PaperVision® Enterprise

Installation and Getting Started Guide

Version 85.0

DIGITECH
S Y S T E M S

CONTENTS

CHAPTER 1

Introduction

Welcome

Welcome to the *PaperVision Enterprise Installation and Getting Started Guide*. This guide will walk you through the installation process and the minimum set up needed to get started with PaperVision Enterprise and assumes that you are familiar with the Microsoft® Windows operating system.

This guide is written for IT professionals who are familiar with software installations and configurations. Additionally, users of this installation guide should be familiar with the Microsoft® Windows operating system and basic database administration.

System Requirements

This content describes the minimum software and hardware requirements for PaperVision Enterprise.

Minimum Software Requirements

The following table shows the minimum system requirements for PaperVision Enterprise and its optional components.

Software	Version
Operating Systems	Windows® 2008 R2, 2012, 2012 R2, or 2016 is required for servers running PaperVision Enterprise server. Windows 7, 8, 8.1, or 10 is required for the following components: • PaperVision Administration Console • PaperVision Assistant • PaperVision Automation Service (optional) Including all latest versions of the OS with all required (not optional) Windows updates. PaperVision Web/Application or Authentication Gateway Server (optional) both require Internet Information Server (IIS) 7.5 or later.
Microsoft® .NET Framework	Version 4.5 or later
Windows PowerShell	Version 1.0 or later

Software	Version
Microsoft® SQL Server	SQL Server 2008 or later NOTE: Optionally, you can install Microsoft SQL Server Express Edition. We support SQL Server Express 2008 R2 or later.
Internet Browser	Internet Explorer® 11 (PaperVision Viewer and Browser-Based Viewer) Mozilla Firefox® latest version (PaperVision Viewer and Browser-Based Viewer) Google Chrome™ latest version (PaperVision Viewer and Browser-Based Viewer) Safari® on iPad devices and Macs latest version (Browser-Based Viewer)

Minimum Hardware Requirements

Most enterprise software is capable of operating on a basic hardware configuration that includes a current processor and 4 GB of memory for desktops and 8 GB of memory for servers. However, each organization and their intended use of PaperVision Enterprise are unique. The intended workload, (including the maximum number of users, and the quantity and types of operations performed within a specific periodicity, etc.) coupled with security and redundancy requirements will dictate the hardware requirements for each implementation.

PaperVision Enterprise has the distinct capability to scale both up and out. You can configure most of the functions performed by PaperVision Enterprise to take advantage of powerful hardware configurations, such as those with many processor cores and hundreds of GB of memory (scaling up). Additionally, PaperVision Enterprise can spread its processing requirements across numerous computers (scaling out).

PaperVision Enterprise products are designed and tested for specific operating systems, not hardware environments. Numerous customers successfully run PaperVision Enterprise in virtual environments, including VMware® and Microsoft® Hyper-V. While this technology has matured over the years, issues have occurred with common software (other than PaperVision Enterprise) not operating properly or efficiently because of the virtual environment. In the cases that Digitech Systems' Technical Support has witnessed, the issue was with the virtual environment, not our software.

If our technical support believes that the hardware environment (including virtual environments) is contributing to an operational or performance issue, they may request that you ensure the issue exists in a different (or non-virtual) environment.

If you intend to use a virtual environment for your PaperVision Enterprise implementation, carefully consider the implications of running in a shared environment. Remember, you are not just sharing processors and memory. You are also sharing network and disk resources with the other virtual environments on the same hardware.

Component	Requirement
Hard Disk Space	1.05 GB (installation only)
Screen Resolution	SVGA Monitor (1024 x 768 or higher recommended)

Terms You Should Know

This content contains definitions for terms that are used throughout the documentation and online help. Knowing this terminology will help you use the product and its documentation more effectively.

Administrators

From the PaperVision Enterprise Administration Console, you can set up the following types of administrators

- **Global administrators** can control every aspect of configuration for PaperVision Enterprise, including configurations for all entities. However, they cannot access the documents in a project, as a system (entity) administrator can.

- **System administrators** are entity administrators. They can administrate a single entity and have access to all functionality in all projects for that entity. However, system administrators cannot assign the entity's data group, full-text, migration, and batch paths; these path assignments require a global administrator.

- **Workflow administrators** can design and configure workflows within an entity. They can configure workflow definitions for any project and view workflow history and workflow status reports, but they have no access to documents or functions in any projects unless a system administrator explicitly grants them access. If they have access to view documents within a project, workflow administrators can create workflow instances for a particular document and view its workflow status.

- **Capture administrators** can define capture jobs for use with PaperVision Capture. Capture administrators have no administrative capabilities in PaperVision Enterprise.

- **E-Form administrators** can create E-Forms in PaperVision Enterprise.

Data Group

A data group is a set of documents and their index values. A data group can contain one document or thousands of documents, and those documents can be grouped into one or many projects. A data group holds information for only a single entity, but it can contain an unlimited number of projects. Typically, a data group contains only documents for one project, as this makes organization easier.

Documents

Documents contain the individual pages or images for a given set of index values. If document grouping is enabled, documents are grouped per page results. (See the "To set the default document grouping" procedure in the "Display Entity Properties" section of the *PaperVision Enterprise Administration and Architecture Guide* for instructions.) By default, 100 documents appear per page of search results in PaperVision Enterprise.

Detail Sets

Detail sets (also referred to as "duplicate documents") define a collection of index values that allow multiple sets of field data to reference a single document. If documents with detail sets appear in a search results screen in PaperVision Enterprise, they display with a down arrow that allows you to expand all documents contained in the detail set. Detail sets can be created in PaperFlow™, PaperVision Capture, PaperVision Message Manager, and PaperVision Enterprise Report Management.

The example below shows a search results screen with expanded detail sets to show the documents' related Company Name, and Check Date. The Invoice Number and Document ID detail sets vary across documents.

	Company Name	Invoice Number	Check Date	@Document ID	@Document Creation Dat	@Status
▾	Digitech Systems LLC.	123456	7/26/1997 12:00:00 AM	1	2017-12-18 14:00:16	
	Digitech Systems LLC.	654321	7/26/1997 12:00:00 AM	2	2017-12-18 14:00:16	
▾	Microsoft Inc.	235673	4/4/1975 12:00:00 AM	3	2017-12-18 14:00:16	
	Microsoft Inc.	384745	4/4/1975 12:00:00 AM	4	2017-12-18 14:00:16	
	Microsoft Inc.	893753	4/4/1975 12:00:00 AM	5	2017-12-18 14:00:16	
▾	Amazon Warehouse	737545	7/5/1994 12:00:00 AM	6	2017-12-18 14:00:16	
	Amazon Warehouse	374773	7/5/1994 12:00:00 AM	7	2017-12-18 14:00:16	
	Amazon Warehouse	743723	7/5/1994 12:00:00 AM	8	2017-12-18 14:00:16	
	Amazon Warehouse	823745	7/5/1994 12:00:00 AM	9	2017-12-18 14:00:16	

Entity

An entity is a body such as a company, corporation, or organization. Each entity is autonomous and administers its own projects, users, groups, workflows, security policies, and so on. An entity never shares elements with other entities, and you cannot switch between entities after you log in. A system administrator can limit access to specific projects, functionality, and documents within an entity. Depending on your configuration, you might be required to log in to your entity from the same computer or network each time.

In general, most users (including those at large enterprise installations) use only a single entity. Only a few special circumstances require more than one entity. For example, in a hosting environment where an application service provider (ASP) is hosting data for multiple companies and each company wants to administrate itself and its users. Digitech Systems' ImageSilo is a good example of an ASP that hosts multiple entities. You might also see more than one entity in a large enterprise consisting of different departments that require the ability to administrate themselves separately from other departments without involving a central IT organization.

Entity ID

An entity ID is a unique number that identifies each entity. Each entity is autonomous. You cannot change your entity ID after you log in and you cannot work across entities.

Index Values

Document index fields contain values that let you identify key elements of documents within a project during the capture process. You then use these index field values to search for and retrieve documents in PaperVision Enterprise. When you enter an index value to perform a search for a document, the application compares the value you entered against your database tables and retrieves documents that meet your specific criteria.

> **N O T E**
>
> When index field values are saved in PaperVision Enterprise, the following characters are automatically removed from them: **% ^ & * | <**

PaperVision Administration Console

The PaperVision Administration Console provides administration and configuration capabilities.

PaperVision Authentication Gateway

The PaperVision Authentication Gateway includes the web interface for integrated Windows-based authentication to the PaperVision Enterprise Server (single sign-on).

PaperVision Automation Service

The PaperVision Automation Service is a Microsoft® Windows service that performs automated tasks at specified time intervals. Examples of work performed by the PaperVision Automation Service include importing data, workflow management, records retention and destruction, and report processing. Multiple Automation Services can be installed on distinct machines or multiple PaperVision Automation Service processes may be configured to run on the same machine.

PaperVision Enterprise Server

The PaperVision Enterprise Server provides the web interface for user access.

PaperVision Full-Text Processor

The PaperVision Full-Text Processor is a Microsoft® Windows service that performs automated tasks waiting to be completed in the full-text queue. Examples of work performed by the PaperVision Full-Text Processor include creating and adding to the index of full-text data, deleting full-text data from the index, and compressing the full-text index. A single PaperVision Full-Text Processor is designed to leverage the hardware resources available on a given PC; however, to increase processing throughput, additional Full-Text Processors can be installed.

Project

A project is a logical grouping of documents based on a common indexing schema. For example, ABC Company has three projects: Human Resources, Accounts Receivable, and Sales.

- The Human Resources project contains employee records and health insurance information.
- The Accounts Receivable project contains billing, purchase order, and invoice information.
- The Sales project contains prospect and client information.

Each of these projects is a separate logical grouping within the ABC Company entity. Projects support up to 200 named index fields. Project names must be unique within an entity, but an administrator can create an unlimited number of projects.

Get Product Support

Digitech Systems takes great pride in providing software that is simple to use, feature-rich, and flexible in architecture and integration capabilities. If you experience any difficulty, please contact us toll free at (877) 374-3569 or direct at (402) 484-7777 to experience our legendary customer service. Additionally, you may contact us at support@digitechsystems.com. Our technical support staff is available to serve you between the hours of 8:00 AM and 6:00 PM Central Time.

Digitech Systems' product features and enhancements are driven by you, our customer. If you have an idea for a future product feature or enhancement, please send an e-mail to dev@digitechsystems.com.

In addition to our legendary technical support staff, we also offer the following resources to help you answer questions and resolve issues.

- **MyDSI** - MyDSI is an interactive tool for all Digitech Systems customers. Log in to MyDSI at http://mydsi.digitechsystems.com to download product updates, license purchased software, view support contract renewals, and check the status of your software support cases and requests.

- **User Forums** - Log in to the User Forums at http://forums.digitechsystems.com to exchange answers and ideas with other users in our moderated community.

- **Knowledge Base** - Log in to search our extensive Knowledge Base at http://k-b.digitechsystems.com for articles on all Digitech Systems products.

- **Documentation** - For documentation describing the use and features of PaperVision Enterprise, refer to the PaperVision Enterprise product guides. To access the online help and guides from the PaperVision Enterprise software, click the **Help** menu.

CHAPTER 2

PaperVision Enterprise Installation

Important Installation Prerequisites

Before you install PaperVision Enterprise on your computer, you must be designated as an administrator to install any of the PaperVision Enterprise setup types.

I M P O R T A N T

PaperVision Enterprise should be installed using administrative privileges. If User Account Control (UAC) is enabled during the installation, some operations may not function properly. If UAC is enabled and you are not logged on to Microsoft Windows as the machine's administrator, a UAC prompt appears each time you open the PaperVision Enterprise Administration Console and asks you to allow the PaperVision Enterprise Administration Console to make changes to the computer.

In addition, you might want to review the "System Architecture" appendix in the *PaperVision Enterprise Administration Guide* to learn about the system design scenarios for PaperVision Enterprise.

Installation and Configuration Wizard

The installation and setup of PaperVision Enterprise requires that you follow the instructions on every screen. You can click the **Back** or **Next** buttons to move backward and forward through the screens. You can click the **Cancel** button to exit and close the Installation or Setup Wizard. Additionally, the **Skip** button is available on certain screens if specific components have already been configured in previous versions of PaperVision Enterprise.

Install PaperVision Enterprise Server

Before installing PaperVision Enterprise, review and complete the "Important Installation Prerequisites" above. The following instructions describe the default PaperVision Enterprise Server installation type that installs all Server, Administrative, and Automation features.

To install PaperVision Enterprise Server

1. From the PaperVision Enterprise installation, run **PaperVision Enterprise.exe**.

   After a few moments, the **Welcome to the InstallShield Wizard for PaperVision Enterprise** dialog box appears.
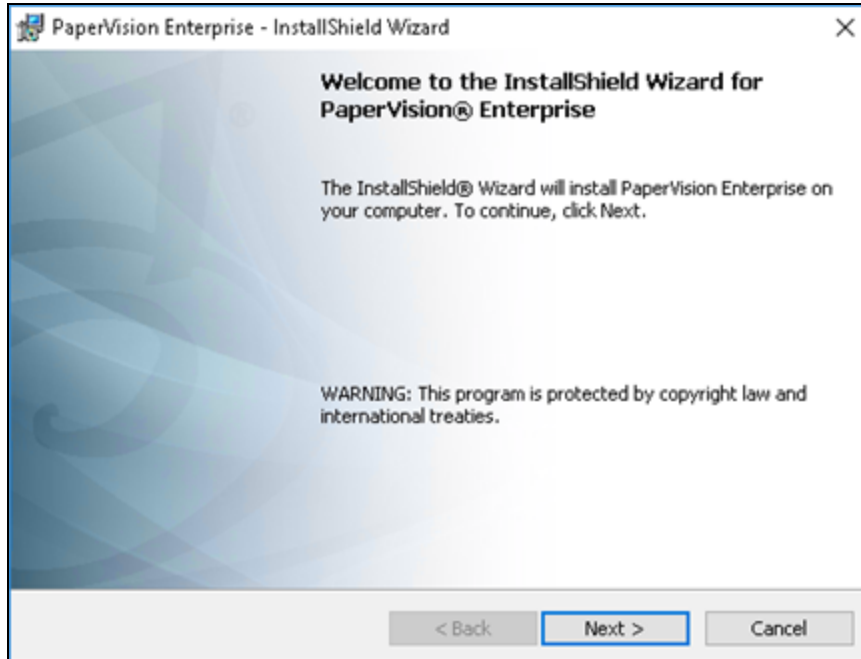
2. Click **Next** to open the **License Agreement** dialog box.
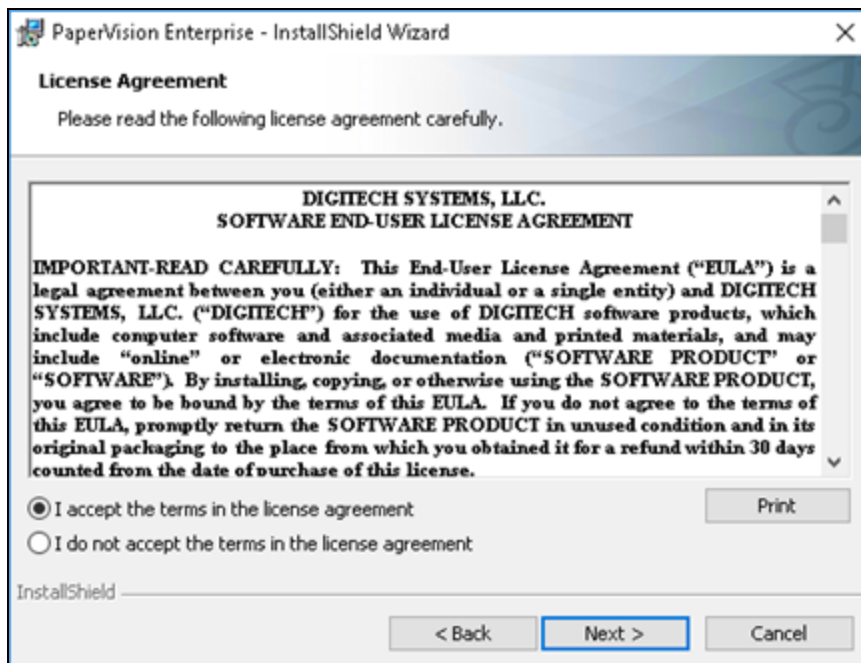
3. To accept the terms of the End-User License Agreement, select **I accept the terms in the license agreement**. If you decline the terms, the installation will terminate.

N O T E

To print a hard copy of the End-User License Agreement, click **Print**.

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4. Click **Next** to open the **Setup Type** dialog box.
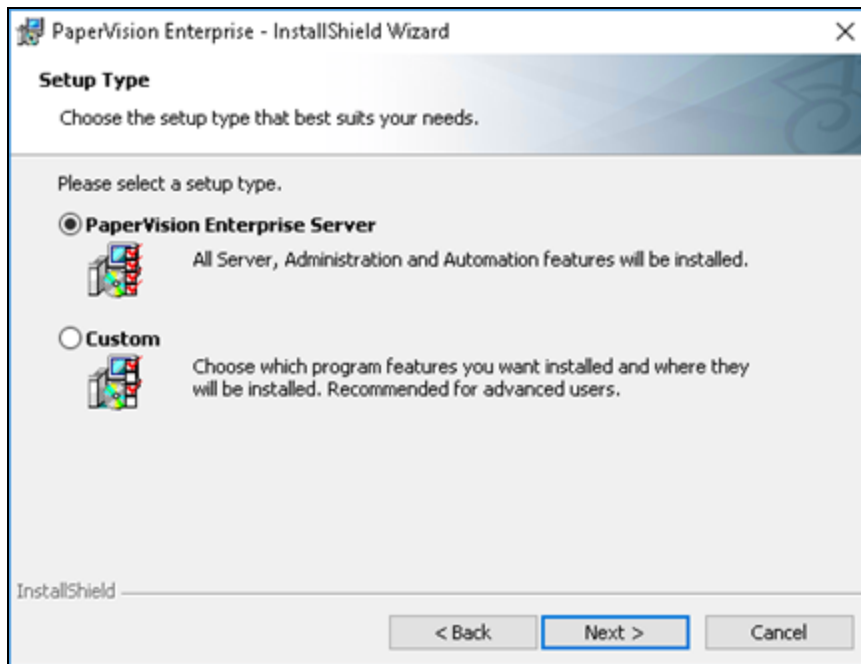
5. Click one of the listed setup types. A description of each setup type follows, but this document describes the steps only for the **PaperVision Enterprise Server** setup type.

- Selecting **PaperVision Enterprise Server** installs all server, administration, and automation features.

- Selecting **Custom** (recommended only for advanced users) lets you select the individual components to install. When you select this option, and then click **Next**, the **Custom Setup** dialog box appears. In this dialog box, you can select a component, and its description and memory requirements appear in the **Feature Description** area on the right.

N O T E

When performing a custom installation, you can change the default installation location for the selected component by clicking **Change**, and then selecting a new destination folder.

To leave a component out of the installation, click the arrow to the left of the component, and then select **This feature will not be available**.

Click the arrow to the left of the component to access the following options:

This feature will be installed on local hard drive.

This feature, and all subfeatures, will be installed on local hard drive.

Both of these options will install the necessary components for a custom installation on the local hard drive.

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6. After selecting **PaperVision Enterprise Server**, click **Next** to open the **Ready to Install the Program** dialog box.
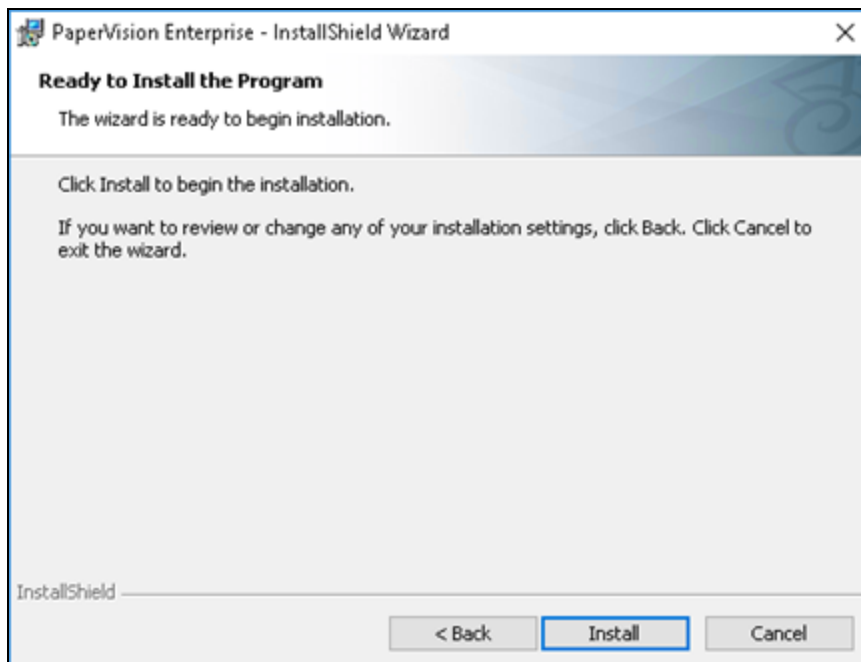
7. Click **Install**.

    A progress bar appears on the **Installing PaperVision Enterprise** dialog box.
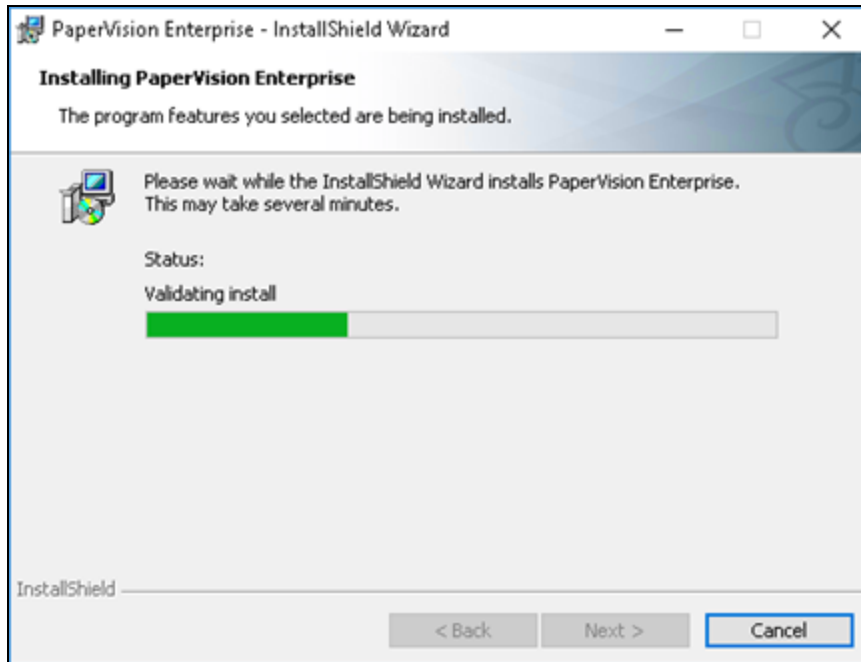
After PaperVision Enterprise is successfully installed, the **InstallShield Wizard Completed** screen appears.
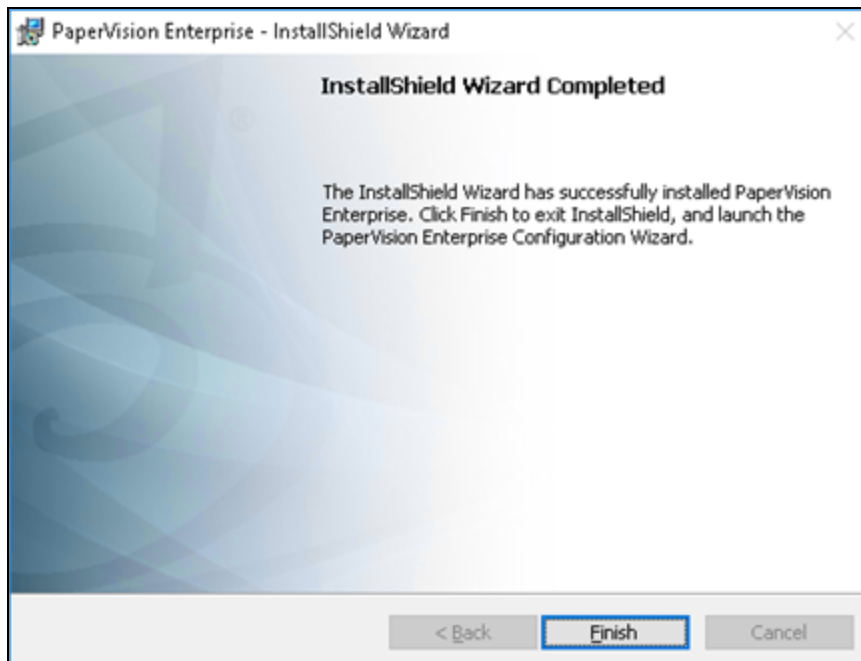
8. Click **Finish** to open the **PaperVision Enterprise Configuration Wizard**, and then go to "Configure PaperVision Enterprise Server" below.

Configure PaperVision Enterprise Server

The following instructions describe how to use the PaperVision Enterprise Configuration Wizard to guide you through the setup process. To access this wizard, you should have completed the procedure under "To install PaperVision Enterprise Server" on page 15. You should see the following dialog box.

To configure PaperVision Enterprise Server

![IMPORTANT icon] **I M P O R T A N T**

If you are setting up process redirection, see "Set Up Process Redirection" on page 44 before completing the following procedure. You must verify that a virtual directory exists specifically for the cache path or that the cache path is set to a UNC path that the web and application servers can access.

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1. In the **Welcome - PaperVision Enterprise Configuration** dialog box, click **Next** to open the **Configure PaperVision Enterprise Server Site** dialog box.
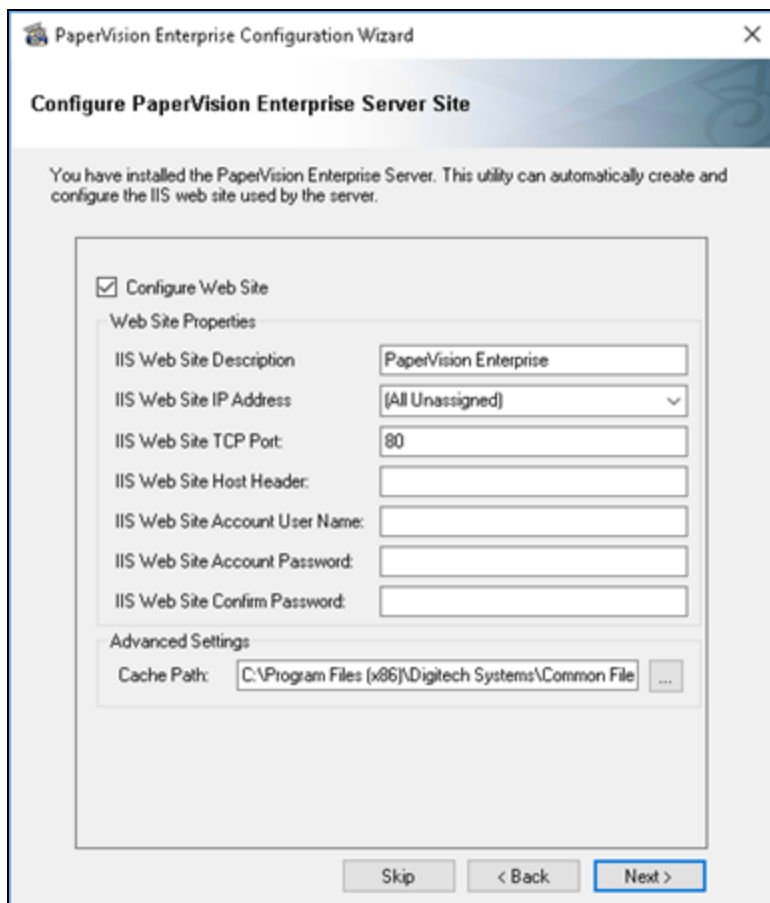
2. To automatically configure and create the IIS web site used by the PaperVision Enterprise Server, select the **Configure Web Site** check box.

3. In the **IIS Web Site Description** box, type the web site name that will appear in the list of IIS web sites.

4. In the **IIS Web Site IP Address** box, do one of the following:

    * If you select **All Unassigned**, you can either type the machine name and instance (for example, http://<MachineName_Instance>/Default.aspx) or the IP address to browse to the site.

    * If you select a specific IP Address, then you must type the specific IP address (for example, http://127.0.0.1/Default.aspx).

5. In the **IIS Web Site TCP Port** box, type the port number used to communicate with IIS. If the Default Web Site in IIS already uses the specified port, you must do one of the following:

    * Specify another port number (for example, 8086).

    * Delete the Default Web Site if it has not already been configured.

    * In IIS, stop the Default Web Site by right-clicking it, and then selecting **Stop**. However, if you want to start the Default Web Site at a later time, you will need to change its TCP Port.

    * Use the server name and a different IP address.

6. In the **IIS Web Site Host Header** box, type the host header.

    This allows multiple URL addresses to connect to the same site or to segregate web sites. Host headers may also be used when two web sites share the same port.

7. In the **IIS Web Site Account User Name box** (used for anonymous access), you must enter the name using one of the following formats:

    * <DomainName>\<UserName>

    * <MachineName>\<UserName>

    * <MachineName_Instance>\<UserName>

    N O T E

    The specified account must have the Windows **Log On as a Service** user right enabled.

    ---

8. In the **IIS Web Site Account Password** box, type the password.

9. In the **IIS Web Site Confirm Password** box, type the password you entered to confirm it.

10. In the **Cache Path** box, type the directory path for the cache location.

    The folder must be named Cache and the physical path of the folder must exist outside of the PVEWeb folder. The IIS virtual directory should be set to Read Only, and turn off the ability to Run Scripts. Grant full control to the physical path of the folder (if it exists on the same server) to the Authenticated user running the site.

    I M P O R T A N T

    If you are setting up process redirection, verify that a virtual directory exists specifically for the cache path or that the cache path is set to a UNC path that the web and application servers can access.

    ---
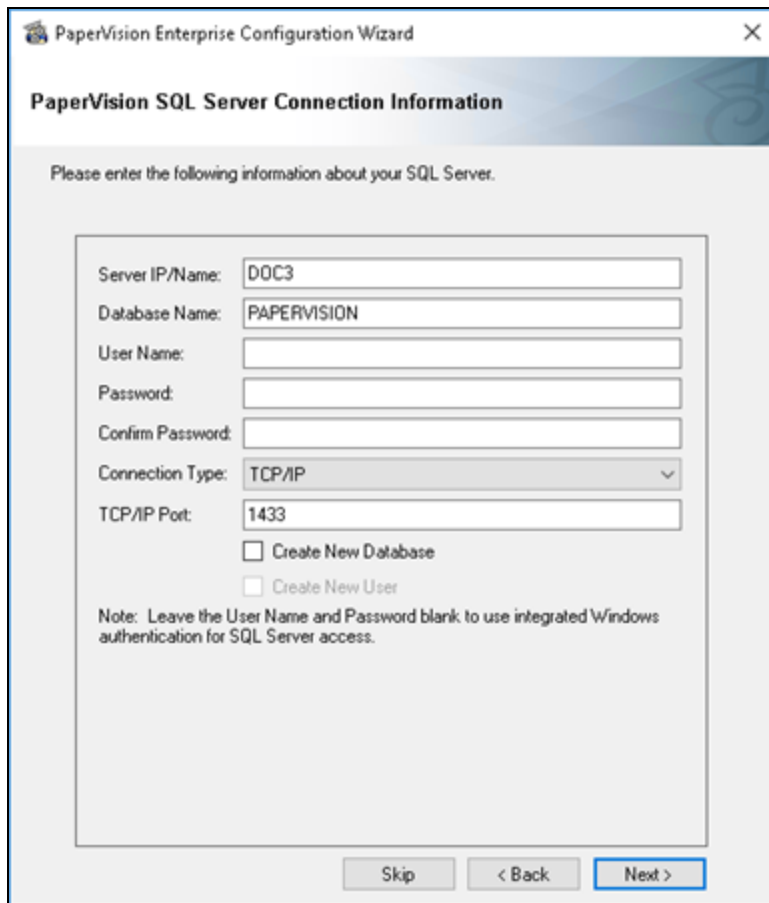
11. Click **Next** to open the **Configure PaperVision Authentication Gateway Site** dialog box.

12. To automatically create and configure the authentication gateway in IIS, select the **Configure Web Site** check box.

13. In the **IIS Web Site Description** box, type the web site name that will appear in the list of IIS web sites.

14. In the **IIS Web Site IP Address** box, do one of the following:

    • If you select **All Unassigned**, you can either type the web site domain name or the IP address to browse to the site (for example, http://PaperVisionDomainName/Default.aspx).

    • If you select a specific IP Address, then you must type the specific IP address (for example, http://127.0.0.1/Default.aspx).

15. In the **IIS Web Site TCP Port** box, type the port number that will be used to communicate with IIS. If the Default Web Site in IIS already uses the specified port, you must do one of the following:

    - Specify another port number (for example, 8086).
    - Delete the Default Web Site if it has not already been configured.
    - In IIS, stop the Default Web Site by right-clicking it, and then selecting Stop. However, if you want to start the Default Web Site at a later time, you will need to change its TCP Port.
    - Use the server name and a different IP address.

16. In the **IIS Web Site Host Header** box, type the host header.

    This allows multiple URL addresses to connect to the same site or to segregate web sites. Host headers may also be used when two web sites share the same port.

17. Click **Next** to open the **PaperVision SQL Server Connection Information** dialog box.

18. In the **Server IP/Name** box, type either the IP address or the machine name where the database resides.

19. In the **Database Name** box, type the database name that will be used to store data for PaperVision Enterprise.

20. In the **User Name** box, type the user name for the person who has the necessary permissions to create new users and add new data. If you do not want to use the System Administrator account, enter the name of a user that already exists and was granted the necessary permissions in SQL Server.

21. In the **Password** box, type the password associated with the user specified in the previous step. If you created a SQL user, type the password for that user.

> **N O T E**
>
> If you leave the **User Name** and **Password** fields blank, the database connection will use Windows Authentication credentials. Typing a user name and password for the database will supersede the Windows Authentication credentials.

22. In the **Confirm Password** box, type the password you specified to confirm it.

23. From the **Connection Type** list, select the connection type you want to use. If you select **TCP/IP**, then type the applicable port number in the **TCP/IP Port** box.

24. If the specified database name does not already exist, select **Create New Database**, and the new database will be automatically created in SQL Server.

25. If the specified user does not already exist, select **Create New User**. The new user will be automatically created in SQL Server and granted access to the database.

> **N O T E**
>
> If you select this option, a SQL Login prompt will appear. Enter the user name and password for the account that has permission to create new users.

26. Click **Next** to open the **Configure PaperVision Automation Service** dialog box, and then go to the next section.

N O T E

If the following error appears:
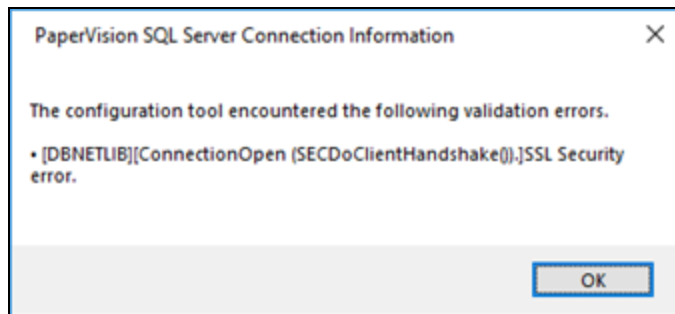
It means that the TLS 1.0 and SSL 3.0 protocols are disabled, and you must add the SQL client version you are running to the **PVDM.ini** file in the **C:\Program Files (x86)\Digitech Systems\Common Files** directory. You can find the correct version in the SQL Server Configuration Manager. After you get the correct version, in the `[PVDM]` section of the **PVDM.ini** file, add the following line:

`DBPROVIDER=SQLNCLI`*`SQLClientVersion`*

For example, to use SQL Native Client version 11, you would type `DBPROVIDER=SQLNCLI11`.

Configure the PaperVision Automation Service

The Automation Service is a Microsoft® Windows service that performs automated tasks and operations at a specified time interval. To access the following **Configure PaperVision Automation Service** dialog box, you should have completed the procedures in the previous sections.

To configure the Automation Service

1. In the **Configure PaperVision Automation Service** dialog box, select one of the following options:

   - The **Local System Account** option requires no additional user name or password inform-ation. However, the local system account generally does not have access to network shared drives and other directories on the computer. As such, it may be necessary to change the account the service is using. A confirmation message will ask you if you want to continue and save the changes (if you changed the account settings). Click **Yes** to continue with the installation.

   N O T E

   If you select **No**, the installation will not proceed. (See "Change the Windows Service Account" on page 56 for instructions to change the Windows service account.)

   - The **This Account** option lets you select the Windows user account that will have security rights to perform all PaperVision Automation Service functions such as reading, writing, and deleting files. If you choose this option, type a user name and password; and then confirm the password.

   I M P O R T A N T

   The specified account must have the **Windows Log On as a Service** user right enabled.

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2. Click **Next**, and then go to "Configure the PaperVision Full-Text Processor" on the next page.

Configure the PaperVision Full-Text Processor

The PaperVision Full-Text Processor is a Microsoft® Windows service that performs automated tasks waiting to be completed in the full-text queue. Examples of work performed by the PaperVision Full-Text Processor include creating and adding to the index of full-text data, deleting full-text data from the index, and compressing the full-text index.

To access the following **Configure PaperVision Full-Text Processor** dialog box, you should have completed the procedures in the previous sections.
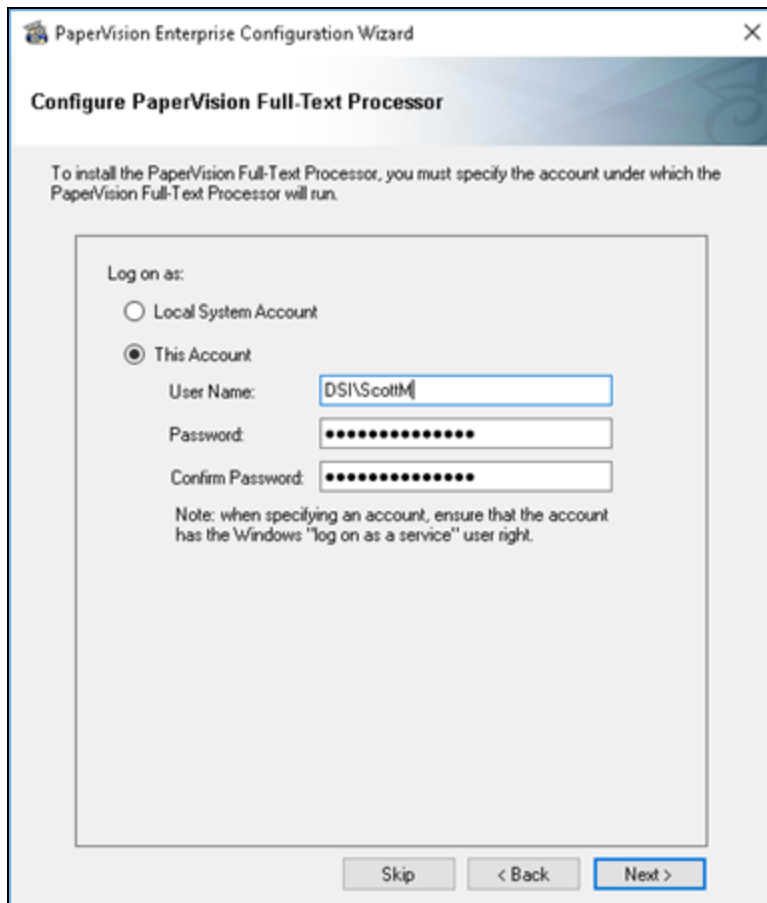
To configure the Full-Text Processor

N O T E

By default, the following settings are populated with the same configuration information you specified for the Automation Service.

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1. In the **Configure PaperVision Full-Text Processor** dialog box, select one of the following options:

   - The **Local System Account** option requires no additional user name or password information. However, the local system account generally does not have access to network shared drives and other directories on the computer. As such, it may be necessary to change the account the service is using. A confirmation message will ask you if you want to continue and save the changes (if you changed the account settings). Click **Yes** to continue with the installation.

N O T E

If you select **No**, the installation will not proceed. (See "Change the Windows Service Account" on page 56 for instructions to change the Windows service account.)

   - The **This Account** option lets you select the Windows user account that will have security rights to perform all PaperVision Full-Text Processor functions such as building and adding to the index of full-text data, and deleting full-text data from the index. If you choose this option, type a user name and password; and then confirm the password.

I M P O R T A N T

The specified account must have the **Windows Log On as a Service** user right enabled.

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2. Click **Next**, and then go to "License PaperVision Enterprise" on the next page.

License PaperVision Enterprise

To access the following **PaperVision Licensing** dialog box, you should have completed the procedures in the previous sections.

To add licenses

1. On the **PaperVision Licensing** dialog box, do one of the following:

   - To add your purchased license, click **Add License**, and then go to the next step in this procedure.

   - If you want to run PaperVision Enterprise in demonstration mode, click **30 Day Demo License**, and then go to step **5**.

   📜 **N O T E**

   If you have already added a purchased license of PaperVision Enterprise, you cannot add a subsequent demo license. If you want to add a demo license, you must add it before any purchased license. The demo license includes one license each of the Advanced Admin Pack and Enterprise Workflow and fifty Enterprise User licenses.

   - If you have multiple licenses to add, you can do a bulk import of them from a text file to save time. To use this feature, contact customer support to get a text file that contains your

licensing information, and then perform the following procedure.

1. Click **Import Licenses**.

2. In the **Open** dialog box, select the text file that contains the license codes you want to import, and then click **Open**.

    If a license code does not import successfully, a prompt appears asking if you want to do a phone authorization. If you click **Yes**, the **Obtain Authorization Code** dialog box appears with the information you need to complete the authorization by phone.

3. When you are finished importing licenses, go to step **5** in the main procedure.

2. In the **New License** dialog box, enter the license code that was included with the purchase.
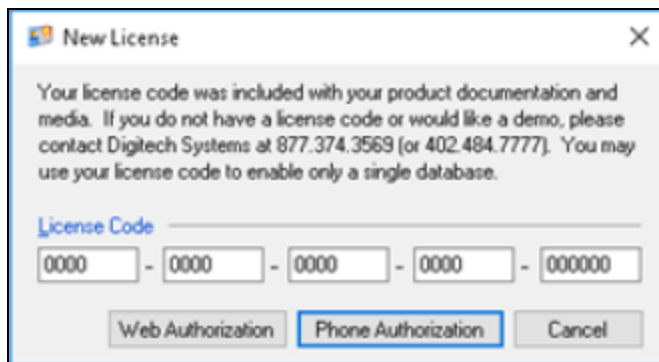
3. Do one of the following:

    - If the computer has access to the Internet, click **Web Authorization** to obtain the license key online.

    - Click **Phone Authorization**, and then follow the instructions on the **Obtain Authorization Code** dialog box.

N O T E

You must provide the serial number and identifier before the license key will be given to you.

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4. In the **Obtain Authorization Code** dialog box, enter the code, and then click **OK**.

5. Click **Next** to open the **PaperVision Data Storage** dialog box.

6. In the **Data Path** box, do one of the following:

    • Type the location of the data storage path where document and full-text data will be stored.

    • Click the ellipsis button to browse to the location where document and full-text data will be stored.

🗒 **N O T E**

If multiple computers will be accessing this location, it is recommended to enter a network-accessible path such as ***SERVER\SHARE***. The user account that is configured to run the PVE server site must have **Full Control** access to the UNC share.

---

7. Click **Next** to open the **Thank You – PaperVision Enterprise Configuration** dialog box, and then click **Finish** to close the configuration wizard.

Uninstall PaperVision Enterprise

The following procedure removes PaperVision Enterprise from the system. However, user-generated data, including processed files, databases, images, and so on, will remain intact.

To uninstall PaperVision Enterprise

1. On the taskbar in Windows, click the **Start** button.

2. Select **Control Panel**, and then under **Programs**, click **Uninstall a program**.

3. From the list of programs, select **PaperVision Enterprise**, and then click **Uninstall**.

4. From the list of programs, select **Microsoft ReportViewer 2010 Redistributable**, and then click **Uninstall**.

5. From the list of programs, select **IIS URL Rewrite Module 2**, and then click **Uninstall**.

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CHAPTER 3

Get Started in PaperVision Enterprise

Task Overview

After PaperVision Enterprise has been successfully installed, a global administrator must complete the tasks listed below before users can begin working with the software. Entity and project configuration, global administration operations, and all other administration functions are described in the *PaperVision Enterprise Administration and Architecture Guide*.

N O T E

To find the sections referenced below, search for the listed headings in the *PaperVision Enterprise Administration and Architecture Guide* or the online help after you have logged in to the Administration Console.

From the PaperVision Administration Console, the global administrator must:

- Create an entity and associated projects. (See the "Entity Configuration" and "Project Administration" sections.)
- Add new PaperVision Enterprise users. (See the "System Users" section.)
- Configure system settings. (See the "System Settings" section.)
- Configure automation service scheduling operations. (See the "Automation Service Scheduling" section.)

See "Log in to the PaperVision Administration Console" on the facing page for instructions to access the PaperVision Enterprise Administration Console where you can perform the tasks listed above.

See "Log in to the PaperVision Enterprise Web Client" on page 38 for instructions to access the PaperVision Enterprise Web Client.

See "PaperVision Enterprise Configuration Utility" on page 39 if you need to reconfigure the PaperVision automation service or SQL server connection that you specified during the original installation of PaperVision Enterprise.

Log in to the PaperVision Administration Console

The PaperVision Administration Console provides a single point of administration for everything related to PaperVision Enterprise, including workflow configuration. An unlimited number of entities can be managed using a single sign on. Only global, system, and workflow administrators can log into the administration console.

To log in to the PaperVision Administration Console

1. On your desktop, double-click the **PaperVision Admin Console** icon to open the **Administration Login** dialog box.
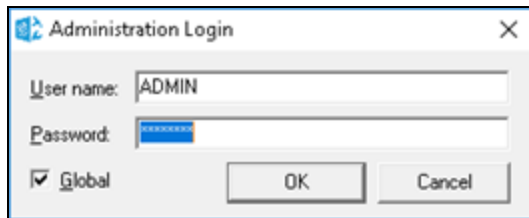
The **User name** and **Password** values default to **ADMIN**, and the **Global** check box is selected to log you in as a global administrator.

2. (Optional) If you want to log in as a system administrator, then clear the **Global** check box.

3. Click **OK** to open the **PaperVision Administration Console**.
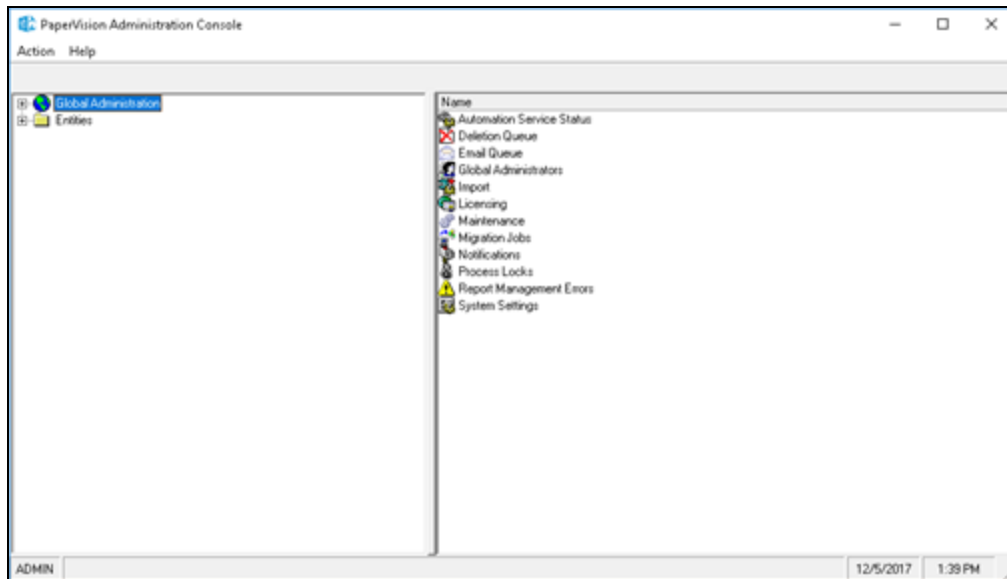
4. See "Task Overview" on the previous page for a list of tasks you must perform as a global administrator from the PaperVision Administration Console before using PaperVision Enterprise. See the *PaperVision Enterprise Administration Guide* for instructions to complete these tasks. Search for the listed headings in your *PaperVision Enterprise Administration and Architecture Guide* or the online help after you have logged in to the Administration Console.

Log in to the PaperVision Enterprise Web Client

The PaperVision Enterprise Web Client is accessed through your web browser, and includes all client functionality and operations such as document viewing, searching, indexing, and other document manipulation operations. When you initially log into the Web Client application, you may need to change your current password.

To open the PaperVision Enterprise Web Client

1. Open your web browser.

2. In the browser's Address bar, type the PaperVision Enterprise URL provided by your administrator, which follows the general format:

   ```
   http://<pveurladdress>/default.aspx
   ```

   The login dialog box appears.

3. Type your user name and password. If this if your first time logging in, contact your administrator for your user name and password.

4. From the **Language** list, select the appropriate language.

5. Click **Login**.

   If you are required to change your password the first time you log in, the **Password Change Required** dialog box appears.

6. In the **Current Password** box, type the password given to you by your administrator.

7. In the **New Password** box, type the new password to which you want to change.

8. In the **Confirm New Password** box, retype the new password to confirm it.

9. Click **Change**.

   The main PaperVision Enterprise window appears, displaying a list of projects, E-Forms, destruction lists, system settings, etc. to which you have been given access. The accompanying *PaperVision Enterprise User Guide* and online help describes the features and functionality of the PaperVision Enterprise Web Client.

PaperVision Enterprise Configuration Utility

After installation, if you need to reconfigure the PaperVision Automation Service or SQL Server connection information, you can use the PaperVision Enterprise Configuration Utility.

To open the PaperVision Enterprise Configuration Utility

1. On the applicable machine, start Windows.

2. On the taskbar, click the **Start** button, and then click **All Programs**.

3. Click the **Digitech Systems** folder, and then click **PaperVision Configuration Utility**.

4. If a **User Account Control** dialog box appears, click **Yes** to allow the configuration utility to make changes to the computer.

5. On the left pane, you can select the following options:

- **Configure PaperVision Automation Service** - Click this option to change the number of simultaneous processes. (See "Change the Number of Simultaneous Processes" below for configuration instructions.)

- **SQL Sever Connection Information** - Click this option to change the SQL server connection settings. (See "Change SQL Server Connection Information" on the facing page for configuration instructions.)

Change the Number of Simultaneous Processes

Your automation service processes were configured when the software was installed, but you can change the number of simultaneous processes through the **PaperVision Enterprise Configuration Utility**. You can configure multiple automation service processes to run on a single physical machine. In this scenario, each automation service process is specified in a `SERVERNAME_INSTANCE` format. The instance sequence starts with zero and increments by one for each added instance.

> **E X A M P L E**
>
> If your system had three simultaneous automation service processes configured on a machine named `SERVER`, the **Automation Service Status** listing would show the following under the **Automation Server** column.
>
> ```
> SERVER_0
> SERVER_1
> SERVER_2
> ```

To change the number of simultaneous processes

1. Open the **PaperVision Enterprise Configuration Utility**. (See "To open the PaperVision Enterprise Configuration Utility" on the previous page if you need help.)

2. On the left pane, click **Configure PaperVision Automation Service**.

3. On the right pane, in the **Simultaneous Processes** box, specify the number of the simultaneous processes you want to use, and then click **Save**.

4. On the **Configure PaperVision Automation Service** dialog box, click **Yes** to restart the service. If you click **No**, you must manually restart the service. Your changes will not take effect until the service has been restarted.

> **N O T E**
>
> If you want to change the Windows service account under which the automation service is running, see "Change the Windows Service Account" on page 56 for instructions.

Change SQL Server Connection Information

In the **PaperVision Enterprise Configuration Utility**, you can change the SQL server connection settings.

To change SQL server connection information

1. Open the **PaperVision Enterprise Configuration Utility**. (See "To open the PaperVision Enterprise Configuration Utility" on page 39 if you need help.)

2. On the left pane, click **SQL Server Connection Information**.

3. On the right pane, in the **Server IP/Name** box, type either the IP address or the machine name where the database resides.

4. In the **Database Name** box, type the database name that will be used to store data in Paper-Vision Enterprise.

5. In the **User Name** box, type the user name for the person who has the necessary permissions to create new users and add new data. If you do not want to use the System Administrator account, enter the name of a user that already exists and was granted the necessary permissions in SQL Server.

6. In the **Password** box, type the password associated with the user specified in the previous step. If you created a SQL user, type the password for that user.

> **N O T E**
>
> If you leave the **User Name** and **Password** fields blank, the database connection will use Windows Authentication credentials. Typing a user name and password for the database will supersede the Windows Authentication credentials.

7. In the **Confirm Password** box, type the password you specified to confirm it.

8. From the **Connection Type** list, select the connection type you want to use. If you select **TCP/IP**, then type the applicable port number in the **TCP/IP Port** box.

9. If the specified database name does not already exist, select **Create New Database**, and the new database will be automatically created in SQL Server.

10. If the specified user does not already exist, select **Create New User**. The new user will be automatically created in SQL Server and granted access to the database.

> **N O T E**
>
> If you select this option, a SQL Login prompt will appear. Type the user name and password for the account that has permission to create new users.

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APPENDIX A

Process Redirection

Set Up Process Redirection

In PaperVision Enterprise, you can use process redirection to redirect SQL and file operations from a web server to an application server. This configuration is ideal to store the data on your internal network and allow users from the Internet to access it from the PaperVision Enterprise web client. PaperVision Enterprise is specifically engineered to do this in the most secure manner. Because the internal application server is the one accessing the data, the external web server never needs access to the data stores. This ensures that if the DMZ is ever compromised your data is not vulnerable. This configuration also works well for offloading the work that one server has to do on your internal network.

Setup Assumptions

The following assumptions are made ONLY if the configuration includes a web server in the DMZ and the application server is part of the internal network:

1. A firewall is installed.
   - HTTP (or HTTPS traffic) should be allowed to originate from the PaperVision Enterprise web server (in the DMZ network) to the PaperVision Enterprise application server (in the internal network).
   - HTTP (or HTTPS traffic) should be allowed to the PaperVision Enterprise web server (in the DMZ network) from the Internet.
   - Appropriate traffic is allowed to traverse the firewall to support Microsoft's domains and trusts (see related Microsoft KB articles later in this document).
2. The PaperVision Enterprise web server is part of a Windows domain in the DMZ.
3. The PaperVision Enterprise application server is part of a different Windows domain on the internal network.
4. A one-way trust exists between the internal domain and the DMZ domain.
   - Internal domain is trusted
   - DMZ domain is trusting
5. IIS is installed on both the PaperVision Enterprise web server (in the DMZ network) and the PaperVision Enterprise application server (in the internal network).

For more information about domains and trusts, see the following links:

Understanding Trust Transitivity

How to Configure a Firewall for Domains and Trusts

Configuring a Web Server to Use a Separate Application Server

I M P O R T A N T

Complete the following configuration only after installing and configuring the product.

A web server can redirect only to an application server. Configuring a web server to use a separate application server is done by modifying the **PVDM.ini** file in the **C:\Program Files (x86)\Digitech Systems\Common Files** directory, and using the appropriate configuration files for the document search and file services. (See "Process Redirection with the PaperVision Document Search Service" on the next page and "Process Redirection with the PaperVision File Service" on page 50 for instructions to configure these services.)

Insert the following two lines of text in the **PVDM.ini** file:

```
[PVDM]

REDIRECTREQ=http://yourappserverhere/
```

If your web server sits behind a load balancer, you should also add the following lines:

```
[PVDM-GLOBALSYSTEM]

WEBURL=http://yourwebserverhere/
```

N O T E

Alternatively, these URL addresses can contain the "https" protocol identifier.

Since the web server will never need to interact with the database, it is not necessary (nor recommended for security reasons) to start the PaperVision Administration Console and connect to a database on the web server.

Process Redirection with the PaperVision Document Search Service

The PaperVision Document Search Service is not configured for systems that are using process redirection or SSL by default. Therefore, you must use different **web.config** and **DocumentSearch.svc** files for the search service to work with these options. Which files you use depend on whether you are using SSL on the redirect server, and whether you are redirecting to a server using SSL. From the procedures that follow, use the one that describes your setup configuration to specify the correct preconfigured files. These procedures assume that PaperVision Enterprise is installed in the default directory (**C:\Progam Files (x86)\Digitech Systems**).

To set up a web server not using SSL to redirect to a web/application server not using SSL

1. On the web server, in the **C:\Program Files (x86)\Digitech Systems\PaperVision\Services\DocumentSearch** folder, right-click the **DocumentSearch.svc** file, and then click **Rename**.

2. Rename the file to **DocumentSearch.svc.Default**.

3. Press Enter, and then click **Yes**.

4. Right-click the **DocumentSearch.svc.Redirect** file, and then click **Rename**.

5. Rename the file to **DocumentSearch.svc**.

6. Press Enter, and then click **Yes**.

7. Right-click the **web.config** file, and then click **Rename**.

8. Rename the file to **web.config.Default**.

9. Press Enter, and then click **Yes**.

10. Right-click the **web.config.HTTP_Redirect_HTTP** file, and then click **Rename**.

11. Rename the file to **web.config**.

12. Press Enter, and then click **Yes**.

13. Open the **web.config** file in Notepad.

14. Search for **http://**. (There is only one instance.)

15. Change the default URL to the URL to which you are redirecting.

E X A M P L E

If you are redirecting to the server "ImageSilo," you would change the default URL from:

```
address=http://localhost:8081/Services/DocumentSearch/DocumentSearch
.svc
```

to

```
address=http://ImageSilo/Services/DocumentSearch/DocumentSearch.svc
```

---

16. Click **Save**.

17. Restart IIS.

To set up a web server not using SSL to redirect to a web/application server using SSL

1. On the web server, in the **C:\Program Files (x86)\Digitech Systems\PaperVision\Services\DocumentSearch** folder, right-click the **DocumentSearch.svc** file, and then click **Rename**.

2. Rename the file to **DocumentSearch.svc.Default**.

3. Press Enter, and then click **Yes**.

4. Right-click the **DocumentSearch.svc.Redirect** file, and then click **Rename**.

5. Rename the file to **DocumentSearch.svc**.

6. Press Enter, and then click **Yes**.

7. Right-click the **web.config** file, and then click **Rename**.

8. Rename the file to **web.config.Default**.

9. Press Enter, and then click **Yes**.

10. Right-click the **web.config.HTTP_Redirect_SSL** file, and then click **Rename**.

11. Rename the file to **web.config**.

12. Press Enter, and then click **Yes**.

13. Open the **web.config** file in Notepad.

14. Search for **http://**. (There is only one instance.)

15. Change the default URL to the URL to which you are redirecting.

E X A M P L E

If you are redirecting to the server "ImageSilo," you would change the default URL from:

```
address=http://localhost:8081/Services/DocumentSearch/DocumentSearch.svc
```

to

```
address=https://ImageSilo/Services/DocumentSearch/DocumentSearch.svc
```

---

16. Click **Save**.

17. Restart IIS.

To set up a web server using SSL to redirect to a web/application server not using SSL

1. On the web server, in the **C:\Program Files (x86)\Digitech Systems\PaperVision\Services\DocumentSearch** folder, right-click the **DocumentSearch.svc** file, and then click **Rename**.

2. Rename the file to **DocumentSearch.svc.Default**.

3. Press Enter, and then click **Yes**.

4. Right-click the **DocumentSearch.svc.Redirect** file, and then click **Rename**.

5. Rename the file to **DocumentSearch.svc**.

6. Press Enter, and then click **Yes**.

7. Right-click the **web.config** file, and then click **Rename**.

8. Rename the file to **web.config.Default**.

9. Press Enter, and then click **Yes**.

10. Right-click the **web.config.SSL_Redirect_HTTP** file, and then click **Rename**.

11. Rename the file to **web.config**.

12. Press Enter, and then click **Yes**.

13. Open the **web.config** file in Notepad.

14. Search for **http://**. (There is only one instance.)

15. Change the default URL to the URL to which you are redirecting.

E X A M P L E

If you are redirecting to the server "ImageSilo," you would change the default URL from:

```
address=http://localhost:8081/Services/DocumentSearch/DocumentSearch
.svc
```

to

```
address=http://ImageSilo/Services/DocumentSearch/DocumentSearch.svc
```

---

16. Click **Save**.

17. Restart IIS.

To set up a web server using SSL to redirect to a web/application server using SSL

1. On the web server, in the **C:\Program Files (x86)\Digitech Systems\PaperVision\Services\DocumentSearch** folder, right-click the **DocumentSearch.svc** file, and then click **Rename**.

2. Rename the file to **DocumentSearch.svc.Default**.

3. Press Enter, and then click **Yes**.

4. Right-click the **DocumentSearch.svc.Redirect** file, and then click **Rename**.

5. Rename the file to **DocumentSearch.svc**.

6. Press Enter, and then click **Yes**.

7. Right-click the **web.config** file, and then click **Rename**.

8. Rename the file to **web.config.Default**.

9. Press Enter, and then click **Yes**.

10. Right-click the **web.config.SSL_Redirect_SSL** file, and then click **Rename**.

11. Rename the file to **web.config**.

12. Press Enter, and then click **Yes**.

13. Open the **web.config** file in Notepad.

14. Search for **http://**. (There is only one instance.)

15. Change the default URL to the URL to which you are redirecting.

E X A M P L E

If you are redirecting to the server "ImageSilo," you would change the default URL from:

```
address=http://localhost:8081/Services/DocumentSearch/DocumentSearch
.svc
```

to

```
address=https://ImageSilo/Services/DocumentSearch/DocumentSearch.svc
```

---

16. Click **Save**.

17. Restart IIS.

To set up an application server at the end of a redirect

> ⚠ **I M P O R T A N T**
>
> If the application server at the end of a redirect is not configured to use SSL, then no changes are required. If the application server is using SSL, then complete the following procedure.

---

1. On the application server, in the **C:\Program Files (x86)\Digitech Systems\PaperVision\Services\DocumentSearch** folder, right-click the **web.config** file, and then click **Rename**.

2. Rename the file to **web.config.Default**.

3. Press Enter, and then click **Yes**.

4. Right-click the **web.config.SSL** file, and then click **Rename**.

5. Rename the file to **web.config**.

6. Press Enter, and then click **Yes**.

7. Restart IIS.

Process Redirection with the PaperVision File Service

The PaperVision File Service is not configured for systems that are using process redirection or SSL by default. Therefore, you must use different **web.config** and **FileService.svc** files for the file service to work with these options. Which files you use depend on whether you are using SSL on the redirect server, and whether you are redirecting to a server using SSL. From the procedures that follow, use the one that describes your setup configuration to specify the correct preconfigured files. These procedures assume that PaperVision Enterprise is installed in the default directory (**C:\Progam Files (x86)\Digitech Systems**).

To set up a web server not using SSL to redirect to a web/application server not using SSL

1. On the web server, in the **C:\Program Files (x86)\Digitech Systems\PaperVision\Services\FileService** folder, right-click the **FileService.svc** file, and then click **Rename**.

2. Rename the file to **FileService.svc.Default**.

3. Press Enter, and then click **Yes**.

4. Right-click the **FileService.svc.Redirect** file, and then click **Rename**.

5. Rename the file to **FileService.svc**.

6. Press Enter, and then click **Yes**.

7. Right-click the **web.config** file, and then click **Rename**.

8. Rename the file to **web.config.Default**.

9. Press Enter, and then click **Yes**.

10. Right-click the **web.config.HTTP_Redirect_HTTP** file, and then click **Rename**.

11. Rename the file to **web.config**.

12. Press Enter, and then click **Yes**.

13. Open the **web.config** file in Notepad.

14. Search for **http://**. (There is only one instance.)

15. Change the default URL to the URL to which you are redirecting.

E X A M P L E

If you are redirecting to the server "ImageSilo," you would change the default URL from:

```
address=http://localhost:8081/Services/FileService/FileService.svc
```

to

```
address=http://ImageSilo/Services/FileService/FileService.svc
```

---

16. Click **Save**.

17. Restart IIS.

To set up a web server not using SSL to redirect to a web/application server using SSL

1. On the web server, in the **C:\Program Files (x86)\Digitech Systems\PaperVision\Services\FileService** folder, right-click the **FileService.svc** file, and then click **Rename**.

2. Rename the file to **FileService.svc.Default**.

3. Press Enter, and then click **Yes**.

4. Right-click the **FileService.svc.Redirect** file, and then click **Rename**.

5. Rename the file to **FileService.svc**.

6. Press Enter, and then click **Yes**.

7. Right-click the **web.config** file, and then click **Rename**.

8. Rename the file to **web.config.Default**.

9. Press Enter, and then click **Yes**.

10. Right-click the **web.config.HTTP_Redirect_SSL** file, and then click **Rename**.

11. Rename the file to **web.config**.

12. Press Enter, and then click **Yes**.

13. Open the **web.config** file in Notepad.

14. Search for **http://**. (There is only one instance.)

15. Change the default URL to the URL to which you are redirecting.

> **E X A M P L E**
>
> If you are redirecting to the server "ImageSilo," you would change the default URL from:
>
> `address=http://localhost:8081/Services/FileService/FileService.svc`
>
> to
>
> `address=https://ImageSilo/Services/FileService/FileService.svc`

16. Click **Save**.

17. Restart IIS.

To set up a web server using SSL to redirect to a web/application server not using SSL

1. On the web server, in the **C:\Program Files (x86)\Digitech Systems\PaperVision\Services\FileService** folder, right-click the **FileService.svc** file, and then click **Rename**.

2. Rename the file to **FileService.svc.Default**.

3. Press Enter, and then click **Yes**.

4. Right-click the **FileService.svc.Redirect** file, and then click **Rename**.

5. Rename the file to **FileService.svc**.

6. Press Enter, and then click **Yes**.

7. Right-click the **web.config** file, and then click **Rename**.

8. Rename the file to **web.config.Default**.

9. Press Enter, and then click **Yes**.

10. Right-click the **web.config.SSL_Redirect_HTTP** file, and then click **Rename**.

11. Rename the file to **web.config**.

12. Press Enter, and then click **Yes**.

13. Open the **web.config** file in Notepad.

14. Search for **http://**. (There is only one instance.)

15. Change the default URL to the URL to which you are redirecting.

> **E X A M P L E**
>
> If you are redirecting to the server "ImageSilo," you would change the default URL from:
>
> ```
> address=http://localhost:8081/Services/FileService/FileService.svc
> ```
>
> to
>
> ```
> address=http://ImageSilo/Services/FileService/FileService.svc
> ```

16. Click **Save**.

17. Restart IIS.

To set up a web server using SSL to redirect to a web/application server using SSL

1. On the web server, in the **C:\Program Files (x86)\Digitech Sys-tems\PaperVision\Services\FileService** folder, right-click the **FileService.svc** file, and then click **Rename**.

2. Rename the file to **FileService.svc.Default**.

3. Press Enter, and then click **Yes**.

4. Right-click the **FileService.svc.Redirect** file, and then click **Rename**.

5. Rename the file to **FileService.svc**.

6. Press Enter, and then click **Yes**.

7. Right-click the **web.config** file, and then click **Rename**.

8. Rename the file to **web.config.Default**.

9. Press Enter, and then click **Yes**.

10. Right-click the **web.config.SSL_Redirect_SSL** file, and then click **Rename**.

11. Rename the file to **web.config**.

12. Press Enter, and then click **Yes**.

13. Open the **web.config** file in Notepad.

14. Search for **http://**. (There is only one instance.)

15. Change the default URL to the URL to which you are redirecting.

> **E X A M P L E**
>
> If you are redirecting to the server "ImageSilo," you would change the default URL from:
>
> ```
> address=http://localhost:8081/Services/FileService/FileService.svc
> ```
>
> to
>
> ```
> address=https://ImageSilo/Services/FileService/FileService.svc
> ```

16. Click **Save**.

17. Restart IIS.

To set up an application server at the end of a redirect

IMPORTANT

If the application server at the end of a redirect is not configured to use SSL, then no changes are required. If the application server is using SSL, then complete the following procedure.

---

1. On the application server, in the **C:\Program Files (x86)\Digitech Systems\PaperVision\Services\FileService** folder, right-click the **web.config** file, and then click **Rename**.

2. Rename the file to **web.config.Default**.

3. Press Enter, and then click **Yes**.

4. Right-click the **web.config.SSL** file, and then click **Rename**.

5. Rename the file to **web.config**.

6. Press Enter, and then click **Yes**.

7. Restart IIS.

APPENDIX B

Windows Service Account

Change the Windows Service Account

The PaperVision Automation Service automates tasks that require no human intervention. This service runs as a true Windows service and starts automatically the first time the PaperVision Administration Console is opened. Because it is running as a true service, no user must be logged into the computer for it to perform its processing. By default, it is configured to run under the Local System account. This account generally does not have access to network shares as well as a number of directories on the computer. As such, it may be necessary to change the account the service is using.

To change the Windows Service account

1. Right-click **My Computer**, and then select **Manage** to open the **Computer Management** window.
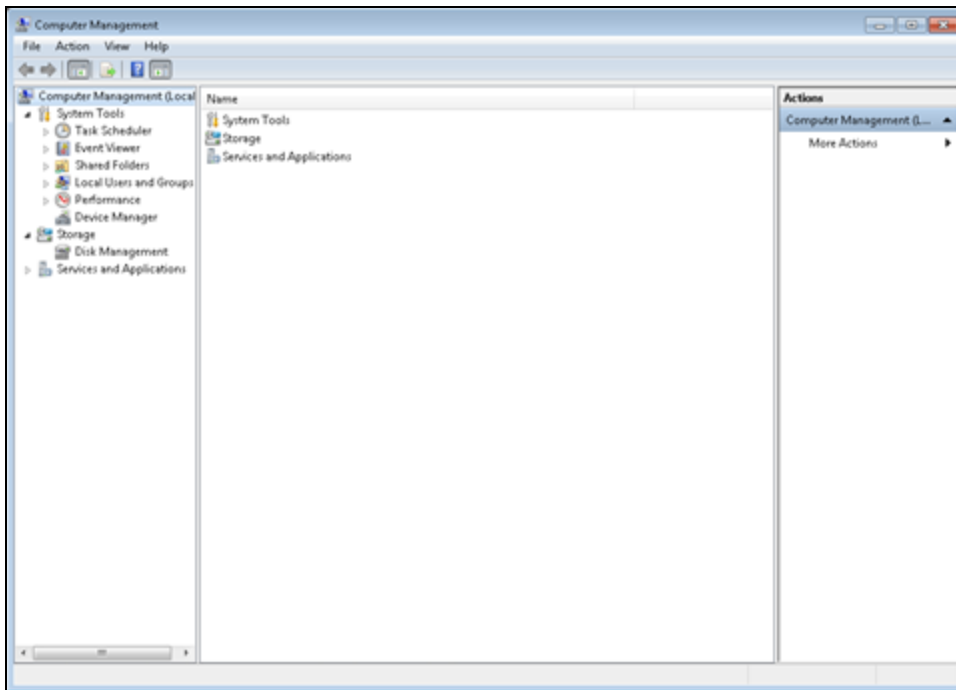
2. On the left pane, expand **Services and Applications**, and then click **Services**.
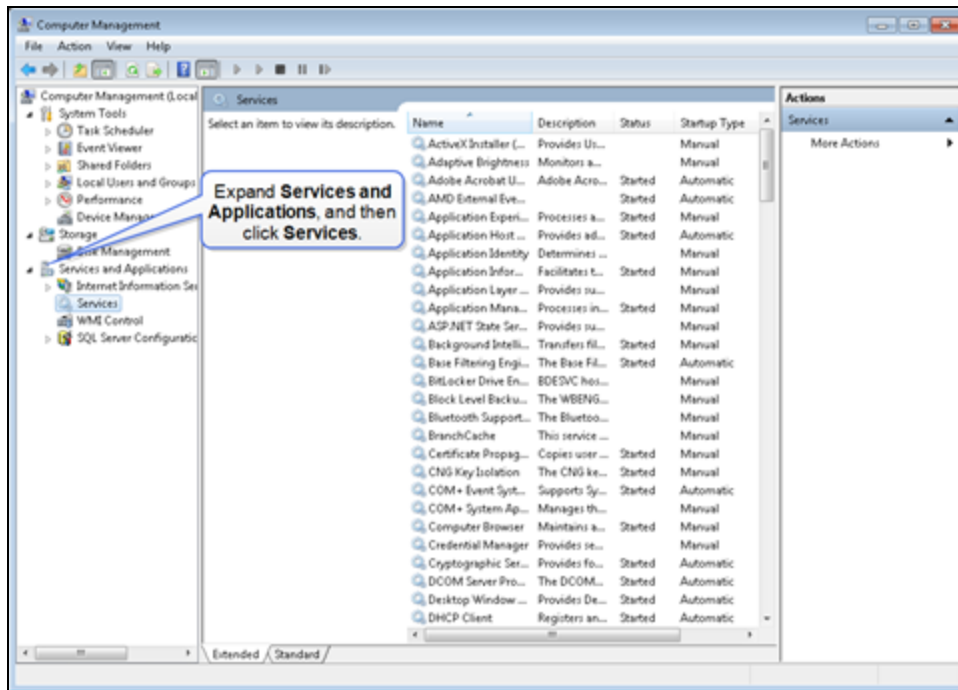
3. On the center **Services** pane, scroll though the list of services to locate, and then double-click the **PaperVision ProcessInitiator2** to open a dialog box similar to the following.
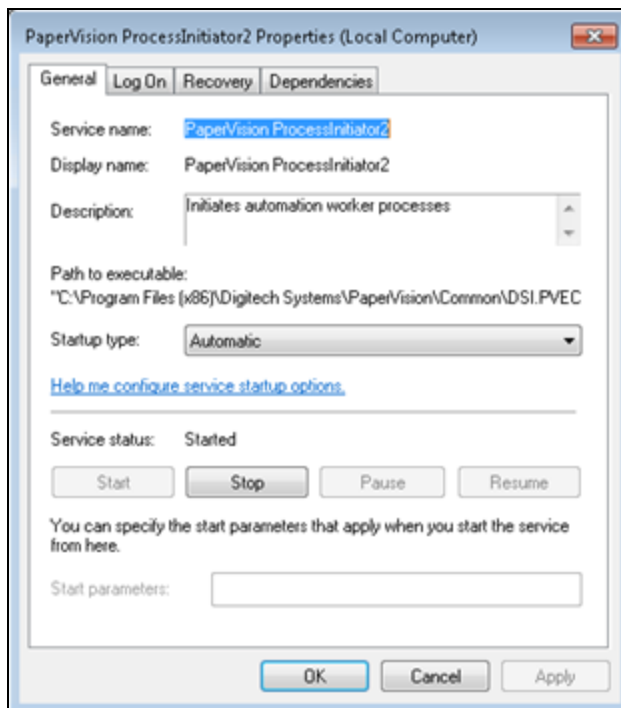
4. Click the **Log On** tab.
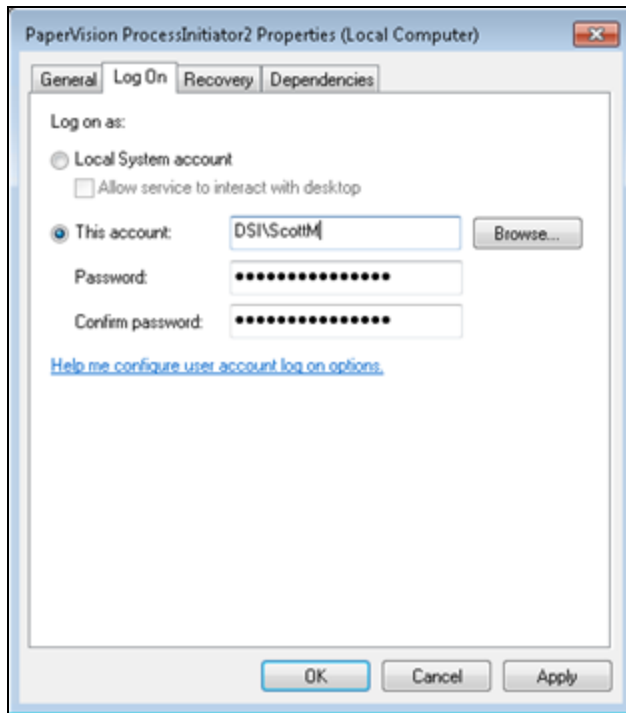
5. Select **This account**.
6. Click **Browse** to locate, and then select a user account that has the necessary permissions.
7. In the **Password** box, type the password for the user account.
8. In the **Confirm password** box, type the password again.
9. Click **OK** to apply the changes.
10. Click the **General** tab.
11. Click **Stop** to stop the service.
12. Click **Start** to restart the service.
13. Click **OK** to save your settings.

APPENDIX C

Multiple Entity Support

Enable Multiple Entity Support

PaperVision Enterprise can support multiple entities. By default, all users log into the default entity (Entity ID 1). However, to use multiple entities, users need the ability to provide their entity ID when they log onto PaperVision Enterprise. The following procedures describe how to enable multiple entity login for the PaperVision Administration Console and the PaperVision Enterprise Web Client.

To enable multiple entity login for the PaperVision Administration Console

1. Locate the **PVDM.ini** file in the **Digitech Systems\Common Files** directory where Paper-Vision Enterprise was installed.

2. In the **PVDM.ini** file, insert the following lines of text.

   ```
   [PVDM]

   LOGINENTID=1
   ```

   N O T E

   The [PVDM] section may already exist.

3. Save the file.

   The next time the PaperVision Administration Console is accessed, the system prompts the user to provide an Entity ID.

   N O T E

   Providing an Entity ID of zero (0) causes the PaperVision Administration Console to attempt to log the user on as a global administrator. Zero is not valid for the PaperVision Enterprise application because global administrators cannot access documents.

To enable multiple entity login for the PaperVision Enterprise Web Client

1. Locate the **globalSettings.resx** file in the **PaperVision\PVEWeb.Mvc\App_GlobalResources** directory where PaperVision Enterprise was installed, and then open it with a text editor.

2. In the **globalSettings.resx** file, change the "false" constant in the following line to "true," so the resulting line appears as follows:

   ```
   <data name="gblLoginShowEntID" xml:space="preserve">

       <value>true</value>
   ```

3. Save the file.

   At the next login, the system will prompt the user to provide an Entity ID.

   N O T E

   Alternatively, you can show (or hide) your entity ID in the user login window by modifying the Web Client display options. Click the down arrow next to your user name, and then click, **User Options**. On the left pane, click **General**. Under **Display Settings**, you can select **Show** or **Hide** for the **Entity ID** setting.

APPENDIX D

Remote Authentication

Remote Authentication Functional Overview

PaperVision Enterprise includes remote authentication gateway capabilities that allow organizations to integrate Windows authentication/single sign-on in a secure manner, regardless of whether the PaperVision repository is located in the same Active Directory domain as the authenticated users. Additionally, it lets users access their repository both from within their Active Directory domain and external to that domain, when Windows authentication/single sign-on is unavailable.

The following steps describe how remote authentication works:

1. The user opens the web browser and points it to the installed "PaperVision Authentication Gateway" server's website. This "PaperVision Authentication Gateway" IIS website installation must have the ability to authenticate the user against Active Directory.

2. The authentication gateway reads an encrypted configuration file which indicates the encryption key value that is used to encrypt the user's credentials. By using the security context that IIS is running under, the gateway determines the user's domain name and user name (that is, DOMAIN\USER). It then encrypts this as the PaperVision user name using the specified encryption key value.

3. The gateway then redirects the user's browser to their standard PaperVision repository's login page (locally within the same domain, or remotely), passing the encrypted login credentials.

4. The PaperVision login process automatically detects that remotely authenticated credentials have been passed. As such, it uses the entity security policy's **Remote Authentication Gateway Encryption Key** value (the value is used, not the name) to decrypt the authenticated credentials. If the credentials were not encrypted with the specified encryption key value, they cannot be decrypted and the user will not be automatically authenticated to the repository. If the credentials are properly encrypted (and hence, can be decrypted), the user is automatically logged in.

It is the common **Remote Authentication Gateway Encryption Key** value between the authentication gateway and the PaperVision repository that ensures only authorized authentication gateways may pass credentials. It is important to note that PaperVision has no visibility into a user's Active Directory password. As such, it is neither necessary nor recommended to maintain consistent passwords between PaperVision and Active Directory for a user.

Remote Authentication Use Scenarios

You can use PaperVision's remote authentication gateway facilities in nearly any environment. Following are likely scenarios and their general installation steps.

PaperVision Repository within the Same Active Directory Domain

In this scenario, the PaperVision Enterprise server is installed as a member of the users' Active Directory domain. Although the easiest way of accomplishing this is to use the AutoLogin.ASPX page that is installed in the WebServer directory, doing so requires using Authenticated Access in the website under which PaperVision Enterprise is running. The primary problem with this is that all

activities performed by the server (that is, database and file access) are performed using the user's Active Directory credentials. As such, each user must be given explicit security access to the document storage shares/locations and the database server. A much better way to handle this situation is to set up two different websites on the same computer (typically requiring an IP address for each site). This allows server activities to be performed under a single security context (when the primary website is hit), while still allowing the user's security context to be determined by the authentication gateway website. The general installation steps for configuring this scenario follow.

1. Install and configure the PaperVision Enterprise server as usual (including making the necessary IIS configuration settings) on a server located in the Active Directory domain. (See "Install Paper-Vision Enterprise Server" on page 14 if you need instructions for installing the server.) However, when installing PaperVision, perform a Custom installation and add the PaperVision Authentic-ation Gateway feature.

2. Configure a second IIS website on this server for the PaperVision Authentication Gateway.

3. Using the PaperVision Administration Console, configure a new encryption key, and then select that encryption key in the entity security policy's **Remote Authentication Gateway Encryption – Key Name** setting (located on the **Authentication** tab).

4. Run and configure the PaperVision Gateway Settings application. (See "Configure PaperVision Authentication Gateway Settings" on the next page if you need instructions.)

ImageSilo or PaperVision Repository within a Different Active Directory Domain

In this scenario, the PaperVision server is installed in either a different Active Directory domain (or no domain at all) as the users' Active Directory domain (that is, the PaperVision web server is located in the DMZ which doesn't have a trust relationship with the organization's internal domain). The general installation steps for configuring this scenario follow.

1. On a server within the user's Active Directory domain, install only the PaperVision Authentic-ation Gateway. This is accomplished by performing a Custom installation and selecting ONLY the PaperVision Authentication Gateway.

2. Configure an IIS website on this server for the PaperVision Authentication Gateway.

3. Using the PaperVision Administration Console, configure a new encryption key, and then select that encryption key in the entity security policy's **Remote Authentication Gateway Encryption – Key Name** setting (located on the **Authentication** tab).

4. Run and configure the PaperVision Gateway Settings application. (See "Configure PaperVision Authentication Gateway Settings" on the next page if you need instructions.)

Configure PaperVision Authentication Gateway Settings

After PaperVision Enterprise Server is successfully installed and configured, you must configure the PaperVision Authentication Gateway using the **PaperVision Gateway Settings** utility. This utility lets administrators enter the encryption key and other settings used by the authentication gateway, and saves them in an AES-256 bit encrypted file that is specific to the machine on which it was created. For security purposes, you cannot copy the created PVRemoteAuth.XML file from one machine to another – each machine must be used to create its own file. (Refer to "Remote Authentication Functional Overview" on page 62 for more information about the remote authentication gateway capabilities in PaperVision Enterprise.)

Before you can configure PaperVision Gateway settings, you must complete the following tasks in the PaperVision Enterprise administration console.

- Create a user with a user name that exactly matches the user name logged in to the machine.
- Create an encryption key.
- Assign the encryption key to the security policy for the applicable entity.

The following procedures will walk you through each task required to configure the PaperVision Authentication Gateway.

To log in to the PaperVision Enterprise Administration Console

1. Double-click the **PaperVision Admin Console** icon.
2. In the **Administration Login** dialog box, type your user name and password.

   If this is your first time logging in, the user name and password are both **ADMIN**.
3. If you want to log on as a global administrator, select the **Global** check box.

   If this is your first time logging in, select the **Global** check box.

To create a PaperVision Enterprise user

1. After you have logged in to the Administration Console, on the left pane, expand **Entities**.
2. Expand the appropriate entity, and then expand **General Security**.
3. Click **System Users**, and then do one of the following to open the **New User** dialog box:
   - On the **Action** menu, point to **All Tasks**, and then click **New User**.
   - On the toolbar, click **New**.
   - Right-click on the right pane, and then select **New User**.

4. In the **New User** dialog box, in the **User Name** box, type the name that will be used to log in to the computer.

> ### N O T E
> This user name must exactly match the user name logged into the computer, including the domain name if necessary. For example, if the user logged into the computer is JSmith on the Accounting network domain, the user name you create would be Accounting\JSmith. To assist you in determining the user logged into the machine, the Authentication Gateway includes a DebugUser.ASPX page that helps administrators troubleshoot IIS authentication issues by displaying the authorized user credentials detected by IIS. To access the DebugUser.ASPX page, navigate to http://*Gatewayservername*:*portnumber*/DebugUser.ASPX

5. (Optional) In the **Full Name** box, type the user's full name.

6. (Optional) In the **Email Address** box, type the user's email address.

7. In the **Password** box, type the user's password.

8. In the **Confirm Password** box, type the user's password again to confirm it.

> ### N O T E
> We recommend that you never leave a password set to a blank value, as it can pose a security risk.

9. To force the user to change the password the next time they log in, select **User must change password at next login**.

10. To allow the user to change the password at any time, select **User can change password when desired**.

11. In the **User Type** area, select the appropriate user type. To create a regular user, clear all of the check boxes. You can specify the following user types.

   * **System Administrator** - When you select this check box, the user can configure all administrative settings for the entity and have access to all functionality in all projects for that entity.

> ### N O T E
> If you select **System Administrator**, the other user types are automatically assigned to the user.

   * **Workflow Administrator** - When you select this check box, the user can configure WorkFlow definitions for any project, as well as view WorkFlow history and WorkFlow status reports. By default, WorkFlow administrators do not have access to documents or functions in any projects and must be granted access to those projects explicitly.

   * **Capture Administrator** - This setting is not used in PaperVision Enterprise. When you select this check box, the user can configure jobs and job steps in PaperVision Capture.

   * **E-Form Administrator** - When you select this check box, the user can create E-Forms in PaperVision Enterprise.

12. After you have defined the user, click **OK** to save it.

To create an encryption key

1. After you have logged in to the Administration Console, on the left pane, expand **Entities**.

2. Expand the appropriate entity, and then expand **General Security**.

3. Click **Encryption Keys**.

4. Do one of the following:

   - On the **Action** menu, point to **All Tasks**, and then click **New Encryption Key**.

   - On the toolbar, click **New**.

   - Right-click the selected item, and then click **New Encryption Key**.

5. In the **Add Encryption Key** dialog box, in the **Key Name** box, type a name to identify the key.

6. From the **Key Type** list, select the type of encryption to use for the key.

7. In the **Pass Phrase** box, type a pass phrase for generating the encryption key.

> ⚠ **I M P O R T A N T**
>
> The value you type in the **Pass Phrase** box is the value you will use for the **Encryption Key Value** setting in the **PaperVision Gateway Settings** utility.

8. (Optional) In the **Description** box, you can type a description for the key. This is the only item that you can edit after the key is added.

9. Click **OK** to save the new encryption key.

To assign the encryption key to the entity security policy

1. After you have logged in to the Administration Console, on the left pane, expand **Entities**.

2. Expand the appropriate entity, and then expand **General Security**.

3. Right-click **Security Policy**, and then click **Configure Security Policy** to access the **Entity Security Policy** dialog box.

4. Click the **Authentication** tab, and then in the **Key Name** box, select the encryption key that you created.

5. Click **OK** to save the encryption key assignment.

To configure PaperVision Gateway Settings

1. On the taskbar in Windows, click the **Start** button, and then click **All Programs**.

2. Click the **Digitech Systems** folder, and then click **PaperVision Gateway Settings** to open the **PaperVision Gateway Settings** dialog box.
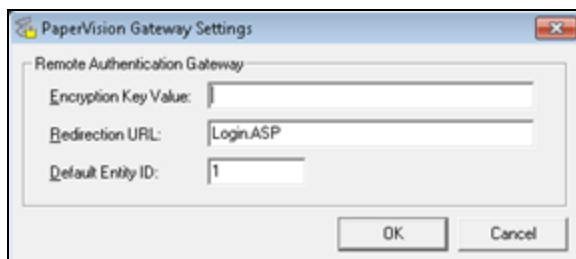
3. In the **Encryption Key Value** box, specify the pass phrase (not the encryption key name) which is identical to that created and selected in the entity security policy as the **Remote Authentication Gateway Encryption Key**.

4. In the **Redirection URL** box, specify the URL for the PaperVision Enterprise login page.

5. In the **Default Entity ID** box, specify the default entity ID to be used when logging in using the authentication gateway.

Accessing the Authentication Gateway
To access the Authentication Gateway

- Use your web browser to access the URL of your authentication gateway web site. The URL must include the server name where the Authentication Gateway is located and the applicable port number. For example, http://*Gatewayservername*:*portnumber*.

Using PaperVision Search URL to Access the Authentication Gateway

To log in using the PaperVision Authentication Gateway when running a PVESearchURL query, replace **/PVESearchURL.aspx?** with **?searchURL=true&**

Here is an example of what the URL might look like:

```
http://Gatewayservername:portnumber?searchURL=true&UserName=Public
&EntID=4&ProjID=1&IndexFields=Name&IndexValues=John Doe&ResultsType=list
```

To view a list of optional PVESearchURL query parameters using the PaperVision Authentication Gateway, you can access the following URL:

```
http://Gatewayservername:portnumber?searchURL=true
```

Using PaperVision Tools to Access the Authentication Gateway

PaperVision Enterprise Tools allows users to manage and upload documents directly from Microsoft® Word, Excel, PowerPoint and even Windows Explorer to PaperVision Enterprise. This tool makes it easy for users to engage in content management without leaving their Microsoft Office application. Drivers are also included to allow printing from any application that supports printing directly to PaperVision Enterprise.

To configure the Authentication Gateway in PaperVision Tools

1. After you have logged in to PaperVision Enterprise, click the down arrow next to your user name, and then click **Downloads**.

2. Locate **PaperVision Tools**, and then click **Download**.

3. When prompted, select whether you want to run or save the application.

4. If you saved the application, after the download is complete, run the executable file.

5. After the installation is complete, you can open Word, Excel, or PowerPoint, and then click the **Add-ins** ribbon to access the following dialog box where you can specify configuration options.
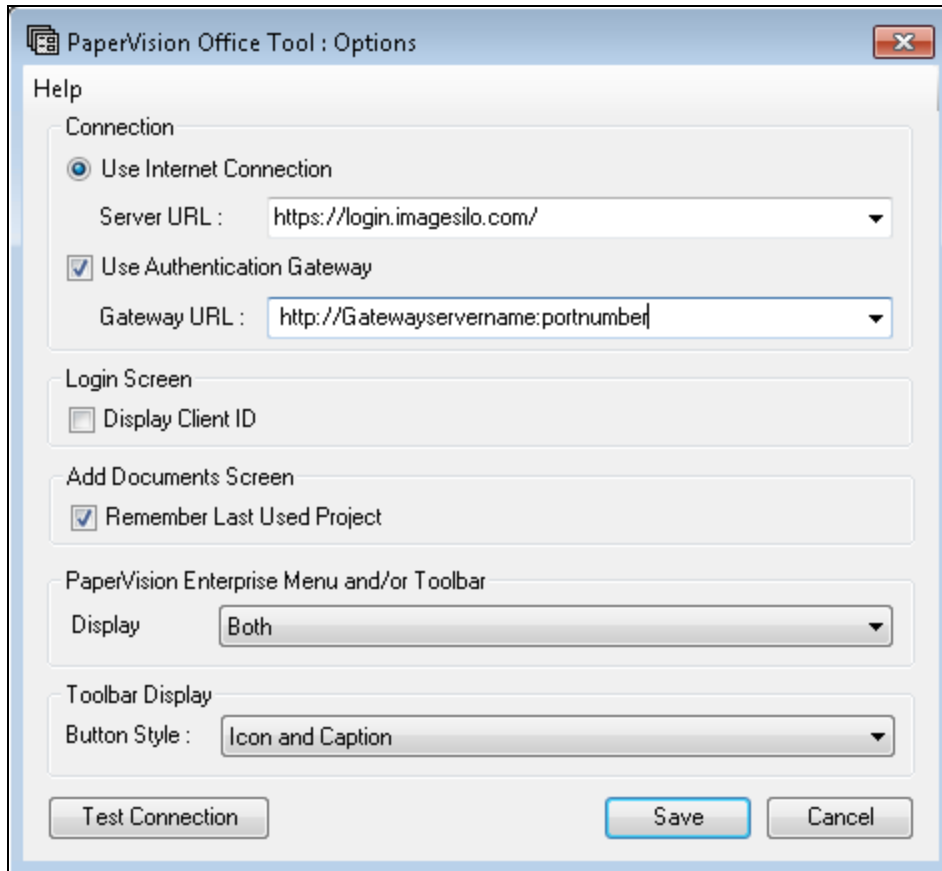
6. In the **Server URL** box, type the URL to your PaperVision Enterprise log in page.

7. Select **Use Authentication Gateway**, and then type the URL to the authentication gateway site.

8. Click **Save**.

APPENDIX E

Configure IIS

Configure IIS

To ensure that the PaperVision website works correctly, you must configure IIS to use specific options. Complete the procedure that applies to your operating system.

> **N O T E**
>
> You should always run Windows Update after installing and configuring IIS.

- See "To install and configure IIS on Windows Server 2008 and Windows Server 2008 R2" below.
- See "To install and configure IIS on Windows Server 2012 and Windows Server 2012 R2" on the facing page.
- See "To install and configure IIS on Windows Server 2016" on page 73.
- See "To install and configure IIS on Windows 7" on page 74.
- See "To install and configure IIS on Windows 8 and Windows 8.1" on page 75.
- See "To install and configure IIS on Windows 10" on page 76.

To install and configure IIS on Windows Server 2008 and Windows Server 2008 R2

The following steps describe how to install and configure IIS through **Server Manager** > **Add Roles**.

1. From the **Server Manager**, click **Roles**, and then click the **Add Roles** link

    The **Add Roles Wizard** starts, and then displays the **Before You Begin** page.

2. Click **Next** to continue.

3. On the **Select Server Roles** window, click **Application Server**.

4. On the **Add Features** window, click **Add Required Features**.

5. On the **Select Server Roles** window, click **Web Server (IIS)**.

6. On the **Add Features** window, click **Add Required Features**, and then click **Next**.

7. On the **Select Role Services** window, select **.NET Framework 3.5.1**.

8. Click **Next** to open the **Web Server (IIS)** dialog box.

9. Click **Next** to open the **Select Roles Services** window.

10. Under **Web Server\Common HTTP Features**, select the following items:

    - **Static Content**
    - **Default Document**
    - **Directory Browsing**
    - **HTTP Errors**

11. Under **Web Server\Application Development**, select the following items:

    * **ASP.NET** - Click **Add Required Role Services** on the **Add role services** pop-up window.

    * **NET Extensibility**

    * **ASP**

    * **ISAPI Extensions**

    * **ISAPI Filters**

12. Under **Web Server\Health and Diagnostics**, select the following items:

    * **HTTP Logging**

    * **Request Monitor**

13. Under **Web Server\Security**, select the following items:

    * **Windows Authentication**

    * **Request Filtering**

14. Under **Web Server\Performance**, select **Static Content Compression**.

15. Click **Next** to open the **Confirm Installation Selections** window

16. Click **Install**.

    The roles, role services, and features are installed, and the **Installation Results** window appears.

17. Click **Close** to exit the **Add Roles Wizard**.

18. Close the **Server Manager** window.

To install and configure IIS on Windows Server 2012 and Windows Server 2012 R2

The following steps describe how to install and configure IIS through **Programs** > **Turn Windows features on or off**.

1. From the **Server Manager** > **Dashboard**, click the **Manage** link.

2. Click the **Add Roles and Features** link to start the **Add Roles and Features Wizard**.

3. Select **Role-based or feature-based installation**, and then click **Next**.

4. On the **Server Selection** window, select **Select a server from the server pool**.

    The local machine is selected in the **Server Pool** list.

5. Click **Next** to open the **Server Roles** window.

6. Select **Web Server (IIS)** to open the **Add features that are required for Web Server (IIS)** window.

7. Select **Include management tools (if applicable)**, and then click **Add Features** to close the window.

8. On the **Server Roles** window, click **Next** to open the **Features** window.

9. Select **.NET Framework 3.5 Features**.

10. Select, and then expand **.NET Framework 4.5 Features (Installed)**.

11. In the expanded list of options, do the following:

    1. Select **ASP .NET 4.5**.

    2. Select, and then expand **WCF Services (Installed)**.

    3. In the expanded list of options, select **HTTP Activation** to open the **Add features that are required for the HTTP Activation** window.

12. Select, and then expand **Windows PowerShell**.

13. In the expanded list of options, select **Windows PowerShell 2.0 Engine**.

14. Select, and than expand **Windows Process Activation Service**.

15. In the expanded list of options, select **Process Model** and **Configuration APIs**.

16. Click **Next** to open the **Web Server Role (IIS)** window.

17. Click **Next** to open the **Roles Services** window.

18. Under **Web Server\Common HTTP Features**, select the following items:

    • **Default Document**

    • **Directory Browsing**

    • **HTTP Errors**

    • **Static Content**

19. Under **Web Server\Health and Diagnostics**, select **HTTP Logging**.

20. Under **Web Server\Performance**, select **Static Content Compression**.

21. Under **Web Server\Security**, select **Request Filtering** and **Windows Authentication**.

22. Under **Web Server\Application Development**, select the following items:

    • **NET Extensibility 3.5**

    • **NET Extensibility 4.5**

    • **ASP**

    • **ASP.NET 3.5**

    • **ASP.NET 4.5**

    • **ISAPI Extensions**

    • **ISAPI Filters**

23. Under **Web Server\Management Tools**, select **IIS Management Console**.

24. Select, and then expand **IIS 6 Management Compatibility**.

25. In the expanded list of options, select **IIS 6 Metabase Compatibility**.

26. Click **Next** to open the **Confirmation** window.

27. Click **Install**.

The **Results** window appears, and after the installation finishes, **Installation succeeded on <machine name>** appears under the progress bar.

28. Click **Close**.

To install and configure IIS on Windows Server 2016

The following steps describe how to install and configure IIS through **Programs** > **Turn Windows features on or off**.

1. From the **Server Manager** > **Dashboard**, click the **Manage** link.

2. Click the **Add Roles and Features** link to start the **Add Roles and Features Wizard**.

3. Select **Role-based or feature-based installation**, and then click **Next**.

4. On the **Server Selection** window, select **Select a server from the server pool**.

   The local machine is selected in the **Server Pool** list.

5. Click **Next** to open the **Server Roles** window.

6. Select **Web Server (IIS)** to open the **Add features that are required for Web Server (IIS)** window.

7. Select **Include management tools (if applicable)**, and then click **Add Features** to close the window.

8. On the **Server Roles** window, click **Next** to open the **Features** window.

9. Select **.NET Framework 3.5 Features**.

10. Select, and then expand **.NET Framework 4.6 Features (Installed)**.

11. In the expanded list of options, do the following:

    1. Select **ASP .NET 4.6**.

    2. Select, and then expand **WCF Services (1 of 5) installed**.

    3. In the expanded list of options, select **HTTP Activation** to open the **Add Features that are required for the HTTP Activation** window, and then click **Add Features** to close the window.

12. Select, and then expand **Windows PowerShell (2 of 5 installed)**.

13. In the expanded list of options, select **Windows PowerShell 2.0 Engine**.

14. Select, and then expand **Windows Process Activation Service**.

15. In the expanded list of options, select **Process Model and Configuration APIs**.

16. Click **Next** to open the **Web Server Role (IIS)** window.

17. Click **Next** to open the **Roles Services** window.

18. Under **Web Server\Common HTTP Features**, select the following items:

    - **Default Document**
    - **Directory Browsing**
    - **HTTP Errors**
    - **Static Content**

19. Under **Web Server\Health and Diagnostics**, select **HTTP Logging**.

20. Under **Web Server\Performance**, select **Static Content Compression**.

21. Under **Web Server\Security**, select **Request Filtering** and **Windows Authentication**.

22. Under **Web Server\Application Development**, select the following items:
    - **NET Extensibility 3.5**
    - **NET Extensibility 4.6**
    - **ASP**
    - **ASP .NET 3.5**
    - **ASP .NET 4.6**
    - **ISAPI Extensions**
    - **ISAPI Filters**

23. Under **Web Server\Management Tools**, select **IIS Management Console**.

24. Select, and then expand **IIS 6 Management Compatibility**.

25. In the expanded list of options, select **IIS 6 Metabase Compatibility**.

26. Click **Next** to open the **Confirmation** window.

27. Click **Install**.

    The **Results** window appears, and after the installation finishes, **Installation succeeded on <machine name>** appears under the progress bar.

28. Click **Close**.

To install and configure IIS on Windows 7

The following steps describe how to install and configure IIS through **Programs** > **Turn Windows features on or off**.

1. On the taskbar, click the **Start** button, and then on the **Start** menu click **Control Panel**.

2. Click the **Programs** link, and then click the **Programs and Features** link.

3. On the left pane, click the **Turn Windows features on or off** link to open the **Windows Features** dialog box.

4. Select, and then expand **Internet Information Services**.

5. Select, and then expand **Web Management Tools**.

6. In the expanded list of options, do the following:

    1. Select, and then expand **IIS 6 Management Compatibility**, and then select **IIS Metabase and IIS 6 configuration compatibility**.

    2. Select **IIS Management Console**.

7. Select, and then expand **World Wide Web Services**.

8. In the expanded list of options, select, and then expand **Application Development Features**, and then select the following items:
    - **.NET Extensibility**
    - **ASP**
    - **ASP.NET**
    - **ISAPI Extenstions**
    - **ISAPI Filters**

9. Select, and then expand **Common HTTP Features**, and then select the following items:

    *   **Default Document**
    *   **Directory Browsing**
    *   **HTTP Errors**
    *   **Static Content**

10. Select, and then expand **Health and Diagnostics**, and then select the following items:

    *   **HTTP Logging**
    *   **Request Monitor**

11. Select, and then expand **Performance Features**, and then select **Static Content Compression**.

12. Select, and then expand **Security**, and then select the following items:

    *   **Request Filtering**
    *   **Windows Authentication**

13. Select, and then expand **Microsoft .NET Framework 3.5.1**, and then select **Windows Communication Foundation HTTP Activation**.

14. Click **OK** to install the necessary components for IIS.

To install and configure IIS on Windows 8 and Windows 8.1

The following steps describe how to install and configure IIS through **Programs** > **Turn Windows features on or off**.

1. On the taskbar, click the **Start** button, and then click **Windows System** > **Control Panel**.

2. Click the **Programs** link.

3. Under the **Programs and Features** section, click the **Turn Windows features on or off** link to open the **Windows Features** dialog box.

4. Select **.NET Framework 3.5 (includes .NET 2.0 and 3.0)**.

5. Select, and then expand **.NET Framework 4.5 Advanced Services**.

6. In the expanded list of options, do the following:

    1. Select **ASP .NET 4.5**.

    2. Select, and then expand **WCF Services**.

    3. In the expanded list of options, select **HTTP Activation** and **TCP Port Sharing**.

7. Select, and then expand **Internet Information Services**.

8. Select, and then expand **Web Management Tools**.

9. In the expanded list of options, do the following:

    1. Select, and then expand **IIS 6 Management Compatibility**, and then select **IIS Metabase and IIS 6 configuration compatibility**.

    2. Select **IIS Management Console**.

10. Select, and then expand **World Wide Web Services**.

11. In the expanded list of options, select, and then expand **Application Development Features**, and then select the following items:

    • **.NET Extensibility 3.5**

    • **.NET Extensibility 4.5**

    • **ASP**

    • **ASP.NET 3.5**

    • **ASP.NET 4.5**

    • **ISAPI Extenstions**

    • **ISAPI Filters**

12. Select, and then expand **Common HTTP Features**, and then select the following items:

    • **Default Document**

    • **Directory Browsing**

    • **HTTP Errors**

    • **Static Content**

13. Select, and then expand **Health and Diagnostics**, and then select **HTTP Logging**.

14. Select, and then expand **Performance Features**, and then select **Static Content Compression**.

15. Select, and then expand **Security**, and then select the following items:

    • **Request Filtering**

    • **Windows Authentication**

16. Click **OK** to install the necessary components for IIS.

To install and configure IIS on Windows 10

The following steps describe how to install and configure IIS through **Programs** > **Turn Windows features on or off**.

1. On the taskbar, click the **Start** button, and then click **Windows System** > **Control Panel**.

2. Click the **Programs** link.

3. Under the **Programs and Features** section, click the **Turn Windows features on or off** link to open the **Windows Features** dialog box.

4. Select **.NET Framework 3.5 (includes .NET 2.0 and 3.0)**.

5. Select, and then expand **.NET Framework 4.6 Advanced Services**.

6. In the expanded list of options, do the following:

    1. Select **ASP .NET 4.6**.

    2. Select, and then expand **WCF Services**.

    3. In the expanded list of options, select **HTTP Activation** and **TCP Port Sharing**.

7. Select, and then expand **Internet Information Services**.

8. Select, and then expand **Web Management Tools**.

9. In the expanded list of options, do the following:

   1. Select, and then expand **IIS 6 Management Compatibility**, and then select **IIS Metabase and IIS 6 configuration compatibility**.

   2. Select **IIS Management Console**.

10. Select, and then expand **World Wide Web Services**.

11. In the expanded list of options, select, and then expand **Application Development Features**, and then select the following items:

    * **.NET Extensibility 3.5**
    * **.NET Extensibility 4.6**
    * **ASP**
    * **ASP.NET 3.5**
    * **ASP.NET 4.6**
    * **ISAPI Extenstions**
    * **ISAPI Filters**

12. Select, and then expand **Common HTTP Features**, and then select the following items:

    * **Default Document**
    * **Directory Browsing**
    * **HTTP Errors**
    * **Static Content**

13. Select, and then expand **Health and Diagnostics**, and then select **HTTP Logging**.

14. Select, and then expand **Performance Features**, and then select **Static Content Compression**.

15. Select, and then expand **Security**, and then select the following items:

    * **Request Filtering**
    * **Windows Authentication**

16. Click **OK** to install the necessary components for IIS.