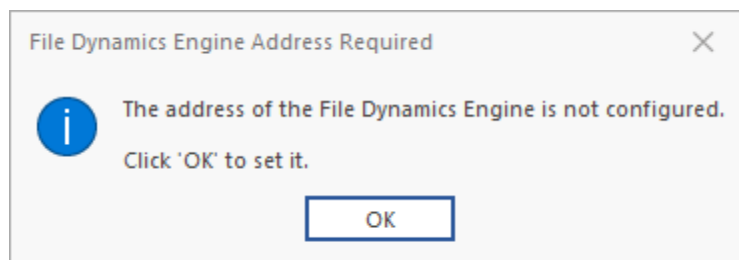
## 6.17 Installing the Data Owner Client

The Data Owner Client is the administrative tool used by designated Data Owners to perform specific types of data management actions. These include recovering archived data and permissions from High-Value Targets (HVTs) and initiating data operations from externally-generated files through Workload policies.

The Data Owner Client can be installed on any platform where .NET 4.6.2 can run.

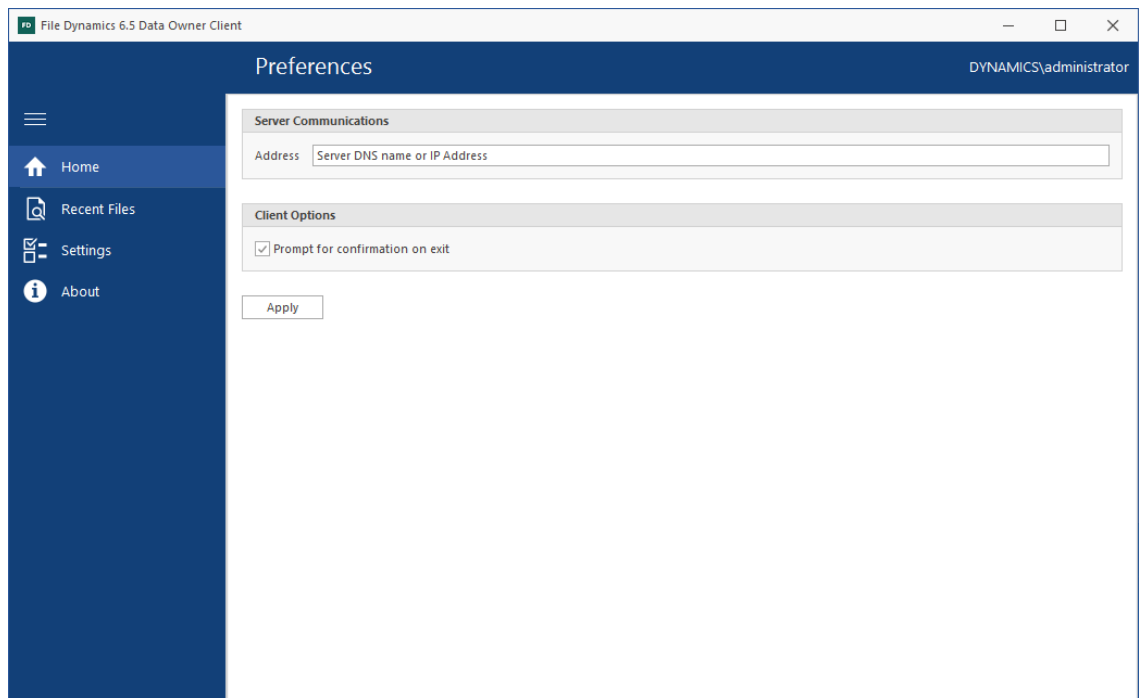
- 1 On the Windows server or workstation where you will run the Data Owner Client, copy to a directory the FileDynamics\_6.5.0.iso.
- 2 Mount the FileDynamics\_6.5.0.iso file.
- 3 At the root of the FileDynamics\_6.5.0.iso image, double-click FileDynamics-DataOwnerClient-6.5-xx.exe.
- 4 Agree to the licensing terms and conditions and click **Install**.
- 5 When notified that the setup was successful, click **Run Data Owner Client**.

The following notification appears:



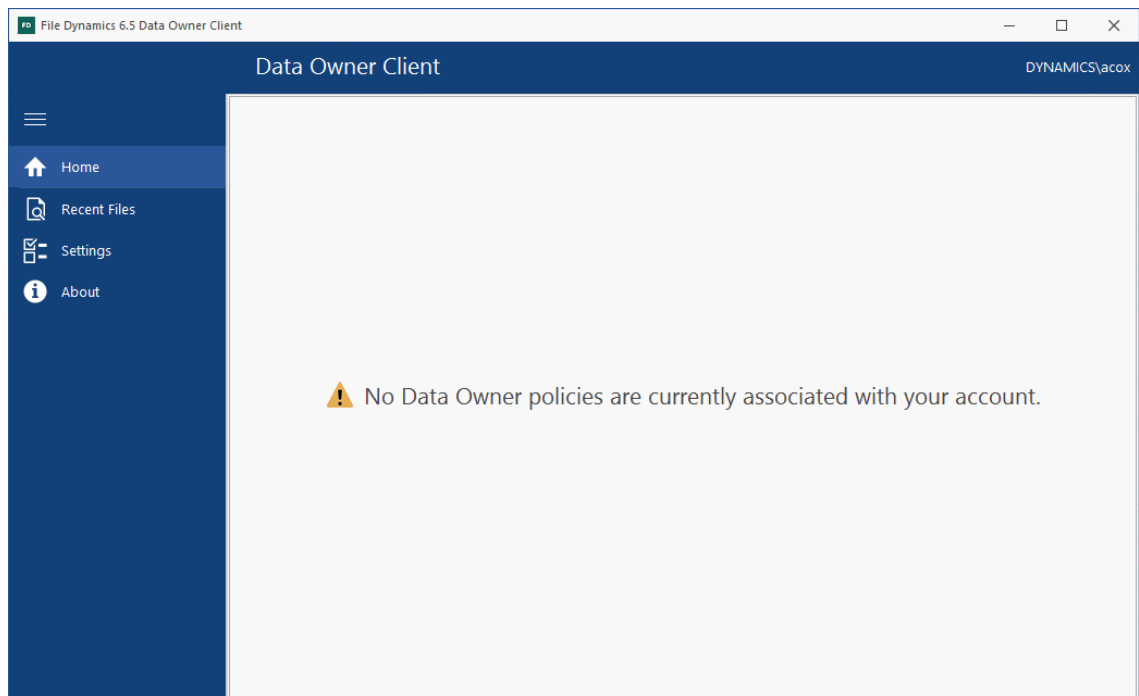
- 6 Click **OK**.

The following dialog box appears:



- 7 In the **Address** field, specify the DNS name or IP address of the server hosting the File Dynamics Engine.

The following interface appears, indicating that the Data Owner Client is configured.



## 6.18 Administering File Dynamics

You have now completed the installation of File Dynamics 6.5. For administration procedures, refer to the *Micro Focus File Dynamics 6.5 Administration Guide*.

# A

## Documentation Updates

This section contains information about documentation content changes that were made in this *Micro Focus File Dynamics 6.5 Installation Guide* after the initial release of File Dynamics 6.0. 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:

### A.1 August 3, 2020

Updates were made to the following sections:

Location	Update Description
<a href="#">“Upgrading from Storage Manager for Active Directory to File Dynamics Essentials” on page 39</a>	New section.

### A.2 September 10, 2019

Updates were made to the following sections:

Location	Update Description
<a href="#">Chapter 4, “Installing CouchDB,” on page 33.</a>	New section.
<a href="#">Section 5.1.1, “Micro Focus File Dynamics Essentials,” on page 37.</a>	New section.
<a href="#">Section 5.2.3, “Upgrading the CouchDB Schema,” on page 41.</a>	New section.
<a href="#">Section 6.3, “Installing the Engine,” on page 44.</a>	Updated procedures.
<a href="#">Section 6.8, “Active Directory Schema,” on page 68</a>	Section moved to new location.
<a href="#">Section 6.16, “Configuring Your Storage Resources,” on page 92.</a>	New section.

## A.3 March 29, 2019

Updates were made to the following sections:

Location	Update Description
<a href="#">Section 2.2, "License Version," on page 13.</a>	New section.
<a href="#">Section 3.1, "Minimum Supported Versions of SQL Server," on page 17.</a>	New section.
<a href="#">Migrating from Storage Manager 3.1.1.</a>	Removed chapter.
<a href="#">Section 6.3, "Installing the Engine," on page 44.</a>	Updated host requirements.
<a href="#">Section 6.10, "Installing and Configuring the Event Monitor," on page 74.</a>	Updated host requirements.
<a href="#">Section 6.11, "Installing and Configuring the File System Agents," on page 79.</a>	Updated host requirements.
<a href="#">Section 6.12, "Installing and Configuring the Phoenix Agents," on page 85.</a>	Updated host requirements.
<a href="#">Section 6.13, "Installing the Admin Client," on page 90.</a>	Updated host requirements.
<a href="#">Section 6.17, "Installing the Data Owner Client," on page 92.</a>	Updated host requirements.

## A.4 September 28, 2018

Updates were made to the following sections:

Location	Update Description
<a href="#">Section 5.2, "Upgrading from File Dynamics 6.x," on page 40</a>	New section.