

# *Solid Edge SharePoint Implementation Guide*

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# Preface

This guide describes the implementation and basic processes used to work with Insight-managed Solid Edge documents.

## Note

This document supplements the online help installed with Solid Edge Insight ST2.

## Audience

This manual is intended for Insight administrators who want to use Solid Edge in an Insight-managed environment. An understanding of Solid Edge and Microsoft SharePoint concepts are required.

## Conventions

The following conventions represent items of specific interest to you:

### Tip

Indicates information that helps you apply the techniques and procedures described in the text.

### Note

Identifies general instructions or comments that need to be emphasized.

### Caution

Identifies practices that can either produce results contrary to what you expect or result in damage to software or data.

### Warning

Identifies practices that could result in permanent loss of data or software.

## Microsoft documentation

Microsoft operating system, SQL Server, and SharePoint documentation is available outside the context of this document.

You can access various web sites as referenced throughout this manual.

## Submitting comments

Please feel free to give us your opinion of the usability of this manual, to suggest specific improvements, and to report errors. Mail your comments to:

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## Preface

Solid Edge Learning Media Development  
675 Discovery Drive, Suite 100  
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To submit your comments online, you can also use the Siemens GTAC online support tools at <http://support.ugs.com>.

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## Chapter

# 1 *Implementing Insight and Microsoft SharePoint*

## Insight Implementation Guide

This release of the *Solid Edge SharePoint Implementation Guide* describes how to properly implement Insight ST2 with Microsoft SharePoint.

Insight works with Microsoft SharePoint to help you manage your Solid Edge documents. Microsoft SharePoint is a collaborative workspace tool designed to easily find, manage, and share information in a rich, customizable dashboard site to enable you to locate, write, review, and manage content in your organization. SharePoint works closely with other tools such as Windows Explorer and web browsers to help you manage your documents.

The Microsoft SharePoint Server uses tools such as Internet Explorer browser windows, operating system security for users and groups, search and indexing algorithms, and a well-documented object model for storing and managing documents.

### **Note**

SQL Server 2000 is no longer supported.

### **About this release**

Options you have for installing and configuring Insight ST2 with SharePoint for this release are:

- Microsoft Windows Server 2003, 32-bit
  - SQL Server 2005
  - Windows SharePoint Services (WSS) 2.0 or SharePoint Portal Server (SPS) 2003
- Microsoft Windows Server 2003, 32-bit
  - SQL Server 2005
  - Windows SharePoint Services 3.0 or Microsoft Office SharePoint Server 2007 (MOSS)
- Microsoft Windows Server 2008, 32-bit
  - SQL Server 2008

- Windows SharePoint Services 3.0 or Microsoft Office SharePoint Server 2007 (MOSS)
- Microsoft Windows Server 2003, 64-bit
  - SQL Server 2005, 64-bit
  - Microsoft Office SharePoint Server 2007 (MOSS), 64-bit
- Microsoft Windows Server 2008, 64-bit
  - SQL Server 2008, 64-bit
  - Microsoft Office SharePoint Server 2007 (MOSS), 64-bit

### Changes to this document since the previous release

This document contains the following updates from previous releases:

- This document is now available as a printable *.pdf* document and it is accessible from both the Solid Edge delivery media and the Solid Edge Help menu.
- In addition to being supported on Windows SharePoint Services 2.0 and SharePoint Portal Server (SPS), Insight is now supported on:
  - Windows SharePoint Services (WSS) 3.0
  - Microsoft Office SharePoint Server (MOSS) 2007
- Solid Edge Insight client is supported on a 64-bit platform. Deployment options include: XP32, XP64 with 32-bit applications, and XP64 with native 64-bit applications. Insight Server remains a 32-bit application.

The following are some tips to keep in mind before installing or upgrading Insight and Microsoft SharePoint:

#### Tip

- Be sure to read [Before Using This Guide](#) to understand where you can get more information about implementing Insight and Microsoft SharePoint.
- Read the Solid Edge *readme.txt* file to be aware of any last-minute installation issues that were encountered after the *Solid Edge SharePoint Implementation Guide* was completed. The *readme.txt* file is available in the application folder on your Solid Edge installation media.

## Before using this guide

### Who should read this guide

This implementation guide is intended for administrators who want to install and implement Microsoft SharePoint with Insight to effectively manage your site's Solid Edge documents.

## **Additional information**

There are several documents available online that provide good information on Microsoft SQL Server and SharePoint. Additional sources are noted throughout this guide. Before you get started, here are a few sources of information for you to be aware of:

Microsoft SharePoint Home Page

<http://www.microsoft.com/sharepoint>

Which SharePoint technology is right for you?

<http://office.microsoft.com/en-us/sharepointtechnology/FX101758691033.aspx?ofcresset=1>

Microsoft Windows SharePoint Services 3.0

<http://office.microsoft.com/en-us/sharepointtechnology/FX100503841033.aspx>

What's New in Windows SharePoint Services 3.0

<http://msdn.microsoft.com/en-us/library/ms473241.aspx>

Top 10 Benefits of Windows SharePoint Services 3.0

<http://technet.microsoft.com/en-us/windowsserver/sharepoint/bb684456.aspx>

Microsoft Office SharePoint Server (MOSS)

<http://office.microsoft.com/en-us/sharepointserver/FX100492001033.aspx>

Microsoft Office SharePoint Server 2007 top 10 benefits

<http://office.microsoft.com/en-us/sharepointserver/HA101655201033.aspx>

SQL Server 2005 Upgrade Handbook

<http://www.microsoft.com/technet/prodtechnol/sql/2005/sqlupgrd.msp>

15 Seconds: Performance Monitoring in SharePoint Portal Server 2003

<http://www.15seconds.com/Issue/050825.htm>

Tips for Performance Tuning SQL Server's Configuration Settings

[http://www.sql-server-performance.com/sql\\_server\\_configuration\\_settings.asp](http://www.sql-server-performance.com/sql_server_configuration_settings.asp)

Microsoft Support

<http://support.microsoft.com/directory>

SharePoint Newsgroups

Insight Newsgroups

## **Implementation checklist**

You need to review this checklist of steps to properly implement Solid Edge Insight.

- Determine hardware and operating system availability.
  - 32-bit or 64-bit
  - Windows Server 2003 or Windows Server 2008
- Decide what type of installation you will perform based on the supported pairings of software listed previously.
- Determine an approach to installation/upgrade.
  - New installation
  - In-place upgrade
  - Content database migration

The following chapters of this guide will provide additional information and instructions for implementing Insight with SharePoint, whether you are installing a new site, or upgrading an existing implementation.

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## Chapter

# 2 *Preparing for installation or upgrade*

## System requirements

### Hardware requirements

Verify your hardware meets the recommendations and requirements as shown:

#### Caution

If you do not have adequate memory or processor power, the upgrade may fail.

- \_\_\_ 1. It is recommended that you have a server farm consisting of one or more:
  - Front-end Web servers — host the web services.
  - Database servers — host the SQL database
  - Application servers — host SharePoint and Insight
- \_\_\_ 2. Verify that the front-end Web servers and the application servers have the following hardware:

	<b>Minimum requirements</b>	<b>Recommended requirements</b>
CPU speed	2.5 GHz	Dual processors that are each: <ul style="list-style-type: none"><li>• Application server: 2.5 GHz or faster</li><li>• Front-end Web server: 3 GHz or faster</li></ul>
RAM	2 GB	<ul style="list-style-type: none"><li>• Application server: 4 GB</li><li>• Front-end Web server: More than 2 GB</li></ul>

	<b>Minimum requirements</b>	<b>Recommended requirements</b>
Disk space for setup	NTFS file system, formatted partition with a minimum of 3 GB of free space.	NTFS file system, formatted partition with 3 GB of free space, plus adequate free space for your data storage requirements.
Network	1 gigabits per second (Gbps) connection between computers in the server farm	2 gigabit per second (Gbps) or better connection between computers in the server farm

- \_\_\_ 3. Depending on which version of SQL you are using, verify that the database server has the following hardware:

**SQL Server 2005**

	<b>Minimum requirements</b>	<b>Recommended requirements</b>
CPU speed	2 GHz or higher processor	3 GHz or higher processor
RAM	1 GB	4 GB of RAM
Disk space for setup	<ul style="list-style-type: none"> <li>• 350 MB of available hard disk space for the server</li> <li>• 425 MB of additional hard disk space for WSS Books online, WSS Mobile Books Online, and sample databases</li> </ul>	Four 64 GB hard disks: <ul style="list-style-type: none"> <li>• One disk for the operating system</li> <li>• One disk for the SQL application</li> <li>• One for the SQL databases</li> <li>• One disk for the SQL log files</li> </ul>
Hardware level Redundant Array of Independent Disks (RAID) controller		Total of 10 disks: <ul style="list-style-type: none"> <li>• Two disks mirrored for the operating system and SQL application</li> <li>• Eight disks are placed in a disk array. Create two stripes mirrored (RAID 0+1) for optimum performance.                             <ul style="list-style-type: none"> <li>– One logical volume for the transaction logs</li> </ul> </li> </ul>

	<b>Minimum requirements</b>	<b>Recommended requirements</b>
		<ul style="list-style-type: none"> <li>- One logical volume for the databases</li> </ul> <p><b>Note</b></p> <p>Performance tuning for disk configuration is based on disk spindles, not on disk space.</p>

**Caution**

Consider the quantity and size of your Solid Edge files when sizing the disk drive for your installation. All of your Solid Edge files are loaded into SharePoint and your specific requirements will vary.

**SQL Server 2008**

	<b>Minimum requirements</b>	<b>Recommended requirements</b>
CPU speed	2 GHz or higher processor	3 GHz or higher processor
RAM	2 GB	4 GB of RAM
Disk space for setup	<ul style="list-style-type: none"> <li>• 350 MB of available hard disk space for the server</li> <li>• 425 MB of additional hard disk space for WSS Books online, WSS Mobile Books Online, and sample databases</li> </ul>	<p>Four 64 GB hard disks:</p> <ul style="list-style-type: none"> <li>• One disk for the operating system</li> <li>• One disk for the SQL application</li> <li>• One for the SQL databases</li> <li>• One disk for the SQL log files</li> </ul>

	<b>Minimum requirements</b>	<b>Recommended requirements</b>
Hardware level Redundant Array of Independent Disks (RAID) controller		Total of 10 disks: <ul style="list-style-type: none"> <li>• Two disks mirrored for the operating system and SQL application</li> <li>• Eight disks are placed in a disk array. Create two stripes mirrored (RAID 0+1) for optimum performance.                             <ul style="list-style-type: none"> <li>– One logical volume for the transaction logs</li> <li>– One logical volume for the databases</li> </ul> </li> </ul> <p><b>Note</b></p> Performance tuning for disk configuration is based on disk spindles, not on disk space.

**Caution**

Consider the quantity and size of your Solid Edge files when sizing the disk drive for your installation. All of your Solid Edge files are loaded into SharePoint and your specific requirements will vary.

## **Operating system requirements**

Supported operating systems are shown with their corresponding components.

### **Note**

All configurations require at least Microsoft Internet Explorer 6.0 with the most recent service packs.

- Microsoft Windows Server 2003, 32-bit
  - SQL Server 2005
  - Windows SharePoint Services (WSS) 2.0 or SharePoint Portal Server (SPS) 2003
- Microsoft Windows Server 2003, 32-bit
  - SQL Server 2005
  - Windows SharePoint Services 3.0 or Microsoft Office SharePoint Server 2007 (MOSS)
- Microsoft Windows Server 2008, 32-bit
  - SQL Server 2008
  - Windows SharePoint Services 3.0 or Microsoft Office SharePoint Server 2007 (MOSS)
- Microsoft Windows Server 2003, 64-bit
  - SQL Server 2005, 64-bit
  - Microsoft Office SharePoint Server 2007 (MOSS), 64-bit
- Microsoft Windows Server 2008, 64-bit
  - SQL Server 2008, 64-bit
  - Microsoft Office SharePoint Server 2007 (MOSS), 64-bit

If you are using non-English operating system and SharePoint, you need to load the Microsoft .NET language packs from: <http://www.microsoft.com/downloads/>

### **Caution**

Internet browsers other than Internet Explorer 6.0 and later are not supported.

## **Performance recommendations**

The following recommendations are designed to help you increase the performance of Insight.

- Have a dedicated SharePoint server. Do not combine with services such as Active Directory, Exchange, DHCP, DNS, WINS, Print, File or FAX.

- You should ensure that you have at least 300 MB of disk space allocated for temporary internet files. To do this, in Internet Explorer, click Tools® Internet Options. On the General page, click Settings. On the Settings dialog box, in the Amount of Disk Space to Use field, type 300. If your system is configured with multiple hard drives, you should consider moving the location of Internet Explorer temporary files off of your system drive.
- When setting up log files, indexing, and performing backups, follow Microsoft's recommendations listed on the SharePoint homepage, <http://www.microsoft.com/sharepoint>
- Be sure you read and understand the documentation provided with your software to balance speed and security.
- Stop services that are not required.
- Do not compress or encrypt (EFS) SQL database log files. Anti-virus software should not scan SQL database log files.
- The number of documents per document library is documented as 5 million, however, this is provided you nest the documents in folders. Be sure to consider the impact on your site collection.
- The maximum recommended number of documents per folder is 10,000. However, performance is impacted when the number of documents per folder exceeds 2,000.
- The maximum recommended document size stored in SharePoint Portal Server is 500 MB. Performance is impacted when larger files are used.
- Performance is impacted with the greater the number of columns used because more data has to be retrieved from the database and presented to the user. Two thousand columns per document library and 4096 per list should be considered.
- Insight checks all the entries in the My Network Places folder on a system to see if each network place is a SharePoint site. Every system has an entry for My MSN Sites. Since this entry is in My Network Places, Insight checks it. If you are running stand-alone client/server off the network or Microsoft is running slow it adds time to various operations in Insight. You can remove the My MSN Sites improve performance.

## Determining your upgrade approach

There are many factors involved in determining your approach to installing or upgrading a content management system. Careful planning and consideration of your particular environment are of upmost consideration. To assist you in determining your approach, the following table lists and compares various upgrade approaches.

### Options for upgrading

Option	Description	Considerations
In-place upgrade	Upgrades existing databases and servers all at one time	Easiest approach Sites retain URLs Environment is offline during the upgrade. No capability to revert to previous state.
Database migration	Installs the new version on a separate server farm or separate hardware. The databases are migrated into the new environment at your discretion.	Complex process with a higher risk of error. Requires new server farm or hardware. Existing installation remains available and untouched by the upgrade.

### Special considerations

There are special considerations for upgrading to Windows SharePoint Services 3.0 (WSS) or Microsoft Office SharePoint Server 2007 (MOSS) depending on your existing configuration.

From	To	Suggested approach
Windows SharePoint Services 2.0	Microsoft Office SharePoint Server 2007 (MOSS)	Use database migration to move the content databases from Windows SharePoint Services 2.0 to Microsoft Office SharePoint Server 2007 (MOSS). This approach performs an in-place upgrade of the site content.
Windows Server 2003	Windows Server 2008 with Microsoft Office SharePoint Server 2007 (MOSS)	Upgrade to Microsoft Office SharePoint Server 2007 (MOSS), then upgrade to Windows Server 2008.
Windows Server 2003	Windows Server 2008 with Windows SharePoint Services 3.0 (WSS)	Upgrade to Windows SharePoint Services 3.0 (WSS), then upgrade to Windows Server 2008.

### Recommended sequence for installation

The following is the recommended sequence of software installation.

- Microsoft Windows Server
- Microsoft SQL Server
- Windows SharePoint Services (WSS) 3.0
- Insight Server
- Microsoft Office 2007



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## Chapter

# 3 *Configuring your server farm*

Your server farm is a collection of servers, services, databases, and other infrastructure components that comprise your SharePoint and Insight implementation. Typically, the various servers in the farm have roles such as responding to users of the portal (web front end servers), hosting index servers, query servers, and other services of SharePoint (application servers), and hosting the backend database for SharePoint (SQL servers). Instructions in this chapter include loading the operating system, Internet Information Services (IIS), and SQL Server to prepare the system for SharePoint and Insight.

## Perform pre-installation steps

The following is a high-level outline of steps you should perform prior to a new installation of Insight using the following configuration:

- Microsoft Windows Server 2008
- SQL Server 2008
- Windows SharePoint Services 3.0
- Insight Server ST2

\_\_\_ 1. Determine the type of installation you are performing.

You can install into either:

- A separate forest and new domain.
- An existing corporate domain.

For information regarding best practices for implementing Active Directory and managing your domains, refer to *Best Practice Active Directory Design for Managing Windows Networks* at <http://technet.microsoft.com/en-us/library/bb727085.aspx>.

\_\_\_ 2. Verify that hardware requirements are met (see the [Hardware Requirements](#) portion of this document).

Your hardware must meet the requirements to run the new version of software in addition to having the storage capacity for your data.

\_\_\_ 3. Verify you have access to the supported operating system software.

For this example, each server in the farm should have the following operating system and service pack.

<b>Servers</b>	<b>Operating System</b>
Database servers	Microsoft Windows Server 2008, with SP1 (minimum)
Front-end Web servers	Microsoft Windows Server 2008, with SP1 (minimum)
Application servers	Microsoft Windows Server 2008, with SP1 (minimum)

- \_\_\_ 4. Gather the following software:
  - Microsoft Windows Server 2008, SP1 (minimum)
  - Microsoft SQL Server 2008, SP1 (minimum)
  - Windows SharePoint Services 3.0, SP1 (minimum)
  - Solid Edge ST2 with Insight Server

## Install the server operating system

The installation instructions that follow assume the installation of Microsoft Windows Server 2008.

- \_\_\_ 1. Install the Microsoft Windows Server 2008 operating system with the latest service pack.

**Note**

- It is highly recommended that you also install the latest critical updates from Microsoft.
- Internet Explorer 6.0 is automatically installed with the operating system. It is upgraded to IE 7.0 when you install the critical updates.

- \_\_\_ 2. Install Internet Information Services (IIS) on every server in the farm.

- Click Start® Control Panel® Add or Remove Programs.
- Click Add/Remove Windows Components.
- In the Windows Components Wizard, under Components, click Application Server.

Selecting Application Server performs a default installation of Internet Information Services (IIS).

- Click Next, and after the installation completes, click Finish.

- \_\_\_ 3. Once the operating system is installed and the server is running, you need to Add Roles.
  - On the Initial Configuration Task page, under Customize This Server, click Add Roles.
  - In the Add Roles Wizard, click Next.
  - Select the server roles, Application Server and Web Server (IIS), and click Next.
  - in the Add Roles Wizard, click Add Required Features, then click Next to load the Roles.

The Application Server installs the .NET Framework 3.0.
  - Add the Role Services Application Server Foundation, Web Server (IIS) Support, and HTTP Activation. Click Next.
  - Add the role services required for Web Server IIS support by clicking Add Required Role Services.
  - On the Web Server (IIS) page, click Next.
  - Confirm your selections for installation and click Install.
  - Once the Installation Results page displays, confirm the results and click Close.
  
- \_\_\_ 4. Next, you need to Add Features.
  - On the Initial Configuration Tasks page, under Customize This Server, click Add Features.
  - Select SMTP Server and then click Next.

POP3 has been deprecated and is no longer part of Windows Server operating system.
  
- \_\_\_ 5. If you are performing a separate forest and domain installation:
  - Install Domain Name Service (DNS) and Windows Internet Name Service (WINS).
  - Configure the local area network for DNS and WINS.
  - Add users to the domain.

## Create new accounts

- \_\_\_ 1. Create the following domain user accounts:

**Note**

If you are planning to install Microsoft Office SharePoint Server (MOSS), once you perform the MOSS administrator tasks, the necessary privileges are automatically granted to accounts for you.

Sample account name	Account description
FarmAdmin	<p>Used for installing and administering Microsoft Office SharePoint Server (MOSS). Use this account to log on to the server before installing and administering MOSS. When MOSS installs, it automatically grants this user account special privileges. The user of this account is referred to as the farm administrator.</p> <p><b>Note</b></p> <p>This domain user must be a member of the Administrator group on each of the servers where MOSS will be installed.</p>
MOSSAdminPool	<p>The MOSS Central Administration application pool account. Used for communicating with the MOSS configuration database.</p> <p>You will specify this account when you are running the MOSS Configuration Wizard.</p>
SQLUser	<p>Used by the SQL service after SQL is installed.</p> <p>You will specify this account when you are installing SQL.</p>
SQLBrowserUser	<p>SQL browser user account used by the SQL service after SQL is installed.</p> <p><b>Note</b></p> <p>This account is needed only if you are using SQL 2005.</p> <p>You will specify this account when you are installing SQL.</p>

Sample account name	Account description
SQLReporter	<p>Used by the SQL Server Reporting Services (SSRS) after SQL is installed.</p> <p><b>Note</b></p> <p>This account is needed only if you are using SQL 2005.</p> <p>You will specify this account when you are installing SQL.</p>
SSPSERVICE	<p>Used as the shared services provider (SSP) farm search service account. This account indexes and queries the database.</p> <p>You will specify this account when you start the Windows SharePoint Services Search.</p>
WSSSERVICE	<p>Indexes and queries the database and enables you to search the WSS online Help.</p> <p>You will specify this account when you start the Windows SharePoint Services Search service.</p>
WSSSEARCH	<p>Reads the query results of the database.</p> <p>You will specify this account when you start the Windows SharePoint Services Search service.</p>
SSPAPPPOOL	<p>Used by Internet Information Services (IIS) to transfer information in and out of the database.</p> <p>You will specify this account when you start the server farm's shared services.</p>
SSPSEARCH	<p>Used for inter-server communications and for running SSP-scoped timer jobs.</p> <p>You will specify this account when you start the server farm's shared services.</p>

- \_\_\_ 2. If you want to use different domain user accounts for the application pools created for content Web applications or My Site Web applications, create the additional domain user accounts.

**Note**

You will add the application pool account user name to the farm administrator's group and assign the necessary SQL permissions to the accounts later in the installation process.

**Add the servers to the domain**

Add all the Windows servers in your deployment to the domain.

- \_\_\_ 1. Choose Start® My Computer, and right-click Properties.
- \_\_\_ 2. On the Computer Name tab, click Change, and specify the domain information.

**Install Microsoft SQL Server**

Both Microsoft SQL Server 2005 and Microsoft SQL Server 2008 are supported for this release of Insight. The following are instructions for installing SQL Server 2008.

Before you begin, make sure you have the latest .NET framework installed. Also ensure you have installed the latest critical updates for Microsoft Server.

**Tip**

Additional information on installing Microsoft SQL Server 2008 is available at:

<http://msdn.microsoft.com/en-us/library/ms143219.aspx>.

**Install SQL Server 2008**

- \_\_\_ 1. Begin the installation of Microsoft SQL Server 2008 by inserting the SQL Server installation media and running *setup.exe*.

**Note**

Microsoft .NET Framework is a prerequisite to installing SQL Server 2008.

- Click OK to install the prerequisites and continue with Setup.
- \_\_\_ 2. On the SQL Server Installation Center page, select the appropriate installation type for your configuration.

**Example**

New SQL Server stand-alone installation or add features to an existing installation.

- \_\_\_ 3. In the Setup Support Rules page, click Show Details to ensure you have passed each of the rules listed.
- \_\_\_ 4. Provide your Product Key, accept the license terms, and then click Install to install Setup Support files.

- \_\_\_ 5. In the Feature Selection page, select the following features:
  - Database Engine Services
  - Full-Text Search
  - Management Tools — Basic
  - Management Tools — Complete
- \_\_\_ 6. You can provide a name for the instance or install a default instance. Select Default Instance.
- \_\_\_ 7. (Optional) If you have an additional hard drive, you have the option to load the database on the extra drive.

**Tip**

Refer to the hardware and software requirements included in the *Preparing for installation or upgrade* chapter of this document to determine your best solution.

- \_\_\_ 8. Select NT Authority/Network Service.

When you set up the SQL Service Account, use a local Windows administrator privileged account.

This account is necessary to allow the SQL Server agent to connect to the SQL server using the standard SQL server authentication.
- \_\_\_ 9. In the Database Engine Configuration page, select Mixed Mode (SQL Server Authentication and Windows authentication).
  - If you are logged on as the Administrator, click Add Current User.
  - Click the Data Directories tab.
  - Provide the directory locations for the database.
  - Click the FILESTREAM tab.
  - Enable FILESTREAM for your database.
  - Click Next.
- \_\_\_ 10. On the Error and Usage Reporting page, click Next.
- \_\_\_ 11. Once you have reviewed the components that will be installed, click Install.
- \_\_\_ 12. Verify your installation completed successfully, and then click Close.



---

## Chapter

# 4 *Installing and configuring Windows SharePoint Services 3.0*

This chapter describes a new installation. If you have a version of Insight with Microsoft SharePoint currently installed, you need to follow the instructions in subsequent chapters for upgrading your installation.

## Install Windows SharePoint Services 3.0

Windows SharePoint Services 3.0 (WSS) is a no cost add-on to Windows Server 2003, Service Pack 1 or later, and it is included with Windows Server 2003 R2. Windows SharePoint Services 3.0 is also supported on Microsoft Windows Server 2008.

### Note

If you are installing Windows SharePoint Services 3.0 (WSS) on a server running Windows Server 2008, you must install Windows SharePoint Services 3.0 with Service Pack 1 (minimum).

Only one workflow is available with WSS 3.0, however additional workflows can be created using SharePoint Designer or Visual Studio.NET.

Windows SharePoint Services 3.0 is available for download from the Microsoft Download Center:

<http://www.microsoft.com/downloads/en/default.aspx>.

Prior to installing and configuring Windows SharePoint Services 3.0, you should:

- Configure Microsoft Windows Server 2003 or 2008
- Configure SQL Server 2005 or 2008

### Note

The following instructions apply to the installation of WSS 3.0 after Microsoft Windows Server 2008 and SQL Server 2008 has been installed.

- \_\_\_ 1. Log on to the front-end Web server using the administrator account and run *SharePoint.exe*.
- \_\_\_ 2. You must accept the license terms in order to continue.
- \_\_\_ 3. Click Advanced to install Windows SharePoint Services 3.0 (WSS) on a single server or a server farm.

- \_\_\_ 4. Select the type of installation you want to install on the server.
  - Web Front End installs components for rendering content to users. You can add servers to form a SharePoint farm.
  - Stand-alone installs all components on a single machine. You can not add servers to create a SharePoint farm.

**Note**

The remaining instructions assume Web Front End installation.

- \_\_\_ 5. Click Install Now.
- \_\_\_ 6. Specify the installation location for WSS 3.0 by accepting the default. Make a note of this location.
- \_\_\_ 7. Click Install Now.

A dialog box asking you if you want to run the SharePoint Products and Technologies Configuration Wizard appears. By default, running the configuration wizard is selected.

**Tip**

You can clear the selection for running the Configuration Wizard, click Close and then install the latest Windows SharePoint Services 3.0 Service Pack before continuing.

- \_\_\_ 8. Once the installation completes, configure WSS 3.0.

## Configure Windows SharePoint Services 3.0

- \_\_\_ 1. Run the SharePoint Products and Technologies Configuration Wizard on all web servers in the server farm.
  - Choose Start® Administrative Tools® SharePoint Products and Technologies Configuration Wizard.

You are informed that some services may have to be started or reset during configuration.

- \_\_\_ 2. Click Yes to restart the services if required.

**Note**

If you are configuring WSS 3.0 on a server running the Windows Server 2003 operating system, go to the AdminConsole, click Web Service Extensions, and ensure ASP.NET v2.0 is set to Allowed.

- \_\_\_ 3. When you configure Windows SharePoint Services (WSS) on the first server, on the Connect To A Server Farm page in the Configuration Wizard, select **No, I want to create a new server farm.**

**Tip**

When you configure WSS on the remaining servers in the farm, select **Yes, I want to connect to an existing server farm.**

- \_\_\_ 4. Specify the configuration database all servers in the farm will use.
  - Type the name of your server and choose a name for your SharePoint database.
  - Type the administrator login information (servername\administrator) and password.
  - Click Next.
- \_\_\_ 5. Specify a port number for the SharePoint Central Administration page. You will use this for managing your configuration settings for a server farm.

If you do not specify a port number, a random port number will be used.

**Tip**

Do not use Port 80.

- \_\_\_ 6. Specify the authentication method you want to use.

NTLM is used for this example.
- \_\_\_ 7. Verify your selections and click Next.
- \_\_\_ 8. Once the configuration is successful, click Finish.
- \_\_\_ 9. Log in to your server using the administrator account.

On the Central Administration page, review each of your administrator tasks.
- \_\_\_ 10. Configure your incoming and outgoing e-mail settings.
- \_\_\_ 11. Click Create SharePoint Sites, and then click Create New Web Application (top-level site). Supply the requested information.
  - Type Port 80 for the IIS web site.
  - For the Application Pool, click Configurable.
  - Click Restart IIS Auto.
- \_\_\_ 12. Install Insight Server, but do not configure at this point.

Refer to the Insight Server installation instructions in the section of this document entitled *Install Insight Server*.

**Note**

If you do not install Insight Server prior to creating your site collection, the top site will not have shortcut commands on the document libraries.

## \_\_\_ 13. Create Site Collection.

- Supply a title for your top level site and select Team Site.
- Type the administrator username and password, then click OK.

Once your top level site is successfully created, click *http://servername*.

## \_\_\_ 14. Return to the Central Administration home page and change the maximum upload size to 500 MB.

- Click the Application Management tab.
- Click Web Application General Settings.
- Change the maximum upload size to 500 MB.

## Perform post-installation steps

The following is a high-level outline of steps you should perform following an initial installation of Microsoft Windows Server 2008 with SQL Server 2008.

## \_\_\_ 1. Verify your configuration of Windows SharePoint Services 3.0 (WSS).

## \_\_\_ 2. Create the Insight user in SQL.

- From the Start menu, choose Microsoft SQL Server 2008@ SQL Server Management Studio.
- Click Connect.
- Expand the Security collector and right-click Login. Then click New Login.
- Type the login name and enter a password.
- Uncheck Enforce Password Policy.
- Verify your settings.
- Select the databases and assign the user.

**Example**

db\_datareader and public

- Click Grant and Enabled, then click OK.
- Exit the SQL Server Management Studio.

## \_\_\_ 3. Create the Web applications.

- On the Manage This Farm's Shared Services page, click the Application Management tab.
- Under SharePoint Web Application management, click Create or Extend Web Application.

- Click Create a New Web Application.
  - Under IIS Web Site, change the port number to one that is not currently in use.
  - Under Application Pool® Configurable, enter the username and password of the domain user account for the MOSS administration application pool account.
  - Under Reset Internet Information Services, select Restart IIS Automatically, then click OK.
- \_\_\_ 4. Define the Searchscope.
- \_\_\_ 5. Install Office 2007.



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## Chapter

# 5 *Installing Insight Server*

## Install Insight Server software

In the next few steps, you will install the Insight Server software on your server. You have two options to choose from for your installation.

1. On the Solid Edge with Synchronous Technology DVD, click Other Solid Edge Products® Insight Server.

### Tip

If autorun does not start, go to `\CDROM\Insight Server for WSS 2.0` or `\CDROM\Insight Server for WSS 3.0`, and double-click `setup.exe` to begin the installation.

2. Select the appropriate option for your configuration.

### Note

This example assumes the installation of Insight Server for WSS 3.0.

3. On the Insight Server - InstallShield Wizard, click Next.
4. On the License Agreement page, accept the terms of the license agreement and then click Next.
5. On the Customer information page, enter the information for your organization, and then click Next.
6. Specify the location for your Insight Server files and click Next.

The Windows Installer provides the option to install the Insight Web Parts and Services add-in, which is used to display Solid Edge documents in a SharePoint dashboard.

7. To install the Web Parts and Services add-in, click the arrow next to the name of the add-in. Choose to install the feature only or all subfeatures, and then click Next.



8. Specify a web site and click Next.
9. Click Install.

- \_\_\_ 10. Click Finish when the installation has completed.
  
- \_\_\_ 11. If you have defined a Web Parts location during installation, you need to enable the custom menu extension for Solid Edge documents by adding the URL as the value of the variable, `L_Path_to_SEWebPartPage_Text`, in the *SolidEdgeInsight\_custom\_ows.js* file.
  - Edit the `\Program Files\Common Files\Microsoft Shared\web server extensions\60\Template\Layouts\1033\SolidEdgeInsight_custom_ows.js` file.
  
  - Replace `<WEB PART PAGE URL>` with the location of the *WebPartsPage.aspx* file.

**Example**

`<https://hsvnt315/WebParts/WebPartsPage.aspx>`

- \_\_\_ 12. Initialize the Insight SQL Server.
  - From the Start menu, choose Insight Server for WSS3.0® Initialize Insight SQL Server.
  
  - Provide the server URL, username, and password.
  
- \_\_\_ 13. Create Full Text Index.
  - From the Start menu, choose Insight Server for WSS 3.0® Create Insight Full Text Index.
  
  - The server URL should be visible. Click OK.

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## Chapter

# 6 *Installing and configuring Microsoft Office SharePoint Server 2007 (MOSS)*

## Installing Microsoft Office SharePoint Server 2007 (MOSS)

Microsoft Office SharePoint Server 2007 (MOSS) is built on and extends the functionality provided by WSS 3.0. MOSS has expanded functionality including workflows and reporting capability as well as search capabilities that expand to people and business data. Intranet, extranet, and Web applications are supported from one integrated platform. For a complete product description, see [Microsoft Office SharePoint Server 2007 product overview](http://office.microsoft.com/en-us/sharepointserver/HA101656531033.aspx) at <http://office.microsoft.com/en-us/sharepointserver/HA101656531033.aspx>

- \_\_\_ 1. Log on to the front-end Web server using the farm administrator account.
- \_\_\_ 2. Install Microsoft Office SharePoint Server 2007 (MOSS) on all Web servers in the server farm.

The Setup Wizard guides you through the process.

- On the Choose the Installation You Want page, click Advanced.
  - On the Server Type tab, select Complete — Install all components.
- \_\_\_ 3. On the final screen of the Setup Wizard, clear the option for automatically launching the Configuration Wizard.
  - \_\_\_ 4. Install all the language packs before running the Configuration Wizard.

The language packs can be downloaded from Microsoft at:  
<http://technet2.microsoft.com/downloads/details.aspx?FamilyID=2447426b-8689-4768-bff0-cbb511599a45>.

You do not need to run the Wizard after installing each language pack.

Information on installing and configuring MOSS language packs is available in *Deploy Language Packs (Office SharePoint Server)*, at <http://technet2.microsoft.com/Office/en-us/library/26c07867-0150-463d-b21a-a6d42aecf05a1033.mspx>.

## Configure Microsoft Office SharePoint Server (MOSS)

- \_\_\_ 1. Run the Configuration Wizard to configure MOSS.
  - Choose Start® Administrative Tools® SharePoint Products and Technologies Configuration Wizard.
- \_\_\_ 2. On the Connect to a Server Farm screen, if you are configuring the first server in the farm, select *No, I want to create a new server farm*.  
If you are configuring a subsequent server, select *Yes, I want to connect to an existing server farm*.
- \_\_\_ 3. On the Specify Configuration Database Settings screen:
  - In Database server, enter the name of the SQL server.
  - Under Specify Database Access Account, enter the user name and password for the MOSS Central Administration application pool account.

## Perform MOSS administrative tasks

When the Configuration Wizard completes, the Microsoft Office SharePoint Server (MOSS) Central Administration page displays. There are several tasks displayed in this list.

- Add servers to farm

When you ran the Configuration Wizard, you selected *No, I want to create a new server farm* for the first server in the farm, and *Yes, I want to connect to an existing server farm* for subsequent servers. You do not need to perform this administrative task.

- Assign services to the servers.
- Configure server farm's shared services.

Begin by assigning services to the servers.

- \_\_\_ 1. In the Administrator's Tasks list, click *Initial deployment: Assign services to servers*.
- \_\_\_ 2. In Action, click *Initial deployment: Assign services to servers*.  
Services that are required on the farm, but which are not running are displayed.
- \_\_\_ 3. Start the Excel calculation services.

### Note

This service is required by the Excel calculation component of Microsoft Office SharePoint Server (MOSS). You only need to start this service if you are using this component.

- From Server, select the name of the application server you want the service to run on.

- In the table, in the line for Excel Calculation Services, click Start.

\_\_\_ 4. Start the Office SharePoint Server Search service.

This service is commonly referred to as the indexing service because it indexes the data to facilitate the search.

- From Server, select the name of the application server you want the service to run on.
- In the table, click Office SharePoint Server Search, then click Start..
- Under Query and Indexing, select Use this server for indexing content and use this server for serving search.
- In E-mail Address, enter an e-mail address for a contact person.
- Under Farm Search Service Account, enter the user name and password of the domain user account you created earlier.
- Click Start.

\_\_\_ 5. Start the Windows SharePoint Services Search service.

- From Server, select the name of the application server you want the service to run on.
- In the table, in the line for Windows SharePoint Service Search, click Start.
- Under Service Account, enter the user name and password of the domain user account you created earlier.
- Under Content Access Account, enter the user name and password of the domain user account that you created earlier.
- Under Indexing Schedule, enter the frequency that you want the content index of your sites updated.

**Caution**

Frequent indexing can result in performance degradation.



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## Chapter

# 7 *Upgrading to Windows SharePoint Services 3.0 (WSS)*

## Perform WSS pre-upgrade steps

The following is a high-level outline of pre-upgrade steps to guide you in an upgrade from an Insight installation running with Windows SharePoint Services 2.0, to an Insight installation running Windows SharePoint Services 3.0.

Additional information is available on the Microsoft TechNet web site:  
<http://technet.microsoft.com/en-us/library/cc303309.aspx>

- \_\_\_ 1. Create and test backup images of all the servers in your current environment.

The backup images will provide a recovery path in the event of migration failure.

- \_\_\_ 2. Verify that hardware requirements are met (see the [Hardware Requirements](#) portion of this document).

Your hardware must meet the requirements to run the new version of software in addition to having the necessary processing power and memory to run the upgrade process.

- \_\_\_ 3. Verify that operating system requirements are met.

<b>Servers</b>	<b>Operating System</b>
Database servers	Microsoft Windows Server 2003, SP2
	OR
Front-end Web servers	Microsoft Windows Server 2008, SP1
	OR
Application servers	Microsoft Windows Server 2003, SP2
	OR
	Microsoft Windows Server 2008, SP1

- \_\_\_ 4. Determine an estimate of how long the upgrade process will take and the amount of space needed.

Every environment is unique, so the amount of space and time required to perform an upgrade varies. You can estimate your requirements for upgrade by performing a trial upgrade.

**Tip**

Information about performing a trail upgrade to Windows SharePoint Services can be found at:

<http://technet.microsoft.com/en-us/library/cc287730.aspx>.

- \_\_\_ 5. If you have sites that are based on custom site definitions, you need to develop new custom site definitions and custom elements.

The new custom site definitions must include all of the functionality you need, plus any new capabilities you want to use.

- \_\_\_ 6. Create site upgrade definition files.

The site upgrade definition files map custom elements from your existing custom site definition to the new custom site definition.

- \_\_\_ 7. Verify that Service Pack 2 for Windows SharePoint Services 2.0 is installed.

Choose Start® Control Panel® Add or Remove Programs.

Click Show Updates.

You should see Windows SharePoint Services Service Pack 2 (SP2) listed under Microsoft Windows SharePoint Services 2.0.

**Caution**

If you do not have Service Pack 2 installed, you can download it from: <http://go.microsoft.com/fwlink/?LinkId=71862>, or you can use Microsoft Windows Update to apply the service pack to your systems.

If you are running a server farm configuration, you must install the service pack to each front-end Web server.

- \_\_\_ 8. Deploy upgrade definition files and new site definitions.
- \_\_\_ 9. Test your Web Parts in ASP.NET 2.0 to verify they will work in the new environment.

**Note**

You must rebuild or redeploy custom Web Parts if you are moving to a new server farm by using the database migration path for upgrade.

## Upgrade to Windows SharePoint Services 3.0

The following is a high-level outline of steps to guide you in upgrading an Insight installation to Windows SharePoint Services 3.0

Additional information is available on the Microsoft TechNet web site:

<http://technet.microsoft.com/en-us/library/cc303309.aspx>

## In-place upgrade

The in-place upgrade is the simplest approach to upgrading to Windows SharePoint Services 3.0. All content and configuration data is upgraded at the same time, therefore the Web server and Web sites are offline until the upgrade is complete. This approach is recommended for a stand-alone server that has a small installation and has no custom environments.

### Caution

You cannot pause or revert to a previous version when you perform an in-place upgrade.

1. Ensure you have installed the prerequisite software for Windows SharePoint Services:

Server	Prerequisite software
Web Server	Microsoft Windows Server 2003, SP2
Application Server	Microsoft .NET Framework 3.0
Database Server	Microsoft ASP.NET 2.0
	Microsoft SQL Server 2005, SP3

2. Run setup and install the new version on all servers in your server farm.
  - On the Upgrade Earlier Versions page, click Yes, perform an automated in-place upgrade.
  - On the Server Type tab, select your server:
    - Choose Web Front End if you are running and upgrade on a server farm.
    - Choose Stand-alone if you are upgrading a server that is not part of a SharePoint farm and you want to use Windows Internal Database for your database.
  - Click Install Now.
3. Once installation completes, clear the Run the SharePoint Products and Technologies Configuration Wizard now check box, and click Close.
4. Deploy any software upgrades.
5. Deploy upgrade definition files.
6. Install any language template packs for Windows SharePoint Services 3.0.
7. Run the SharePoint Products and Technologies Configuration Wizard.
  - Click Start® All Programs® Administrative Tools, and click SharePoint Products and Technologies Configuration Wizard.
  - On the Configure SharePoint Central Administration Web Application page, you can specify a port number for SharePoint Central

Administration, by selecting the Specify Port Number check box, and then typing the port number to use.

- In the configure Security Settings section, select NTLM, and then click Next.

The configuration database and Central Administration Web application for Windows SharePoint Services 3.0 are configured.

**Note**

At this point, you must run Setup on each server in the server farm before continuing.

- \_\_\_ 8. Once the upgrade is successful, click Finish.
- \_\_\_ 9. Review your log files and resolve any issues you might have encountered.

## Perform WSS post-upgrade steps

After you have completed your upgrade to Windows SharePoint Services 3.0, there are a few things you should do before removing the old version of the product.

- \_\_\_ 1. Verify your upgrade by reviewing the upgrade log file (upgrade.log).

You should identify any problems with the upgrade and complete the configuration of any outstanding sites.

**Note**

You can also verify the success of the upgrade using the SharePoint Central Administration Web site to view the version number on the Servers in Farm page.

- \_\_\_ 2. Remove Windows SharePoint Services 2.0 language packs.
- \_\_\_ 3. Remove the connection to the previous version by finalizing your upgrade.
  - In Central Administration, click Operations® Upgrade and Migration® Finalize Upgrade.
  - Click complete Upgrade, then click OK.

**Caution**

Once you finalize an upgrade, you cannot go back to the upgrade process.

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## Chapter

# 8 *Upgrading to Microsoft Office SharePoint Server 2007 (MOSS)*

## Perform MOSS pre-upgrade steps

The following is a high-level outline of pre-upgrade steps to guide you in an upgrade from an Insight installation running with Windows SharePoint Services 2.0, to an Insight installation running Microsoft Office SharePoint Server 2007 (MOSS).

Additional information is available on the Microsoft TechNet web site:

<http://technet.microsoft.com/en-us/library/cc288751.aspx>

1. Create and test backup images of all the servers in your current environment.

The backup images will provide a recovery path in the event of migration failure.

2. Verify that hardware requirements are met (see the [Hardware Requirements](#) portion of this document).

Ensure have enough space to accommodate the size of your largest site collection.

### Tip

You can use SQL Server's Enterprise Manager to determine the size of your databases.

Additionally, you need to have enough disk space for the search indexes, upgrade log files, and transaction log files for the databases. The default growth rate of 10% for the transaction log files may not be enough in large environments which can lead to a timeout. Information on pre-growing SQL transaction logs can be found in [Expanding a Database](#), at [http://msdn2.microsoft.com/en-us/library/aa933083\(SQL.80\).aspx](http://msdn2.microsoft.com/en-us/library/aa933083(SQL.80).aspx).

3. Verify that operating system requirements are met.

Servers	Operating System
Database servers	Microsoft Windows Server 2003, SP2
	OR
	Microsoft Windows Server 2008, SP1

Servers	Operating System
Front-end Web servers	Microsoft Windows Server 2003, SP2
	OR Microsoft Windows Server 2008, SP1
Application servers	Microsoft Windows Server 2008, SP1
	OR Microsoft Windows Server 2008, SP1

- 4. Record account information to have on-hand when you install Microsoft Office SharePoint Server 2007 (MOSS).

Server	Server name	Server IP address	Username and Password of a domain account with administrator privileges
Front-end Web server 1			
Front-end Web server 2			
Application server 1			
Application server 2			
Database server 1			
Database server 2			

- 5. Create any domain user accounts needed for the migration.

When you install Microsoft Office SharePoint Server (MOSS) and perform the MOSS administrator tasks, the necessary privileges are automatically granted to the accounts described here.

Sample account name	Account description
FarmAdmin	<p>Used for installing and administering Microsoft Office SharePoint Server (MOSS). Use this account to log on to the server before installing and administering MOSS. When MOSS installs, it automatically grants this user account special privileges. The user of this account is referred to as the farm administrator.</p> <p><b>Note</b></p> <p>This domain user must be a member of the Administrator group on each of the servers where MOSS will be installed.</p>

Sample account name	Account description
MOSSAdminPool	The MOSS Central Administration application pool account. Used for communicating with the MOSS configuration database.  You will specify this account when you are running the MOSS Configuration Wizard.
WSSSearch	Reads the query results of the database.  You will specify this account when you start the Windows SharePoint Services Search service.
SSPAppPool	Used by Internet Information Services (IIS) to transfer information in and out of the database.  You will specify this account when you start the server farm's shared services.
SSPSearch	Used for inter-server communications and for running SSP-scoped timer jobs.  You will specify this account when you start the server farm's shared services.

- \_\_\_ 6. If you are upgrading to SQL Server 2005 as part of this migration, install SQL Server 2005.

**Note**

Information on installing SQL Server 2005 is available in [Installing SQL Server 2005](http://msdn2.microsoft.com/en-us/library/ms143516.aspx), at <http://msdn2.microsoft.com/en-us/library/ms143516.aspx>.

- \_\_\_ 7. Verify that Service Pack 2 for Windows SharePoint Services or SharePoint Portal Server is installed.

Choose Start® Control Panel® Add or Remove Programs.

Click Show Updates.

You should see Windows SharePoint Services Service Pack 2 (SP2) listed under Microsoft Windows SharePoint Services 2.0.

**Caution**

If you do not have Service Pack 2 installed, install Service Pack 2 on each server, then verify that your sites are still functioning correctly.

- \_\_\_ 8. Install Microsoft .NET Framework 3.0. You must reboot your system once installation completes.

Separate downloads for x86-based computers and x64-based computers are available on the Microsoft web site. Take precautions to download and install the appropriate version for your computers.

**Tip**

- Information for Microsoft .NET Framework 3.0 is available from the Microsoft Download Center Web site at <http://go.microsoft.com/fwlink/?LinkID=72322&clid=0x409>, on the Microsoft .NET Framework 3.0 page.
- Microsoft .NET Framework 3.0 contains the Windows Workflow Foundation technology, which is required by MOSS workflow features. If you have an older version of the Windows Workflow Foundation, uninstall the older version before installing Microsoft .NET Framework 3.0.

\_\_\_ 9. Verify that Microsoft ASP.NET 2.0 is enabled.

- Choose Start® Administrative Tools® Internet Information Services (IIS) Manager.
- Click Web Service Extensions and look for ASP.NET V2.0.50727.
- If ASP.NET 2.0 is not enabled, enable it at this time, and verify your sites are functioning correctly.

**Tip**

Additional information on enabling Microsoft ASP.NET 2.0 is available at <http://technet2.microsoft.com>.

\_\_\_ 10. If you are upgrading from Windows SharePoint Portal Server, you are ready to install Microsoft Office SharePoint Server 2007 (MOSS).

**Caution**

If you are upgrading from Windows SharePoint Services 2.0, you must install and configure Windows SharePoint Services 3.0 (WSS) before continuing. You cannot upgrade directly from Windows SharePoint Services 2.0 to Microsoft Office SharePoint Server 2007 (MOSS).

- To install Windows SharePoint Services 3.0, log on to the front-end Web server using the farm administrator account.
- On the upgrade earlier version page in the Installation Wizard, select Yes, perform a gradual upgrade.
- On the Server Type tab, select Web Front End and click Install Now.
- Clear the selection for running the Configuration Wizard and click Close.

## Install Microsoft .NET Framework 3.0

Microsoft .NET Framework 3.0 contains the Windows Workflow Foundation technology, which is required by MOSS workflow features. There are separate downloads available for x86-based computers and x64-based computers. Be sure to download and install the appropriate version for your computer.

If you have an older version of the Windows Workflow Foundation, uninstall that version before installing Microsoft .NET Framework 3.0.

### Tip

Information for Microsoft .NET Framework 3.0 is available from the Microsoft Download Center Web site at <http://go.microsoft.com/fwlink/?LinkId=72322&clid=0x409>.

- \_\_\_ 1. Start the installation for Microsoft .NET Framework 3.0.

The installation runs in the background and the Installation Wizard is listed as an icon on your status bar at the bottom of the screen.

### Tip

To view the installation in progress, click the icon on the status bar and display the Installation Wizard.

- \_\_\_ 2. When .NET Framework installation completes, reboot your system before continuing.
- \_\_\_ 3. Run Windows Update to check for security updates to Microsoft .NET Framework 3.0.

More information about Microsoft .NET Framework is available in Microsoft .NET Framework Developer Center <http://msdn.microsoft.com/netframework>. Information about the problems installing Microsoft .NET Framework is available at <http://forums.microsoft.com/MSDN/ShowPost.aspx?PostID=1518360&SiteID=1>.

## Enable Microsoft ASP.NET 2.0

Microsoft ASP.NET 2.0 was installed automatically when you installed Microsoft .NET Framework 3.0.

- \_\_\_ 1. In Control Panel, click Add or Remove Programs.
- \_\_\_ 2. Select the Application Server check box, and then click Details.
- \_\_\_ 3. Select the ASP.NET check box, and then click OK.

## Install SharePoint

The Insight ST2 release is supported on the following versions of Microsoft SharePoint:

- Windows SharePoint Services 2.0

- SharePoint Portal Server 2003
- Windows SharePoint Services 3.0
- Microsoft Office SharePoint Server 2007

Install and configure SharePoint for your datacenter. For instructions, see the chapter entitled, [Installing SharePoint](#).

## Upgrade to Microsoft Office SharePoint Server 2007 (MOSS)

Insight Server continues to be supported on Windows SharePoint Services (WSS) 2.0. However, with the release of Insight ST2, you can now run on Microsoft Office SharePoint Server 2007 (MOSS).

Microsoft Office SharePoint Server 2007 (MOSS) has expanded functionality including workflows and reporting capability as well as search capabilities that expand to people and business data. Intranet, extranet, and Web applications are supported from one integrated platform. For a complete product description, see [Microsoft Office SharePoint Server 2007 product overview](#) at <http://office.microsoft.com/en-us/sharepointserver/HA101656531033.aspx>

For installation instructions, see the topics, [Installing Microsoft Office SharePoint Server 2007 \(MOSS\)](#), and [Configure Microsoft Office SharePoint Server 2007 \(MOSS\)](#) included in the following chapter.

## Perform MOSS post-upgrade steps

- \_\_\_ 1. Run the Configuration Wizard to configure MOSS.
  - Choose Start@ Administrative Tools@ SharePoint Products and Technologies Configuration Wizard.
- \_\_\_ 2. On the Connect to a server farm screen, if you are configuring the first server in the farm, select No, I want to create a new server farm.  
If you are configuring a subsequent server, select Yes, I want to connect to an existing server farm.
- \_\_\_ 3. On the Specify Configuration Database Settings screen:
  - In Database server, enter the name of the SQL server.
  - Under Specify Database Access Account, enter the user name and password for the MOSS Central Administration application pool account.

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## Chapter

# 9 *Installing Windows SharePoint Services 2.0*

## Windows SharePoint Services 2.0 overview

Insight Server continues to be supported with Windows SharePoint Services 2.0. If you have chosen to use Windows SharePoint Services 2.0 with SQL 2005 to implement Insight in your datacenter, you need to be aware of some of the functionality of Windows SharePoint Services 2.0 before continuing.

### User Roles

There are five main default user site groups:

- Guest
- Reader
- Contributor
- Web Designer
- Administrator

Windows SharePoint Services 2.0 introduces the concept of user rights. User rights are unique permissions like browse, delete, and edit that are combined to create Windows SharePoint Services 2.0 site groups. Because groups are made up of individual rights, the default Windows SharePoint Services 2.0 site groups can be modified. For example, you can remove the delete right from the Contributor group to prevent users from deleting files. You can also create new site groups.

For more details see the Microsoft Windows SharePoint Services 2.0 Administrator's Guide.

In Windows SharePoint Services 2.0 default permissions and groups are set at the root site and they can be overridden in sub-sites or document libraries.

### Note

You can only assign users to the default Windows SharePoint Services 2.0 groups at the document library level.

### Properties

Windows SharePoint Services 2.0 adds data types and provides options that can be set on each property.

**Windows SharePoint Services 2.0 Column Type**

Single or Multiple line of text

Number

Choice

Date and Time

Lookup (pull data from elsewhere in SharePoint)

Hyperlink

Yes/No

Calculated (calculates the value for the column based on values in other columns)

Currency (displays in decimal format with currency symbol based on selected currency)

There are additional formatting options that you can set to ensure valid entries are added to the system. Some of the formatting options are:

- Min/Max values for number properties
- Display as percentage
- Default values
- Calculated values
- Number of decimal places

Administrators can also alter the default view to hide system columns on the dashboard so users can focus on the key data. Insight takes advantage of this option by turning the display off for all the mandatory Insight properties.

Using Windows SharePoint Services 2.0, administrators can change column names when needed and spaces can be used in column names. When changing column names, you need to check to see if other columns may be using the renamed column as a lookup. If they are, you need to update the lookup to point to the renamed column. Windows SharePoint Services 2.0 limits the total number of columns in a document library based on the data type. The limits for each type of column are:

- There is a limit of 64 (57/51) text columns per list (single line of text, choice, hyperlink, picture)
- Multi-line text - 32 (31/29) columns
- Number or currency - 32(32/31) columns
- Date - 16 columns
- Lookup - 16 columns
- Yes/No - 16 columns
- Calculated - 8

### **Note**

The numbers in parentheses () are for document libraries as several columns are used by the system. The first number listed is for standard SharePoint document libraries. The second number is for Insight document libraries.

Properties are set at the document library level for Windows SharePoint Services 2.0.

## **Backup and Recovery**

Windows SharePoint Services 2.0 provides you the ability to backup individual sites while the system is in-use. However, users will notice slower performance for this type of backup. Backing up files on a per-site basis helps when files are organized by sites. Sites that do not change regularly, such as standard parts, can be scheduled for weekly backup but skipped during the nightly backups. For details on how to backup a Windows SharePoint Services 2.0 site see the Microsoft Windows SharePoint Services 2.0 Administrator's Guide.

## **Version Limits**

Windows SharePoint Services 2.0 allows customers to turn on versioning. However, there is no way to specify a version limit with Windows SharePoint Services 2.

### **Note**

For Insight customers, we recommend that versioning be turned off until there is an automated way to purge old versions due to the large demand unlimited versions will put on disk-space for a typical customer site.

## **Install Windows SharePoint Services 2.0**

There are several items you must consider while installing Windows SharePoint Services.

### **Caution**

Windows SharePoint Services 2.0 does not upgrade directly to Microsoft Office SharePoint Server (MOSS). You must install WSS 3.0 before upgrading to MOSS.

## **Installation considerations for Windows SharePoint Services 2.0**

There are certain choices that you must make either before or during your installation of Windows SharePoint Services 2.0. Some of these choices, such as the database type you use, can be changed later without a lot of extra work. Other choices, such as the user account mode you will use, cannot be changed unless you un-install and re-install Windows SharePoint Services. If you are installing Windows SharePoint Services in a large scale environment, such as a server farm, it is critical that you make the right choices at the very beginning. Be sure that you carefully consider the following before you install Windows SharePoint Services 2.0.

## Choosing a user account mode

When you install Windows SharePoint Services, you must choose which mode you want to use for user accounts. Windows SharePoint Services can work with either of the following user account modes:

- Domain account mode (recommended)

This mode is used inside organizations to grant access to users with existing Microsoft Windows domain accounts.

- Active Directory account creation mode

This mode is used by Internet Service Providers to create unique accounts for customers in Active Directory service.

### Note

All Insight testing was done using Domain Account Mode and we recommend you implement using Domain Account Mode.

You cannot mix the modes. You must choose either Domain account mode or Active Directory account creation mode. The difference between these two modes is the method you use to create user accounts. In Domain account mode, you use existing domain user accounts. In Active Directory account creation mode, accounts are automatically created in the Active Directory organizational unit you specify. In either mode, you use the same method to manage users of a site. You add them to the site using their existing domain or Active Directory accounts and then assign them to site groups to give them the rights they need to use the site.

The choice between user account modes is a one-time-only choice because it affects how the configuration database for your server or server farm is created. You cannot change user account modes after creating the configuration database and this step is one of the first choices you make after installation when using SQL Server.

For more information about user account modes, see the Managing Users and Cross-Site Groups section of the Windows SharePoint Services Administrator's Guide available from download from the Microsoft web site:

<http://www.microsoft.com/downloads/>

When you are in Active Directory account creation mode, there are certain administrative tasks that are unavailable in the HTML Administration pages. For example, you cannot create a top-level web site, you cannot enable Self-Service Site Creation, and you cannot add a user to a site from the Central Administration pages. To perform these actions in Active Directory account creation mode, you must use the command line or the object model.

For more information, see the Using the Object Model to Manage Windows SharePoint Services section of the Windows SharePoint Services Administrator's Guide.

The Minimum Password Age group policy on the domain controller must be set to 0 days. Failure to do so will result in users being unable to change their passwords, unless they have administrator rights on the server. For information on setting the Minimum Password Age group policy, see Microsoft Windows 2003 Server online help.

## **Choosing a database type**

Insight requires at least SQL Server 2005, SP3 or higher for the SharePoint storage mechanism. Insight will not run with Windows SharePoint Services on Windows Microsoft Server Desktop Engine (WMSDE).

The default Windows SharePoint Services installation uses Windows MSDE. Using this SharePoint setup option does not create a property index that can be used for searching and limits customers to a maximum of ten user connections. Insight needs the property index to determine what files to copy to the user's local cache. Therefore, Insight will not run with a WMSDE installation.

## **Choosing an authentication type for SQL Server**

If you choose to use SQL Server with Windows SharePoint Services, you must also choose the authentication method to use for connections between Windows SharePoint Services and the SQL Server databases. The authentication methods available for these connections are Windows authentication or SQL Server and Windows authentication.

- Windows authentication depends on the domain credentials for an Internet Information Services (IIS) application pool to connect to the SQL Server database. The username and password are not sent between servers, but are abstracted through the IIS application pool. This would require you to add all the Insight users to the database, which is not a very good solution.
- SQL Server and Windows authentication requires less administration, because when you connect to the database, the username and password for the database administrator account are sent from server to server in unencrypted format. Therefore the SQL Server and Windows authentication is recommended.

You make the database authentication choice after installation, when you connect to the SQL Server databases for the first time.

For more information about security, see the Windows SharePoint Services Security Model section of the Windows SharePoint Services Administrator's Guide. <http://www.microsoft.com/downloads/>

For more information about authentication methods for SQL Server 2005, see the SQL Server 2005 documentation.

### **Note**

We recommend you choose SQL Server and Windows authentication for SQL Server.

## **Choosing an IIS Application Pool configuration**

Internet Information Server (IIS) is a required service. When you install Windows Server 2003 Standard edition, IIS is not started by default. This can create problems when installing Windows SharePoint Services. When you install Windows Server 2003, make sure that you check the option to start IIS before you attempt to install Windows SharePoint Services.

Internet Information Server (IIS) introduced application pools in IIS 6. With application pools, you can use an isolated process to run your web applications. Each application pool has unique credentials on the server, so you can identify which

applications are performing which actions. If that application fails, it does not affect other applications that are also running.

Windows SharePoint Services supports the new application pool model in IIS 6. When you configure your server or your server farm, you can choose from the following options:

One application pool for the administrative virtual server

The administrative virtual server must always have its own, separate application pool.

Shared application pools for all virtual servers hosting Web sites

You can choose to use the same application pool for all other virtual servers you use in Windows SharePoint Services. If you do so, however, you lose the security and failure protection measures that multiple application pools help provide. Applications running on one virtual server can potentially read or write data from another virtual server's application, and if one virtual server fails, they all fail.

Separate application pools for each virtual server hosting Web sites

With separate application pools for each virtual server, you gain the security and failure protection measures that application pools help provide. If one virtual server fails, it does not affect the others. No application running in a unique application pool can read another application's data if the application is on another virtual server. However, separate application pools create more complexity in management, since unique domain accounts must be created and maintained for each application pool.

Shared application pools for all virtual servers hosting the same Web sites

In a server farm environment, you can also choose to use the same application pool accounts for any virtual servers that are hosting the same Web sites. For example, if your server farm has three servers, each of which has at least one virtual server that hosts the same Web site (<http://www.example.com/site>), you can use the same application pool account for all of the virtual servers hosting that site. This way, you only need to remember one set of credentials for that group of Web sites, and you can perform tasks across a set of virtual servers in your server farm.

#### **Note**

If you choose this configuration, you must be sure to use a domain account for the application pool account.

You specify the application pool to use for your administrative virtual server when you install Windows SharePoint Services to a server and set the configuration database. You specify any other application pools to use when you extend a virtual server on that server. For more information about application pools, see the IIS 6.0 Help system.

### **Install Insight Server before creating any sites**

Insight Server installation extends the document library menus to add the Insight Web Parts and also increases the maximum string length that SharePoint supports. You should install Insight Server on each Windows SharePoint Server web server if running in a web farm or the Windows SharePoint Server if running single-server to

update the default site templates before adding any site-specific customizations or SharePoint sites to SharePoint.

### **Note**

Any sites created before installing Insight Server, including the default website, cannot be used for Insight document libraries.

## **Adding Insight extensions to custom templates**

Insight Server modifies the default SharePoint and SharePoint Portal Server templates to add web part and more than 255 character string support. If you create your own site templates or load one of the SharePoint language packs, you will need to modify the templates to add Insight support using the following steps:

1. Close Internet Explorer and Stop IIS.
2. First find and backup all *onet.xml* files and then edit each *onet.xml* located in the \Program Files\Common Files\Microsoft Shared\Web Server Extensions\60\TEMPLATE\1033\SITE DEFINITION NAME\XML.

### **Replace**

```
<Project Title="Team Web Site" ListDir="Lists" xmlns:ows="Microsoft SharePoint">
```

### **with**

```
<Project Title="Team Web Site" ListDir="Lists"
xmlns:ows="Microsoft SharePoint"
CustomJSUrl="/_layouts/[%=System.Threading.Thread.CurrentThread.CurrentUICulture.
LCID%]/SolidEdgeInsight_custom_ows.js">
```

3. Restart IIS.

## **Microsoft SharePoint limits**

The capacity of Windows SharePoint Services is also limited by the number of objects that can be created in a given scope, such as number of documents per folder. The scale limits in Windows SharePoint Services are not hard limits enforced by the system. They are practical limits imposed by reasonable performance. In other words, you can exceed these limits if you want to, but you may find the resulting performance to be unacceptable.

The following table lists the objects in Windows SharePoint Services and describes their limits.

Object	Scope	Limit	Comments
Site collection	Database	50,000	Total throughput degrades as the number of site collections increases. At 10,000 site collections, throughput is 90% of peak. At 50,000 site collections, throughput is 70% of peak.
Web sites	Web site	10,000	The interface for enumerating subsites of a given Web site does not perform well beyond 1,000 subsites.
Web sites	Site collection	2 million	You can create a very large total number of Web sites by nesting the subsites. For example, 1,000 subsites, each with 1,000 subsites, is 1,001,000 Web sites.
Documents	Folder	10,000	The interfaces for enumerating documents in a folder do not perform well beyond a few thousand entries.
Documents	Library	2 million	You can create very large document libraries by nesting folders.
Security principals	Web site	2,000	The size of the access control list is limited to a few thousand security principals, in other words users and groups in the Web site.
Users	Web site	2 million	You can add millions of people to your Web site by using Microsoft Windows security groups to manage security instead of using individual users.

Items	List	10,000	<p>The interface for enumerating list items does not perform well beyond a few thousand items.</p> <p>Pages with more than 100 Web Parts are slow to render. Pages with more than a few thousand user personalizations are slow to render.</p> <p>The interface for enumerating lists and libraries in a Web site does not perform well beyond a few thousand entries.</p> <p>The file save performance degrades as the file size grows. The upper limit is about 50 MB. This limit is enforced by the system, but the limit can be changed by the administrator.</p>
Web Parts	Page	100	
Web Part personalization	Page	10,000	
Lists	Web site	10,000	
Document size**	File	50 MB	

The maximum file size recommended by Microsoft is 50 MB though we have tested files as large as 500 MB without encountering any errors or unusual decline in performance.

The following characters are not supported in Windows SharePoint Services:

# : \ ? \* < > % / | " { } ~ [ ] Space ! ( ) = ; . , @ & +

**Note**

If a file, folder, or URL name in your original site contains one of these characters, it is replaced with an underscore (\_). Multiple periods are replaced with a single period. Additional digits may be appended to the file or folder name if there are conflicting renaming changes. Folder names may not begin with an underscore (\_).

**Modify Virtual Server Settings**

There are several options that should be changed for each virtual server that will be used for Insight files.

## Maximum upload size

By default SharePoint limits files to 50 MB. To modify this setting, go to the Virtual Server General Settings page for the virtual server and change the Maximum Upload Size option. In this example we have changed the maximum upload size to 250 MB.



Once you have changed the limit, select OK at the bottom of the page to save your changes.

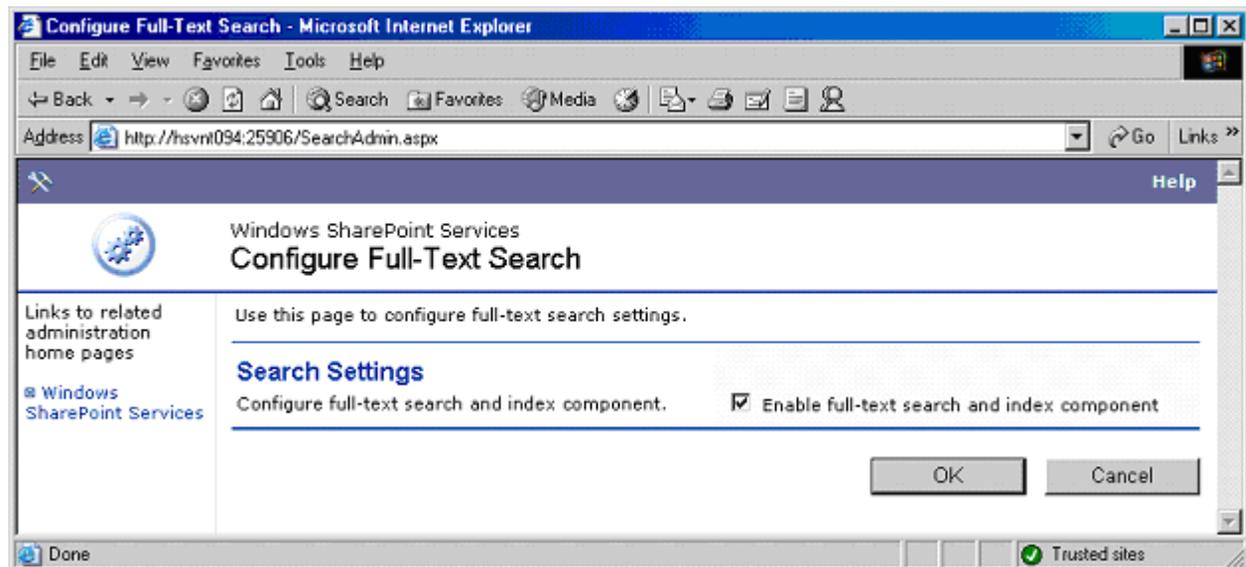
## Event Handlers

If you will be using the SharePoint Workflow provided by Insight and Microsoft you will need to turn event handlers on for the virtual server. This option can be turned on by going to the Modify Virtual Server Settings page for the virtual server and turning the option on as shown in the next figure.



## Enable full-text search

To perform full-text searches with Windows SharePoint Services (WSS) 2.0 and Insight, you must turn on the full-text search and index component from the WSS administrator pages. To turn the option on, go to the WSS Central Administration page and select configure full-text search in the Component Configuration section.



## Accessing the site or document library

The dashboard is the web interface to your Solid Edge site or document library. There are two ways to access your site or document library:

- Internet Explorer
- Solid Edge Open dialog box

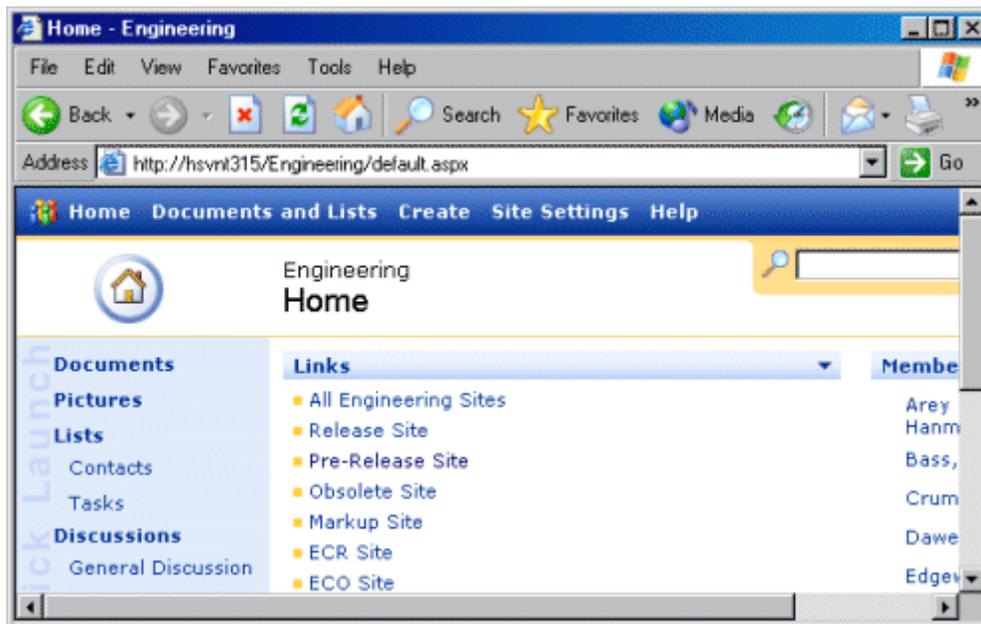
**Note**

You can use Internet Explorer to open Solid Edge documents.

If the site or document library did not automatically open Internet Explorer, you can connect to your Solid Edge site (Dashboard) in Internet Explorer using the web folder location you specified earlier. Type the web location you created earlier using your server node name.

For this example, you would type **http://hsvnt315/engineering**. This is only an example; the name in your installation will be different.

The default Internet Explorer dashboard looks similar to the following:



In My Network Places, you can click Add Network Place to access documents stored in your Solid Edge document library.

**Note**

If you are running, Microsoft Windows XP, you must disable Web Client Services before adding a network place. However, this does not apply for 64-bit operating systems.

**To disable Web Client services:**

1. In Control Panel, click Administrative Tools, and then click Services.
2. From the list, right-click WebClient and select Properties.
3. Change the Startup type to Disabled.
4. Change the Service Status to Stopped.

5. Click OK.

## Insight Server Assistant

The Insight Server Assistant is designed to assist you with properly configuring Insight Server on Windows SharePoint Service 2.0. The Insight Server Assistant Wizard is a series of dialog boxes that:

- Checks the software configuration.
- Specifies a document library where web parts, if loaded, will be stored.
- Creates or renames sites and document libraries to be used by Life Cycle Assistant and the ECO process.
- Specifies the location of the *Options.xml* file that will be updated with the document libraries created with the assistant.

When you click the Finish button on the last dialog of the wizard, the Secure Links Update dialog box is displayed. You can use this dialog box to:

- Configure the location of the cache, log file, and search scope file.
- Start Secure Links Update.
- Schedule when Secure Links Update should run.

You must have administrator privileges to run the assistant.

### Running Insight Server Assistant

1. Run *InsightServerAssistant.exe* from the Program folder where Insight Server is installed on your computer.

The Insight Server Assistant Wizard is displayed. This wizard assists in the initial configuration of Insight on Windows SharePoint Service 2.0.

#### Note

You can specify the port as part of the URL in the Server URL box. If no port is defined, port 80 is used for an http server and port 443 is used for an https server.

2. On the wizard, click Next.

The wizard verifies that the correct software is loaded on the server.

**Note**

If there are problems with the software loaded on the server, information about the software is displayed in the dialog box.

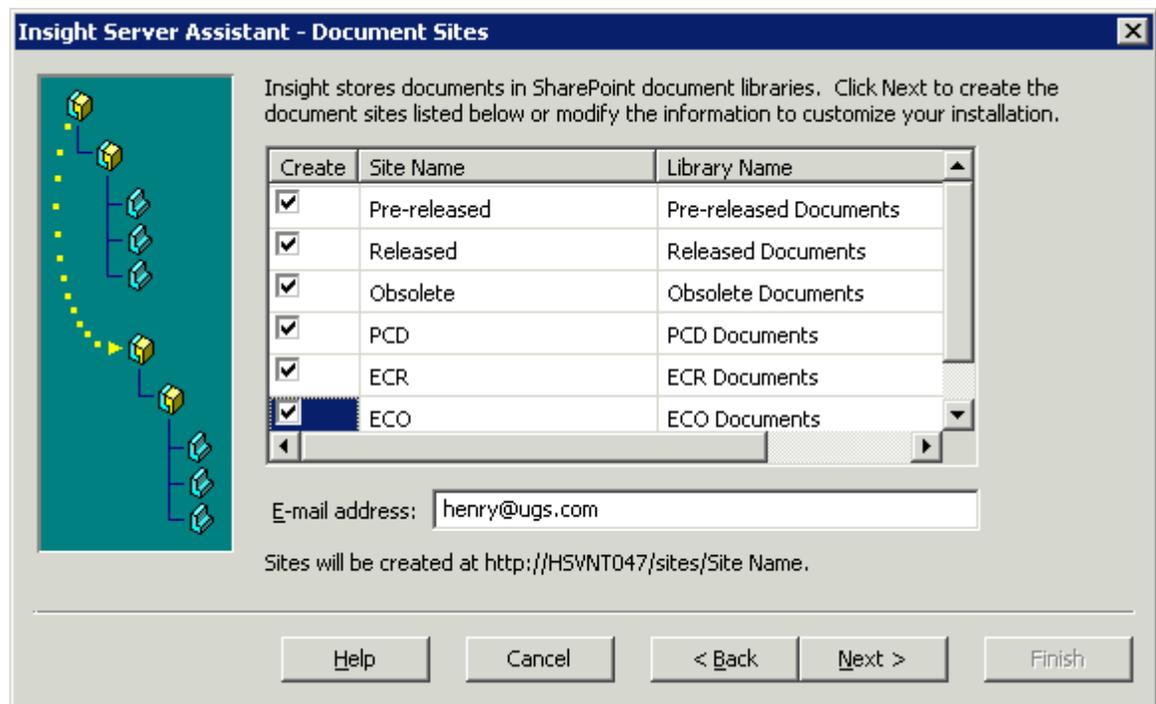
- A warning sign displayed under Status indicates the software is optional, but not loaded.
- A stop sign displayed under Status indicates the software version is not valid. You must exit the wizard, correct the problem and run the wizard again.

3. Specify where the web parts will be stored and click Next.

**Note**

This step is skipped if you did not load web parts during the Insight Server installation.

4. Specify the sites and document libraries to be created and click Next.



5. Browse for the Solid Edge Administrator *Options.xml* file, and click Next.  
The *Options.xml* file is updated to include the document libraries you create.

6. Click Finish.

7. In the Secure Links Update dialog box, configure the Insight Cache, Log File, and Search Scope locations.

**Note**

When you change the location of the Insight cache, you should specify a root folder on a drive with a large amount of free space.

8. Start Secure Links Update, or create a schedule for the update.

## Insight Web Components

Insight web parts provide true integration between Insight and the SharePoint dashboard, allowing non-Solid Edge users to view Solid Edge documents in a SharePoint dashboard through their web browser.

**Note**

Insight web components are an add-in that you must select on the Custom Setup page of the Insight Server InstallShield wizard. Without this add-in, you will not be able to display Solid Edge documents in a SharePoint web part page.

Insight Server delivers four web parts to expose Solid Edge data to non-Solid Edge users:

Delivered Web Parts	Description
BOM View	Displays a components list of all Solid Edge documents, or an exploded BOM view of an assembly.
Property View	Displays both profile and system properties for the selected BOM component. Like the BOM View, you can sort the properties in the list.
Graphics View	Displays a graphical representation of the selected BOM component.
Solid Edge Search	<p>Uses Solid Edge Search to find documents matching defined properties or various criteria, including mathematical operators and standard Boolean expressions.</p> <p><b>Note</b></p> <p>The Search View is delivered with Insight Server, however the administrator must place the web part on the dashboard.</p>

These components are installed in the Virtual Server Gallery on the SharePoint server, from where they can be dragged onto the web part page that hosts the Solid Edge Insight web parts.

The BOM View is helpful if you need to create reports. You can:

- Print the BOM View

- Highlight information in the BOM View, then copy and paste the information into a Microsoft Excel spreadsheet.
- Save the information to an external file, including a comma-delimited file (.csv) or a Excel file (.xls).

You can use the revision rules As Saved, Latest, Latest Released, or External to generate the BOM. When you select a component in the BOM View, the Property View and Graphics View, if installed, automatically update to display information for the selected component. The same views are also updated if you change the selected revision rule.

There are several ways to change the display of the BOM View:

- Double-click a column to sort the entries in the BOM.
- Select a column heading, then drag it to a new position to change the order of the columns.
- Right-click to display a shortcut menu to change the font, sort the properties, find text, and format columns.

These changes are remembered each time you access the dashboard.

The Graphics View provides commands that allow you to change your display. You can do such things as fit views, pan views, rotate views, and zoom in or out on the model.

When you use the Graphics View web component to view Assembly, Part, Sheet Metal, Weldment, PCF, DXF or DWG documents, the documents on the server are automatically downloaded to the local Insight cache. In most cases this cache is located on the system drive and is typically located in \Documents and Settings\\Application Data\Microsoft\MSDAIPP\OffLine. Over time, the cache may become large in size, depending on the number and size of the documents that have been viewed. This can cause the disk to run out of space, so you should monitor this folder and delete documents when needed.

#### **Note**

You can use the File Locations tab on the Options dialog box to change the location of the Insight cache.

To view any of the supported document types above in the web parts, choose **View Properties/Graphics/BOM** from the document's shortcut menu. This will cause SharePoint to navigate you to the web part page using the selected document as the context URL for the display of the web parts.

### **Prerequisites for using Web Parts**

<b>Item</b>	<b>Delivery</b>
Version 2.0 of the .NET framework	If this does not exist, the web parts will display an error message that includes a link to the self extracting executable on the Insight server.

The corresponding language pack (if non-English .NET framework)	Same as above, except there will be no error message, or link, if the user already has the appropriate version of the framework, regardless of whether the language pack is loaded or not.
Microsoft XML 3.0 parser	Automatically delivered to the user's machine through Internet Component Download if they do not already have it.
Client software, one of the following:	If the user does not have any of these, then web parts will initiate an automatic download from the Insight server and execute the setup.
<ul style="list-style-type: none"> <li>• Solid Edge</li> <li>• Insight Connect</li> <li>• Solid Edge Viewer</li> </ul>	

### Installing the Web Components

During setup, Insight allows you to install Web Components. If you choose not to install them during installation, but later change your mind, use the following instructions to install them.

The Insight Web Components are packaged in a cabinet file named *SEWebParts.cab* that is delivered in the `\InsightServerInstallDir\Web Components` folder. A batch file named *InstallWP.bat* is delivered to the same folder and must be run to install the web components correctly in SharePoint. Before running the batch file, it is important to make sure that the SharePoint delivered executable, *STSADM.exe* is in the PATH environment variable. This file is typically located at `<%system drive%>\Program Files\Common Files\Microsoft Shared\web server extensions\60\BIN`. If you not want to modify the PATH environment variable, then you need to modify *InstallWP.bat* to specify the full path for *STSADM.exe*.

### Creating the Web Part Page

The web part page is a special type of container document in SharePoint that hosts one or more web parts. Please refer to SharePoint documentation or help on how to create a web part page. It is highly recommended that you create the web part page in a document library in a separate site so you can change users, groups, permissions, and authentication without affecting the Insight sites and document libraries. This is important because the web parts will have a wider audience than the designers and engineers that work on the documents. It is also not necessary to create the Solid Edge mandatory properties in this library, unless you intend to store Solid Edge documents here.

Finally, the administrator needs to ensure that all users and groups that need to have viewer permissions for web parts are added to the appropriate web part page site.

### Enabling the Custom Menu Extension

Once you create the web part page document, the Insight administrator needs to add the URL of this document, such as `http://<server>/sites/WPPSite/WPPDocLib/WebParts.aspx`, as the value of the script variable, `L_Path_to_SEWebPartPage_Text`, in the `SolidEdgeInsight_custom_ows.js` file. This file is typically installed in `<%system drive%>\Program Files\Common Files\Microsoft Shared\web server extensions\60\TEMPLATE\LAYOUTS\<lang`

id> on the SharePoint server. This allows the administrator to enable the custom menu extension for Solid Edge documents, such as the menu item View Properties/BOM/Graphics, that directs the user to this web part page from any Solid Edge document except *.cfg* files in an Insight enabled document library.

### **Adding Web Parts**

Once the web part page is ready, the administrator can navigate to it. From the web part page, the administrator can point to Modify Shared Page, then point to Add Web Parts, and then click Browse to open the Add Web Parts tool pane. Click on Virtual Server Gallery to access the storage location of the Insight web parts. From the Web Part List, drag and drop any of the BOM, Property and/or Graphics web parts onto the web part page in the desired location. Once this is done, click the Close button on the tool pane, and the web parts are ready for use.

### **Editing Web Part Settings**

Web parts have a shared view and a personal view. The shared view applies to all users and requires higher security privileges to modify. The personal view applies to each individual user. All Solid Edge web parts have embedded controls and have the built-in flexibility of storing individual user preferences for certain control settings. The following settings are configurable:

- BOM and Property Web Parts
- Height in pixels
- Width in pixels
- Control (expanded or collapsed when the web part page loads)
- Graphics web part
- Revision Rule control.
- Background color for 2-D and 3-D documents
- EdgeBar (display or hide)

To configure these setting, on the web part pull-down menu, click Modify My Web Part to display the edit tool pane. On the edit tool pane, change the settings under the Control Settings section.

To enable each user to modify the web part control settings to their personal preferences, the Insight administrator must set them up to be part of a site group whose personal rights include Update Personal Web Parts.

### **Changing Document Context Without Leaving the Web Part Page**

Typically, you are directed to the web part page using the **View Properties/Graphics/BOM** menu item in the document's context menu, along with the URL for the document (the context URL for the web part page). If you want to view multiple Solid Edge documents in the web components, it is a lot of work to navigate to each document and then be re-directed back to the web part page using that document's context menu. Instead, if you already have a list of URLs that

need to be viewed in the web part page, it is much easier to directly modify the web part page URL displayed in the Internet Explorer address bar to change document context without leaving the page.

The format of the web part page URL that displays web components with context is as follows:

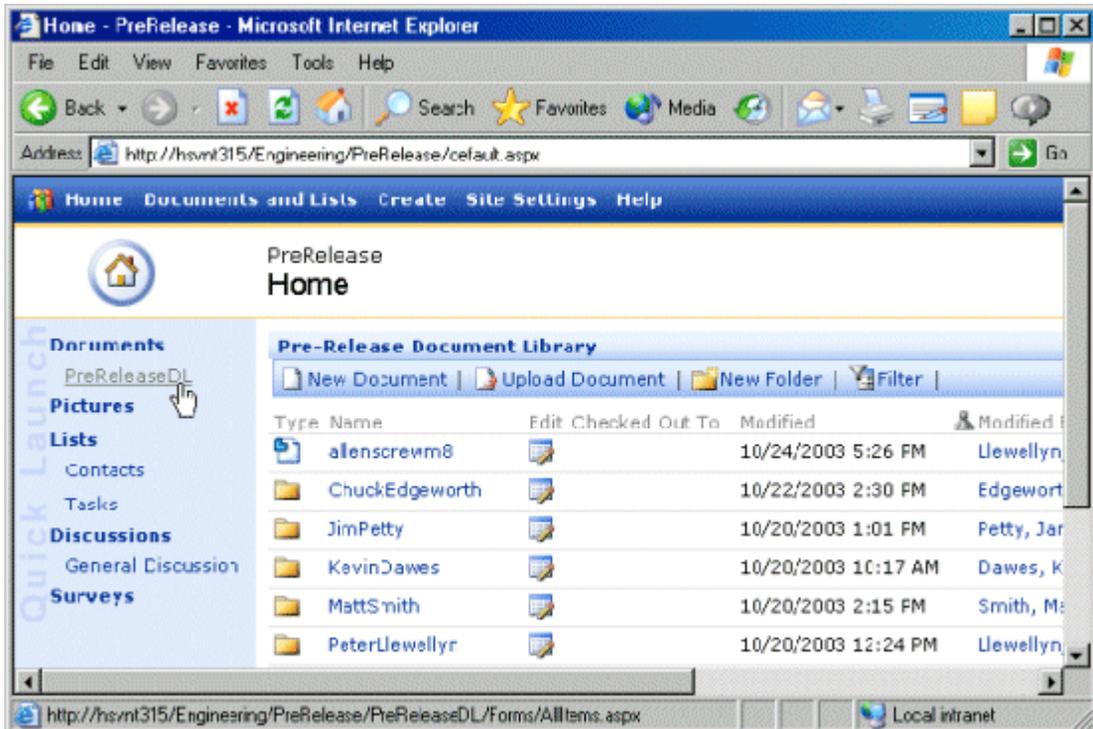
```
<web part page url>?SEURL=<solid edge document url>
```

To make web components display information for a different document, replace the portion of the web part page URL above that is to the right of the "=" with the new URL, and refresh the page. The web components should now display the new document.

## Add new columns

Columns can be thought of as user-defined properties that store information for items in a document library. To add new columns:

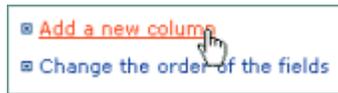
1. On the site home page, select a document library.



2. On the document library page, under Actions, click Modify Settings and Columns.



3. On the Customize page, under Columns, click Add a New Column.

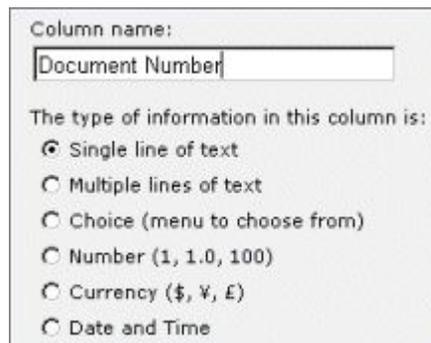


4. On the Add Column page, in the Column Name field, type a name for the column and select an information type for the column.

The column is the equivalent of a user-defined property.

**Note**

Make sure that when you add new columns that the type is the same for each document library, or there will be property mismatch problems. For example, when you add Document Number to all of your document libraries the type must be the same.



5. In the Optional Settings for Column section, set the Require That This Column Contains Information option to Yes.

Setting the option to Yes will require the column to have input. Be sure that the Add to Default View is selected.

6. Click OK to add the column.



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## Chapter

# 10 Working with SharePoint

### Solid Edge Properties that are synchronized

The following lists the Solid Edge file properties that are synchronized. You can view these properties on the File Properties dialog box in Solid Edge and in Internet Explorer.

#### Note

This portion of the document is specific to systems configured with Windows SharePoint Services 2.0.

Property Set Name	Property Name	Location on Properties dialog box	Will SharePoint Server index the property by default?	SharePoint Property Name for Synchronize
Summary Information Property Set	Title	Summary page	***Yes	Title
Summary Information Property Set	Subject	Summary page	No	Property must be added as a custom defined property in SharePoint.
Summary Information Property Set	Author	Summary page	No	Created By
Summary Information Property Set	Keywords	Summary page	No	Property must be added as a custom defined property in SharePoint.
Summary Information Property Set	Comments	Summary page	No	Property must be added as a custom defined property in SharePoint.
Summary Information Property Set	Template	Summary page	*Yes	Template

Summary Information Property Set	Last Saved By	Statistics page (only in SE), Summary page (only in Explorer)	*Yes	Last Saved By
Summary Information Property Set	Revision Number	Summary page (only in Explorer)	*Yes	Ignored. The property "Revision Number" in Project Information property set is synchronized with property name "Revision Number."
Summary Information Property Set	Total Editing time	Summary page (only in Explorer)	**Not Applicable	Total Editing time
Summary Information Property Set	Last Printed	Summary page (only in Explorer)	**Not Applicable	Last Printed
Summary Information Property Set	Create Time/Date	Summary page (only in Explorer)	No	Date of Creation
Summary Information Property Set	Last Saved Time/Date	Summary page (only in Explorer)	No	Date Last Saved
Summary Information Property Set	Number of Pages	Summary page (only in Explorer)	**Not Applicable	Page Count
Summary Information Property Set	Number of Words	Summary page (only in Explorer)	**Not Applicable	Word Count
Summary Information Property Set	Number of Characters	Summary page (only in Explorer)	**Not Applicable	Character Count
Summary Information Property Set	Thumbnail	Not Displayed	**Not Applicable	Ignored. Property type is not supported by SharePoint.
Summary Information Property Set	Name of Creating Application	Statistics page (only in SE), Summary page (only in Explorer)	*Yes	Application Name
Summary Information Property Set	Security	Not Displayed	*Yes	Security
Project Information Property Set	Document Number	Project page	No	Document Number

Project Information Property Set	Project Name	Project page	No	Project Name
Project Information Property Set	Revision Number	Project page	No	Revision Number
Document Summary Information Property Set	Category	Summary page	No	Property must be added as a custom defined property in SharePoint.
Document Summary Information Property Set	Format	Summary page (only in Explorer)	**Not Applicable	Presentation Format
Document Summary Information Property Set	Bytes	Summary page (only in Explorer)	**Not Applicable	Byte Count
Document Summary Information Property Set	Lines	Summary page (only in Explorer)	**Not Applicable	Lines
Document Summary Information Property Set	Paragraphs	Summary page (only in Explorer)	**Not Applicable	Paragraphs
Document Summary Information Property Set	Slides	Summary page (only in Explorer)	**Not Applicable	Slides
Document Summary Information Property Set	Notes	Summary page (only in Explorer)	**Not Applicable	Notes
Document Summary Information Property Set	Hidden Objects	Summary page (only in Explorer)	**Not Applicable	Hidden Objects
Document Summary Information Property Set	MMCLIPS	Summary page (only in Explorer)	**Not Applicable	Multimedia Clips
Document Summary Information Property Set	Manager	Summary page	No	Property must be added as a custom defined property in SharePoint.
Document Summary Information Property Set	Company Name	Summary page	No	Property must be added as a custom defined property in SharePoint.

Extended Summary	Saving Application	Statistics page (only in SE)	No	Saving Application
Extended Summary	File Size	Not Displayed	No	File Size
Extended Summary	Sheet Count	Not Displayed	No	Number of Sheets
Information Property Set	Object Count	Not Displayed	No	Number of Objects
Information Property Set	Document ID	Not Displayed	No	DocumentID
Information Property Set	Status	Status page	No	Status
Mechanical Modeling Property Set	Material	Project page	No	Material
Custom Property Set	Any user defined property	Custom page	No	Name of user defined property.

\*Yes If the property is defined on the document library, SharePoint will index it.

\*\*\*Yes Property is defined on the document profile (Base Document) by default. All profiles in SharePoint contain them and they cannot be deleted.

\*\*Not Applicable Property is specific to Microsoft Word or Excel documents and are not applicable to Solid Edge documents.

**Note**

Windows SharePoint Services 2003 allows properties to contain spaces. Spaces in properties were prohibited in SharePoint Portal Server 2001.

If the name of a custom property matches the display name in SharePoint, the property is synchronized.

**Note**

There are no Solid Edge properties that synchronize with the SharePoint description property. To avoid this problem you can create a custom property for *description* and SharePoint will synchronize with it.

**Using Mandatory Properties**

Insight contains a set of mandatory properties that are used to manage Solid Edge documents in SharePoint.

**SEModel\_Type**

Required to save Synchronous content to Insight.

**SEDocID**

The SEDocID property contains information that Insight uses to manage links. Every document managed by SharePoint has a unique ID. Insight stores the link

information in the SEDocID property. If Insight cannot find links in the relative path structure of a managed document, it attempts to find the document based on the unique ID.

#### **SELinkData**

The SELinkData property contains a text representation of all the links in the document. It is used in where-used searches, reports, and to determine which documents to copy to the local cache during download.

#### **SERevised From**

The SERevisedFrom property contains the name of the document from which the selected document was revised. It is populated when you run the Set Action to Revise command in Revision Manager.

#### **SEStatus**

The SEStatus property contains the status of the document that is set on the Status page of the File Properties dialog box.

#### **SEStatusUser**

The SEStatusUser property contains the name of the last user to change the status of the document on the Status page of the File Properties dialog box.

#### **SELastKnownLocation**

The SELastKnownLocation property contains the URL where the document was stored the last time it was checked in. It is updated every time you check in a document and helps to find files that have been moved.

#### **SERevisionLevel**

The SERevisionLevel property contains information that determines the location of a file within the revision tree so that the correct revision of the file is displayed when revision rules are used when opening the file.

#### **SERevisionRoot**

The SERevisionRoot property is the SEDocID for the very first document to be revised in the revision history. This makes it easier to find all of the files revised from a common root.

### **Adding the Mandatory Properties**

Before you can use Solid Edge Insight, as the administrator, you must create the set of mandatory properties on the server and set up the users and roles for access to specific folders in the managed library.

1. On the Start menu, choose Programs® Solid Edge Insight Server® Workspace Editor.
2. On the Mandatory Properties Creation On Server dialog box, type the name of your document library and click Create.

A dialog box is displayed when the properties are successfully created.

3. On the dialog box, click OK.

## **Sites, Document Libraries, and Dashboards**

During installation, Windows SharePoint Services automatically creates a dashboard site and a document library.

Sites or document libraries, also known as managed libraries, consist of a collection of folders, management tools, categories, and indexed information. You can create, review, and publish documents in the site or document library.

You can connect to the site or document library from a web browser or Office applications.

The dashboard is a centralized access point for finding and managing information. You can use a web browser to find information and perform document management tasks. You can use the dashboard to perform such tasks as search for documents and subscribe to information.

### **Note**

You can use Internet Explorer to open Solid Edge ST2 documents.

Insight will not run in the default site because it is created before Insight Server modifies the site templates. Therefore, web components and workflow will not work in the default site. You should use sub-sites for all Insight work.

### **Site Group Rights**

Each site group created in SharePoint contains rights. There are three types of rights:

- List-rights
- Site-rights
- Personal-rights

When assigning the Site-rights, if the site group is assigned only the "View Pages" right, Insight is unable to determine if a specific user belongs to this group. To determine this, it is essential to have the Site-Right Manage Site Groups option selected for the site-group, which allows group users to revise documents.

Therefore, Insight needs to have the Site-Right Manage Site Groups option selected for the revise permitted site-group.

## **Document Management with Solid Edge Insight**

Solid Edge Insight contains features to help you manage your documents such as:

- Access control based on roles.
- Ability to create custom roles.
- Version tracking.

As an administrator, you can assign roles to control access to documents. You should determine how much access to documents you want to give to a user before assigning a role to the user. For example, if you do not want a user to be able to edit

a set of documents, you can make the user a reader for the folder containing those documents. The user will be able to view the documents, but will not be able to make changes to them.

Solid Edge Insight records the document history to help track any changes you make to the document. If you want to make changes to a document, you can check it out to deny other users write access to the document while you are making your changes. After you complete your changes, you check the document back in and make the document available to others. Each time you check a document in, Insight assigns a new version number to the document and archives the old document into the managed library. When you check out a document, you retrieve the most current version of the document, unless you restore an older version forward and make it the latest version.

## **SharePoint Roles**

Using Windows SharePoint Services 2003, there are five main default box user groups:

- Guest
- Reader
- Contributor
- Web Designer
- Administrator

Windows SharePoint Services 2003 introduces the concept of user rights. User rights are unique permissions like browse, delete, and edit that are combined to create Windows SharePoint Services 2003 groups. Because groups are made up of individual rights, the default Windows SharePoint Services 2003 groups can be modified. For example, you can remove the delete right from the Contributor group to prevent users from deleting files. You can also create new groups.

For more details see the Microsoft Windows SharePoint Services 2003 Administrator's Guide.

In Windows SharePoint Services 2003 default permissions and groups are set at the root site and they can be overridden in sub-sites or document libraries.

### **Note**

You can only assign users to the default Windows SharePoint Services 2003 groups at the document library level.

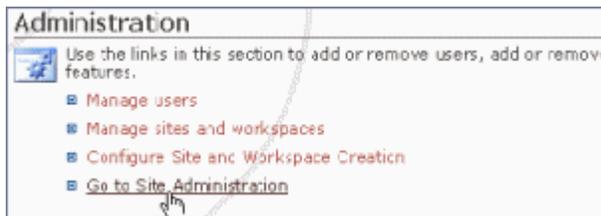
## **Manage Users and Site Groups**

You must be an administrator to assign roles for a folder, site or document library.

### **Add a site group**

1. In Internet Explorer, select the appropriate site.
2. Click Site Settings.

3. On the Site Settings page, click Go to Site Administration.



4. On the Site Administration page, under Users and Permissions, click Manage Site Groups.



5. On the Manage Site Groups page, click the appropriate site group and then click Add a Site Group.
6. On the Add a Site Group page, in the Site Name and Description sections, type a site group name and description.
7. In the Rights section, click the appropriate options for the site group, and then click Create Site Group.

**Note**

Make sure to select the Browse Directories option under Site Rights or you will not be able to browse web site directories.

**Add a user to a site group**

1. In Internet Explorer, select the appropriate site.
2. Click Site Settings.
3. On the Site Settings page, under Administration, click Manager Users.
4. On the Manage Users page, select the user(s) you want to add to the site group and click Edit Site Groups of Selected Users.
5. On the Edit Site Group Membership page, under Site Group Membership, click the site group to which you want to add the user and click OK.

## SharePoint Data Types

SharePoint has several data types and formatting options. While this information is visible from the SharePoint dashboard, the following data types and format settings are not visible within the Solid Edge ST2 application:

Data Type/Format Setting	Effect in Solid Edge
Date and Time- Date only	Solid Edge shows the complete date and timestamp.
Lookup	Properties of this type are not displayed in Solid Edge.
Calculated	Properties of this type are not displayed in Solid Edge.
Number minimum/maximum	These constraints are not honored by Solid Edge.
Show as Percentage	This display setting is not honored by Solid Edge. The stored value is displayed as a standard numeric value. For example, 33% is displayed as .33.

With SharePoint you can only add one fill-in value per choice property in the document library.

Lists and document libraries in Windows SharePoint Services can only contain a certain number of fields or columns. The maximum numbers for fields and columns are:

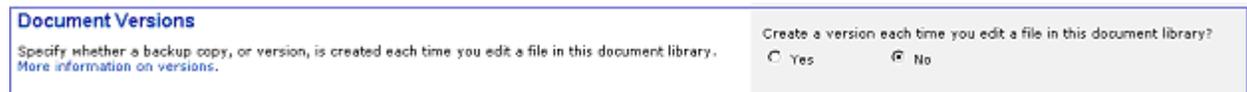
- 64 text fields, including the following field types:
  - Single line of text
  - Choice
  - Picture
- 16 Lookup fields
- 16 Date and Time fields
- 16 Yes/No fields
- 32 Number fields
- 32 Multiple lines of text fields

### Note

SharePoint and Insight add mandatory fields to a document library so the maximum limits are actually lower than those shown above.

## Document Versioning

Document versioning enables you to keep multiple versions of a document. If you need to reverse a change you made to a document, you can restore the previous version and continue working. By default, versioning is turned off for Windows SharePoint Services document libraries. To turn this option on, go to the Document Library Settings page for the document library and select Yes for Document Versions.



### Note

In SharePoint 2001, administrators could set a version limit. In SharePoint 2003 the version limit is unlimited. At this time Microsoft does not provide any automated tools for purging old versions for all the documents in a document library simultaneously. However, you can do it on a file-by-file basis.

We do not recommend that you use versioning until there is a utility for either setting the version limit or an automated method to purge versions from all the files in a document library due to the excessive disk space requirements added with unlimited versions.

## Setting up SharePoint Server for Insight Queries

Insight Server accesses Microsoft SQL Server directly for queries. As a result of this, the Insight server components must have SQL access rights to the SharePoint databases.

To facilitate this, you must:

- Change the authentication mode to SQL Server and Windows Mode.
- Establish an appropriate user account on the SQL server for Insight Queries.
- Initialize the Insight SQL Server.

### Change the authentication mode to SQL Server and Windows Mode

SQL Server offers two methods of authenticating users: *Windows Authentication* or *SQL and Windows*. Whether you are migrating from a previous version of Insight that used Windows Authentication, or performing an initial installation of the Insight Server Software, you must set the Authentication Type for SQL Server to *SQL Server and Windows* mode using the following steps.

1. Log in to an administrative account on the SQL database server and start Enterprise Manager: Click Start ® Programs® Microsoft SQL Server® Enterprise Manager.
2. When Enterprise Manager starts, in the navigation pane, expand the Console Root folder, then the SQL Server Group, until you see your server listed. Your server name may simply be LOCAL.
3. Right-click the server, and on the shortcut menu click Properties.

4. On the SQL Server Properties dialog box, click the Security tab.
5. In the Security pane, set the Authentication option to *SQL Server and Windows*.
6. Click OK to apply the change.
7. If prompted, restart the SQL server; then log in to an administrative account, start Enterprise Manager, and navigate to your server again.

### **Establish an appropriate user account on the SQL server for Insight Queries**

Direct queries to the SQL server require an account. Follow these steps to establish the account that will be used for the queries.

1. In Enterprise Manager, navigate to your server.
2. Open the Security folder, right-click Login, and select New Login.
3. On the General page of the SQL Server Login Properties dialog box:
  - a. Select and add a new username, for example "InsightUser".
  - b. Select the SQL Server Authentication Option and define the password for this account.
  - c. In the Database list, select the content database with a name beginning "STS\_". This is the database that SharePoint uses.
4. On the Database Access page of the SQL Server Login Properties dialog box:
  - a. Check Permit to access to the SharePoint database, sedb, and all content databases (whose names typically begin with "STS\_").

If you are running SharePoint Portal Services, there may be other databases as well that you will wish to query with this account.
  - b. For each of these databases, in the Permit in Database Role list, check db\_datareader.

### **Initialize the Insight SQL Server**

An administrator on the Insight server must initialize the SQL server to generate content database information for the SharePoint server and store it for use with Insight Queries.

1. Log in to an administrative account on the Insight server.
2. On the Start menu, click Insight Server V, then Initialize Insight SQL Server.
3. In the Insight: SQL Server Login, provide the User Name and Password you defined for the account you created above.

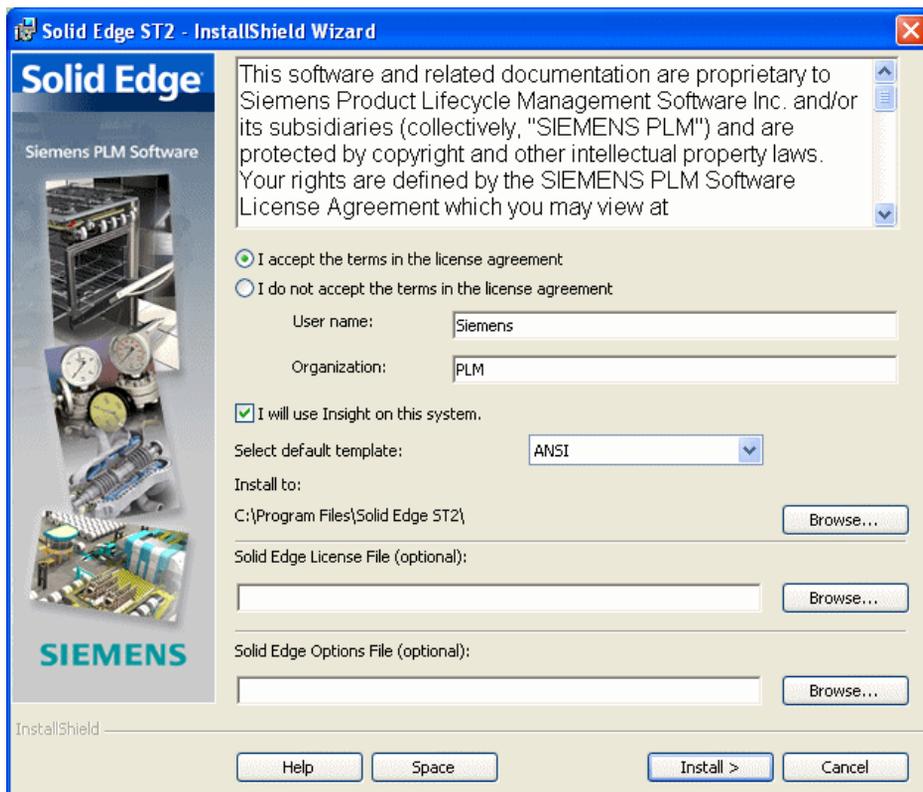


## Chapter

# 11 Working with Insight

## Installing the Insight client

The Solid Edge Insight client is installed with Solid Edge ST2. Use the Solid Edge InstallShield Wizard to guide you through the installation and to define installation settings.



Select the **I will use Insight on this system** check box, and the Update Searchscope utility is automatically run as part of the installation of Solid Edge. Definitions in the *searchscope.txt* file connect the client to the database.

The recommended hardware and software requirements for Insight are the same as for Solid Edge. The requirements are found in the *Solid Edge Installation and Licensing Guide* delivered on the Solid Edge installation media in `\Program\ResDLLs\0009\setup.pdf` or in the Solid Edge *readme* file.

**Note**

Insight Connect can be installed independently of Solid Edge dependent on proper licensing. Installation instructions for Insight Connect are included in the *Insight Connect Installation and Licensing Guide* delivered on the Solid Edge installation media.

## Define the Search Scope

The *searchscope.txt* file provides mapping between SharePoint network places (which are UNC) and SharePoint sites. It is used by Insight to define the managed sites or document libraries utilized by your company. These sites are accessed during Where Used searches or when deleting documents from the library. You should add entries to the *searchscope.txt* file for each managed site or document library at your company. For example, if you create a managed site or document library named SolidEdgeWS on a server named *server123*, the *searchscope.txt* file would have the following entry:

```
http://server123/SolidEdgeWS.
```

You can update the entries in your *searchscope.txt* file by using the Update SearchScope utility.

**Note**

At least one valid entry must exist in *searchscope.txt*, however, you do not need to add entries for subfolders within a managed library.

The Update SearchScope utility is automatically run if you select the check box **I will use Insight on this system** during installation of Solid Edge. If you need to run the utility after installation is completed, you can choose Start@ Programs@ Solid Edge ST2@ Insight@ Solid Edge Insight Update Searchscope. When you start the utility, the Update Searchscope dialog box is displayed so you can maintain the entries in the Searchscope list. See Solid Edge Help file *Add or Remove Links in Searchscope* for details.

You can specify that Solid Edge and Insight Connect look for the *searchscope.txt* file in a different folder, including a folder on another machine on the network. To specify a different location, on the Solid Edge Application menu, click Solid Edge Options. On the File Locations page of the Solid Edge Options dialog box, select Search Scope and then click Modify. You can then browse to the location where the *searchscope.txt* file is located.

## Adding Solid Edge documents to an Insight-managed library

You can add multiple documents and folders to a managed library using Insight or individual documents using Solid Edge.

### Adding documents using Insight

You can use the Add to Library command to load your unmanaged Solid Edge documents and folders to a managed library. You must have Author privileges to

add documents and folders to a managed library. You can add a single document, multiple documents, or an entire folder.

### **Adding documents using Solid Edge**

When you create a new document, you can add the document to a managed library using the Save As command in Solid Edge. On the Save As dialog box, in the Save In box, select the managed library folder you want to use. When you close the document, it is added to the library.

When you add a Solid Edge document to the library, any other documents linked to the document are also added to the library. When you select a folder to add to the managed library, all the documents in the folder are also added to the library.

When you add a folder to a managed library, the folder structure is duplicated in the managed library. For example, if you select C:\mydocuments\parts, a new folder named *parts* is created in the managed library. After you add the documents and folders to a managed library, you can use Revision Manager to modify the folder structure and the links are maintained.

You cannot use the Add to Library command to move documents from one library to another. Instead, you should use Revision Manager to move documents between managed libraries.

#### **Note**

If you use Internet Explorer or Windows Explorer to move documents across sites, the Solid Edge properties are not moved.

Folder security settings, approvals, profiles, and folder types are inherited from the parent folder for any new folders created during the add process. For example, if you add a Solid Edge Part document, *flat050.par*, into the managed folder, Washers, the part inherits the characteristics for the Washers folder.

### **Direct and indirect documents**

The documents that you select to add to the managed library are called direct documents. These direct documents may contain links to other documents or reference other documents, which are known as indirect documents. For example, when you add an assembly to a managed library, all the parts and subassemblies within the selected assembly are indirect documents, if you select only the assembly document to add to the library. Similarly, a part copy within a part document or a part referenced within a drawing document are also indirect documents.

#### **Note**

When you add a managed document to an assembly, Solid Edge uses the *searchscope.txt* file to prevent you from creating links to documents with duplicate IDs. The *searchscope.txt* file must list at least one managed workspace, or you will not be able to place managed parts in assemblies.

### **Adding XpresRoute documents**

When you create a tube part in XpresRoute, a part file is created that contains the tube geometry. The tube part also contains a reverse link back to the assembly where the tube was created.

Suppose you open a new assembly, enter the XpresRoute environment, and create a tube. Until you save the assembly, the reverse link cannot be solved. To solve the reverse link, you are required to save the assembly before you create a tube in a managed library.

If you want to add an existing tube part to a managed library, you should repair the links first. In Insight, run the Search for Broken Links command on the Tools menu under Link Management to find the temporary name of the assembly. Once you have the assembly name, run the Redefine Links command on the Tools menu under Link Management to replace the temporary file name with the full path of the link.

For example, suppose you run the Search for Broken Links command and it reports a temporary name for an assembly named *Assembly1a.asm*. When you run the Redefine Links command, a series of Redefine Link dialog boxes are used to solve this broken link. On the second Redefine Links dialog box, in the Current Link Path field, type *assem1.asm*. In the Redefine Link Path field, type the full path for the assembly file, for example, *D:\projects\p105\Assembly1a.asm*. This will resolve the link.

### **Preparing to add documents to the managed library**

There are a few things you should do before you add documents to a managed library. You should:

- Find and repair all broken links.
- Find duplicate document names.
- Remove documents you do not want to manage.
- Scan for invalid document names.

The Add to Library command, on the Manage menu in View and Markup, has the option to perform a dry run to identify files that contain broken links or invalid characters at a single level. Once the dry run is complete, the Dry Run Complete dialog will appear and you can add the documents to the library and update the status of the documents to "Checked In."

As the dry run scans the list of documents, it does more than check for broken links. The dry run checks folders and documents for invalid characters. When a document is added to the library, any invalid characters are replaced with an underscore, (`_`), and the current timestamp is appended to the file name. Any links that point to the old name are updated to point to the new name. If a folder has an invalid character in its name, you will need to rename the folder and update the links pointing to the old folder name prior to importing the files into Insight. For more information on updating links, see help for the Redefine Links command. The dry run reports an error when the local cache path for the given file or cookie file name and path exceeds 256 characters.

Invalid characters

# : \ ? \* < > % / | " ~ &

Conducting a dry run to identify broken links is recommended, but you can also search for broken links before adding documents to the library. The Search For Broken Links command, on the Tools menu under Link Management in View and Markup creates a list of files that contain broken links. You can search for broken links in individual documents, or a complete folder structure, including subfolders.

The Search For Broken Links command creates a text file that lists the broken links along with a list of possible replacements for the broken links. This can be useful if there are a large number of broken links. You can use the File Locations tab on the Solid Edge Options dialog box to specify the location of this text file. You can also click View on the Search For Broken Links Results dialog box to view the text file.

There are several ways you can repair these broken links, depending on the number of files containing broken links. If you have several files that contain broken links, you can use the Redefine Links command to repair them. If you only have a few files, you can use Revision Manager or the Edit Links command to repair them or open them in Solid Edge.

You can add duplicate documents to a managed library, but duplicate document names cannot exist in the same folder. The Search for Duplicate Document Names command, on the Tools menu under Link Management in View and Markup, finds all documents that have the same name. If duplicate document names are found, you should ensure that you are adding the correct document to the library.

The Search For Duplicate Document Names command creates a text file that shows the name and location of duplicate documents. You can use the File Locations page on the Options dialog box to specify the location of this file.

When you add a folder to the library, every document in the folder is added to the library, regardless of whether or not you want to manage them. You should remove any documents that you do not want to manage before adding the folder to the library. These documents might include text or log files that reside in the folder you want to import.

The SharePoint Portal Server has some limitations on which special characters it supports. It is very important that you scan your local folder for invalid document names before adding them to the managed library.

High ASCII, double-byte character set (DBCS) and Unicode are supported for all languages, except for the following limitations:

### **Limitation on folder and document names**

- SharePoint Portal Server supports the same conventions that the file system supports for naming folders and documents. Folder and document names can consist of all Unicode characters except for the following characters:  
`#" \ ? * < > % / | " ~`
- If a file, folder, or URL name in your original site contains one of these characters, it is replaced with an underscore (\_). Multiple periods are replaced with a single period. Additional digits may be appended to the file or folder name if there are conflicting renaming changes. Folder names cannot begin with an underscore (\_).
- If you have unmanaged folders that contain an invalid character, you can rename the folders in Windows Explorer, and then use the Redefine Links command to change the links in the files to point to the new folder name.

### **Limitations on library names**

- Library names can consist of characters 0-9, a-z, and an underscore (\_). The underscore cannot be the leading character in the document library name.
- The lower ASCII code set includes the characters with codes 32-127.

- The library name cannot exceed 255 characters in length.

### **Limitation on schema element and column names**

- Schema element and column names cannot use the following characters: # : \ ? \* < > % / | " ~
- Column names can contain spaces.

### **Limitations on number of characters in URLs and schema element names**

- Uniform Resource Locators (URLs) are limited to 900 bytes. Typically, the limitation is 254 Unicode characters for English. If a Unicode-based character set other than English is used, the limitation is 100 characters.
- Schema element names (the property title field) are limited to 100 characters.

### **Folder Mapping file**

You will need a folder mapping file if the documents you want to add to the managed library contain links to other documents, such as an assembly that contains many parts in several folders that are on different drives. The linked documents are included in the add process, but Insight needs a way to determine where these documents should go in the managed library. You can use the *FolderMap.txt* in the Program folder to specify how the linked documents within the unmanaged folders are added to the managed library destination folders. For example, you can map a folder, C:\PartsLibrary to a managed folder. When you add the linked documents, any documents that reside in C:\PartsLibrary, or any subfolders below it, are placed in the managed folder structure you define in the *FolderMap.txt* file.

By default, the *FolderMap.txt* file is located in the Solid Edge ST2 Program folder. For example, if you loaded Solid Edge to drive C, the path would be C:\Program Files\Solid Edge ST2\Program\FolderMap.txt.

You can specify for Solid Edge to look for the *FolderMap.txt* file in a different folder, including a folder on another machine on the network. To specify a different location, on the Solid Edge Application menu, click Solid Edge Options. On the File Locations page of the Options dialog box, select Insight Folder Mapping and then click Modify. You can then browse to the drive and folder containing the *FolderMap.txt* file. You can use a text editor, such as Notepad, to edit the file.

If the linked documents reside in the same folder you are importing, or in a subfolder below it, you do not need to use the *FolderMap.txt* file. The application automatically knows where to place the linked documents and can modify the link information. The application can also create the folders in the managed library where the linked documents will reside.

If the linked documents reside in folders above the parent document folder, or on different drives, Insight cannot automatically determine where to place the linked docs. In this case, you will need to use the *FolderMap.txt* file.

For example, in an assembly that consists of:

```
Assembly - C:\Dir1\Dir2\Assembly1.asm
Parts - C:\Dir1\Dir2\part1.par
       C:\Dir1\part2.par
       D:\Dir1\Dir2\Dir3\Dir4\part3.par
```

If you want to add the assembly to `http://mymachine/se/docs`, the *FolderMap.txt* file would have the following entries.

```
Source:C:\Dir1 Destination:http://mymachine/se/docs/Dir3
Source:D:\Dir1\Dir2\Dir3\Dir4
Destination:http://mymachine/se/docs/Dir3/Dir4
```

This string places all linked documents, for which a folder location cannot be created, in the docs folder in the managed library. You can also add another location to the end of the destination string if you want to create a new folder to store the documents.

## Deleting Solid Edge documents from SharePoint

You can select documents and folders you want to delete from the library of managed documents on your server using the Delete From Library command on the Manage menu. You can delete a single document, multiple documents, or a folder. When you delete documents and folders from the server, they are also deleted from your local cache. You must have author privileges to delete documents and folders. We recommend that you remove delete privileges from all standard user groups so that only an administrator can delete documents.

### Note

You should always use the Delete From Library command to delete managed documents. If you delete managed documents using Windows Explorer or Internet Explorer, you may accidentally break links between the Solid Edge documents.

### Selecting documents and folders to delete

When you click the Delete From Library command, the Delete From Library dialog box is displayed so you can select the documents and folders you want to delete. You can use the options on the dialog box to browse to the managed folder that contains the documents you want to delete. The Delete From Library dialog box will only display managed folders and documents. You will not be able to see documents or folders that are not managed.

To specify the documents and folders you want to delete, select them from the Name column on the left side of the dialog box, then click Add to add them to the Selected Folders And Files list on the right side of the dialog box. The Remove and Remove All buttons enable you to remove items from the Selected Folders And Files list. When you have completed the list of items you want to delete, click OK to start the delete process.

### Preventing broken links

Solid Edge automatically performs a Where Used search when you click OK, to check if any of the documents you want to delete are linked to other documents. If the document you want to delete is linked to another document that is not being deleted, a message is displayed and the document is not deleted. For example, if you select a Part document to be deleted, but the Part document is linked to a Draft document that is not being deleted, you will not be able to delete the Part document. When deleting folders, Solid Edge checks to see if the folder is empty before deleting it. You can only delete folders that are empty.

## Managing your local cache

When working with managed documents, Solid Edge creates a local cache of the viewed documents to improve performance. You can use the File Locations page on the Solid Edge Options dialog box to specify the location of your local cache.

Every document that is loaded to your local cache has a cookie file associated with it. This cookie file contains information such as the actual location from which the document was loaded, the check out status of the document, and the timestamp of the document in the managed library at the time it was downloaded. Solid Edge creates a hidden folder named Cookies(username) beneath your local cache folder to store these cookie files. For example, if your user name is *jsmith* and you specify your local cache location to be D:\managed documents, Solid Edge creates a folder D:\managed documents\Insight\Cookies(jsmith).

A local cache is faster and more reliable than a mapped network drive. When you open a document, Solid Edge automatically manages the synchronization between the document stored in the library and the document in your local cache. Solid Edge checks your local cache to see if the local document is up to date with the version of the document in the managed library. Solid Edge then opens the local file or copies the current version from the managed library to your local cache.

The Cache Assistant command on the Manage menu assists you in managing your local cache. You can use the Cache Assistant dialog box to synchronize all the documents in the managed library, check in documents you have checked out, download documents from the managed library to your local cache, or delete documents from your local cache.

You can use the buttons on the dialog box to manage all the documents in your local cache, or you can use the shortcut menu commands to manage selected documents. Similar to Windows Explorer, you can use the Ctrl key to select documents randomly, or the Shift key to select a sequential list of documents.

The Show option on the Cache Assistant dialog box controls which documents are displayed in the list. You can set this option to display only checked out documents, out-of-date documents, or all the documents in your local cache.

### Synchronizing documents in the library

You can check your local cache for any out-of-date documents, and then download the latest version from the managed library to update your local cache using the Synchronize All button on the Cache Assistant dialog box. You can also use the Synchronize command on the shortcut menu to synchronize selected documents.

#### Note

When working in the Assembly environment, you can limit the files to be synchronized to only the files displayed in Assembly Pathfinder.

### Checking documents in and out of the managed library

You can use the Check Out command on the Cache Assistant shortcut menu to lock a document in the managed library, which prevents other users from making changes to it. The Check Out command also changes the document status in the local cache to read-write, so you can make changes to the document. If you check out a direct document, read-only copies of all indirect documents are downloaded to your local cache. If you in-place activate a part in an assembly, Solid Edge checks out the part.

After you make changes to the checked out document, you can use the Check In All command on the Cache Assistant dialog box to upload the documents to the managed library and make them available for other users to check out. You can also use the Check In command on the shortcut menu to check in selected documents.

You can use the Undo Check Out command on the Cache Assistant shortcut menu to undo changes you make to a checked out document. Any changes you have made to the checked out document are lost when you undo the check out of the document. This also releases the check out lock on the document in the managed library, which allows other users to make changes to the document. If you undo the check out of a direct document, you also undo the check out for any associated indirect documents that are checked out. The Undo Check Out command does not upload the document to the library, and it is not removed from your local cache.

Managed direct documents opened with read-only permissions can be checked out using the Check-Out command. The command verifies the active document is the most recent version, checks the file out of the library, sets the file to a writable state, and enables the Save command for you to save any in-memory file changes. This command is available in Insight and Teamcenter environments for Assembly (.asm), Part (.par), Sheet Metal (.psm), Draft (.dft), View and Markup, and Revision Manager.

#### **Note**

The Checkout command does not transfer any files from the server since the active document is the latest version.

### **Downloading documents to local cache**

You can select documents from the managed library and download them to your local cache using the Download button on the Cache Assistant dialog box. This is helpful if you want to manage your cache manually or work off-line. When you click the Download button, the Download dialog box is displayed with options for selecting the documents you want.

### **Deleting documents from cache**

You can remove all the documents in your local cache using the Delete All button. This is helpful if you want to free up disk space or force the local cache to update with the latest information from the managed library.

### **Checking document revisions**

You can display the name and folder path of the document that was used as a template to create the selected document using the Revised From command on the shortcut menu. The Show Revisions command on the shortcut menu displays the name and folder path of any documents that are revisions of the selected document.

### **Opening documents**

You can open a selected document in the application used to create it using the Open command on the shortcut menu.

## **Scheduling cache management tasks**

You can use Insight Cache Manager to schedule cache management to run during off-line hours. To access the Cache Manager, on the Start menu, choose Programs® Solid Edge ST2® Insight® Cache Manager. This displays the Cache Manager dialog box that assists in scheduling cache management tasks. After you select the processes to schedule, click Schedule to display a Username and Password dialog box that allows you to specify the username that will be used to run the task. After entering the username and password, click OK to display a standard Microsoft task schedule dialog box. You can schedule tasks to run once, daily, weekly, monthly, or at startup or login. The dialog box also contains a When Idle entry for scheduling tasks. However, because of the possibility of a negative affect on server performance, Insight does not enable this option.

If Solid Edge or Revision Manager is running when Cache Manager is scheduled to run, Cache Manager is cancelled and an error is added to the log file. To avoid this, make sure you close all files before Cache Manager is scheduled to run.

You cannot have separate Cache Manager processes running simultaneously. If a process is still running when a second process is scheduled to run, the second process is cancelled and an error is added to the log file. To avoid this, make sure that you schedule sufficient time for each process to complete before another process begins.

If you are offline when a Cache Manager process is scheduled to run, Insight attempts to go back online and run the scheduled processes. Once the processes complete, you are returned to offline mode.

Your scheduled setting preferences are stored in a file called *CacheMgr.ini*. This file is stored in the Solid Edge ST2 Program folder if you have Solid Edge ST2 loaded. The file is stored in the Insight Program folder if you have only stand-alone Insight Connect loaded.

You can use Solid Edge Administrator to control the options to enable document check-in, document synchronization, or document download.

## **Updating document library event handlers**

If you encounter problems scheduling your cache management tasks, there may be a problem with the document library event handlers. You should check the following:

- Ensure the events are enabled on the virtual server.
  1. Go to the SharePoint Central Administration page.
  2. Select Configure Virtual Server Settings in the Virtual Server Configuration section of the Administration page.
  3. Select a web site to configure.
  4. Select Virtual Server General Settings in the Virtual Server Management section of the Virtual Server Settings page.
  5. Turn Event Handlers On in the Event Handlers section of the Virtual Server General Settings.
- Ensure the document library has the event sink assembly set.

1. On the appropriate SharePoint site, go to the document library you want to monitor.
  2. Under Actions, click Modify Columns and Settings.
  3. Under General Settings, click Change Advanced Settings.
  4. In the Event Handler section of the Assembly Name field, ensure the assembly name is specified.
  5. In the Class Name field, ensure that a class is specified.
  6. If there is no data in the Assembly Name or Class Name, you should specify them as:
    - In the Assembly Name field, type `SEEventLogging, Culture=neutral, Version=1.0.0.0, PublicKeyToken=6a0a10f1c5fe3153`.
    - In the Class Name field, type `SEEventLogging.SEEventHandling`.
    - At a command prompt, run `iisreset.exe`.
- Ensure the Insight assemblies are added to Global Assembly Cache (GAC). If they are not added, run Insight Server setup again.
  - If problems still persist, clean all entries in the event handler and read SE event handlers as described in the second bullet above.
  - If problems still persist, check the Windows System Event Viewer to check for system-generated messages. A message will be logged if the event handler assembly is not created.

The list above ensures that events are being logged properly. If the events are being logged, but Link Fixup Manager does not work properly, the latest *InsightLinkFixupUserLogxxxxxxx.txt*, *InsightLinkFixupDevLogxxxxxxx.txt*, and *Insight\_Webservice.txt* file from the server machine assist in debugging the problem.

### Simplified Insight Server setup

After running the simplified Insight setup, a dialog appears for you to provide:

- The log files location.
- The Insight Cache Location.
- The *searchscope.txt* file location.
- A schedule for the task.

You can associate only one event handler assembly for a document library in SharePoint. Currently Insight delivers a workflow application that also works on events. So you can have multiple SharePoint event listeners running, two assemblies are delivered with the Insight Server setup and both will be added to the GAC:

- `InsightEventLogging.dll`

- SEEventHandler.dll

InsightEventLogging.dll performs the actual logging the information of the events. SEEventHandler.dll listens to the events and uses the InsightEventLogging.dll to log the event data.

If you are using other event handlers other than SEEventHandler.dll you need to do the following:

1. In the development code project, add a reference to the InsightEventLogging.dll by browsing to the Insight Server Program folder.
2. Add the statement "using InsightEventLogging" at the top of the project.
3. In the OnEvent method add the following two statements:

```
SEInsightLog LogEvent = SEInsightLog.GetInstance();  
LogEvent.SELogEventWithInsight(listEvent);
```

The workflow application is modified by following the same steps.

Making this change enables you to have your own event handler implementation. You can pass the event information to Insight so that the information needed for batch schedulers will be logged and you can do what you need to do with the event.

### **Event logging**

Cache Manager events are logged in groups of 20. It is possible that there are events residing in memory when the server begins processing. The events are written to the log file when the server reboots. To ensure that all processed, you should schedule a server reboot task before you run the secure link fixup task.

You can use the Insight Logging Settings dialog box to enable event logging and specify the location of the log files. To access the dialog box, on the Start menu, choose Programs® Solid Edge ST2® Insight® Insight Logging.

## **Managing Solid Edge documents**

There are different ways to manage Solid Edge documents. Because information is being shared and used between these documents, maintaining the relationship information between these documents can be quite complex. Insight uses a concept called Secure Links to help manage this information. Each document managed by SharePoint has a unique id that Insight stores as part of the link information. If Insight cannot find links in the relative path structure of a managed document, it attempts to find the document based on the unique id. With Insight, you can rename or move documents without having to use the Where Used command in Revision Manager to update these links. Insight can find the documents automatically. Because of this ability to avoid possible relationship problems, we recommend that you use Insight to manage your Solid Edge documents.

### **Note**

You should use Insight Connect Revision Manager to move or rename documents. If you use Internet Explorer or Windows Explorer to move documents across sites, the Solid Edge properties are not moved.

Insight Connect has commands such as Rename, Delete from Library, Find Broken Links, Redefine Links, and Find Duplicate files that help you manage document links.

## Creating custom reports

Insight enables you create custom reports from your data. It uses the property and link information from documents stored in the library, and not the local copy, to create these reports. For example, if you create a report on an open document, the report will contain information from the last version of the document you checked in, not the version you have open. Role privileges are applied when generating reports so the results of the report may vary from user to user, depending on the roles for the user.

### Report types

You can create the following types of reports:

- Bill of Materials
- Exploded Bill of Materials
- Summary of Atomic Parts
- Parts List

### Formatting a report

You can format the report using the Format option on the Reports dialog box. Using the Format Report dialog box, you can set the following:

- Font
- Column headings (based on available properties)
- Sorting method

Each property you include in the report will be a new report column. Standard properties you can choose from include Quantity, Document Number, Revision, and Author. You can also include custom file properties that you have recorded in the part and subassembly documents.

After you have formatted the report, you can preview the report output by selecting the OK button on the Format Report dialog box.

### Outputting the report

After previewing the report, you have the following options:

- Save the current report.
- Print the current report.
- Copy the current report to the clipboard.

- Create another report.

### Saving a report

The Save As option defines a storage location, document name, and output type. You can output the report as a text file (.txt) or rich text file (.rtf).

### Adding properties to managed documents

If you add new custom properties to managed Solid Edge documents, you must also add these properties to the managed document library on the SharePoint server to make them available in an assembly report. Managed document profiles are stored in the Document Profiles folder on the SharePoint server. To properly synchronize the Solid Edge file properties and the SharePoint managed document profile properties, the property names must match exactly.

## Managing Workflows with Insight Server

Insight Server delivers an Insight workflow application. To create the necessary lists in SharePoint, run the *MicrosoftSharePointWorkflowSetupWizard.exe* application located in the Insight Server Program folder.

#### Note

If you are running in a server farm environment, this application should be run on each front-end web server by installing Insight Server on each web server. After running it on the first web-server, select the existing lists to properly setup the configuration file.

### Getting started

To get started with workflows you should:

- Turn on Content Approval.
- Turn on Event Handlers.
- Set up workflow designer.

### Turn on content approval

The workflow application uses content approval to move documents through the approval process. This option must be turned on so that the workflow setup wizard can select an existing document library if the document libraries have already been created.

1. Go to the SharePoint Central Administration page.
2. Select the General Settings page for the document library
3. Select Yes for the content approval if the document library already exists.



## Turn on event handlers

The workflow application uses event handlers to monitor when something happens to a document. Before running the workflow setup wizard, verify this option is turned on using the following steps:

1. Go to the SharePoint Central Administration page.
2. Select Configure Virtual Server Settings in the Virtual Server Configuration section of the Administration page.
3. Select a web site to configure.
4. Select Virtual Server General Settings in the Virtual Server Management section of the Virtual Server Settings page.
5. Turn Event Handlers On in the Event Handlers section of the Virtual Server General Settings.



### Note

Make sure that the web site you want to configure is a sub-site of a top level site.

## Set up Workflow Designer

To use the workflow designer application, install Visio 2003 on the SharePoint server.

## Enhancements to the workflow application

Microsoft delivers the core of the workflow application. Insight made the following enhancements to Microsoft's workflow application:

- Added the ability to e-mail the document's author when a document finishes the approval process or is rejected
- Provides for notification-only users, which defines the workflow to notify someone that a document is going through the approval process without having to give them approval rights.
- Sets remaining pending users to approve or reject and set their weight to 0 if a document reaches its threshold. This cleans up the Workflow Instances table and makes it easier for users to see which documents are still waiting for the user's approval.

### Configuring a workflow

It is important that you understand some of the common things you can do with the workflow application. This section covers some of the more common capabilities with workflows.

The samples in this document assume sites are using the default threshold weight of 10 to determine when a document should move to the next ordinal. The samples shown can be combined and mixed to create a workflow with as many steps as are necessary for your site.

**Note**

Allow for change when creating your workflows by incrementing ordinals by 10 or 100.

### Using serial approvals

Serial approvals enable you to send documents for approval in sequential order, based on the ordinal value specified in the Workflow Definitions table.

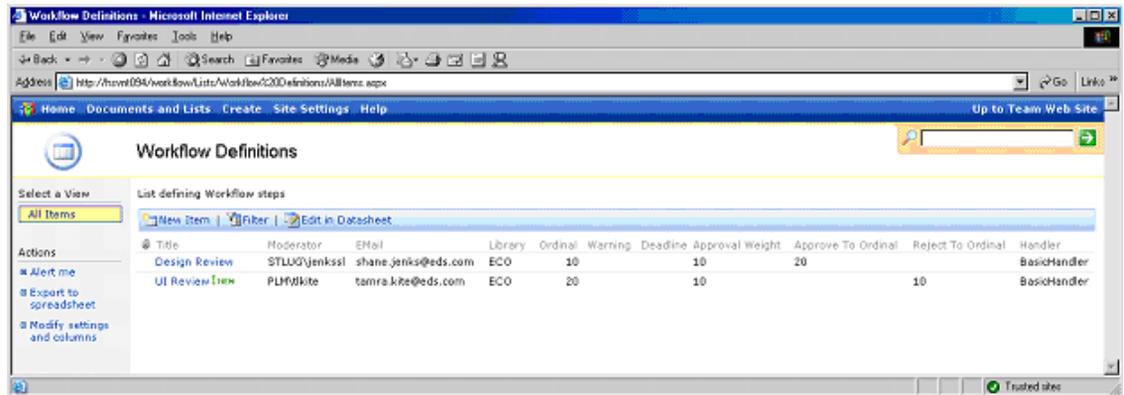
To setup serial approval:

1. Add an entry in the Workflow Definitions table for each step in the approval process.
2. Give each step in the workflow a unique ordinal with an approval weight of 10.

The workflow sends the document through the approval cycle from the lowest ordinal to the highest.

In the following example there are serial steps:

- Design Review
- UI Review



**Note**

In this example it shows Approve to and Reject to ordinals for each step in the process. By default the application will approve to the next-higher ordinal and reject to the next-lower ordinal but it is better to fill in the fields so it is clearer what is happening throughout the workflow process.

## Using parallel approvals

Parallel approvals enable you to have multiple entries in an ordinal, all of which must be approved before the document can be completely approved.

To create a parallel step in the workflow, add multiple entries for an ordinal. The entries can have different titles, but the ordinals must be the same and the total approval weight must add up to 10 or more. In the following example we have a parallel approval:

- Design Review
- UI Review

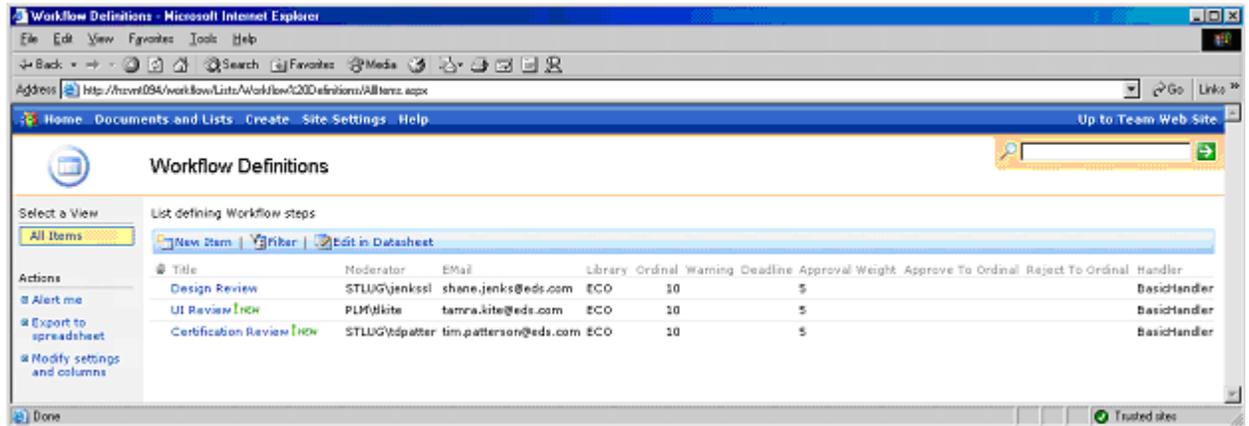
Both of these entries need to be approved before a document can be completely approved.

Title	Moderator	Email	Library	Ordinal	Warning	Deadline	Approval Weight	Approve To Ordinal	Reject To Ordinal	Handler
Design Review	STLUG\jenkssl	shane.jenks@eds.com	ECO	10			5			BasicHandler
UI Review <span style="color: green;">NEW</span>	PLM\jkite	tamra.kite@eds.com	ECO	10			5			BasicHandler

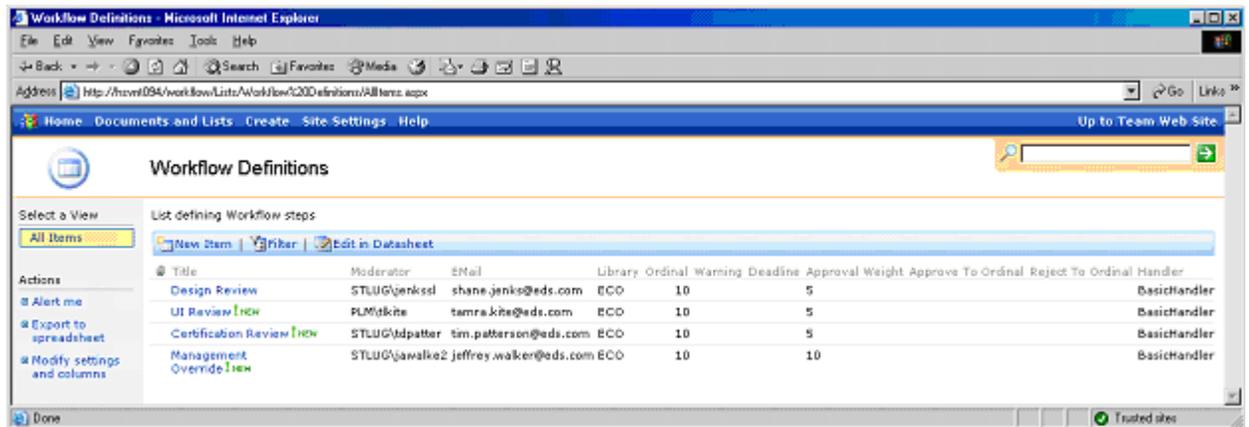
Parallel approvals enable you to create steps in the workflow that require a majority approval before the document moves to the next ordinal. The key is to assign each user enough Approval Weight so when the weight reaches 10 or more, you have the number of approvals you need. The following example requires one out of three people to approve the document: Tamra, Shane, or Tim.

Title	Moderator	Email	Library	Ordinal	Warning	Deadline	Approval Weight	Approve To Ordinal	Reject To Ordinal	Handler
Design Review	STLUG\jenkssl	shane.jenks@eds.com	ECO	10			10			BasicHandler
UI Review <span style="color: green;">NEW</span>	PLM\jkite	tamra.kite@eds.com	ECO	10			10			BasicHandler
Certification Review <span style="color: green;">NEW</span>	STLUG\jdpatter	tim.patterson@eds.com	ECO	10			10			BasicHandler

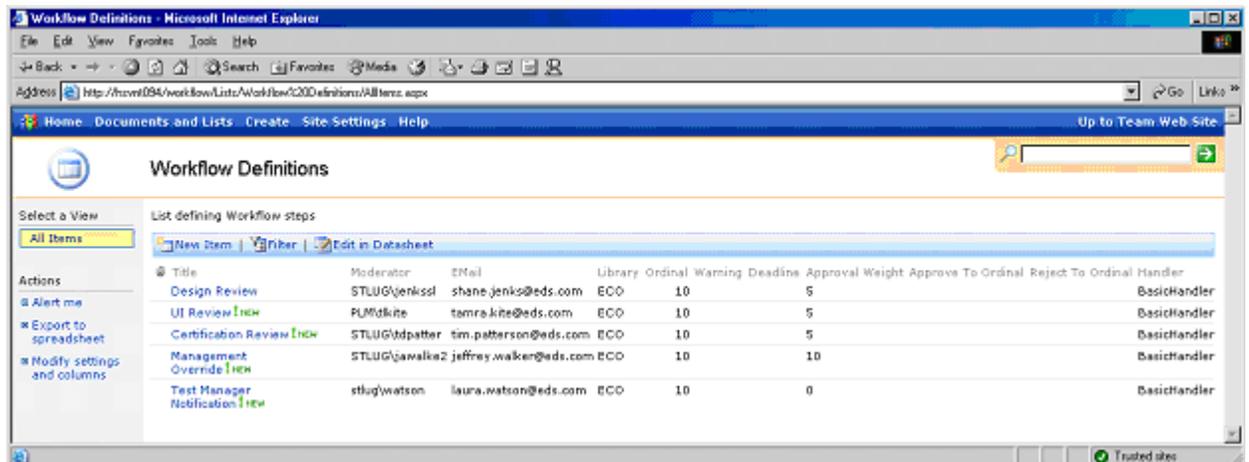
To change it so two out of the three people need to approve the document, you can drop the Approval Weight for each of the users to 5 as shown:



Parallel steps can also have a "master" approver that can override everyone's decision. To do this, give one person on the ordinal an approval weight of 10. This is useful for times when you can't reach a consensus or too many people are out of the office. In the following example, Jeffrey can approve or reject a document, regardless of what the other users do:



Finally, to add a notification-only user, add a person with Approval Weight of 0. In the following example Laura has been added as a notification-only user:



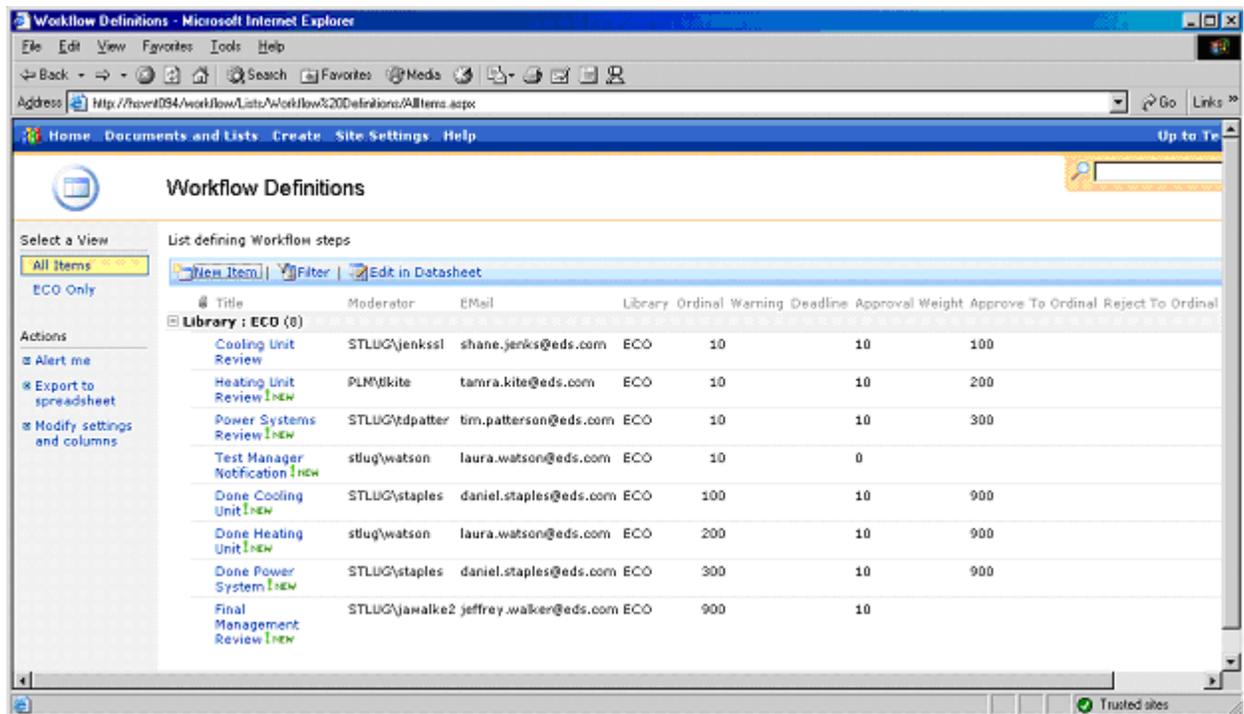
## Branch based on approver

There may be cases where the user that approves a document in a parallel step branches the approval process. To do this with the workflow application, assign each approver enough weight to approve the document to the next ordinal and assign different Approve To Ordinals to each user.

### Note

In this example it shows Approve to and Reject to ordinals for each step in the process. By default the application will approve to the next-higher ordinal and reject to the next-lower ordinal but it is better to fill in the fields so it is clearer what is happening throughout the workflow process.

Each of the branches should end at a common final ordinal since the application automatically increments to the next higher ordinal once approvals are complete at each step. In this example, if the 100 ordinal branch did not have a final approval that sent the process to ordinal 900, the 200 branch would start then the 300 branch.



Title	Moderator	Email	Library	Ordinal	Warning	Deadline	Approval Weight	Approve To Ordinal	Reject To Ordinal
Cooling Unit Review	STLUG\jenkss1	shane.jenks@eds.com	ECO	10	10		100		
Heating Unit Review	PLM\kikite	tamra.kite@eds.com	ECO	10	10		200		
Power Systems Review	STLUG\tdpatter	tim.patterson@eds.com	ECO	10	10		300		
Test Manager Notification	stlwg\watson	laura.watson@eds.com	ECO	10	0				
Done Cooling Unit	STLUG\staples	daniel.staples@eds.com	ECO	100	10		900		
Done Heating Unit	stlwg\watson	laura.watson@eds.com	ECO	200	10		900		
Done Power System	STLUG\staples	daniel.staples@eds.com	ECO	300	10		900		
Final Management Review	STLUG\jawa1ke2	jeffrey.walker@eds.com	ECO	900	10				

## More information on Workflows

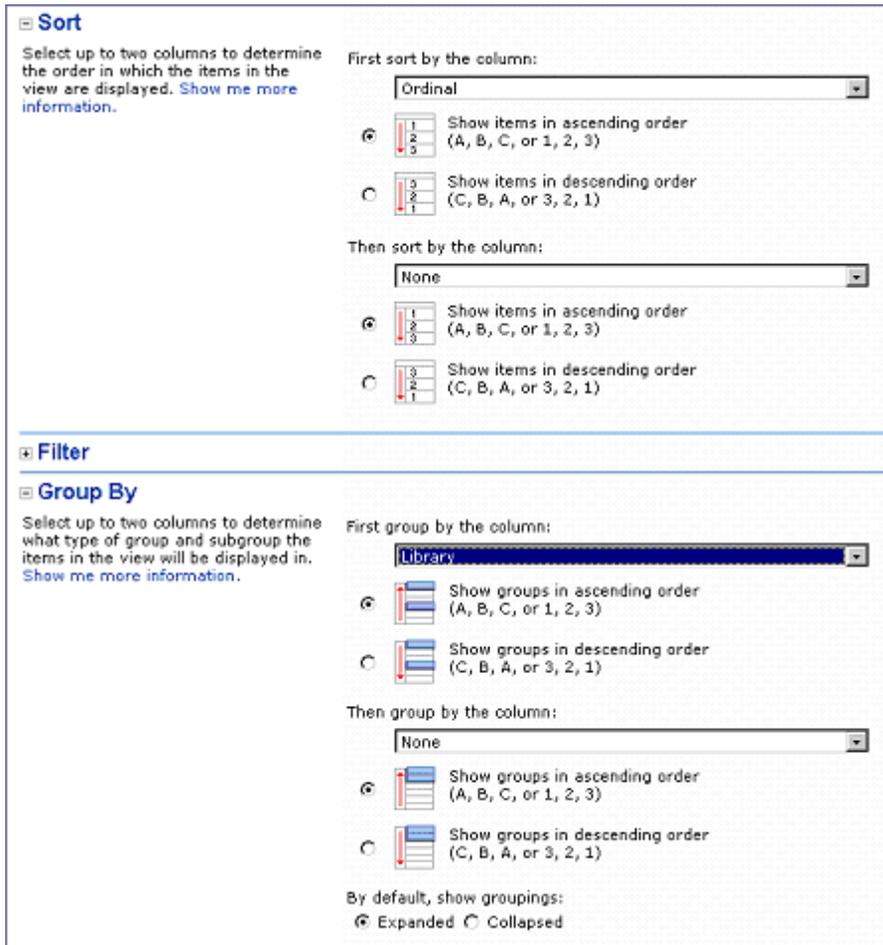
Documents move forward through the workflow when the total Approval Weight is equal to or greater than the Weight Threshold, which has a default value of 10.

When a user rejects a document, their Approval Weight is added as a negative value. When the total Approval Weight is equal to or less than -10, the document is rejected to the previous ordinal.

In parallel steps, it is possible for some users to approve giving the document a positive Approval Weight and other users to reject the document giving it negative approval weight so that the total weight never reaches +/- 10. There are a couple

of ways to guard against this problem. Always be sure to give parallel ordinals a deadline date. If a document is not approved or rejected by this date, it is automatically rejected. You can also assign a master approver that can override everyone's decision.

By default, the Workflow Definitions list is sorted based on the order that entries are added to the list. To make it easier to see the approval process, change the default sort order for the list by modifying the default view. For example, sort the list based on the Ordinal in descending order, and group the list based on the Document Library column.



If you have multiple large workflows, create a separate view for each library. Create a new Public or Personal view. Sort the view based on the Ordinal column and filter the view based on the document library.

**Sort**

Select up to two columns to determine the order in which the items in the view are displayed. [Show me more information.](#)

First sort by the column:

Ordinal

Show items in ascending order (A, B, C, or 1, 2, 3)

Show items in descending order (C, B, A, or 3, 2, 1)

Then sort by the column:

None

Show items in ascending order (A, B, C, or 1, 2, 3)

Show items in descending order (C, B, A, or 3, 2, 1)

---

**Filter**

Show all of the items in this view, or display a subset of the items by using filters. To filter on a column based on the current date or the current user of the site, type **[Today]** or **[Me]** as the column value. [Show me more information.](#)

Show all items in this view

Show items only when the following is true:

Show the items when column

Library

is equal to

ECO

Adding the new view adds a new entry to the Select A View section of the left shortcut bar on the Workflow Definitions page.



They may be referred to as Engineering Change Orders (ECO), Engineering Change Notices (ECN), or Engineering Change Requests (ECR), but they all refer to the same thing; a packet of information used to track engineering changes within the design and manufacturing process.

Typically, an Engineering Change (EC) consists of a bundle of change requests attached to a drawing. It includes an identification number, a requested change, the person requesting the change, the time of the request, and a routing slip to identify the people who need to approve the change. Once the change is approved, an effective date is added to specify when the change will be used in production. On the effective date, the approved drawings are moved to a place where the shop floor can view them.

In an electronic environment, a document or set of documents outlining the changes that are being made are routed through various approval states based on steps within the workflow.

### Implementing an ECO process with the Packaged Collaboration File (PCF)

There are a few steps you should take in implementing Insight and the packaged collaboration file.

1. Ensure users are mapped to the specified site groups for each document library.
2. Verify the privileges for each user work properly for each document library.

3. Run Solid Edge Administrator to set up the default root folders.
4. Set up alerts for the appropriate users in the packaged collaboration document library.
5. Set Approvals/Moderation to On in the ECR and ECO document libraries.

The PCF document library location is a location within the engineering site in which non-engineering personnel, such as shop floor and service technicians, have write access. This allows them to create PCF files and store them in an "incoming" location.

With moderation on in the ECR and ECO document libraries, an approval workflow can be started when the PCF file is moved to that location.

The ECR document library can be thought of as the location to request approvals to create revisions of released documents. If your company does not require approval to create revised documents, you can skip this document library and create revisions without approvals.

The ECO document library can be thought of as the location to request release of revised documents after all changes have been made to the revisions.

### Example of using Insight to implement an EC process

The following steps describe the workflow for using Insight Connect View and Markup to implement an ECO process. In this example, we will take *Assembly1.asm* through the ECO workflow. This example assumes that the steps needed to set up the ECO workflow have been completed and the appropriate users, roles, and document libraries have been created as shown in the table.

User	PreRelease Subsite	Release Subsite	Obsolete Subsite	Markup Subsite	ECO Subsite	ECR Subsite
Shopfloor	None	Viewer	None	Creator	Viewer	Viewer
TechSupport						
Engineer	Creator	Viewer	Viewer	Creator	Creator	Creator
Release Mgr	Deletor	Deletor	Deletor	Deletor	Deletor	Deletor
Admin	All	All	All	All	All	All
SEStatus	Available In Work Review	Released In Baselined	Obsolete	Available	Available In Work Review	Available In Work Review

**Note**

The user moving the packaged collaboration file from one location to another needs to have Delete privileges. For example, you probably want to set up your workflow where the packaged collaboration file can be moved by a Manager or an Administrator, but not an Engineer or someone from the shop floor.

### Going through the workflow

1. Shopfloor Joe identifies a problem with an assembly and searches the Released site for the assembly document or its related draft document.

**Note**

Shopfloor Joe may also want to search against the assembly or draft document to see if the PCF documents already exist.

2. Shopfloor Joe opens *Assembly1.asm* in Insight Connect, View and Markup and views the assembly. He can add comments to the assembly document and save the contents as a .pcf file.
3. Engineer Ron receives an e-mail notification when the file is added to the PCF document library. In order to receive e-mail, alerts must be turned on for this library.
4. Engineer Ron opens the package collaboration file and reviews the comments made by Shopfloor Joe that indicate that *Part3.par* needs to be revised.
5. Engineer Ron switches from View and Markup to Revision Manager, while in Insight Connect, and performs a where-used search to identify the documents that will be impacted by the revision. The search results include:
  - Part3.par, Part3.dft
  - S2.asm, S2.dft
  - AssemblyA.asm, AssemblyA.dft
  - AssemblyC.asm, AssemblyC.dft
6. Engineer Ron can perform the actions specified if no approval is needed or add information to the PCF file outlining the revisions being requested. He can use an Office document to do this.
7. Engineer Ron adds all the information needed to describe the requested changes and saves the PCF file to disk.
8. Release Manager Kevin moves the completed package collaboration file to the ECR or ECO location, depending on the approval requested. Moderations should be turned on for these locations. The approvers for the ECR location receive notification to approve the package collaboration file.
9. The approvers review the PCF file in the ECR document library and approve or reject the requested changes. Remember, for ECR, the approvers are either approving or rejecting the request to create revisions of released documents at this time.
10. Once the request to create revisions is approved, Engineer Ron can open the same package collaboration file, bring up Revision Manager, and run Perform Actions. The revised documents are created automatically in the Pre-Release document library root folder location and the status is set to Available. Solid Edge is used to make all required changes documented in the package collaboration file.
11. After all revised documents are complete, Engineer Ron opens the package collaboration file and updates it with information that all changes were made.

12. Release Manager Kevin moves the package collaboration file from the ECR document library to the ECO document library with Moderation turned on. At the same time, he uses Life Cycle Assistant with the package collaboration file to set the status of all Revised documents and change the status to In Review.
13. The approvers for the ECO document library approve or reject the request to release the revised documents.
14. When approved, the Release Manager is notified the ECO was approved.
15. Release Manager Kevin uses Life Cycle Assistant to move all Revised documents to the Released folder. To do this he:
  - Opens the package collaboration file to get a list of revised documents in the Life Cycle Assistant list.
  - Moves the documents to the Released document library and sets the status to Released.  
  
If the option is set to make old files obsolete, he moves the original files to the Obsolete document library and the sets the status to Obsolete.
16. Release Manager Kevin moves the package collaboration file to the ECN folder. This notifies anyone that has Alerts that the new released product is available for production.

## **Typical workflow for using Insight to manage Solid Edge documents in a library**

You can easily work with your Solid Edge ST2 documents in a managed library using the Insight technology delivered with Solid Edge ST2.

A typical workflow for working with Solid Edge ST2 documents is:

1. Create a Solid Edge ST2 document and use the Save As command to save the document to a SharePoint library.

### **Note**

The document is not saved to the library yet; it is saved to your cache.

2. Close the document to upload and add it to the library.
3. Open the document to check it out.

Insight always publishes the document on check in and ensures that approvals are turned off in SharePoint for the folder.

### **Note**

Microsoft SharePoint provides a workflow that seeks document approvals and publishes documents for others to view. Solid Edge has its own workflow and does not use SharePoint approvals.

## Viewing the log file in Solid Edge

All Insight warnings and error messages are reported to a common error dialog box and written to a log file. The dialog box displays errors and warnings for the last command. You can select a column on the dialog box to sort the information in the box based on that column.

The system creates an ASCII text log file per application session that contains the warnings and error messages for the entire session. You can view and print the file from Notepad or any other application that can read a text file. The system names the log file based on the time stamp for the file.

The log file is stored in the location specified on the File Locations page of the Solid Edge Options dialog box. You can specify that Insight look for the file in a different folder, including a folder on another machine on the network. To specify a different location, on the Application menu, click Solid Edge Options. On the File Locations page of the Solid Edge Options dialog box, select Log Files and then click Modify. On the Browse dialog box, specify the drive and folder for the log file.

### Insight Error Messages

The following information describes the various Insight error messages.

#### **Unable to contact the server, try again. If the problem continues, contact your administrator.**

This error occurs when there is a problem with the connection to the server. The network may not be working properly or the server may be down. If this happens in the middle of the command, the document may be marked as checked out in SharePoint, but not be on your local machine. If so, an administrator will have to clean up the file or cancel the check out to update the library.

#### **Insufficient drive space to store <file>. Contact your administrator to free sufficient space and try again.**

This error occurs when the server or local machine does not have enough free space to hold the document. To correct the error, an administrator needs to clear the cache, remove files from the system, or purge versions of documents. If you think this may be a persistent problem, you may want to install a larger hard drive.

#### **<Folder> has approvals turned on. Turn off approvals and try your command again.**

This error occurs when an administrator has SharePoint approvals turned on. To correct the problem, an administrator needs to turn the approvals off.

#### **You do not have sufficient privileges to <command> <filename or folder name> or there are network problems preventing authentication from the server.**

This error occurs when you do not have sufficient privileges to execute a command. To correct the error, you can have an administrator provide the privileges you need to execute the command. You can also have another user that does have sufficient privileges run the command.

**File already exists in <folder name>. Rename one of the documents or rename the duplicate.**

This error occurs when a document with the same name already exists in SharePoint. To correct the error, remove the existing document from the cache or ignore the message and continue.

**Cannot rename <old folder name>. A folder with the name you specified already exists. Specify a different folder name.**

This error occurs when a folder with the same name already exists in SharePoint. To correct the error, reset the folder name to its previous value and select a different folder name.

**File is locked. Close it in Solid Edge or other application that is using it.**

This error occurs when a document is locked by the system because it is open in Solid Edge or another process. To correct the error, close the document in Solid Edge or the process that is causing the lock.

**File <filename> is checked out by <checkout user>. Open the file read only.**

This error occurs when a document is checked out by another user. To correct this error, the user must check in the document before it can be checked out by another user.

**Document is unusable and cannot be opened in Solid Edge.**

The document may have the wrong file extension or there may be a problem with the file. Contact GTAC and submit the file for examination.

**Invalid link data was found in <filename no path>.**

Submit an IR and send the file to GTAC for removal of the invalid link data.

## **Working offline using Insight**

Your workflow may require that you work offline at times. For example, you may need to take a portable machine out of the office, maybe to a customer site. Microsoft Loopback adapter is a tool designed for working in a virtual network environment where access to a network is not feasible. Enabling the loopback adapter improves your performance while working offline with Solid Edge Insight.

**Installing the Microsoft loopback adapter**

1. Click Start, point to Settings, and then click Control Panel.
2. On the Control Panel, double-click Add/Remove Hardware.
3. Click Next.
4. Set the Add/Troubleshoot a Device option, and then click Next.

5. Select Add a New Device, and then click Next.
6. Select No, I want to select the hardware from a list, and then click Next.
7. Select Network adapters, and then click Next.
8. In the Manufacturers box, scroll down and select Microsoft.
9. In the Network Adapter box, select Microsoft Loopback Adapter, and then click Next.
10. On the Start Hardware Installation dialog box, click Next.
11. Click Finish.

### **Configuring the Microsoft loopback adapter**

After you have installed the Loopback Adapter, you will need to configure it.

1. Click Start, point to Settings, and then click Network and Dial-up Connections.
2. On the Network and Dial-Up Connections dialog box, click the right mouse button on the last Local Area Connection and rename it to MS Loopback Adapter.
3. Click the right mouse button on MS Loopback Adapter and select Properties.
4. On the General page of the Loopback Properties dialog box, make sure NetBEUI Protocol is the only option that is checked.
5. Select OK.
6. To avoid network conflicts, in Network and Dial-up Connections, disable the LAN Connection entry first before enabling Microsoft Loopback Adapter option. Select the LAN Connection entry, then click the right mouse button, and select Disable on the shortcut menu.
7. For the Microsoft Loopback Adapter to function, you will need to right-click on it in the Network and Dial-up Connections dialog box and select Enable. Most systems will already be enabled and only give you the option: Disable. In this case, go to the next step.
8. When reconnecting the LAN Connection, disable Microsoft Loopback Adapter first, and then enable the LAN Connection.

## **Enabling SSL for the web server**

Insight supports Secure Socket Layer (SSL) as a mechanism of managing the security of message transmission over the Internet. SSL uses a cryptographic system of two keys to encrypt data—a public key known to everyone and a private or secret key known only to the recipient of the message. Many web sites use the SSL protocol to exchange confidential information. The web sites that require an SSL connection use *https:* instead of *http:* in the URL.

To enable SSL for the web server, follow the instructions in Microsoft's article, [How To Enable SSL for All Customers Who Interact with Your Web Site in Internet Information Services](#).

Other helpful references include:

- [Configuring and Implementing Secure Socket Layer \(SSL\) for SharePoint Web Sites](#)
- [Enabling Secure Socket Layer for SharePoint Portal Server 2003](#)

### **Ensure secure communications with your web server**

To secure communications with your web server, check the option **Require Secure Channel (SSL)** in Internet Information Server (IIS) Manager. Failure to select this option will result in a conflict between http and https.

1. Choose Start® Programs® Administrative Tools and select Internet Information Server (IIS) Manager.
2. Choose Web Sites® Default® Properties.
3. Click the Directory Security tab.
4. In the Secure Communications portion of the menu, click Edit.
5. Select the option to Require Secure Channel (SLL).
6. Click OK to return to the Web Site Properties dialog box.

### **Installing the client certificate on client machines**

In order to use Hypertext Transfer Protocol with Secure Socket Layer (HTTPS), you need an SSL Certificate signed by a source trusted by your client browsers such as a commercial Certificate Authority.

You can install the client certificate on the client machine using either of the following methods:

#### **Method 1**

1. Once you have installed the server certificate on your server, obtain the Client Root CA Certificate from the vender.
2. Save the file with a *.cer* extension.
3. Open a Microsoft Internet Explorer browser and select Tools® Internet Options® Content® Certificates.
4. Click Import.  
The Certificate Manager Import Wizard is displayed.
5. Click Next and browse to the location of the recently stored root CA certificate you saved in step 2.
6. Set the File type field to All Files.

7. Select the certificate and click Open.
8. Click Next and select Automatically Select the Certificate Store Based on the Type of the Certificate.
9. Click OK.
10. Click Next, then Finish.
11. Select Yes when prompted if you want to add the certificate to the root store.

### **Method 2**

1. Obtain the Root CA Certificate from the vender.
2. Save the file with a *.cer* extension.
3. Double-click the client certificate *certificate.cer* and the Certificate dialog box will display.
4. Click Install Certificate and the Import Wizard is displayed.
5. Click Next and select Automatically Select the Certificate Store Based on the Type of the Certificate.
6. Click OK.
7. Click Next, then Finish.

### **Checking for an installed client certificate**

1. Open a Microsoft Internet Explorer browser.
2. Choose Tools® Internet Options® Content® Certificates.
3. Click the Trusted Root Certification Authorities tab.
4. Verify that your client certificate is visible in the list of certificates.
5. Click Close to exit the menu.



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## Chapter

# 12 *Trouble Shooting*

## Checking Setup

There are several components that must be installed to ensure that your system works properly. If you encounter problems, you should check these components.

### Verify SQL Server 2005 is installed

1. Log on to the server with the account used to install SQL Server.
2. On the Add or Remove Programs dialog box, select SQL Server, then click Support Information.
3. (Optional) You can also verify the version by looking at the *SP3areadme.htm* file in \Program Files\Microsoft SQL Server\MSSQL.

The file name will vary based on the service pack installed.

### Verify the SQL Service Manager is running

1. On the Desktop, right-click the SQL Service Manager icon and click Open SQL Service Manager.

The current server should be displayed in the Server control.

In the Services list box, there should be five services listed:

- Distributed Transaction Coordinator
- Microsoft Search
- MSSQL ServerOLAPService
- SQL Server
- SQL Server Agent

2. Select each service and verify they are running and that they are set to Auto-start when the operating system starts.

#### Note

Although all services do not have to be running, at a minimum Microsoft Search and SQL Server are required. Others may need to be running based on the your configuration.

3. Exit the SQL Service Manager application.

### **Verify That The SharePoint Content and Information Databases Were Created**

1. From the Start menu, start SQL Enterprise Manager.
2. Browse down to the Databases node and look for two databases.
  - The default configuration database name is configdb.
  - The default SharePoint database will start with STS\_<servername>\_1.

You do not have to verify that the information contained in the databases is complete. You just need to verify that the databases exist.

#### **Note**

Modifying the databases or rows in any way other than through the SharePoint dashboard or SharePoint API is not supported.

3. Exit the SQL Enterprise Manager application.

### **Verify Internet Information Services Information**

1. From the Start menu, select Internet Information Server (IIS) Manager.
2. Verify the STSAdminPool, Default Web Site, and SharePoint Central Administration entries are listed. You may create additional virtual web sites to provide multiple entry points so there should be one virtual server for each site. To verify you upgraded the virtual server to run with SharePoint, look for a Microsoft.SharePoint.ApplicationPages.dll entry in the virtual folder\layouts\bin folder for each virtual folder.
3. Connect to the default SharePoint home page for the server. For example: <http://hsvnt094>.
4. Select the Shared Documents document library from the Quick Links section on the left of the dashboard.
5. Select Upload Document from the menu and try to upload a Microsoft Office document.
6. Verify the document was uploaded.
7. Repeat steps 4 - 6 using an Insight document library.

### **Verify InsightData and InsightLogInfo Folder Permissions**

1. On the system drive where Insight is installed, highlight the InsightData folder, right click and select Properties.
2. On the InsightData Properties dialog box, click the Security tab.
3. In the Group or User Names field, select the Users group and verify that permissions are set to, at minimum, allow Read & Execute, Read, and List Folder Contents.

The files inside the InsightData folder are used to get the document library property mapping information for the SharePoint Server. If you do not have read access on the InsightData folder, then the deep list generation fails.

4. Repeat the process for the InsightLogInfo folder.

The files inside the InsightLogInfo folder are used to get the server log file location and enable logging flag. If you do not have read access on the InsightLogInfo folder, the web service is unable to get the log file location and fails to generate the server side log file.

### Check Content Approval and Document Versions

1. Select the Modify Settings and Columns page for the document library.
2. Select the Change general settings page for the document library
3. Determine if the Content Approval or Document Versions is turned on.

By default both these options are turned off. If Content Approval is turned on, anyone with Moderate Lists right must approve a document before it is shown in the All Documents view. The approval is valid for one version so if the file is changed, it will have to be approved after each change.

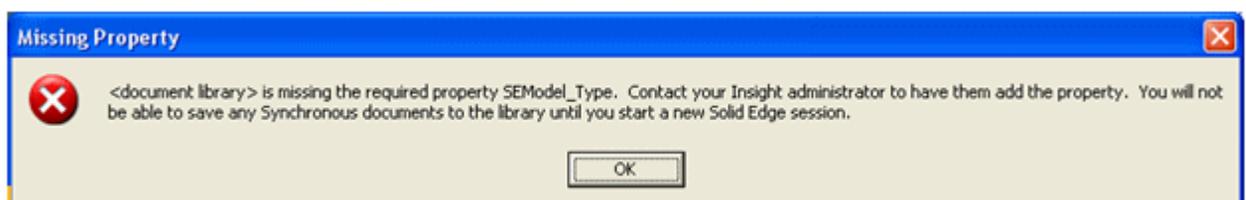
If you have problems with SQL Manager being installed properly, running properly, or problems with the SharePoint database being created properly, the SQL server installation is the likely source of the problems. If these problems occur, you should un-install all applications except Windows 2003 server and re-install them. If the installation was done with WMSDE, see the Microsoft Windows SharePoint Services 2003.0 Administrator's Guide for instructions on moving from WMSDE to SQL Server.

If you have problems with IIS or SharePoint, you should un-install SharePoint and IIS and re-install them.

If you have problems connecting to a SharePoint page on the server, uploading documents to the server, or modifying settings on the server, the SharePoint installation is the likely source of the problem. If these problems occur, verify that all usernames and passwords are correct. If they are, un-install SharePoint and re-install.

## Missing Property for Synchronous files

The property SEModel\_Type must exist in the Insight document library for you to save Solid Edge Synchronous files to Insight. If you are working with a Synchronous file and the property is not mapped, you will see the error message:



If you encounter this error message while working in a Solid Edge Synchronous file:

1. Save the Solid Edge Synchronous file to an unmanaged location.
2. Contact your Insight administrator to add the SEModel\_Type property to the document library using the instructions found in the Help topic [Add New Columns](#). Set the options to:
  - Column name: SEModel\_Type
  - Type of information: Number (1, 1.0, 100)
  - Require that this column contains information: No
3. Add the Solid Edge Synchronous file you saved to the unmanaged location to the document library using Add to Library.

## Disabling Client Integration

When you are running WSSv3 and open Solid Edge files from Internet Explorer, you may see confirmation dialog boxes regarding opening files.

### Example

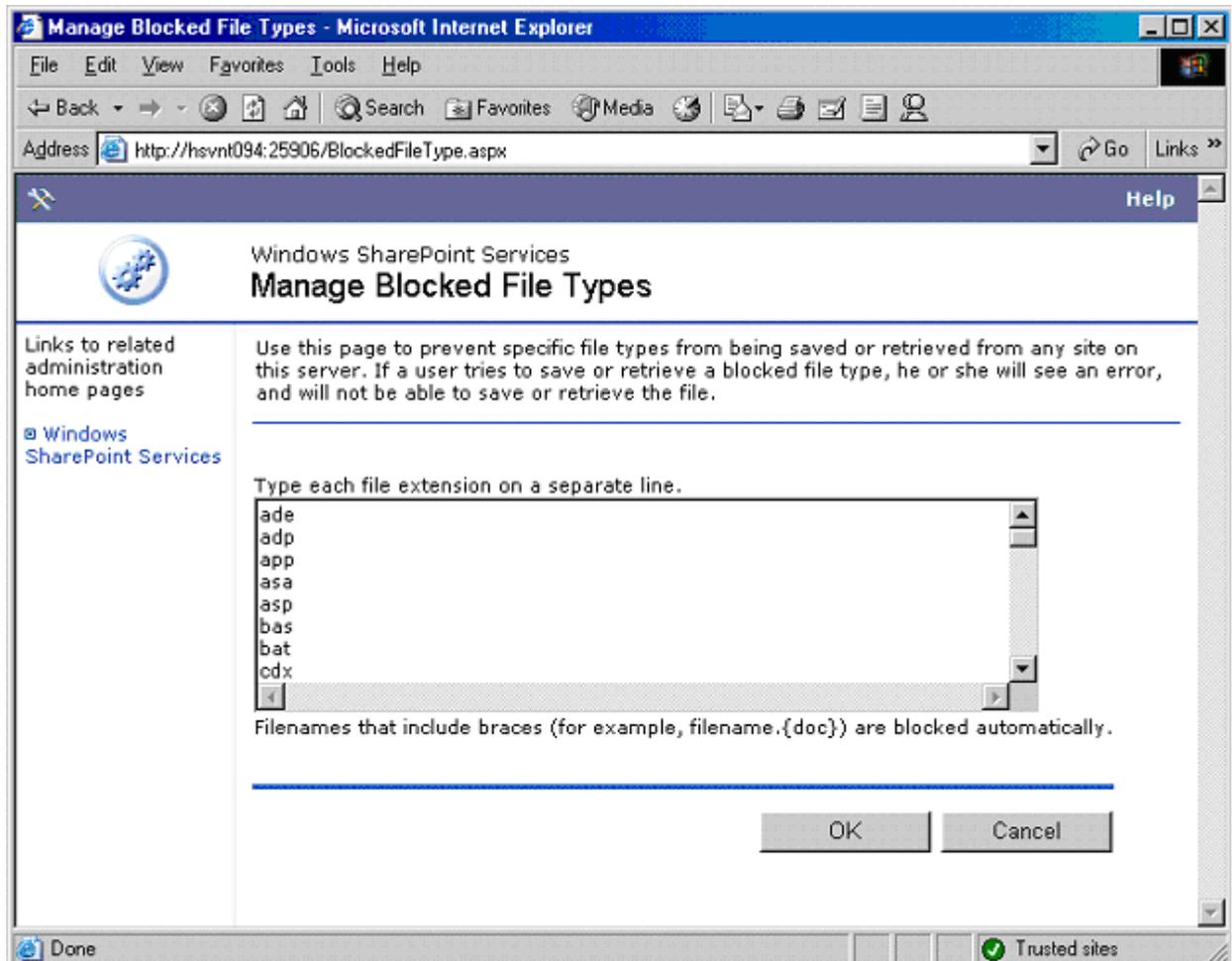


You can prevent the appearance of these dialog boxes by disabling Client Integration.

1. Log on to the WSSv3 server with an administrative account.
2. In Central Administration, click Application Management® Authentication Providers® Edit Authentication.
3. Click Default.
4. Disable Client Integration by setting Enable Client Integration to No.

## Blocked File Types

Administrators can block files with certain extensions from being loaded into SharePoint. Review the list and see if the file the user is trying to load has a blocked file type.



Verify the various Solid Edge file extensions are not in this list.

## Server Speed

There are several processes that may affect the speed the server. If you experience a decrease in the speed of your server, you should check these processes.

### Virus Scanning

SharePoint allows administrators to schedule virus scanning during file upload and download. This can add significant time to file transfer operations and to the server load.

Check the SharePoint Central Administration pages to see if virus scanning is turned on. If it is, have all users exit Insight and SharePoint and run a sample

timing test by clearing a client's cache, then opening a typical managed drawing. Save without making changes and then close the drawing. Repeat these steps after turning all the virus scanning options off and restarting IIS. You can restart IIS by typing `iisreset` in a DOS command window. If there is more than a 5% difference in the times, the virus scanning software is causing performance problems.

### **HTML Viewing**

The HTML viewing service converts files and documents into viewable HTML format. Because this viewing happens on demand, it can require a lot of resources. It is recommended that you always use a separate server to host the HTML viewing service so that the viewing service performance does not impact the performance of your Web server. For more information about changing HTML Viewer settings, see *Managing HTML Viewers in the Windows SharePoint Services 2003 Administrator's Guide*.

### **Usage Analysis Logging and Processing**

Usage analysis logging has a fairly low impact on server performance, normally less than 10%. However, usage log processing runs separately from the main Windows SharePoint Services process and is a resource-intensive task. Log processing relies on the SharePoint Timer service. To minimize the performance impact you can schedule log processing for times when you know use of your sites is low. You can also increase the number of log files to improve logging performance or decrease the number of log files to improve log file processing performance. For more information about changing usage analysis settings, see *Configuring Usage Analysis in the Windows SharePoint Services 2003 Administrator's Guide*.

### **Site Use Confirmation and Auto-deletion**

This feature helps you monitor and delete web sites that are not being used. It also relies on the SharePoint Timer service to check for unused sites, to send e-mail alerts about unused sites to site administrators, and to automatically delete sites. As with any other feature that uses the SharePoint Timer service, you can configure the process to run at an appropriate time when your server is less heavily used. Also, because this feature is controlled at the virtual server level, you can stagger the times for each virtual server, so that not all virtual servers are being checked for unused sites at the same time. For more information about changing settings for site use confirmation, see *Managing Unused Web Sites in the Windows SharePoint Services Administrator's Guide*.

### **Alerts**

Daily and weekly alerts do not impact performance heavily, but if you have a large number of immediate alerts being sent, it can slow your server down. This feature also relies on the SharePoint Timer service, so you can specify the times for daily and weekly alerts and you can set a longer interval for immediate alerts. For example, the default is every 5 minutes, but you may want to extend it to 15 minutes. You can also limit the number of alerts each user can sign up for, so that your server is not flooded with alert requests. Also, because alerts are controlled at the virtual server level, you can stagger the time ranges for each virtual server, so that not all virtual servers are sending alerts at the same time. Keep in mind that the only way to determine the amount of server resources being taken up by sending alerts is to monitor your SMTP server for a significant amount of outbound traffic. For more

information about changing alert settings, see *Managing Alerts in the Windows SharePoint Services Administrator's Guide*.

### **Server Events and Scheduled Services**

Any extra processing done with custom programming that listens to SharePoint document library events adds extra load to the SharePoint server. If possible, turn the event listeners and scheduled services off and measure the user's performance. If the performance increase is significant, re-evaluate the need for the event listener or look for ways to improve the performance of the listener. If the problem is a scheduled service, look for ways to schedule the service to run when it will not impact the main production times, such as during backups.

### **Dashboard is too slow**

Review the web parts the user has on their dashboard page and the number of items that they are displaying. If there are a significant number, generally more than 10, web parts or web parts that are hitting other resources for information, try reducing the number of parts on the page to see if performance improves. You can remove all but one web part and then add them back one-by-one. If you are trying to view thousands of records in a list at one time, use filters and custom views to reduce the amount of data that is being displayed.

Also look to see if they are displaying the items in the list by ignoring the folder structure. If this is the case, change the item limit, add a filter, or turn folder display on.

### **Performance Monitor**

Use the Windows Performance Monitor application to monitor the amount of available memory and CPU usage to see if they are being used at more than 80% capacity. If they are, you need to look at adding additional memory CPU or switching to a server farm setup to split the SQL and web work between multiple systems. At this time we do not have any recommendations for determining whether to scale up the existing server or move to a multi-server environment.

## **Creating multiple .mdf files**

If you have all of your data stored on one disk drive, you may experience a decrease in performance when several clients access the disk simultaneously. To avoid this, you can create multiple *.mdf* files, which are the database files that store your Solid Edge data. You can create one file for each disk and then stripe them into a single database.

### **Splitting between multiple disk drives**

To split the SharePoint 2.0 database between multiple disk drives:

1. Generate SQL scripts for the existing database.
2. Detach the existing database and rename it and then re-attach using the new name.

3. Modify the Create Database script to support multiple .mdf/.ndf files, specifying one on each disk drive. For more information, see Microsoft Sequel Server help.
4. Execute the modified script to create the database.
5. Copy all objects from the original database to the new one.
6. Re-populate the full text catalog.

We also recommend you refer to available Microsoft Windows Server training courses as a source of valuable information. For more information, refer to:

<http://www.microsoft.com/learning/en/us/default.aspx>