Autodesk Vault 2010

Implementation Guide

Autodesk

Contents

Vault Fundamentals

Introduction

1

This book is intended to help users who have a basic understanding of Microsoft® Windows® to install and implement Autodesk® Vault successfully in a Microsoft Windows network environment. We assume that you understand Windows® navigation as well as installing and uninstalling software in a Windows environment

In the following chapters, we explain the best practices for implementing Autodesk® Vault, and the recommended methods for deploying the data management server. Although these methods are not the only methods for deploying the software, they are the most robust and easiest to maintain.

Use this guide as a starting point. If your business needs demand it, tou can change the configuration later.

NOTE If you have any questions about this document, contact your reseller to perform a professional implementation of the Autodesk data management server.

Book Organization

The Autodesk Vault Implementation Guide is divide into three sections. The first section is intended to help understand the different versions of Vault. This section presents guidelines for planning a Vault implementation. The second section explains the steps to install the different components of a Vault environment. The last section covers topics relevant to configuring and maintaining all the components in a Vault environment.

Conventions Used In This Book

The following are different formats used in this book to make the text easier to read and understand.

Convention	Example
Files or Paths	*C:\Program Files*
World Wide Web Links	*www.autodesk.com*
Important Information	**NOTE** Additional information
Program or Script Code	`@ECHO OFF`
User Prompts	`User Name`

Support

This book addresses the basic implementation of the Vault environment for most systems. However, there are possible combinations of different software and /or hardware interactions not listed. For more information, visit the following sites:

■ *www.autodesk.com/vault*

■ *www.autodesk.com/discussiongroup-vault*

■ *www.autodesk.com/vault-support*

■ *www.autodesk.com/vault-whitepapers*

If you are an Autodesk Subscription member you can log support requests through the subscription portal at *www.autodesk.com/subscriptionlogin*.

Key Terms

Term	Definition
Data management server	The server used in conjunction with Autodesk Vault and Content Center for storing files and version data.

Term	Definition
Autodesk web server	A Web server that can be used when one computer hosts both the Autodesk data management server and vault client in a stand alone environment, such as an evaluation.
Clients	Applications that access the Autodesk data management server. These include stand alone applications such as Autodesk Vault Explorer and integrated application add-ins such as Autodesk Vault for Inventor, or Autodesk Vault for Microsoft® Office.
Data management	A means to organize and track files and design modifications through the design process.
Autodesk Vault Explorer	The standalone client for Autodesk Vault used to organize information in the vault. This interface can be used to manage any Microsoft Windows file in Autodesk Vault
Microsoft® Internet Information Services (IIS)	A Microsoft® Web server necessary for doing a full implementation of the Autodesk data management server.
Vault	The logical combination of a vault database and a vault file store that contains all the information managed by Autodesk Vault. Each installation of Autodesk Vault can maintain several independent vaults. A single client can connect to several different vaults, but not simultaneously.
Server Console	An application that performs vault system administrative tasks, such as data back up and restore.
Web Server	A server process running on the Autodesk data management server that responds to requests from vault clients.

Term	Definition
Web service	An Application Programming Interface for a client to communicate with a web server application, such as the Autodesk data management server.

Understand Autodesk Vault

<div style="text-align: right; font-size: 3em; font-weight: bold;">2</div>

This chapter explains the underlying Vault architecture and provides information essential for implementing Vault successfully.

Vault Architecture

Three primary components make up the Vault server; a web server, a database, and a file store. The following figure illustrates the basic configuration of the components.
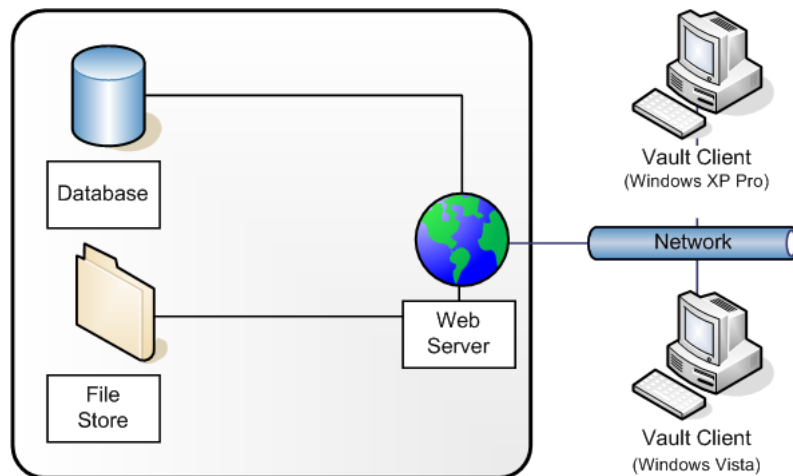
Single Autodesk Vault Server
(Windows 2003 Server Preferred)

Web Server

There are two different Web servers supported by the Autodesk®data management server:

■ Microsoft® Internet Information Services (IIS)

■ Autodesk web server (AWS)

The Autodesk web server is a light-weight Web server intended for a single-user environment. The web server works only for configurations where the entire data management environment is installed on a single computer. That means the server and clients with CAD software are installed on the same machine. AWS is also used for accessing Content Center or if you are a stand alone Inventor user working in a non-collaborative environment.

NOTE If IIS is not installed on the computer that hosts the server, and you require more than a single-user installation, install IIS before you install Autodesk Vault server.

Autodesk data management server requires IIS for anything more than a single-user installation. Before the server is installed, a check is performed to verify the presence of IIS. If IIS is not detected, it must be installed before installing the server.

NOTE The original Microsoft® Windows® installation media might be necessary to complete the IIS installation.

The Autodesk Vault server is actually a Web application that uses services to manage the communication between the clients and the server with Web services. The interaction between the clients and the server resembles the way a web browser communicates with a site on the Internet. The Web services use standard HTTP methods, communicating over the Web server port 80 by default. Microsoft IIS is required for multiple-user configurations.

What Is a Proxy Server

A proxy server forwards requests of client computers to other servers. Some networks force all client computers to use a proxy server for all web service requests.

Database

File
Store

Web
Server

Proxy Server

Network

Vault Client
(Windows XP Pro)

Vault Client
(Windows Vista)

Single Autodesk Vault Server
(Windows 2003 Server Preferred)
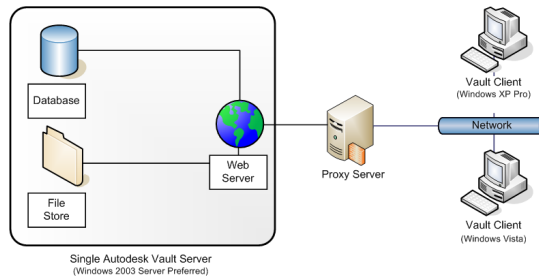
If you your network uses a proxy server, you can configure it to use a host name or bypass the proxy server of your host clients.

NOTE For more information about configuring a proxy server, see Using Vault with a Proxy server.

Database Server

The database server tracks all the relationships between data. It acts like a library card catalog, containing indexes and pointers of where to find related information. By default, the Autodesk data management server installs Microsoft® SQL Server 2005 Express. Microsoft SQL Server 2005 Express can be upgraded any time after the Autodesk data management server components are installed. The SQL server can be upgraded to:

■ Microsoft SQL Server 2005 Enterprise

■ Microsoft SQL Server 2005 Workgroup

■ Microsoft SQL Server 2005 Standard

File Store

The file store and the database server work with each other. The database provides the index information for the location of files. The file store is the secure location on the server where the files are located.

Vault Manufacturing

Autodesk Vault Manufacturing, previously known as Autodesk Productstream® is a version of Vault. It stores and manages engineering information, design

data, and documents securely, shortening the design-to-manufacturing process. It helps design, engineering, and manufacturing departments collaborate and share digital prototyping information. With multi-site tools to connect workgroups across discrete locations, Vault Manufacturing takes full advantage of advanced functionality. It gives design departments the tools to:

■ Track engineering change order.

■ Manage bills of material (BOMs).

■ Promote earlier collaboration through integration to manufacturing business systems.

How Vault Works

As the previous diagrams have shown, each component can be configured to run on its own server. When configuring a server for each component, refer to the following workflow.

1 Client checks out a file.

2 Client sends a request for the file to the Vault server.

3 Vault server sends a query to the database.

4 Vault server copies the files from the file store to the client.

It is important to notice the client computer does not directly communicate with the client computer at anytime.

NOTE The option to configure remote SQL is only available with Vault Manufacturing.

Autodesk Vault Clients

A vault client is any stand-alone application or integrated add-in that connects to the Autodesk data management server to access files and perform vault operations.

An example is the Inventor add-in. When data is added to a vault using the Inventor add-in, the add-in preserves all the complex relationships that are created by assemblies, drawings, presentations, and other files.

Autodesk Vault Client

The Vault Client is a general-purpose application for interacting with a vault on the Autodesk data management server. You can browse the complete vault structure, add any file to the vault, and perform most other file-based operations, depending on your level of permission.

Autodesk Vault Add-ins for Design Applications

Add-in clients provide basic vault functions within the environment of a parent application. Add-ins maintain application-specific data relationships when adding files to a vault.

There are add-ins available for Autodesk and non-Autodesk design applications.

NOTE As a rule, if an integrated client is available for a particular application, managing files using that client minimizes loss of data, such as the assembly relationships. We recommend that you use integrated clients whenever possible.

Microsoft Office Add-in

The Microsoft Office add-in performs basic vault functions on documents, spreadsheets, and other non-CAD data within any of the Microsoft Office applications: Microsoft® Word, Excel®, and Power Point®.

Content Center

Content Center provides access to Autodesk Inventor Content Center libraries. Content Center libraries are stored on the Autodesk data management server.

License Manager Components

Autodesk Vault Manufacturing requires a license for each client connection to the Vault sever. The following section describes the components used to manage these licenses.

Network License Manager

The Network License Manager is used to configure and manage the license servers. When creating a deployment, the Installation wizard prompts you for information about the license manager, such as license server model and server name.

For more information about deploying an Autodesk product from a network location, see the Network Administrator's Guide. Click the Documentation link at the lower left corner of the Installation wizard and in the Help system.

NOTE It is recommended that you use the Network License Activation utility to obtain your license file.

Network License Activation Utility

With the Network License Activation utility, you can obtain licenses over the Internet, which saves time and effort in setting up a network licensed Autodesk product.

In addition, the utility :

■ Registers your product.

■ Provides automated support for email if you cannot obtain a license over the Internet.

■ Saves and migrates license files automatically so that you do not have to.

FLEXnet Configuration Tools

The Network License Manager uses FLEXnet® license management technology from Acresso Software. FLEXnet provides administrative tools that help to simplify management of network licenses. You can use FLEXnet tools to:

■ Monitor network license status.

■ Reset licenses lost to a system failure.

■ Troubleshoot license servers.

■ Update existing license files on the fly.

NOTE For more information about FLEXnet configuration tools see the Vault Network Licensing Guide.

SAMreport-Lite

While not part of the network installation, a version of SAMreport called SAMreport-Lite is available to help you track network license usage. With SAMreport-Lite technology from Acresso Software, you can monitor client usage for Autodesk network licensed products.

SAMreport-Lite generates usage reports in various output formats including HTML, text, and Report Interchange Format. For more information about the SAMreport-Lite features, and for instructions on installing SAMreport-Lite, see the SAMreport-Lite User's Guide.

Installation Requirements

Previous versions of Autodesk data management server installed Microsoft® SQL Desktop Edition (MSDE) by default. If an existing version of the full SQL server is detected during installation, the new Vault Server can use that SQL server. If an MSDE version of SQL is found, upgrade it to Microsoft SQL 2005 Express. If no previous version of a SQL server is detected, or if you are not connecting to an existing remote SQL instance, Microsoft® SQL Server 2005 Express is installed by default. When using SQL Express, Autodesk Vault server supports approximately ten simultaneous vault clients. Additional users can be supported using the full version of Microsoft SQL Server 2005. Purchase the full Microsoft SQL Server 2005 software separately from Microsoft® or a Microsoft reseller. Install Autodesk Vault server with the default version first, and then determine the need to upgrade to the full SQL server.

For more information about system requirements, visit *www.autodesk.com/vault* or the Autodesk® Installation online Help.

NOTE See SQL Server Upgrade if your system exceeds 10 simultaneous clients and you are currently using MSDE.

If a compatible local SQL database is detected during installation, you are prompted to migrate the data once the installation is complete.

NOTE If a database is detected that is not compatible with the new version of Autodesk server, you must remove it before the Autodesk server can be installed.

Operating System Requirements

Autodesk Vault server supports both 32-bit and 64-bit operating systems. All operating systems listed in the following table are 32-bit. Supported 64-bit operating systems are also indicated.

Operating System (32-Bit)	Ser-vice Pack	64-bit	AWS	IIS
Windows® XP Home	SP2,SP3		•	
Windows® XP Professional	SP2,SP3	•	•	•

NOTE Limited to a maximum of ten concurrent connections. Windows XP Home editions used as a data management server for more than one user are not supported

Operating System (32-Bit)	Ser-vice Pack	64-bit	AWS	IIS
Windows Vista® Ultimate	SP1	•	•	•
Windows Vista® Enterprise	SP1	•	•	•
Windows Vista® Business	SP1	•	•	•
Windows Vista® Home Premium	SP1	•	•	
Windows Vista® Home Basic	SP1	•	•	

NOTE Limited to a maximum of ten concurrent requests (data management queries). Windows Vista Home additions only allow three concurrent requests. Windows Vista Home editions used as a data management server for more than one user are not supported.

Operating System (32-Bit)	Service Pack	64-bit	AWS	IIS
Windows server™ 2003 Server Standard	SP2	•		•
Windows server™ 2003 Server Standard R2	SP2	•		•
Windows server™ 2003 Enterprise	SP2	•		•
Windows server™ 2003 Enterprise R2	SP2	•		•
Windows server™ 2003 Small Business Edition	SP2			•
Windows server™ 2003 Small Business Edition R2	SP2			•
Windows server™ 2008 Server Standard		•		•
Windows server™ 2008 Server Enterprise		•		•

NOTE For Best performance on servers, we recommend a dedicated member (non-domain controller) server

The tables indicate the operating systems that support Autodesk Web Server (AWS) and Microsoft Internet Information Services (IIS).

For data management client add-ins, the system requirements are that of the design application.

Hardware Requirements

The following are minimum, recommended, and preferred requirements for running Autodesk Vault server. If possible, meet the *preferred* requirements.

	Disk Space	Memory	Processor
Minimum	60 GB	1 GB	Intel® Pentium® 4, Intel® Xeon® AMD Athlon® 64 / Opteron, 2.0GHz
Recommended	120 GB	2 GB	Intel Pentium 4, Intel Xeon AMD Athlon 64 / Opteron, 3.0GHz

	Disk Space	Memory	Processor
Preferred	500 GB	4 GB	Intel Pentium 4, Intel Xeon AMD Athlon 64 / Opteron, 3.0GHz

Other Requirements

- Either a CD or DVD drive is required, depending on your software media.

- Operating Systems installation media.

- Internet connection for Web downloads and Subscription Aware access.

- Microsoft Internet Explorer® 6 SP1 or later.

- We recommend settings that allow Microsoft Windows to manage virtual memory as needed. Keep at least twice as much free hard disk space as system memory.

Plan the Vault Environment

3

A Vault implementation can be as simple as installing all components on a single computer, or as complex as installing components on several computers in different locations. The more complex the Implementation, the more information there is to consider. This chapter provides an outline of information to consider to make the best decisions for your Vault Implementation.

Information Check List

When Implementing Vault, consider:

- Number of users.

- The number of servers.

- The hardware specifications for all the servers.

- The Operating Systems for all servers.

- All firewalls installed on servers.

- List of other applications running on all servers.

- The version of Microsoft® SQL is going to be used.

- How frequently do users access information in the Vault?

- The latency between all servers.

Use the Information

Every Vault implementation is unique, the following sections help you determine the best configuration for your needs.

Number of Users

Knowing the number of users helps prevent access problems and slow response times. For example, if you have more then ten concurrent users, use Windows® Server 2003 or 2008. For more than 25 user, consider upgrading to the full standard edition or enterprise edition of SQL. Microsoft SQL express allows only 25 concurrent connections. When implementing Vault for a single user, you can load all the components on a single computer.

Number of Servers

When determining the number of servers keep in mind how information flows from the client computer to the Vault server to the SQL server and back. (See How Vault Works).

Server Hardware Specifications

For the recommended and preferred system requirements see Hardware Requirements on page 15. Vault is more processor intensive than memory intensive like some other applications. Avoid loading Vault components on servers that already have a high CPU usage.

Server Operating Systems

Vault Server can be loaded on several different operating systems. When deciding to use a non-server operating system, consider the limitations.

■ Windows® XP Home Edition or Windows Vista® Home Edition are not supported for Vault Manufacturing.

■ Windows XP has a limit of ten concurrent users.

■ Windows Vista has a limit of ten concurrent users and three concurrent web service requests.

Firewalls

Firewalls can block incoming requests. During the Vault Server installation, the server is checked for known firewalls. Fire walls can require that you configure them to allow the Vault Server to communicate correctly. Some

system protection software can include firewalls. Check these tools for the existence of firewalls.

Applications on Servers

Vault can be processor intensive. Loading the Vault Server on a server with other processor intensive applications can cause Vault to run slower than expected.

Microsoft SQL Version

Vault 2010 requires a minimum of Microsoft SQL 2005 Express. If necessary, upgrade your previous version of Vault with MSDE version of Microsoft SQL or Microsoft SQL 2000. See Installation Requirements on page 13.

SQL Express has a limitation of 25 concurrent users and a 4-GB size restriction. If your Vault implementation requires more capacity, set up the Vault server using the Standard or Enterprise versions of SQL.

Access Frequency

How often the Vault Server is accessed affects the server performance. For example, a Vault implementation with 50 users and one or two users checking out one or two files a day does not tax the server much. Using the same configuration with 35 of users accessing the vault every 10 minutes, Vault Server performance differs, running at the non-recommended requirements.

Network Speed

All though network speed is commonly equated to latency, you also consider bandwidth and throughput. Network speed is an important factor to consider, when trying to get the best performance for your Vault implementation. Without running tests to measure your latency, bandwidth, and throughput between all the servers, you can gain an idea of how fast the connections are. Copy a few large files from one server to another. When performing this test, copy from Server A to Server B and then copy from server B to Server A. Data traveling from one server to another does not always take the same route when traveling back.

Install Vault

Build the Vault Environment

4

This chapter discusses installing the Vault server on several different operating systems.

Options for Installing Vault Manufacturing

If you are installing the server components for Vault Manufacturing, you have several options. Vault Manufacturing supports Multi-Site replication with a central remote database. Vault Manufacturing also allows a single site to implement Vault with a dedicated database server.

NOTE For more information on Vault components see Understand Autodesk Vault on page 7. For more information on Vault environments see Plan the Vault Environment on page 17.

Install FLEXnet for Vault Manufacturing

NOTE If you are installing FLEXnet on Windows Vista or Windows Server 2008 IPv6 is enabled by default. Refer to Autodesk TS1101507 for information on using the Autodesk License Manager with IPv6.

Vault Manufacturing 2010 has added a licensing feature. The new licensing uses the Autodesk® Licensing Manager used by other Autodesk products. The installation and configuration of the license manager is like other Autodesk products.

If you are installing Vault server and not Vault Manufacturing server, you do not install or configure the network licensing manager.

NOTE The license server does not have to be the same server as the Vault server. If a different server is used, choose the configure button when installing the Vault server to select the server to use as the license manager.

How to Install the Network License Manager

The Network License Manager is used to configure and manage the license servers.

Install your Network License Manager

1 In the Autodesk Installation wizard, click Install Tools and Utilities.

2 On the Select the Products to Install page, select Autodesk Network License Manager and then click Next.

3 Review the Autodesk software license agreement for your country or region. Accept this agreement to proceed with the installation. Choose your country or region, click I Accept, and then click Next.

NOTE If you do not agree to the terms of the license and want to terminate the installation, click Cancel.

4 On the Review - Configure - Install page, review your product selection and the current settings. If you do not want to change anything, click Install. If you want to change the install type or installation path, click Configure.

5 On the Select the Installation Type page, select Typical or Custom. Accept the default installation path (*C:\Program Files\Autodesk Network License Manager*), or Browse to specify a different path. If you enter a path that does not exist, a new folder is created using the name and location you provide. Click Next.

WARNING Do not install the Network License Manager on a remote drive. When you install the Network License Manager files, provide a path to a local drive. Specify the drive letter; the universal naming convention (UNC) is not permitted.

6 On the Configuration Complete page, click Configuration Complete to return to the confirmation page.

7 On the Review - Configure - Install page, click Install.

8 When the Installation Complete page displays, click Finish.

Install and Use the Network License Activation Utility

With the Network License Activation utility, you can obtain licenses over the Internet. In addition, you can register your product, get automated support by email if you cannot obtain a license over the Internet, and save and migrate license files automatically.

Install your Network License Activation utility

1 In the Autodesk Installation wizard, click Install Tools and Utilities.

> **NOTE** Each installation of the Network License Activation utility is product specific. If you have more than one Autodesk product and you want to install the Network License Activation utility on all of them, install it once for each product.

2 On the Select the Products to Install page, select Autodesk Network License Activation utility and click Next.

3 Review the Autodesk software license agreement for your country or region. Accept this agreement to proceed with the installation. Choose your country or region. Click I Accept, and then click Next.

> **NOTE** If you do not agree to the terms of the license and want to terminate the installation, click Cancel.

4 On the Review - Configure - Install page, review your product selection and the current settings. If you do not want to change anything, click Install.

If you want to change the install type or installation path, click Configure.

5 On the Select the Installation Type page, select Typical or Custom. Accept the default installation path (*C:\Program Files\Autodesk Network License Manager\Network License Activation Utility*), or Browse to specify a different path. If you enter a path that does not exist, a new folder is created using the name and location you provide. Click Next.

6 On the Configuration Complete page, click Configuration Complete to return to the confirmation page.

7 On the Review - Configure - Install page, click Install.

8 When the Installation Complete page displays, click Finish.

Use your Network License Activation utility (online request)

1 Do one of the following:

- (Windows® XP/Windows Server 2003) Click Start ➤ Programs ➤ Autodesk ➤ Network License Manager ➤ *[Autodesk Product]* Network License Activation Utility.

- (Windows Vista®/Windows Server 2008) Click Start ➤ All Programs ➤ Autodesk ➤ Network License Manager ➤ Network License Activation Utility.

2 On the Obtain a Network License page, make sure Direct Connect (over the Internet) is active, enter your product key, and then click Next.

3 On the Server Information page, enter the following data:

- The product serial number

  NOTE If you are modifying an existing license file or obtaining a new license for an existing product, your previously entered information can be displayed. Make sure that the serial number that is displayed is the one you want to license. If it is not, enter the correct product serial number.

- The license server model
  For more information about each license server model, click the ? button.

- The server host name
  If you do not know the host name, enter the following in command prompt to locate the name of each server you plan to use.

  NOTE In a Distributed server model, you are limited to a maximum of 20 servers. Once the 20 server limit has been reached, the Add button disappears.

- The host ID, for each server host name you entered
  If you cannot find the host ID, click Lookup to have the utility automatically locate the host ID for the server or servers.

NOTE If your server has more than one network adapter, select the one that corresponds to a physical network adapter. To determine which adapters are physical, enter **ipconfig/all** at a Windows command prompt and view the Description field above each physical address. If there is more than one physical network adapter, you can use any one of them that was listed when you ran ipconfig /all. Logical devices such as VPN adapters, PPP adapters, and modems can be listed but are not usable for licensing.

- The number of seats for each license server
  If you choose a Distributed server model, the Seats box is displayed. Enter the number of seats for each license server.

  Click Next.

4 On the Confirm Server Information page, review the server information you entered, and click Next.

5 On the Log In page, enter your User ID and Password and then click Log In.

   If you do not have a user account, click the Create a User ID Now link and follow the instructions to create a user account.

6 On the Choose Account page, select an account and click Next.

7 On the License(s) Received page, in the Save License File for [*computer name*] field, enter the location where you want to save your license file, or click Browse to navigate to the location.

NOTE It is recommended that you save your license file to *C:\Program Files\Autodesk Network License Manager\License*.

The content of this page differs depending on which server model you selected.

Click Next.

8 On the License Activation Successful page, click Print to save a printed copy of the license information. Or, click Done to complete the transaction and exit the Network Activation utility.

Use your Network License Activation utility (offline request)

1 Do one of the following:

- (Windows XP/Windows Server 2003) Click Start ➤ Programs ➤ Autodesk ➤ Network License Manager ➤ Network License Activation Utility.

- (Windows Vista/Windows Server 2008) Click Start ➤ All Programs ➤ Autodesk ➤ Network License Manager ➤ Network License Activation Utility.

2 On the Obtain a Network License page, click email, fax, phone or send request by postal mail, enter your product key, and then click Next.

3 On the Server Information page, enter the following data:

- The product serial number

  NOTE If you are modifying an existing license file or obtaining a new license for an existing product, your previously entered information can be displayed. Make sure that the serial number that is displayed is the one you want to license. If it is not, enter the correct product serial number.

- The license server model
  For more information about each license server model, click the ? button.

- The server host name
  If you do not know the host name, enter the following in command prompt to locate the name of each server you plan to use:

  ```
  <prompt> lmutil lmhostid -hostname
  ```

  NOTE In a Distributed server model, you are limited to a maximum of 20 servers. Once the 20 server limit has been reached, the Add button disappears.

- The host ID, for each server host name you entered
  (Windows) If you cannot find the host ID, click Lookup to have the utility automatically locate the host ID for the server or servers.

> **NOTE** If your server has more than one network adapter, select the one
> that corresponds to a physical network adapter. To determine which
> adapters are physical, enter **ipconfig /all** at a Windows command prompt
> and view the Description field above each physical address. If there is
> more than one physical network adapter, you can use any one of them
> that was listed when you ran ipconfig /all. Logical devices such as VPN
> adapters, PPP adapters, and modems can be listed, but are not usable for
> licensing.

- The number of seats for each license server
  If you choose a Distributed server model, the Seats box is displayed.
  Enter the number of seats for each license server.

  Click Next.

4 On the Confirm Server Information page, review the server information
  you entered, and click Next.

5 On the Product Registration page, specify the following:
  - Whether the product is registered to a company or individual.

  - The country or region where the product is used.

  - If the product is an upgrade. If it is, you also need the serial number
    of the previous product.

  Click Next.

6 Enter your personalization data on the Customer Information page and
  choose how you would like to receive your activation code - Email, Fax,
  or Postal mail. Click Next.

7 Review your personalization data on the Confirm Information page and
  choose the method to submit your request. Send your request by email,
  fax, or phone.

  If you choose Send my request by email, an email message displays for
  you to complete. If you choose to forward your request by fax or phone,
  the Contact Autodesk page displays with pertinent contact information.

  Your activation code is sent by the method you specified on the Customer
  Information page.

8 If you want to print a copy of your registration information, select the
  Select Open Activation Request Form. When you are finished, click Close.

NOTE It is recommended that you save your license file to the location where you installed the Network License Manager.

Configure a License Server

You configure a license server so that you can manage the Autodesk product licenses you received when you ran the Network License Activation utility. Configure the license server with the *lmtools.exe* utility.

Configure your license server

Log in with Administrator rights when working with the LMTOOLS utility.

1 Do one of the following:
   ■ (Windows XP / Windows Server 2003) Click Start ➤ Programs ➤ Autodesk ➤ Network License Manager ➤ LMTOOLS.

   ■ (Windows Vista Windows Server 2008) Double-click the LMTOOLS icon on the desktop.

2 In the LMTOOLS program, on the Service/License File tab, make sure the Configure Using Services option is active.

3 Click the Config Services tab.

4 In the Service Name list, select the service name you want to use to manage licenses.

   By default, the service name is *Flexlm Service 1*. If FLEXnet® is managing other software on your computer in addition to Autodesk, you can change the service name to avoid confusion. For example, you can rename *Flexlm Service 1* to *Autodesk Server1.*

   NOTE If you have more than one software vendor using FLEXnet® for license management, the Service Name list contains more than one option. Make sure that only one Autodesk service is listed.

5 In the Path to Lmgrd.exe File field, enter the path to the Network License Manager daemon (*lmgrd.exe*), or click Browse to locate the file.

   By default, this daemon is installed in the *C:\Program Files\Autodesk Network License Manager* folder.

6 In the Path to the License File box, enter the path to your license file, or click Browse to locate the file.

This path is to the license file obtained by the Network License Activation utility or the location where you placed the license file if you obtained it offline.

7 In the Path to the Debug Log File box, enter a path to create a debug log, or click Browse to locate an existing log file.

It is recommended that you save to the *C:\Program Files\Autodesk Network License Manager* folder. The log file must have a *.log* file extension. For new log files, enter the *.log* extension manually.

8 To run *lmgrd.exe* as a service, select Use Services.

9 To start *lmgrd.exe* automatically when the system starts, select Start Server at Power Up.

10 Click Save Service to save the new configuration under the service name you selected in step 4. Click Yes when prompted if you would like to save the settings to the service.

11 Click the Start/Stop/Reread tab and do one of the following:

■ If a service has not yet been defined for Autodesk, click Start Server to start the license server.

■ If a service for Autodesk is already defined and running, click Re Read License File to refresh the Network License Manager with any changes made to the license file or Options file.

The license server starts running and is ready to respond to client requests.

12 Close *lmtools.exe*.

Install and Use SAMreport-Lite (Optional)

SAMreport-Lite is a reporting tool that helps you track network license usage. With SAMreport-Lite technology from Acresso™ Software, you can monitor client usage for Autodesk network licensed products.

To learn more about installing and using SAMreport-Lite, see the *SAMreport-Lite User's Guide*. Click the Documentation link at the lower left corner of the Installation wizard, or see the Help System in the Autodesk product.

Install Vault Server

This section gives step by step instructions for setting up the Vault server on Windows XP, Windows Vista,Windows Server 2003, and Windows Server 2008.

NOTE ASP .NET v2.0 (32-bit) must be installed and configured properly to use Vault server on a 64-bit Windows operating system. Refer to TS1078626

Pre-Install Microsoft SQL

If it is unable to find an installed version of Microsoft SQL, Autodesk Vault Server installs the Microsoft SQL 2005 Express Edition. You can install Microsoft SQL 2005 Standard Edition or Microsoft SQL 2005 Enterprise Edition before installing the Vault server so that you do not have to perform the upgrade at a later time.

NOTE This installation process possibly requires the server to reboot multiple times. Please be sure that you are able to perform the necessary reboots. Also, if you use a custom password for the SQL SA account, specify this password during the installation of the Vault server.

Use the following steps to install Microsoft SQL with an Autodesk Vault Instance.

1 Start the installation process for Microsoft SQL Server.

2 The installation process installs any necessary prerequisites and begins running the pre-installation checks. Note any errors and take the necessary corrective actions before continuing

3 In the Components to Install dialog box, select SQL Server Database Services. To modify the installation path, click Advanced.

4 In the Feature Selection dialog box, you can expand the Database Services options and change the location of the data files directory.

5 In the Instance Name dialog box, enter the name of the instances as *AutodeskVault.*

    NOTE If you install SQL without using this instance name, the ADMS installation creates its own instance of SQL Server called AutodeskVault.

In the Service Account dialog box, specify the Local System account. Or, if you plan to perform backups and restores to remote locations, specify a Domain User account for the SQL Server.

6 In the Authentication Mode dialog box, select Mixed Mode authentication and set the SA password. The default password used in during a default installation is "AutodeskVault@26200".

Set Up Remote SQL

Vault Manufacturing allows the Vault environment to be configured to use a remote SQL database. This database resides on a dedicated server which a single site can use to increase performance. Alternatively, it can be used for a multi-site replicated Vault environment.

Configure Microsoft SQL Server for Remote Access

1 On the computer on which SQL is installed, click
Start ➤ Programs ➤ Microsoft® SQL Server 2005 ➤ Configuration
Tools ➤ SQL Server Configuration Manager.

2 In the SQL Server Configuration Manager dialog box, expand SQL Server 2005 Network Configuration and then select Protocols for AUTODESKVAULT.

3 Right-click TCP/IP in the protocols list and then select Enable.
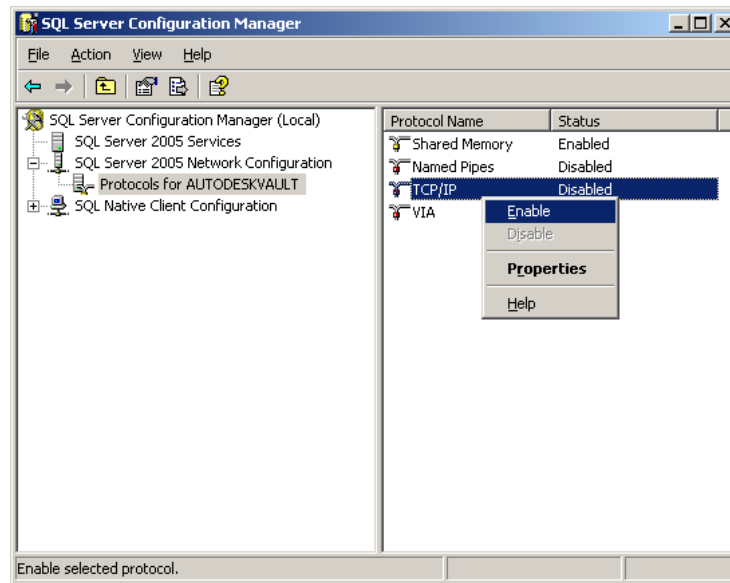
4 Close SQL Server Configuration Manager.

5 On the computer on which SQL is installed, click
Start ➤ Programs ➤ Microsoft SQL Server 2005 ➤ Configuration
Tools ➤ SQL Server Surface Area Configuration.

6 In the SQL Server Surface Area Configuration dialog box, select Surface
Area Configuration for Services and Connections.

7 In the Surface Area Configuration for Services and Connections dialog
box, expand AUTODESKVAULT ➤ Database Engine and then select
Remote Connections. Verify that Local and Remote Connections and
Using TCP/IP only are turned on.
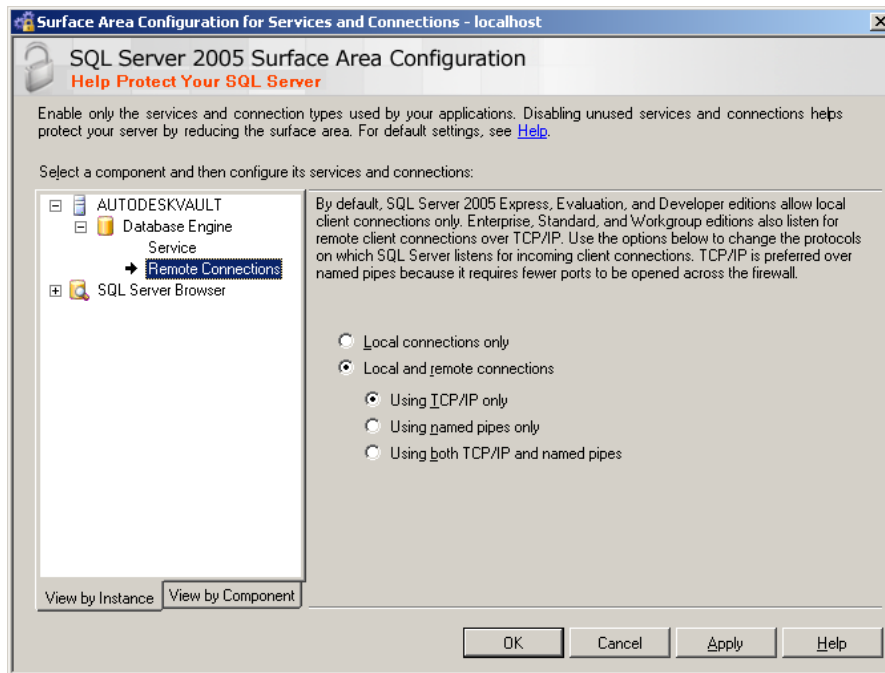
8 Click OK.

9 From the Windows® Start menu, select Settings ➤ Control Panel.

10 In the Control Panel, double-click Administrative Tools.

11 In the Administrative Tools window, double-click Computer Management.

12 In the Computer Management window, expand Services and Applications and then select Services.

13 Locate the SQL Server (AUTODESKVAULT) service. Right-click the service and then select Restart.
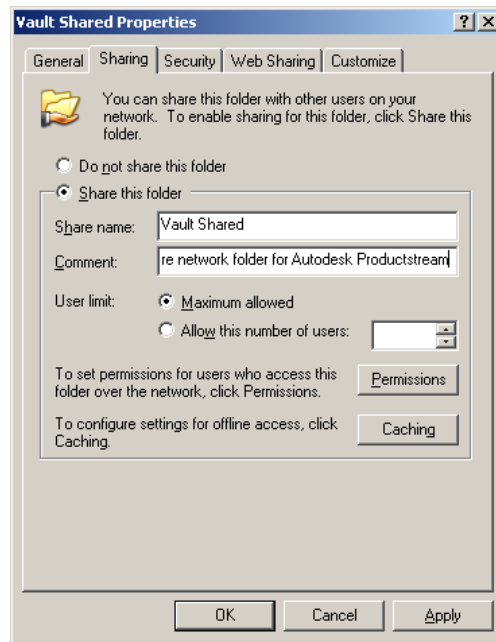
14 Locate the SQL Sever Browser service. Right-click the service and then select Properties.

15 In the SQL Server Browser Properties (Local Computer) dialog box, change the startup type to be Automatic and then click OK.

16 Right-click SQL Server Browser and then select Start.

Create Shared Network Folders

In a multi-site environment, one site can host the AUTODESKVAULT SQL instance. The additional sites access that SQL instance remotely, or all sites can access the same SQL instance remotely. Before configuring the additional sites to access the SQL instance, a shared network folder must be created.

The shared network folder is required as a transition area between the SQL instance and the Autodesk Vault server. The shared network folder can be located on any computer that is accessible by both the data management server and SQL. The space requirement for the shared folder is equal to the total of all database files.

Both the user account under which the Autodesk Vault server is running as well as the user account under which the SQL instance is operating need full access to the shared network folder.

1 Choose a network location and create a folder.

2 Right-click the new folder and then select Sharing and Security.

3 In the Properties dialog box, click Share this folder.

4 Enter a name for the shared folder.

5 In the Comment field, enter *Shared network folder for Autodesk Productstream*.
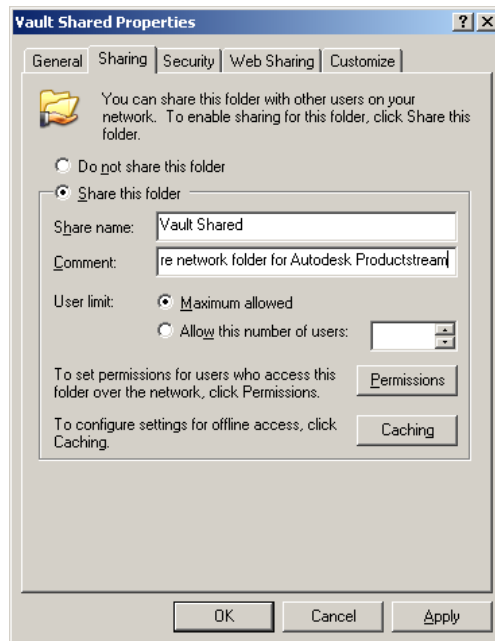
6 Click Permissions.

7 In the Permissions dialog box, click Add. Add the user account under which ADMS is running. By default, this account is a local administrator account on the ADMS server called Autodesk Vault.

8 Add the Windows account under which the SQL Server service is running. The default is Network Service.

9 Give both accounts Full Control.

10 In the Permissions dialog box, click OK.

11 In the Properties dialog box, click OK.

Windows XP

This section explains the recommended steps to install the Autodesk Vault server on a Windows XP workstation. The installation can be summarized in four major steps.

1 Choose the data management server hardware.

2 Load Internet Information Services (IIS)

3 Configure Windows XP SP2 Firewall

4 Run the data management server installation.

NOTE If 10 or more users need access to the vault, we recommended that you install the Autodesk Vault server on Windows Server 2003 or 2008

What You Need

You need the following items before you start.

■ Autodesk Vault installation media

■ Windows XP installation media

■ Administrator rights to the computer your installing the data management server on.

Installation

After choosing the data management server hardware. (see Hardware Requirements for recommended specifications), load Internet Information Services on this system

1 From the Windows Start menu, select Programs ➤ Control Panel

2 From the Control Panel, double-click Add or Remove Programs

3 On the left side of the Add or Remove Programs dialog box, select the option to Add/Remove Windows Components

4 Check Internet Information Services (IIS) and click the Next button. You can possibly be prompted for your Windows XP CD.
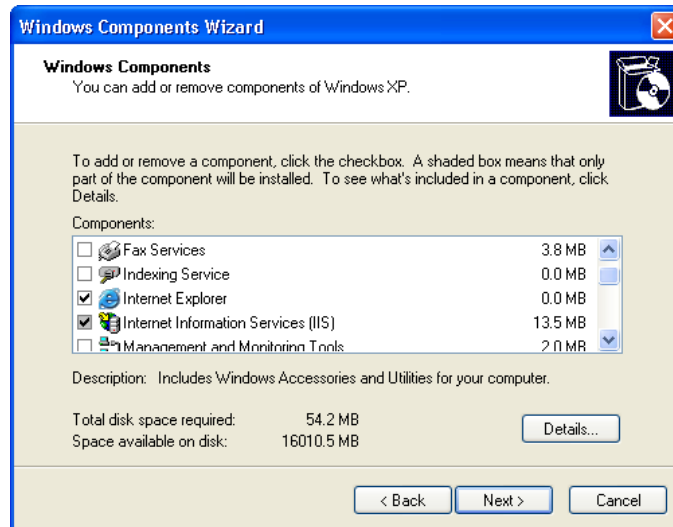
NOTE If IIS is installed and is not being used for any application uninstalling IIS and reinstalling it ensures that the default settings are set

Now that IIS is installed, configure the firewall that is built into Windows XP.

1 From the Windows Start menu, select Programs ➤ Control Panel

2 From the Control Panel, double click Security Center

3 If the Firewall strip says on then click the firewall icon at the bottom of the dialog box.

4 In the Windows Firewall dialog box, click the Exceptions tab, and then click Add Port
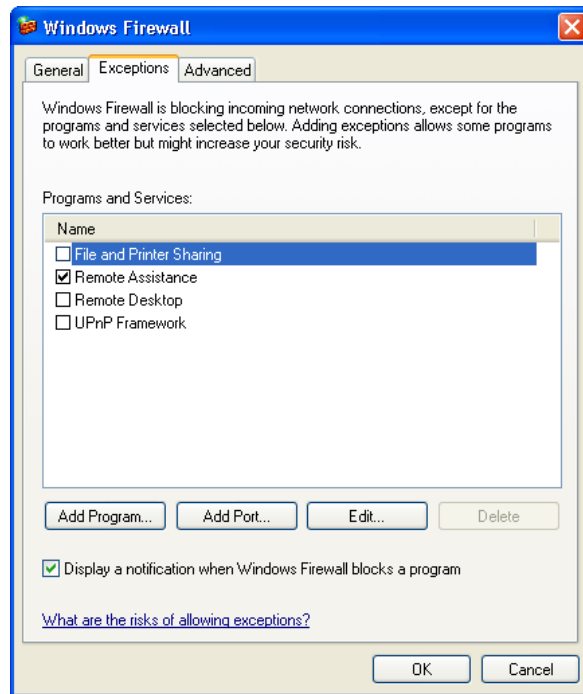
5 In the Add a Port dialog box, Enter the following information.

```
Name: Vault
```

```
Port: 80
```

Ensure TCP is checked
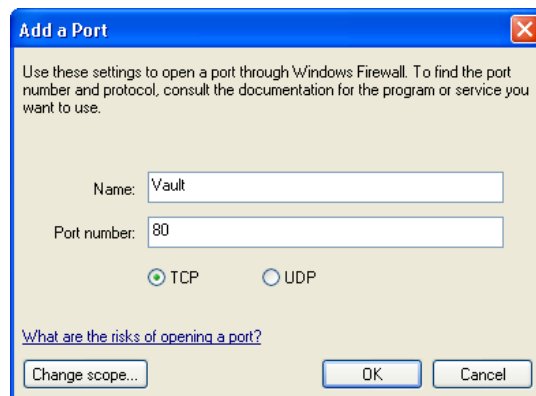
6 Click OK

NOTE If you are not running Windows XP Firewall you can skip this step.

Once the firewall is configured to allow Vault to communicate properly, run the installation from the Autodesk Vault server media.

1 Insert the Installation media and double-click the setup.exe

2 Choose Install Products.

3 Choose Autodesk Vault 2009 (Server).

4 Accept the License Agreement.

5 Fill in your user information.

6 The configuration screen allows you to change the location of the SQL installation. You can change the SQL database location, and the location for the Autodesk Vault server console application.

> **NOTE** We recommend that you take the default locations unless you are setting up a remote site. For more information on Multi-Site setups see Setting Up Multiple Site Environments

7 Click Install

8 The installation performs a series of installation pre-checks. If your system does not pass the installation prechecks a dialog box displays failures and warnings. Use the installation help and information in Troubleshooting

Windows Vista

This section explains the recommended steps to install the Autodesk Vault server on a Windows Vista workstation. The installation can be summarized in four major steps.

1   Choose the data management server hardware.

2   Load and configure Internet Information Services (IIS).

3   Configure Windows Vista Firewall.

4   Run the data management server installation.

What You Need

You need the following items before you start.

■   Autodesk Vault installation media

■   Windows Vista installation media

■   Administrator rights to the computer your installing the data management server on.

Installation

After choosing the data management server hardware (see Hardware Requirements for recommended specifications), load Internet Information Services on this system

1   From the Windows Start menu, select Programs ➤ Control Panel

2   From the Control Panel, double click Programs and Features

3   On the left side of the Programs and Features dialog box, select the option to Turn Windows Features on or off

4   Check Internet Information Services

5   Expand Internet Information Services ➤ Web Management Tools ➤ IIS six Management Compatibility.

6   Turn on the check box for IIS Metabase and IIS 6 configuration compatibility.

7 Expand Internet Information Services ➤ World Wide Web Services ➤ Application Development Features.

8 Turn on the check box for ASP .NET. Three other settings are automatically turned on: .NET Extensibility, ISAPI Extensions, and ISAPI Filters
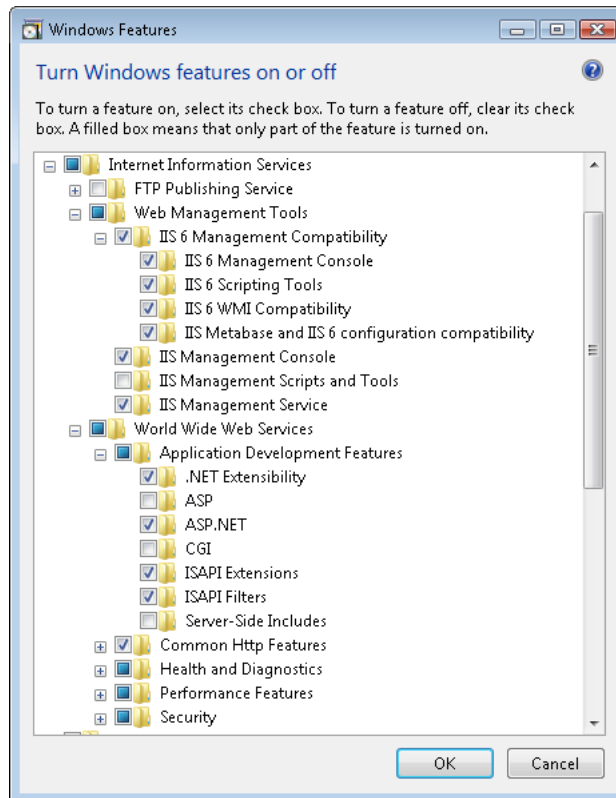
NOTE If IIS is installed and is not being used for any application uninstalling IIS and reinstalling it ensures that the default settings are set. If IIS is not installed you can allow the Vault server installer to perform this installation.
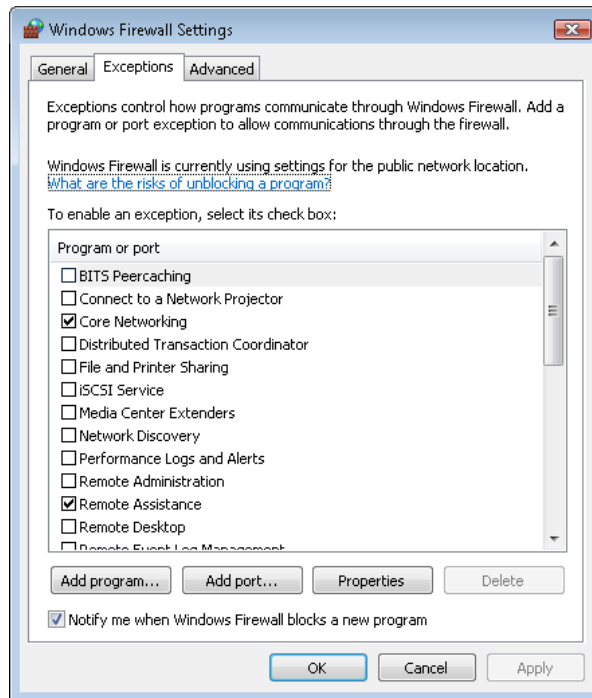
Now that IIS is installed, configure the firewall that is built into Windows Vista, if necessary.

1 On the Windows Start menu, select Programs ➤ Control Panel.

2 On the Control Panel, double click Windows Firewall.

3 If the Firewall strip says that "Windows Firewall is helping to protect your computer," then click Change settings.
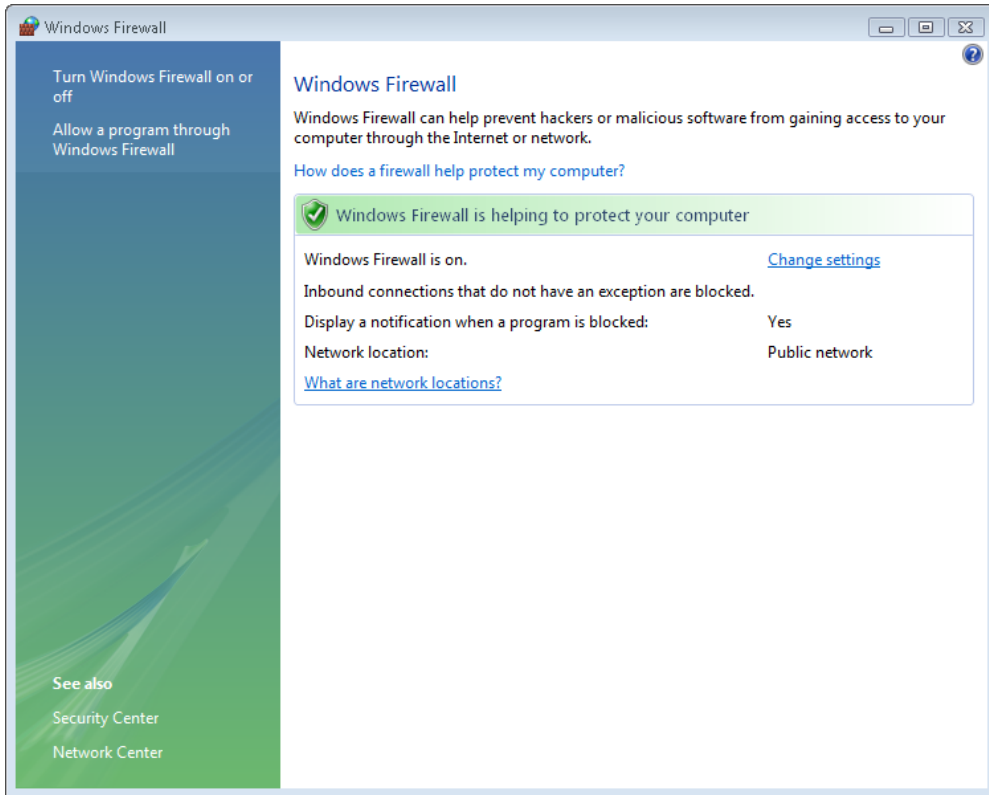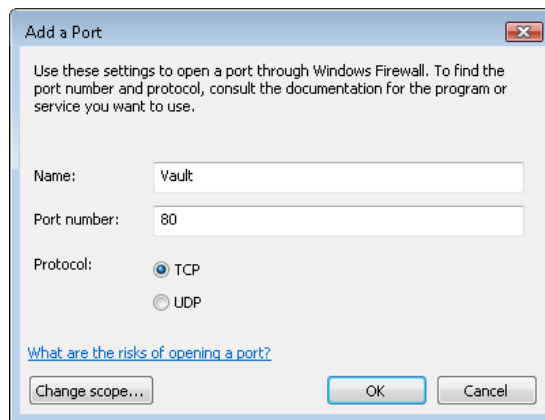
**4** In the Windows Firewall dialog box, click the Exceptions tab, and then click Add Port

5 In the Add a Port dialog box, Enter the following information.

```
Name: VaultPort: 80
```

Ensure TCP is checked

6 Click OK

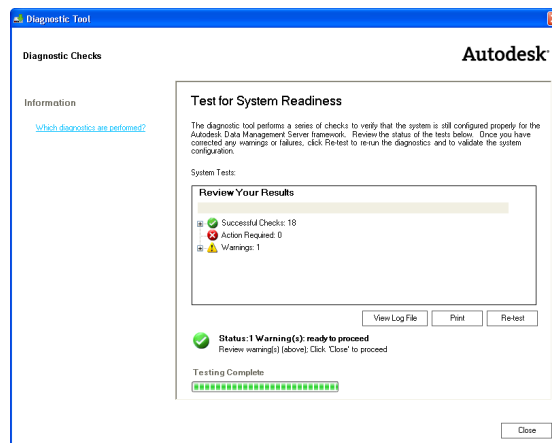**NOTE** If you are not running Windows Vista Firewall you can skip this step.

Once the firewall is configured to allow Vault to communicate properly, run the installation from the Autodesk VaultAutodesk Vault server media.

1 Insert the Installation media and double-click the *setup.exe.*

2 Choose Install Products.

3 Choose Autodesk Vault 2010 (Server).

4 Accept the License Agreement.

5 Fill in your user information.

6 The configuration screen allows you to change the location of the SQL installation. You can change the SQL database location, and the location for the Autodesk Vault server console application.

NOTE We recommend that you take the default locations unless you are setting up a remote site. For more information on Multi-Site setups see Setting Up Multiple Site Environments.

---

7 Click Install

8 The installation performs a series of installation pre-checks. If your system does not pass the installation prechecks a dialog box displays failures and warnings. Use the installation help and information in Troubleshooting.

Windows Server 2003

This section explains the recommended steps to install the Autodesk Vault server on a Windows server 2003. The installation can be summarized in three major steps.

1 Choose the data management server hardware.

2 Load Internet Information Services (IIS) and ASP .NET.

3 Run the data management server installation.

What You Need

You need the following items before you start.

■ Autodesk Vault installation media

■ Windows 2003 Server installation media

■ Administrator rights to the computer your installing the data management server on.

Installation

After choosing the data management server hardware. (see Hardware Requirements for recommended specifications), load Internet Information Services on this system

1 From the Windows Start menu, select Programs ➤ Control Panel ➤ Add or Remove Programs

2 On the left side of the Add or Remove Programs dialog box, select the option to Add/Remove Windows Components

3 Select and check Application Services and click the Details button

4 Check the ASP .NET option. This action causes the boxes for Enable network COM+ access and Internet Information Services to be checked as well.

Application Server

To add or remove a component, click the check box. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.

Subcomponents of Application Server:

☐ 🏛 Application Server Console	0.0 MB
☑ 🔹 ASP.NET	0.0 MB
☑ 🌐 Enable network COM+ access	0.0 MB
☐ 📋 Enable network DTC access	0.0 MB
☑ 🌐 Internet Information Services (IIS)	26.9 MB
☐ ✉ Message Queuing	6.5 MB

Description: Microsoft Management Console Snap-in for the Application Server administrative interface.

Total disk space required: 3.1 MB
Space available on disk: 97844.9 MB

Details...

OK   Cancel

5 Next button. You can possibly be prompted for your Windows server 2003 CD.

NOTE If IIS is installed and is not being used for any application uninstalling IIS and reinstalling it ensures that the default settings are set

Once the IIS is configured, run the installation from the Autodesk Vault server media.

1 Insert the Installation media and double-click the setup.exe

2 Choose Install Products.

3 Choose Autodesk Vault 2009 (Server).

4 Accept the License Agreement.

5 Fill in your user information.

6 The configuration screen allows you to change the location of the SQL installation. You can change the SQL database location, and the location for the Autodesk Vault server console application.We

NOTE recommend that you take the default locations unless you are setting up a remote site. For more information on Multi-Site setups see Setting Up Multiple Site Environments

7 Click Install

8 The installation performs a series of installation pre-checks. If your system does not pass the installation prechecks, a dialog box displays failures and warnings. Use the installation help and information in Troubleshooting
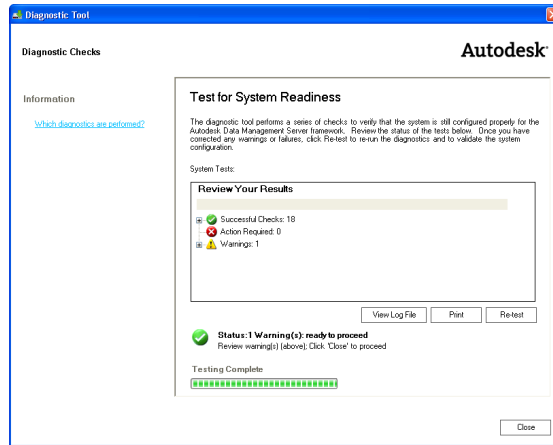
Windows Server 2008

This section explains the recommended steps to install the Autodesk Vault server on a Windows Server 2008. The installation can be summarized in four major steps.

1 Choose the data management server hardware.

2 Load and configure Internet Information Services (IIS)

3 Configure Windows Vista Firewall

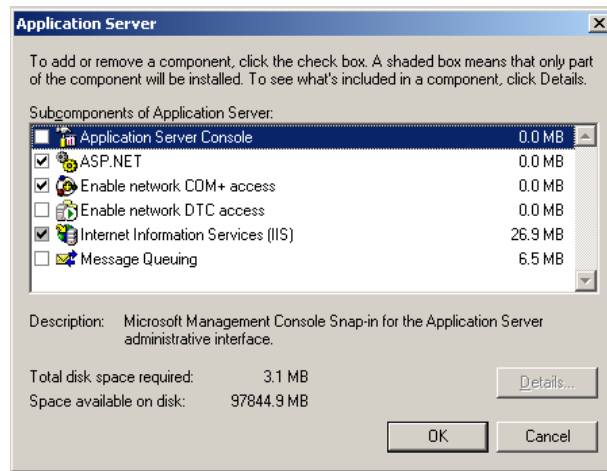**4** Run the data management server installation.

What You Need

You need the following items before you start.

■ Autodesk Vault installation media

■ WindowsServer 2008 installation media

- Administrator rights to the computer your installing the data management server on.

Installation

After choosing the data management server hardware. (see Hardware Requirements for recommended specifications), load Internet Information Services on this system

1 On the Windows Start menu, select Programs ➤ Control Panel

2 On the Control Panel, double click Programs and Features

3 On the left side of the Programs and Features dialog box, select the option to Turn Windows Features on or off

4 Check Internet Information Services

5 Expand Internet Information Services ➤ Web Management Tools ➤ IIS 6 Management Compatibility.

6 Turn on the check box for IIS Metabase and IIS 6 configuration compatibility.

7 Expand Internet Information Services ➤ World Wide Web Services ➤ Application Development Features.

8 Turn on the check box for ASP .NET. Three other settings are automatically turned on: .NET Extensibility, ISAPI Extensions, and ISAPI Filters
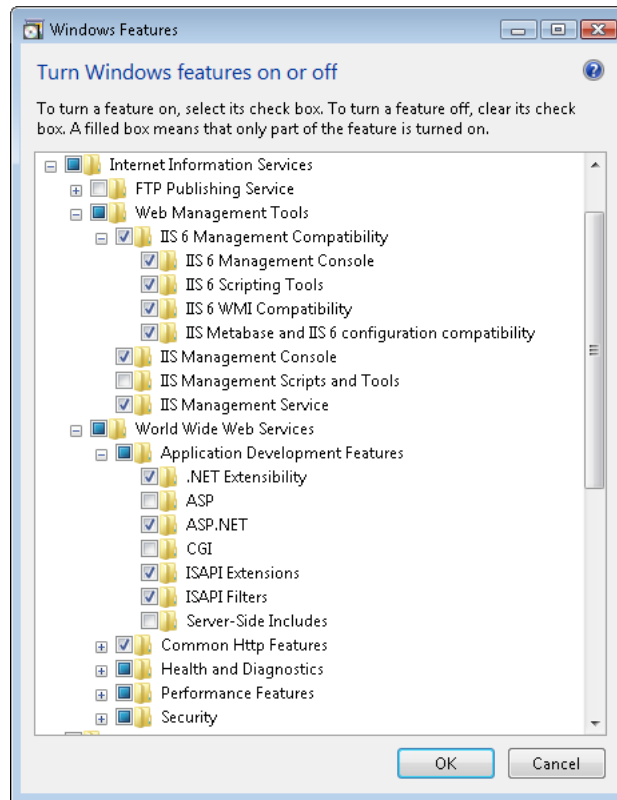
NOTE If IIS is installed and is not being used for any application uninstalling IIS and reinstalling it ensures that the default settings are set

Now that IIS is installed you can configure the firewall that is built into Windows Server 2008, if necessary.

1 On the Windows Start menu, select Programs ➤ Control Panel

2 On the Control Panel, double click Windows Firewall

3 If the Firewall strip says "Windows Firewall is helping to protect your computer," then click Change settings.

4 In the Windows Firewall dialog box, click the Exceptions tab, and then click Add Port

5 In the Add a Port dialog box, enter the following information.

```
Name: Vaultport: 80
```

Ensure TCP is checked

6 Click OK

Once the firewall is configured to allow Vault to communicate properly, run the installation from the Autodesk Vault server media.

1 Insert the Installation media and double-click the *setup.exe*

2 Choose Install Products.

3 Choose Autodesk Vault 2010 (Server).

4 Accept the License Agreement.

5 Fill in your user information.

6 The configuration screen allows you to change the location of the SQL installation. You can change the SQL database location, and the location for the Autodesk Vault server console application.

> **NOTE** We recommend that you take the default locations unless you are setting up a remote site. For more information on Multi-Site setups see Setting Up Multiple Site Environments

7 Click Install

8 The installation performs a series of installation pre-checks. If your system does not pass the installation prechecks, a dialog box displays failures and warnings. Use the installation help and information in Troubleshooting

Upgrading Vault Server

One of the first steps to a successful deployment is to assess the needs of your your organization and the ability to move to the next version. This section provides information on some of the major areas to consider before moving to a new release.

Testing

After assessing the hardware and software, determine whether you need a test environment. If you have unanswered questions, or determine that the data management system is critical to your business, consider setting up a test environment before upgrading to the next release of Autodesk Vault or Autodesk Productstream.

NOTE Using a second "test environment" is a best practice.

Test Environment

If possible, perform a test upgrade of the Vault server on a machine that is like the one that is currently hosting the software. A test upgrade provides confidence that the backup is valid and helps you identify any potential pitfalls without impacting your production environment. It also helps you to

determine compatibility with other applications and environment settings that your company uses.

Test Machine Settings	Benefits
Similar CPU, memory, disk space	Provides an estimate of how long the migration can take. Gives insight into migration settings, such as time-out values to be changed. Shows other configuration settings that can require changes.
Database	Test machines that need access to a vault that is 2 GB or more also need a similar version of full Microsoft® SQL server installed.
Other applications that are installed on the production server	Test for compatibility with various proxy clients, firewalls, anti-virus programs, and so on.
Operating System, Service Packs, firewalls, and so on.	Compatibility testing.
Microsoft® Windows® Administration settings	Check for compatibility with Windows Domain policies, login scripts, permissions, and other settings.

Migration

The Autodesk Vault server console can migrate a vault from Vault 2008 and Vault 2009 to work with Autodesk Vault server 2010. If you currently have a vault database earlier than release 2008, migrate it first to release 2008 and then use the server console to migrate it to work with Autodesk Vault server 2009.

Before You Upgrade

When upgrading from a previous version of Autodesk Vault server 2009:

1 Back up all existing Vaults and libraries.

2 Test the backup by restoring it to another computer.

3 Run the Vault server 2010 installation and allow it to upgrade your existing Vault server.

If you are running the Autodesk Vault server 2008, remove the data management server components before installing the Vault server 2010.

These steps are required to remove Autodesk Vault server 2008. Always create a backup of your vault data before uninstalling. Be careful to perform the following steps in the order given.

Uninstall Components

Before uninstalling any components, back up existing vault and library data. Restore the backed up data on a test environment to verify that it can be successfully restored before proceeding.

NOTE Depending on your configuration, you may not find some of the following components. If they do not appear in the Windows Add or Remove Programs utility, skip the item.

■ Autodesk Vault server 2008 or earlier

■ Autodesk Vault 2008 or earlier (if the server and clients are on the same computer)

■ Autodesk Office Add-in (if the server and clients are on the same computer)

NOTE Do NOT uninstall the SQL instance AUTODESKVAULT.

Install Vault Server 2010

You can install Autodesk Vault server 2010 after you:

■ Back up the vault and library data.

■ Restore the backup on a test environment to verify it works.

■ Remove previous versions of the Autodesk data management server and clients.

See Install Vault Server on page 32 for instructions on installing the server

During the installation, any existing databases and file stores are detected. You are prompted to migrate the data following the installation.

NOTE Vaults from Autodesk Vault server versions 1.0 and 1.3 cannot be migrated. A vault from Autodesk Vault server version 3 ,4,or 5 must be migrated to either version 2008 or 2009 before being migrated to version 2010 or higher.

When starting the server console the first time, it asks you whether to migrate any vaults it finds. If you Select no, use the following procedure to migrate any existing vault.

Migrate existing vault data

1 From the Windows Start menu, select Programs ➤ Autodesk ➤ Autodesk Vault ➤ Autodesk Data Management Server Console 2010.

2 The unmigrated vault is indicated with a yellow warning sign. Select the non-migrated vault.

3 Select Actions ➤ Migrate.

4 When the migration is done, click OK.

Upgrade Microsoft SQL

If your existing Microsoft SQL database server is using Microsoft SQL MSDE or Microsoft 2000, upgrade it to Microsoft 2005 Express, or one of the supported Microsoft SQL versions. When upgrading your Microsoft SQL use one of the following upgrade paths.

■ MSDE ➤ SQL 2005 Express ➤ SQL 2005 Standard or Enterprise

■ SQL 2005 Express ➤ SQL 2008 Express ➤ SQL 2008 Standard or Enterprise

■ SQL 2000 Standard or Enterprise ➤ SQL 2008 Standard or Enterprise

■ SQL 2005 Standard or Enterprise ➤ SQL 2008 Standard or Enterprise

NOTE Microsoft SQL 2008 Express is not supported. Use Microsoft SQL 2008 Express as a migration step only to upgrade from Microsoft SQL 2005 Express to Microsoft SQL 2008 Standard or Enterprise.

Upgrade MSDE to Microsoft SQL 2005 Express

If you are upgrading MSDE edition to MS SQL 2005 Express, you can use the version of MS SQL 2005 Express that is on your ADMS installation media. This version can be found in the Support\SQLExpress folder on your ADMS installation media. Or, download MS SQL Express from the Microsoft Web site and perform the following:

1 Before performing the upgrade, make sure that you have performed a backup using the ADMS Console application.

2 Once the backup is complete, close server console.

3 Open a Command prompt and type "IISReset /Stop". This action prevents users from connecting to a vault while you are performing the upgrade.

4 Start the installation of Microsoft SQL 2005 Express Edition on the server.

5 During the installation, you are asked if you would like to upgrade a current SQL Instance. Select the Instance radio button the select AutodeskVault from the drop-down list.

6 Select the default options for the remaining questions and perform the upgrade.

7 Download and install MS SQL 2005 Express Service Pack 3 from the Microsoft Web site.

8 Open a Command prompt and type "IISReset /Start".

9 Open the ADMS Console and log in.

10 Perform another backup from the server console.

11 Once the backup is complete, close the server console. Your client computers can connect to the Vault server.

Upgrade Microsoft SQL 2005 Express to Microsoft SQL 2005 Standard or Higher

To upgrade a SQL Express 2005 installation to a full version of SQL 2005 using a media which does not include a service pack, or higher, you can use one of the following methods.

Method One

1 Open a command prompt and navigate to the directory where the full version of SQL setup is located.

2 Enter "setup.exe SKUUPGRADE=1" (case sensitive).

3 Start the upgrade and select the AutodeskVault instance.

4 After the upgrade is complete, apply the latest SQL service pack since this upgrade actually does not have on and it is not transferred from SQL Express.

Method Two

1 Create a full backup of your vault using the server console.

   NOTE In later steps, you delete all your vault databases. Validate that you can restore this backup on a test server before proceeding. Do not continue if your test restore fails. Correct any problems you have with the backup before continuing these steps.

2 After the test restore is successful, open the ADMS Console and delete all vaults and libraries listed. Then select Detach Master Vault from the Tools menu.

3 Make sure that all users are logged out of the vault.

4 Completely uninstall SQL 2005 Express, including the following applications in this order:
   ■ Microsoft SQL Server 2005

      NOTE If you have more than one instance of SQL Express installed, be sure to uninstall only the AutodeskVault instance. DO NOT uninstall any other part of SQL after this step is complete.

   ■ MS SQL Server Native Client

   ■ MS SQL Server VSS Writer

   ■ MS SQL Server 2005 Backward Compatibility

   ■ MS SQL Server Setup Support Files

5 Delete the SQL Express folders from Program Files (including data files). If your Vault databases are located on a different drive, be sure to delete the files in this location as well.

6 Install the full version of SQL 2005 with an AUTODESKVAULT instance as in the "Install MS SQL Server Prior to Installing ADMS 2008" section.

7 Install Microsoft SQL 2005 SP1.

8 Restore the backup that you created in step one using ADMS Console.

Client Installation

The Autodesk Vault clients are available on the product installation media as well as on the Autodesk Vault 2009 media.

The Autodesk Vault add-in for Microsoft® Office was shipped with your software and can be used with one or more of the following Microsoft products that are installed and registered on your machine.

■ Microsoft® Word XP/2003/2007

■ Excel® XP/2003/2007

■ PowerPoint® XP/2003/2007

NOTE To install the Autodesk Vault clients, you must have either Microsoft Windows administrator privileges or power user privileges.

Install the clients for an Autodesk design application

■ Insert the installation media for the Autodesk design application and follow the instructions for the installation wizard.

Install the clients for a non-Autodesk design application

■ Insert the installation media for the application and follow the instructions for installing the software.

Install clients from the Autodesk Vault 2010 Media

1 Insert the Autodesk Vault 2010 media.

2 Double-click *setup.exe*.

3 Follow the instructions in the installation wizard.

Add-in Integration

If a design application is already on the computer before the clients are installed, the corresponding add-in clients automatically integrate with the design applications when they are installed. However, if an application is installed after the data management clients, on the Control Panel, modify the data management application to install the missing add-in.

First Log In

When Autodesk Vault server is installed, a vault and a user account are created. The name of the vault is "Vault". The account name is "administrator". No password is assigned to the account and the name is not case sensitive. The administrator account has full administrator privileges.

NOTE If a user account has already been created for you, log in using your user name and password.

Log into Autodesk Vault Server the first time

1 Use one of these methods:

- On the Start menu, click Programs ➤ Autodesk ➤ Autodesk Data Management Server ➤ Autodesk Vault.

- On the Start menu, click Programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk Productstream.

- In an application with an integrated add-in, click File ➤ Autodesk Data Management Server ➤ Log In.

2 In the Log In dialog box, verify the following:

User name	The name for the vault account.
Password	The password associated with the vault account.
Server	The name of the computer on which the vault server is installed.
Database	The name of a vault database located on the specified server. The default is "Vault". Click the

browse button to select from a list of available databases on the server.

A default user ID, vault server, and database are set up for you to get started using the vault right away. If a user account has already been created for you, use your own account information. If a user account has not been created for you, or the default values are not present, contact your vault administrator.

Use either the default values or, if an account has been created for you, use your own account information. The default values are:

`User Name:` Administrator

`Password:` empty

`Server:` Name of the computer on which the vault server is installed. Use localhost if the server is installed on the same machine as the client.

`Database:` Vault

3 Click OK.

You are logged into the vault.

NOTE You have the option to save the account information to log into the vault the next time automatically.

Install the Vault Client

5

The Autodesk® Vault clients include the integrated add-ins for applications such as Autodesk Inventor® and AutoCAD®, and the stand-alone Vault clients. Add-in clients are available for Autodesk® and non Autodesk design applications. Once the Autodesk data management server is installed, the clients can be installed.

Data Management Client Requirements

Autodesk data management clients that integrate with an Autodesk design application require a licensed installation of the corresponding Autodesk application. Refer to the hardware and software requirements for each product.

The clients work with the Autodesk data management server. The Autodesk data management server must be installed and configured before the clients can access the server.

NOTE The data management clients are not compatible with previous versions of Autodesk Vault server. If you are upgrading to Autodesk Vault 2010 or Autodesk Vault Manufacturing 2010, all server and client components must be upgraded.

Operating Systems

- Windows® XP Home (SP2)

- Windows® XP Professional (SP2)

- Windows Vista® Ultimate (32-bit and 64-bit)

- Windows Vista® Enterprise (32-bit and 64-bit)

- Windows Vista® Business (32-bit and 64-bit)

- Windows Vista® Home Premium (32-bit and 64-bit)

- Windows Vista® Home Basic (32-bit and 64-bit)

- Windows XP Professional x64 Edition

Recommended Hardware

- Intel®Pentium® 4, Intel®Xeon®, ADM Athlon™ 1 GHz

- 1-Gb memory or higher

- 500-Mb disk space

NOTE The Autodesk Vault clients can be installed on the same computer with Autodesk Vault server. However, we recommend that you install the server on a dedicated computer.

Before installing

- Close all Autodesk and Microsoft applications before installation.

- Disable any virus scanning software before installing.

- Previous versions of clients are not compatible with Autodesk Vault server 2010. Installing Autodesk Vault server 2010 requires that all clients are upgraded to version 2010.

- The recommended screen resolution is 1024x768 or higher. Large font settings in lower screen resolution settings can affect clarity of dialog boxes.

Client Installation

The Autodesk data management clients are available with the product installation media as well as on the Autodesk Vault 2010 media.

The Autodesk Vault add-in for Microsoft® Office was shipped with your software. It can be used with one or more of the following Microsoft products when installed and registered on your machine.

- Microsoft® Word XP/2003/2007

- Excel® XP/2003/2007

- PowerPoint® XP/2003/2007

NOTE To install the Autodesk Vault clients, you must have either Microsoft Windows administrator privileges or power user privileges.

Install the clients for an Autodesk design application

■ Insert the installation media for the Autodesk design application and follow the instructions for the installation wizard.

Install the clients for a non-Autodesk design application

■ Insert the installation media for the application and follow the instructions to install the software.

Install clients from the Autodesk Vault 2010 Media

1 Insert the Autodesk Vault 2010 media.

2 Double-click *setup.exe*.

3 Follow the instructions in the installation wizard.

Add-in Integration

If a design application is on the computer before the clients are installed, the corresponding add-in clients automatically integrate with the design applications. However, if an application is installed after the data management clients, action is required. Go to the Control Panel and modify the data management application to install the missing add-in.

Configure and Maintain Vault

Configure Basic Vault Options

<div style="text-align: right">

6

</div>

This chapter describes the basic options you configure to allow users to begin using Vault.

Log In the First Time

When Autodesk Vault server is installed, a vault and a user account are created. The name of the vault is "Vault". The account name is "administrator". No password is assigned to the account and the name is not case sensitive. The administrator account has full administrator privileges.

NOTE If a user account is already created for you, log in with your user name and password.

Log into Autodesk Data Management Server the first time

1   Use one of these methods:

■   On the Start menu, click Programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk Vault.

■   On the Start menu, click Programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk Vault Manufacturing.

■   In an application with an integrated add-in, click the Vault add-in tab ➤ Log In.

2   In the Log In dialog box, verify the following:

User name   The name for the vault account.

Password   The password associated with the vault account.

Server	The name of the computer on which the vault server is installed.
Database	The name of a vault database located on the specified server. The default is "Vault". Click the browse button to select from a list of available databases on the server.

A default user ID, vault server, and database are set up for you to get started using the vault. If a user account is already created for you, use your own account information. If a user account has not been created for you, or the default values are not present, contact your vault administrator.

Use either the default values or, if an account has been created for you, use your own account information. The default values are:

`User Name:` Administrator

`Password:` empty

`Server:` Name of the computer on which the vault server is installed. Use localhost if the server is installed on the same machine as the client.

`Database:` Vault

3 Click OK.

You are logged into the vault.

NOTE You have the option to save the account information to log into the vault automatically the next time.

Use Vault with a Proxy server

If a client machine connects to the Web server through a proxy server, all calls to the Autodesk Data Management Server from any Autodesk client fail. To have a successful Autodesk Client/Server communication, bypass the proxy server.

Change the proxy settings in Internet Explorer 6.x and 7.x

1 Open Internet Explorer.

2 On the Tools menu, select Internet Options.

3 Select the Connections tab.

4 Click LAN Settings.

5 If the "Use a proxy server for your LAN" check box is enabled, turn on the "Bypass proxy server for local addresses" check box.

6 Click the Advanced button next to the Port field.

7 In the Proxy Setting dialog box, add the server name and IP address into the Exceptions field.

8 Click OK.

9 Click OK.

10 Click OK to close Internet Options.

All addresses without a period, for example: *http://webserver*, bypass the proxy and resolve directly.

If Internet Explorer continues to connect to the assigned HTTP proxy server, then the HTTP proxy address can contain a period. If this situation happens, configure the proxy server to use a host name.

Configure the proxy server to use a host name

1 Follow steps 1-5 from the previous section for changing the proxy settings in Internet Explorer.

2 If the "Address" field is "*http://webserver.domainname.com*" or "*http://10.0.0.1*", then change it to "*http://webserver*" only.

3 Click OK and close Internet Explorer Options.

Manage User Accounts

The vault is a secure database. Before anyone can use a vault, the administrator must add accounts for users and grant levels of permission within the vault using roles.

For more information about users, roles, and managing accounts, see the server console Help.

Add or Edit User Accounts

You can create user accounts and grant vault access.

1 In either the Vault client or server console Click Tools ➤ Administration.

2 In the Administration dialog box, click the Security tab and then click Users.
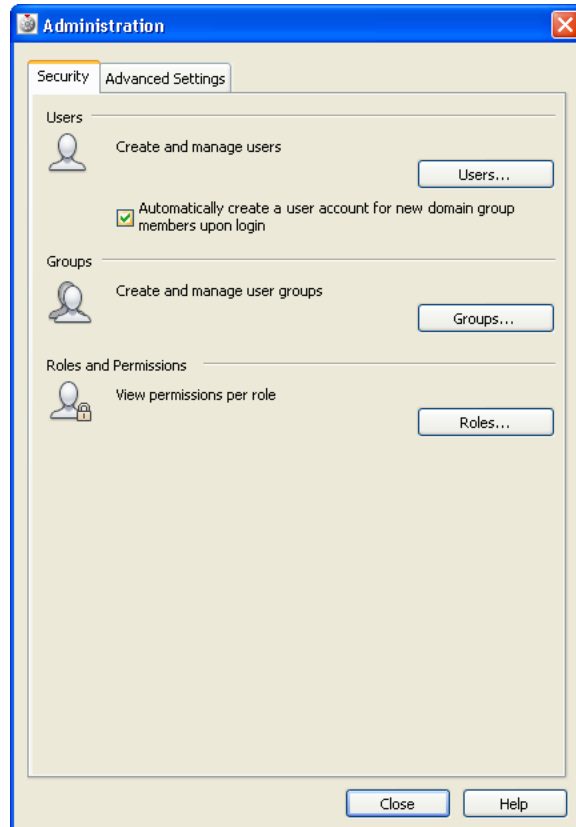
3 In the User Management dialog box, click New User.
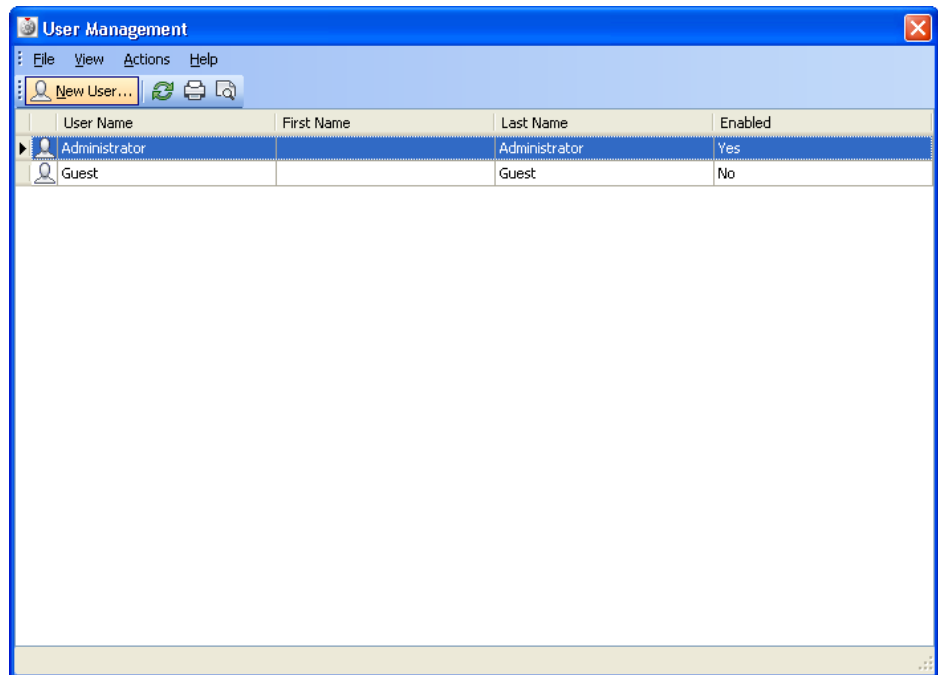
4 In the New User dialog box, enter the information for the new user:

- First name

- Last name

- User name

- Email address

5 Enter a password and confirm it.

6 Click Roles and assign one or more roles to the account. Roles determine the level of access to the vault.

7 Click Vaults and select one or more vaults for the account to access.

8 Select the Enable User check box. Until the account is enabled, it is not available for use and cannot access the vault.

Repeat this process for each new user account needed. Each new user is granted access to the selected vaults on the server.

Edit a user account

1 Double-click a user profile in the User Management dialog box. Or, highlight a user profile and then click Edit User.

2 In the User Profile dialog box, edit the information for the current user.

3 To edit the password, enter a new password and then confirm the new password.

4 Click Roles to edit the user roles.

5 Click Vaults to edit the user access to vaults.

6 Click OK.

NOTE Each user logs into the vault with a unique user name and password. Restrict access to the administrator account to only the assigned vault administrator.

Assigning Roles to User Accounts

1 Select Tools ➤ Administration.

2 In the Administration dialog box, click Users.

3 To assign roles to a user for the first time, click New User.

4 In the New User dialog box, select Roles.

5 In the Add Roles dialog box, select one or more roles, and then click OK.

6 To edit the role for an existing user, double-click a user profile in the User Management dialog box.

7 In the User Profile dialog box, click Roles.

8 In the Add Roles dialog box, select or cancel the selection of one or more roles.

9 Select the Enabled check box. Until the account is enabled, it is not available for use and cannot access the vault.

10 Click OK.

More than one role can be assigned to a user account. The permissions are a union of the assigned roles.

NOTE The Content Center Administrator, Content Center Editor, and Content Center Reviewer roles are specific to Content Center. Do not alter them.

Grant Vault Access to Users

1 Select Tools ➤ Administration.

2 In the Administration dialog box, click Users.

3 To grant a user access to one or more vaults for the first time, click New User.

4 In the New User dialog box, click Vaults.

5 In the Add Vaults dialog box, select one or more vaults, and then click OK.

6 To edit access to a vault, double-click a user profile in the User Management dialog box.

7 In the User Profile dialog box, click Vaults.

8 In the Add Vaults dialog box, select or cancel the selection of one or more vaults.

Disable User Accounts

1 Select Tools ➤ Administration.

2 In the Administration dialog box, click Users.

3 In the User Management dialog box, double-click a user profile to disable, or highlight the user account and click Edit User.

4 In the User Profile dialog box, clear the check box for Enable User.

5 Click OK.

Assign Users to Groups

Groups allow the administrator to create a container to add or remove users from. Rather than assigning several users permissions and roles, the administrator can grant the same permissions to several users by adding or removing them from a group.

1 Select Tools ➤ Administration.

2 Select Groups.

3 In the Group Management dialog box click the New Group button.

4 Enter a name and email address for the group.

5 As the roles and Vaults to the group.

6 Add the users individually or by selecting another group to include.

Configure Revision Options

<div style="text-align: right; font-size: 3em; font-weight: bold;">7</div>

This section provides steps to configure several options that can be used with Vault Manufacturing to control document revisions.

Revision

A revision is a collection of file versions rolled up into one object that is displayed to the user. After a revision is created, document edits are contained within that revision until a new revision is created. So as changes are made and committed to the system, the user sees no change to the revision label.

Once the revision objects have been created, any revision can be downloaded or opened. When a revision is downloaded, only one version within that revision is used to represent the revision. If life cycles (For more information see Life Cycles) are not used, then that version is always the latest version within that revision.

Choose the Revision Scheme

Vault Manufacturing installs three default revision schemes to choose from. To access these schemes, launch your Vault Manufacturing client.

1 On the Start Menu, select All programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk Vault Manufacturing.

2 Log in to the Vault.

3 On the Tools Menu select Administration.

4 Select the Behaviors tab.

5 Click the Revisions button.

The Revision Scheme Definitions dialog box opens with the three default options for revision schemes.

The first revision scheme is configured to use the letters A through Z as the primary revision designator and numbers for all secondary and tertiary. For example, the first revision is marked as A, and the second is marked as B. If you had a small change to Revision A and did not want to mark it as a full Revision bump, you use the secondary, which is A.1.

The second revision scheme is configured the same as the first, except the primary designator is not alphabetical but numerical starting with one. For example, the first revision is 1, and the second is marked as 2. A secondary designation is marked as 1.1.

The last default revision scheme is the Null scheme. Use this scheme if you do not want to use document revisions with Vault Manufacturing.

Create a New Revision Scheme

If necessary, you can create your own scheme based on your company standards.

1 On the Start Menu, select All programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk Vault Manufacturing.

2 Log in to the Vault.

3 On the Tools Menu select Administration.

4 Select the Behaviors tab.

5 Click the Revisions button.

Use the New, Copy, and Edit buttons across the top of the Revision Scheme Definition dialog box to define a revision scheme that matches your company standards.

Lifecycles

A lifecycle is comprised of various states that can be assigned to a file. One or more of these states can be identified as a "released state".

NOTE This option is applied to the state, not the name of the state itself.

When a document is in a released state, a new version is created that is marked internally as released. Newer non-released versions can be created by moving the document to a different state without creating a revision. You can choose your life cycle definition using the following steps.

1. On the Start Menu, select All programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk Vault Manufacturing.

2. Log in to the Vault.

3. On the Tools Menu select Administration.

4. Select the Behaviors tab.

5. Click the Lifecycles button.

In the Lifecycle Definition dialog box, you see that Vault Manufacturing ships with five predefined lifecycle definitions.

The first Lifecycle definition is the Basic Release process. This process supports the lifecycle states.

1. Work in progress

2. For Review

3. Released

4. Obsolete

The second Lifecycle definition is the Flexible Release process. This process supports the lifecycle states.

1. Work in progress

2. For Review

3. Released

4. Quick Change

5. Obsolete

Adding the Quick Change lifecycle state allows you to change a design after a document has been released. This functionality is useful when finding small problems during manufacturing.

The third Lifecycle definition is the Long Lead Time Release process. This process supports the lifecycle states.

1 Work in progress

2 For Review

3 Pre-Release

4 Released

5 Quick Change

6 Obsolete

Adding the Pre-Release lifecycle state allows users to track documents that must be released earlier for ordering materials with long delivery times.

The fourth Lifecycle definition is the SimpleRelease process. This process supports the lifecycle states.

1 Work in progress

2 Released

If all you want to do is control which documents are currently released and which documents are being worked on this Lifecycle definition can be used.

The last Lifecycle definition is the None definition, which allows Vault Manufacturing to be used without Lifecycles.

Categories

Category management provides a way to group properties logically. Grouping by category provides a means for assigning a defined set of behaviors and rules to one or more files. A category labels a file and also sets the defined behaviors that can be used on the file.

For example, you can use categories to mark files as engineering documents or office documents. Once these categories have been assigned, you can use Vault Manufacturing Rules to assign default properties, revision schemes, and lifecycle definitions.

1 On the Start Menu, select All programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk Vault Manufacturing.

2 Log in to the Vault.

3 On the Tools Menu select Administration.

4 Select the Behaviors tab.

5 Click the Categories button.

Rules

Rules allow you to assign categories to files automatically. You can access the rules by following these steps:

1 On the Start Menu, select All programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk Vault Manufacturing.

2 Log in to the Vault.

3 On the Tools Menu, select Administration.

4 Select the Behaviors tab.

5 Click the Rules button.

Using rules categories can be assigned without interrupting the workflow of users. For example, if John is an engineer and works only on engineering documents, a rule can be added that anytime John checks in a file, the Engineering category is assigned to it. John can continue working without having to stop and assign the category to his documents.

Import and Export Configurations

Once you have your Vault configured, you can log into the Vault server console and save your configuration. The configuration can be used when configuring a new Vault. The following steps can be used to export your configuration.

Export a Configuration

1 On the Start Menu, select All Programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk Data Management Server Console.

2 On the left side of the Server Console select the Vault you want to export the configuration from.

3 From the Action pull down menu select Export Configuration.

4 Select a location and filename for the configuration file and select Save.

Import a Configuration

1 From the Start Menu, select All Programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk Data Management Server Console.

2 On the left side of the Server Console select the Vault you want to apply the existing configuration.

3 From the Action pull down menu select Import Configuration.

4 Select the configuration file and select Open.

Configure Advance Options

8

In this chapter, we discuss configuring some of the Vault Manufacturing advance options. These options are not available in the base level of Vault.

Windows Authentication

Windows Authentication allows an Administrator to use existing Active Directory domain user accounts. Windows Authentication also allows users to log in with their Windows credentials once the Administrator has imported their accounts. To import an Active Directory Domain user account follow these steps.

1 From the pill down menu select Tools ➤ Administrator.

2 In the Administration dialog box, select the Security tab.

3 Click Users.

4 In the User Management dialog box, select Actions Import Domain User.

5 In the Select Users dialog box, click Locations to specify the domain containing the Active Directory accounts to import. In the Locations dialog box, select the domain to use and then click OK.

6 In the Select Users dialog box, enter the names of the users to add from the Active Directory domain. Alternatively, click Advanced to search for the users.

7 Once the users accounts have been specified, click OK in the Select Users dialog box. The selected Active Directory domain user accounts are added to the User Management list.

Set Up Multiple Site Environments

Multiple remote sites can be configured to access the same vault data. A site is comprised of a dedicated Autodesk® Vault server and a file store. Each site accesses a shared AUTODESKVAULT SQL instance.

What is a Multiple Site Environment

The multiple site environment allows users to design products across multiple locations as if all the users were in one location. Autodesk® Vault Manufacturing allows two different methods to accommodate this functionality.

The first method is to centralize the data base for all sites. The database for Productstream® can sit on a separate server as illustrated here.
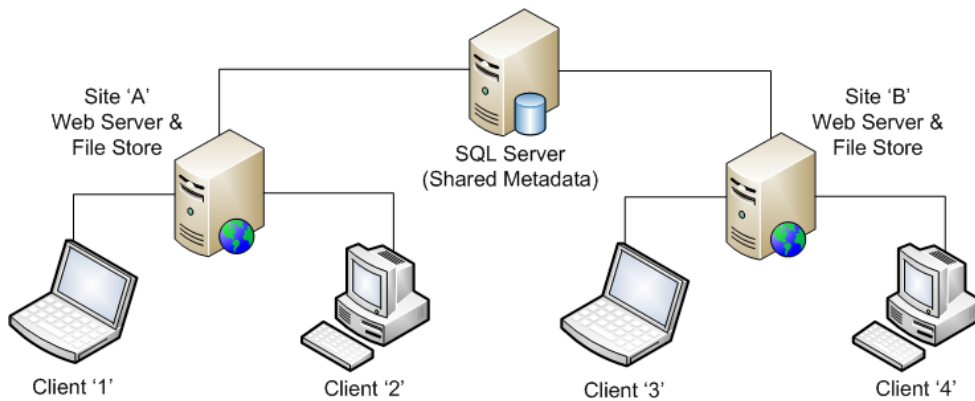
The second method is to set up a main site with the database and main file store located on the same server. The main site has the most users and is where the most design work is done.
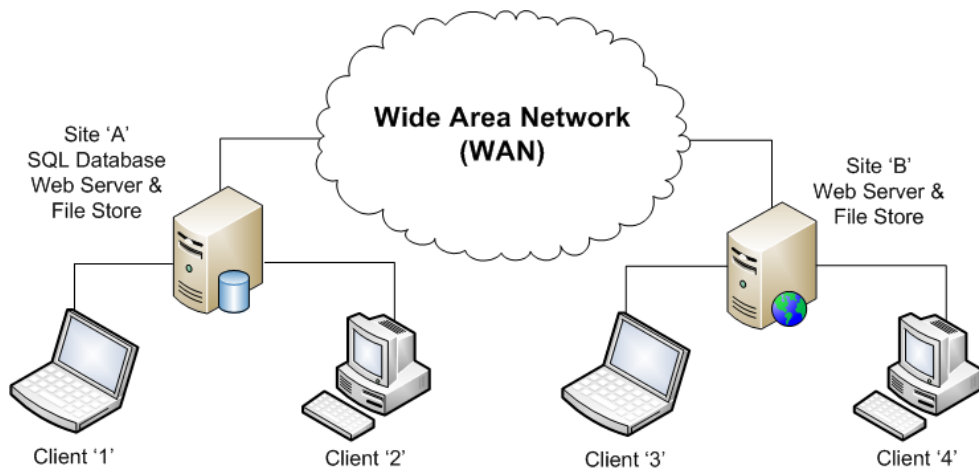
In these environments, users open data files such as AutoCAD® drawings
Inventor Assemblies or Microsoft® Office documents from there local file
Store. All metadata is read from and written to a central database so that users
can open large files much faster than if they copy them across the Wide Area
Network (WAN)

> **NOTE** Setting up the main site first and attempting to access the main set remotely
> can provide satisfactory performance for some users. We recommend that you set
> up the main site and expanding to a multiple site after.

Is Multiple Site Environment Right for You

Setting up a multiple site environment is more complicated than a single
server environment. Consider several factors when deciding if you want to
set up a multiple site environment:

■ Network reliability.

■ Network latency and Bandwidth between sites. (Should be low latency and
high bandwidth.)

■ Number of remote sites.

■ Number of users per site.

■ Size and number of files to replicate per day/per hour.

■ Estimated number of concurrent users.

Pre-Install Checklist

If you read the prededing information and decide to set up a multiple site environment, go through the following check list before you start.

■ Do all remote sites have the software? Is the software copied on the server? Is there a DVD drive on server?

■ Do you have access to an Administrator for all sites? Do you have remote login from main site to each remote sites?

■ Do all remote sites have a latest copy of the file store with a backup package (for existing ADMS customers)?

■ Are all Windows updates current on all servers?

■ Are virus scans turned off?

■ Are firewalls turned off?

■ Are TCP Ports 1433 and 1434 blocked by firewall?

Install Vault Server on Additional Sites

After installing the remote SQL instance and setting up your main Vault server site, install additional Vault sites. The additional sites in the multi-site environment must have the Vault Manufacturing server installed and configured to access the SQL instance used by the first site. The connection to the remote SQL instance is configured during the installation of the data management server. Follow these steps for each additional site.

1 On the remote site, insert the Autodesk Vault Manufacturing installation media.

2 On the installation screen, select either Autodesk Productstream data management server.

3 From the Select the Products to Install page, select Autodesk Vault server 2010, and then click Next.

NOTE You can install the data management clients on the server as well, but it is not a requirement.

4 Accept the license agreement and then click Next.

5 On the Review - Configure - Install page, select Autodesk Vault server 2010 from the drop-down list and then click Configure.

6 Select the Autodesk Vault server 2010 tab.

7 Select Use remote SQL.

Enter the name of the server containing the SQL instance to which to connect or click Browse to locate the server on the network.

NOTE Do not include \\ in front of the server name. A SQL instance named 'AUTODESKVAULT' must exist at the specified location.

8 When using a remote SQL instance, a shared network folder is required as a transition area between the SQL instance and the Autodesk data management server. The shared network folder can be located anywhere on the network and must be accessible by both the data management server and SQL. The space requirement for the shared folder is equal to the total of all database files. Choose a location with sufficient space and performance. Enter the UNC path to the shared network folder or click Browse to locate the shared folder on the network.

NOTE Both the user account under which the Autodesk Vault server runs and the user account under which the SQL instance operates need full control access to the shared network folder.

9 Click Configuration Complete.

10 Click Install.

11 The Installation Complete page indicates that Autodesk Vault server has been installed. Click Finish.

NOTE Once the server is installed, repeat this process for each additional site.

Manage Sites

Sites are managed and maintained using the server console. For more information and additional site management features, see the server console Help.

1 On the Windows Start menu, select Programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk data management server console.

2 Log into the server console.

3 In the navigation pane, select Sites.

Each site is listed along with a summary of site statistics including:

■ Server Name

■ Description

■ Location of File Store

■ Vault Name

■ Vault Status

■ Replication Type

■ Last Replication

■ Next Replication

■ Site Status

Change Descriptions of Sites

1 Select a site from the list.

2 Right-click the Description field for the site, and then select Edit Description.

3 In the Description dialog box, enter a new description for the site and then click OK.

Replicate Data

Replicating data at a site compares the local file store to the file store at each other site. It retrieves any missing files from the other sites. Once replicated, a file and its history are available at the replicated site. Individual vaults can be replicated, or all the enabled vaults on a site can be replicated. Replication can also be scheduled.

NOTE The Replication command synchronizes data only at the site at which it is initiated. Each site is responsible for its own replication.

1 Select the current site from the list.

2 Right-click the site, and the select Replication:

   ■ Site Now to synchronize all the vaults on the current site immediately.

   ■ Vault Now to synchronize only the selected vault.

   ■ Vault Schedule to establish a synchronization schedule or to turn off scheduled synchronization.

3 If you selected Vault Schedule, choose either a daily schedule or a replication frequency in the Scheduled Replication dialog box.

4 ■ Daily – The default daily replication schedule is weekdays at midnight. Specify a start time and select which days to perform the replication.

   ■ Frequency – Specify a start time and then select how often the replication is performed.

   ■ Click OK.

Data Management Server Maintenance

9

This chapter contains the procedures for Autodesk® data management server administration and management.

About Autodesk Data Management Console

A vault consists of three primary components:

- The master database called KnowledgeVaultMaster

- Vault database

- File store

KnowledgeVaultMaster is the master database for Autodesk® Vault server. Like the master database of SQL, KnowledgeVaultMaster is a separate database. It Contains common global administrative and configuration information for all the vault and library databases on the Autodesk Vault server.

The vault database stores information, such as file names, user names, properties, and file relationships.

The file store is a directory structure that contains the actual data files. Autodesk Vault server console includes tools for maintaining databases and file stores.

NOTE Never directly move, delete, or edit a file in the file store.

Perform all database and file store maintenance using the data management console. The console is the interface for the administrator to maintain the vault file stores and databases. Tasks include backing up and restoring data, creating

new vaults, and purging old data. The administration utilities in the server console are also available from the command line. You can use the command line with scripts to create custom schedules and automated maintenance tasks.

NOTE A database consists of an *.mdf* file and an *.ldf* file. Keep these two files together for a vault to work correctly.

Log into the server console with a vault account that has been assigned the Administrator role. To perform most vault maintenance, you must also have SQL administrator privileges. For more information about vault maintenance, command line options, and SQL administrator privileges, see the server Console Help.

Start the Server Console

1 On the Windows® Start menu, select Programs ➤ Autodesk ➤ Autodesk Data Management ➤ Autodesk (Server Console).

2 In the Log In dialog box, enter the user name and password for the vault administrator account.

3 Click OK.

Perform Vault Maintenance

Ensure that no users are connected to the vault or library before performing any maintenance. Users are blocked from accessing the Autodesk Vault server during maintenance procedures (Autodesk® Vault Manufacturing allows backups while users are connected).

Back Up Vault Data

Backing up vault data is essential. The following are recommendations for backing up Autodesk® Vault.

Use the supplied backup-restore utility.

Use the server console to back up all data necessary to restore a server if a failure occurs. When backing up and restoring the Autodesk Vault server, no users can access any vault on the server unless the server is a Productstream® server. When you back up the server, all users are blocked from accessing the system. In addition, server console backs up or restores all vaults on the server. There is no way to select individual vaults to back up or restore.
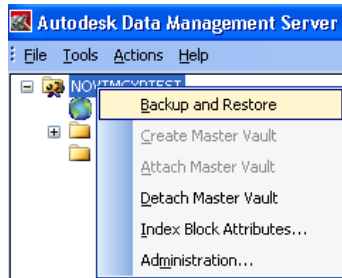
Develop a Backup Schedule.

The next step is to automate the process. Two common methods are:

■ Use the Windows Task Scheduler. This process uses the backup tools included with the server console as part of a standard Windows batch file.

■ Include the backup as part of a tape backup set. This process uses a tape back up system to back up the vault directly or to use a method like the Windows Task Scheduler.

The preferred and most reliable method for backing up a vault is to integrate the server console backup tools into your tape backup plan.

With the server console command line options, you can create a script to automate the backup process. The following script is intended for a default Autodesk Vault server installation. Edit the backup paths and installation paths as needed.

NOTE The following script is for performing full back ups ONLY. For more command line options or to create a script for performing incremental back ups, see the data management server console Help.

Automate backup using Microsoft® Windows® Task Scheduler

1 Create a text file called *Backup.txt*.

2 Insert the following text:

@ECHO OFF

REM DELETE B AND CASCADE A BACKUP SUBDIRECTORIES

RMDIR /Q /S "C:\Backup\Vault\B"

REN "C:\Backup\Vault\A" "B"

REM CREATE A NEW DIRECTORY FOR THE BACKUP

MKDIR "C:\Backup\Vault\A\"

REM START THE BACKUP PROCESS (THIS IS ONE LINE OF TEXT)

"C:\Program Files\Autodesk\Data Management Server 2009\ADMS Console\Connectivity.ADMSConsole.exe" -Obackup -B"C:\Backup\Vault\A" -VUadministrator -VP[YourPassword] -S

**3** Change the name of the text file to *Backup.bat* to convert it to a batch file.

NOTE When backing up a multi-site environment, back up locally on the primary server.

Windows Vista User Account Control

If you want to schedule automatic backups using the Autodesk server console, User Account Control settings in Windows Vista® must be configured to allow applications to run without prompting for administrator permission.

NOTE The following settings affect the entire computer. All applications run without prompting for administrator approval.

---

1 On the Windows Start menu, select Run.

2 In the Run dialog box, enter *secpol.msc* and then click OK.

3 If you are prompted to allow the security policy application to run, click Continue.

4 In the Local Security Policy dialog box, expand Security Settings ➤ Local Policies ➤ Security Options.

5 Locate the policy User Account Control: Behavior of the elevation prompt fro administrators in Admin Approval Mode. Right-click the policy and then select Properties.

6 In the Properties dialog box, select Elevate without prompting and then click OK.
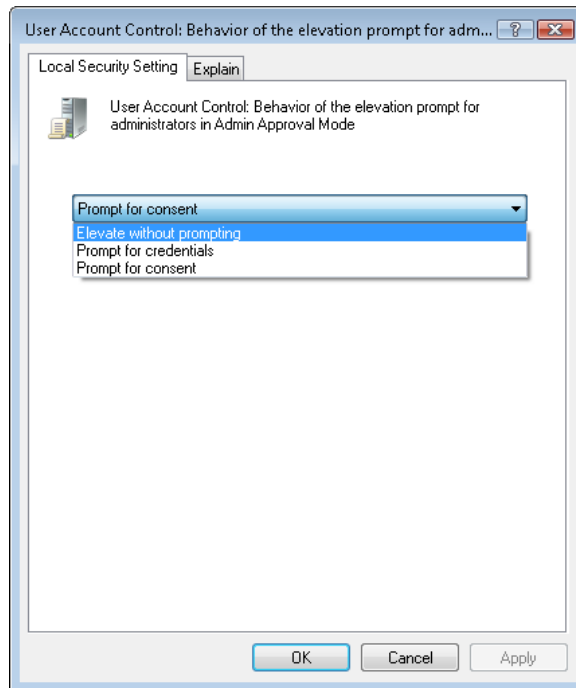
7 Locate the policy User Account Control: Run all administrators in Admin Approval Mode. Right-click the policy and the select Properties.

8 In the Properties dialog box, select Disable and then click OK.

Creating Tape Backups

There are different ways to use a tape backup system to back up a vault. We recommend integrating the Server Console backup tools into your tape backup plan. Many systems allow you to run a script before and after the tape job executes. To back up a vault using a tape backup system, use the following scripts before and after the job runs.

NOTE We do not recommend using backup software to back up the SQL database and file store directly. This method increases the difficulty of migrating to a new release of Autodesk Vault server or restoring a vault on a new machine. In addition, never back up the SQL Server using the "live" backup plug-ins that are available for major tape backup systems. Ensure the file store and SQL data are perfectly in sync with each other. Failure to do so can render your data unusable.

1 Run the following script before your tape backup job starts:

@ECHO OFF

REM THIS WILL STOP THE WEB SERVER AND "CYCLE" THE SQL SERVER
REM PROVIDING THE BEST RESULTS FOR BACKING UP THE VAULT

IISRESET /STOP

NET STOP MSSQL$AUTODESKVAULT

NET START MSSQL$AUTODESKVAULT

REM START THE BACKUP PROCESS (THIS IS ONE LINE OF TEXT)

"C:\Program Files\Autodesk\Data Management Server 2009\ADMS Console\Connectivity.ADMSConsole.exe" -o backup -B"*C:\Backup\Vault\A*" -VUadministrator -VP -S

2 Run the following script after your tape backup job completes:

@ECHO OFF

REM DELETE THE BACKUP SET AFTER THE TAPE SET COMPLETES

RMDIR /Q/S *C:\Backup\Vault\A*"

REM START THE WEB SERVER

IISRESET /START

3 Validate the Tape Backup

To ensure that your backup set restores properly, test both the backup and the backup procedures. We recommend that you install the Autodesk Vault server on a separate computer. Test a full restore of the data using the Restore command in Autodesk Vault server console.

Restore Vaults from Back Ups

1 Click Tools ➤ Restore.

2 Restoring a vault deletes the current data sets and file store. This action cannot be undone. You are prompted for confirmation before proceeding. Click Yes.

3 Select whether you are restoring a directory or a file.

4 In the Restore from directory field, specify the location of the backed up data. To browse for a location, click ... and locate a directory using the file browser.

5 Select whether to restore the database to the original location or to a different location. If you choose Select Restore Location, specify a target directory for the database. This selection is sometimes necessary when restoring data to a different machine that does not have the same drive letters or locations available.

6 Select whether to restore the file to the original location or to a different location. If you choose Select Restore Location, specify a target directory for the file store.

7 Click OK.

The vault data is automatically migrated when it is restored using Autodesk Vault server console. If you are restoring the data using the command line, migrate the data after it is restored.

NOTE Back up files created from the Autodesk Vault server installed with using Autodesk Productstream® cannot be restored to an Autodesk Vault server installed with Autodesk Vault.

Manage Vaults

A vault is created automatically when Autodesk Vault server is installed. Typically, use a single vault for holding all the design data for a design team, since data and folder mappings cannot be shared across vaults. However, you can create additional vaults for:

■ Testing purposes so users can become familiar with vault procedures without affecting the main vault.

■ Contractors who want to use multiple vaults to isolate data from independent clients who each have separate libraries and shared content.

Create a vault

1 In Autodesk Vault server console, click Vaults.

2 Click Actions ➤ Create Vault.

3 Enter a name for the new vault. The name cannot contain certain special characters.

4 The file store can be located in a default location, or a new location can be specified. Click OK to create the vault with the default file store

location. Or, click Select File Store Location to specify a new location and
then click OK.

> **NOTE** The default path for the file store is *C:\Documents and Settings\All
> Users\Application Data\Autodesk\VaultServer\FileStore.* The default path for the file
> store on a Windows Visa system is *C:\Program Data\Autodesk\VaultServer\FileStore.*

Delete Vaults

Vaults that are no longer in use can be deleted. Before deleting any vault, back
up the data.

1 In Autodesk Vault server console, click Vaults.

2 Select a vault to delete.

3 Click Actions ➤ Delete Vault.

4 You are prompted to verify your actions. Click OK.

Move File Stores

We recommend that you keep all the Autodesk Vault server components on
a single machine. However, the file store can be moved from its existing
location to another location. To move a file store to a location on a remote
machine, see "Managing a Remote File Store" in the *Advanced Configuration
Guide* available in the online Vault Knowledge Base.

> **NOTE** Use only the data management server console to move a file store.

Attach and Detach Vaults

Detaching a vault disconnects it from the server so it can be moved to another
location. Do not move the detached vault off the machine hosting the SQL
server. Before detaching the master vault database, detach all other databases.
The vault and its log file are detached. The names of the files for a vault named
Vault are:

■ *Vault.mdf*

■ *Vault_log.ldf*

After the vault is detached, you can move the two corresponding files. The *.mdf* and *.ldf* files must be kept together. Attaching a vault reconnects the set of vault files that were moved to the database engine.

NOTE After reattaching the database, the Autodesk Vault server user accounts must be edited to have access to the reattached vault. To avoid editing the user accounts, back up the database and restore it to a new location.

Detach a vault

1   Ensure that no users are accessing the vault (unless using Productstream).

2   In Autodesk Vault server console, select a vault from the main view.

3   Click Actions ➤ Detach.

4   You are prompted to confirm your actions. Click Yes.

Detach the master vault

1   Ensure that no users are accessing the vault (unless using Productstream).

2   Click Tools ➤ Detach Master Vault.

3   You are prompted to confirm your actions. Click Yes.

NOTE Detach all other databases before detaching the master vault.

Attach a vault

1   Select the Vaults folder.

2   Click Actions ➤ Attach.

3   In the Attach Vault dialog box, enter the name of the data file (*.mdf*) or click the browse button to locate the file.

4   Enter the name of the log file (*.ldf*) or click the browse button to locate the transaction log file.

5   Enter the name of the file store or click the browse button to locate the file store.

6   Enter the name of the vault.

7   Click OK.

For more information on detaching and attaching vaults, see the Autodesk Vault Help. Also, visit the Autodesk Web site at *www.autodesk.com*, and search for support document TS81609.

Purging Vault Data

To help maintain drive space and to minimize file store size for better performance, you can purge old file versions and out-of-date information from the vault. You specify the conditions that must be met to keep a file version in the vault. Versions that do not meet the specified criteria are then removed from the vault.

Basic rules of purging

■ The latest version cannot be purged. To remove a file and all its versions from a vault, use Delete.

■ File versions linked to items in Autodesk Productstream cannot be purged. To remove a version linked to an item, the item must first be deleted from the item master.

■ File versions that are labeled cannot be purged.

■ Locked files cannot be purged.

■ If a file to be purged is checked out, an extra version is maintained.

■ Children with a dependent parent version cannot be purged until the parent version has been purged.

  1 Select a vault from the main view.

  2 Click Actions ➤ Purge.

  3 In the Vault Version Purge dialog box, turn on the check box next to each of the selection rules to determine the data to purge:

Versions except latest	Specify how many file versions to leave in the vault.
Versions older than days	Specify the age of files to purge.
Exclude versions where comment contains	Enter a text string contained within the Comments field of the files in the vault. Any files containing this string are excluded from the purge process.

  4 Click OK.

Re Index the Server

Re indexing the server extracts the properties from all the files in the vault. Typically, this indexing process occurs when a file is first added to the vault or when an updated version is checked in. From time to time, re index the entire vault to:

- Add new properties to the vault that were previously unknown to the system.

- Remove unwanted properties from the vault that are no longer needed, in turn saving space in the SQL Sever database.

The Autodesk Vault server utilizes a technology created by Microsoft called iFilters. iFilters are small applications that exist on the server containing a set of instructions on how to open and extract property data from files. A few iFilters are installed with Autodesk Vault server by default and other exist with the operating system. There are also many third-party iFilters available for other file formats. An Internet search for iFilter returns some of the filters that other software developers have published.

The iFilters that are included by default index the following file types:

- AutoCAD®.*dwg*

- Autodesk Inventor®

- Autodesk® 3D Studio Max®

- Microsoft® Office

Add New Properties

When a new iFilter is installed, the vault database must be re indexed to recognize the related properties. After, run the Re-Index command to extract the new property data from all the files in the vault, including the historical versions.

NOTE Some iFilters create actual properties that are searchable and can be displayed as columns in the vault. Others only index file contents which are searchable, but cannot be displayed as a column. For more information on searching file contents, see the next section Full Content Indexing on page 106.

Remove Unwanted Properties

Autodesk Vault server automatically extracts all the possible properties it can from the system, making them available to users. If necessary, remove some of these properties from the system. Removal prevents users from accessing them (reducing clutter), and reduces the amount of space that SQL Server uses to store these properties.

Removing properties from the system requires first using Autodesk Vault Explorer or Autodesk Productstream File Properties management inside of the administration tools.

After configuring the properties display with the In Use/Not in Use settings, you can re index the vault, removing any property from the system that was marked Not In Use.

Perform property maintenance occasionally. If you decide at a later time that a previously removed property is needed again, you can mark the property In Use and re index the database.

For more information on re indexing properties and property maintenance, see the server console Help.

Full Content Indexing

Full content indexing is the ability to index the actual file contents of many different document types. For example, reading simple text on a *.dwg* file or finding all occurrences of a word in Microsoft® Word documents.

Enable Full Content Indexing

By default, full content indexing is not enabled. Full content indexing can be enabled per vault on the Autodesk Vault server.

1   In the server console, select a vault from the navigation pane.

2   Select Actions ➤ Content Indexing Service.

3   In the Content Indexing Service dialog box, select Yes, enable Content Indexing Service.

Microsoft Indexing Service

Unlike the standard property indexing performed by the Autodesk Vault server, full content indexing is done using the Windows Indexing Service. The Windows Indexing Service is enabled by default.

If the Windows Indexing Service installation is required

1 On the Windows Control Panel, double-click Add or Remove Programs.

2 In the Add or Remove Programs dialog box, click Add/Remove Windows Components.

3 In the Windows Components Wizard, turn on the Indexing Services check box and then click Next.

4 When the component is installed, click Finish.

When you enable the full content indexing for a vault, a new catalog is created in the Index Server, prefixed with ADSK. This is the repository for indexed contents.

The Microsoft Indexing Service is implemented as a shared server. There is no degraded performance with checkin times, nor will the database size increase. However, a full content search takes slightly longer to return results when compared to a more simple property based search.

NOTE The server console manages the Indexing Service under normal operation.

Access the Windows Indexing Service

1 From the Windows Control Panel, double-click Administrative Tools.

2 In the Administrative Tools window, double-click Computer Management.

3 In the Computer Management dialog box, expand Services and Applications ➤ Indexing Service.
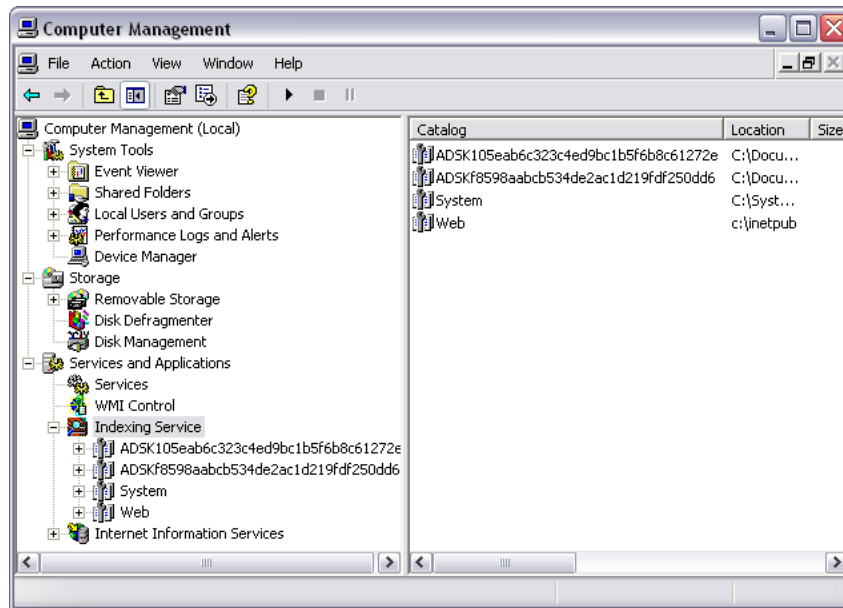
Managing Content Center Libraries

In addition to hosting vaults, Autodesk Vault server also hosts Content Center libraries. Use the server console to perform Content Center Library administrator tasks.

For information on installing Content Center libraries, refer to the Content Center Installation Guide available on the Autodesk Inventor 2009 installation media, disk 1.

Maintain Libraries in Server Console

Use the server console to create, manage, and delete libraries. The console displays the list of Content Center libraries currently installed on the server. Using the Backup command, you can create a back-up of an existing library on the server. Select a library from the list to manage it.

A Content Center library is contained within a SQL Server database. The database is comprised of a pair of files with the extensions MDF and LDF. These files together make one library and need to be maintained together.

Create New Libraries

You can create a new read-write or read-only Content Center library, which can be configured for use in either a local or an Autodesk Inventor project that accesses the Content Center libraries from a central server.

Create a library

1   In the server console, select the Libraries folder in the navigation pane.

2   Click Actions ➤ Create Library.

3   Enter a name for the new library.

4   Select a library partition from the drop-down list.

5   Enter a name for the library database.

6   Click OK.

Delete Libraries

Deleting a library detaches the selected library from the database server, and deletes the data files (*.mdf* and *.ldf*) from the hard disk. All data contained in the library is permanently deleted.

Delete a library

1   In the server console, select a library you want to delete in the navigation pane.

2   Click Actions ➤ Delete Library.

3   Click OK.

Attach Libraries

Use Attach to make a Content Center library available on the server from a pair of existing *.mdf* and *.ldf* data files already on the computer.

Attach a library

1   In the server console, select Libraries in the navigation pane.

2   Click Actions ➤ Attach Library.

3 Click the browse button, and locate the *.mdf* file you want to attach. The *.ldf* file is automatically attached.

4 In the Attach Library dialog box.

5 Click OK.

Detach Libraries

Detaching a library removes a Content Center library from the list of available libraries in the server console. Detach does not delete its data files (MDF and LDF) from the server. The data files can be reattached and made available at a later time using the Attach command. They can also be manually copied to another location to be backed up, or moved to another machine.

Detach a library

1 In the server console, select Libraries in the navigation pane.

2 Click Actions ➤ Detach Library.

3 Click the browse button, and locate the *.mdf* file you want to detach.

4 Click OK.

Export Libraries

Export copies a set of library files (*.mdf* and *.ldf*) that are in the server console to a specified location. You can specify a folder on the same machine, or a location available on the network.

Export a library

1 In the server console navigation pane, select a library you want to export.

2 Click Actions ➤ Export Library.

3 In the Browse for Folder dialog box, specify the location you want to export the *.mdf* file to, and click OK.

Import Libraries

Import copies library files (a pair of MDF and LDF files) into the standard SQL Server data files directory. Then it performs an attach operation to register them with SQL Server and make them available as a Content Center Library. For example, use Import to copy library files from a third party supplier to the Content Center Library you are administrating.

Import a library

1   In the server console navigation pane, select a library you want to import.

2   Click Actions ➤ Import Library.

3   In the Browse for Folder dialog box, locate the *.mdf* file you want to export, and click OK.

Library Summary

Highlight a library to display high-level information about the library and its data files in the main pane.

Library Status

Right-click a library in the browser and select Read-Only to toggle the status of a library to be marked as Read-Only or Read-Write. You cannot change the status of a default read-only libraries installed with Autodesk Inventor.

Content Center Permissions

If you require editing permissions for one or more Content Center libraries, you must have a Content Center Editor account set up for you in the data management server console.

Accounts are not required for users who only need read-only access to the Content Center library.

To create Content Center library user accounts in the data management server console

1   In server console, click Tools ➤ Administration.

2 In the Administration dialog box, click Users.

3 In the User Administration dialog box, click New users.

4 In the New User dialog box, enter the desired information for the user. Click the Roles button to assign the user a Content Center role.

5 Select Content Center Editor to assign editing permissions.

6 Click Vaults to assign the user to a vault. Assign a user to a vault, even if you are not using Autodesk Vault Explorer. This assignment is required to log into the Autodesk Vault server in Autodesk Inventor to access the Content Center libraries.

7 If needed, click Groups to assign the user to a group (optional).

8 Click OK.

9 In the User Management dialog box, and then in the Administration dialog box, click Close.

10 Communicate user account information and the Login procedure to each member in the team.

Learning and Training

Before getting started and rolling out an Autodesk data management solution to all the users in your group, we advise that you learn the basics and understand your deployment approach. Since Autodesk Vault can affect multiple users, make sure that the deployment goes as smoothly as possible.

Learn to Use Autodesk Vault

NOTE It is recommended that all users go through training from an Autodesk Authorized Training Center in addition to the following steps.

As a first step to learning to use Autodesk Vault, refer to the tutorials that are included in with the Autodesk Vault Help. There is a tutorial for each of the design application add-ins. These tutorials are accessible from the respective Help menus in the design application.

Search the Autodesk Knowledge Base:

■ Knowledge Base *www.autodesk.com/vault-support*

More online information about Autodesk Vault server and client applications:

■ Autodesk Inc. *www.autodesk.com*

■ Autodesk Vault *www.autodesk.com/vault*

NOTE Autodesk sponsored discussion groups are a forum where Autodesk customers and industry partners ask questions and share information about Autodesk products. Discussion group topics are publicly available worldwide. You are welcome to participate by posting questions or providing input or answers to questions from other users.


Get Training

Be more productive with Autodesk software. Get trained at an Autodesk Authorized Training Center (ATC) with hands-on, instructor-led classes to help you get the most from your Autodesk products. Enhance your productivity with proven training from over 1,400 ATC sites in more than 75 countries. For more information about Autodesk Authorized Training Centers, contact *atc.program@autodesk.com* or visit the online ATC locator at *www.autodesk.com/atc*.

Training Other Users

As previously mentioned, when training other users on Autodesk Vault, we advise that you use a new, personalized vault for learning purposes. Since a new vault is 100% independent of others, there is no risk that their learning process interferes with production data.

Performance Enhancements

A
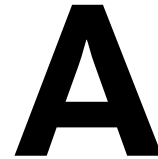
There are several ways to enhance the overall performance of Autodesk® Vault. Before proceeding, we recommend that you read Understand Autodesk Vault on page 7 in this guide.

Key Terms

Term	Definition
Performance Tuning	Monitoring and analyzing the performance of a system and adjusting its configuration to obtain optimum performance.
Operating System	The software that the rest of the software depends on to make the computer functional. On most PCs this is Microsoft® Windows® or the Mac OS®.
Memory	It is a set of storage locations on the main circuit board of a PC.
Disk Defragmentation	A utility included with the Windows operating system that coalesces files on the hard drive, freeing up disk space.
Anti-virus Program	A program that searches for viruses and removes any virus that it finds.
Proxy Server	Existing between a client Web browser and a real server, a computer that caches common and often requested Web pages and holds them for easier access by users.
Customize View	A command in Productstream® or Vault Explorer to customize the information shown in the display grid.

Tuning Server Performance

There are a number of factors that can be tuned to get the optimal performance from Autodesk Vault server. By reviewing this section and tuning your configuration accordingly, you can get the most from your data management solution.

Operating System

A dedicated server operating system such as Windows server™ 2003 is preferable to workstation operating systems such as Windows® XP Professional or multi-purpose server operating systems such as Microsoft® Windows Small Business Server 2003.

Server Memory

In order to determine whether the server has enough available memory, some key factors must be considered: the size of your data and the number of users concurrently accessing the Vault server. If Productstream is used, the number of users concurrently accessing the Item Master should be considered as well.

View memory usage

■ Invoke the Task Manager by right-clicking in the taskbar or pressing CTRL+ALT+DEL.
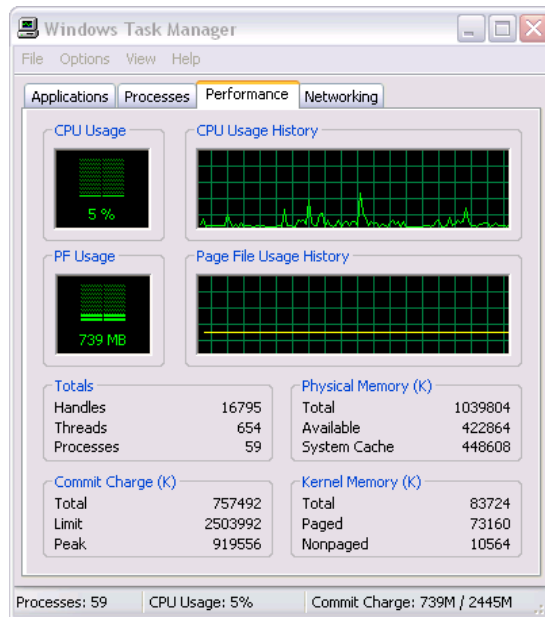
If the Commit Charge Total regularly exceeds the total amount of physical memory, it is likely that many of the programs and processes on the server are using the disk-based swap file excessively. Using the swap file is much slower than using physical memory. Windows uses the swap file for many tasks, so a small amount of swap file usage will not cause any problems.

■ If you suspect that your server has an inadequate amount of memory, check the Commit Charge Total value. Clicking the Processes tab reveals more details on the memory usage of all programs or processes.
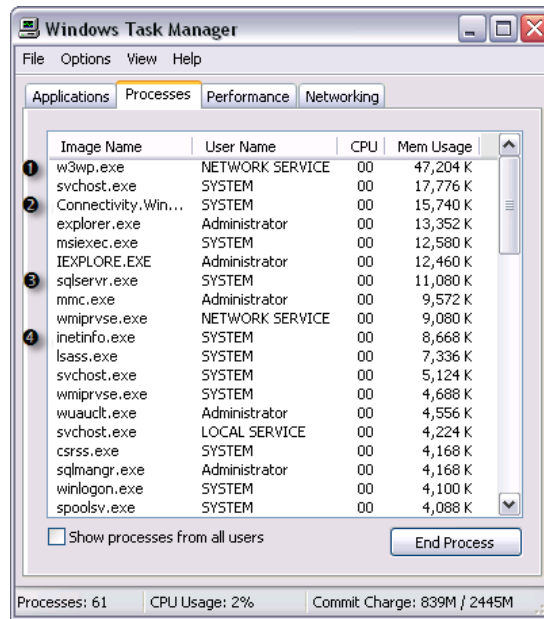
Initial memory usage by Autodesk Vault server.

1 IIS Web Server process (there may be many of these running).

2 Autodesk Vault server notification process.

3 Microsoft®SQL server process.

4 IIS main Web server process.
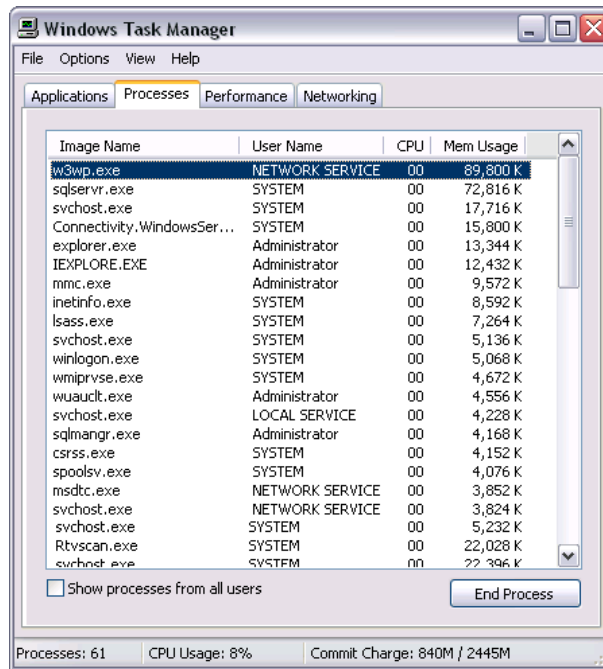
Memory usage after adding a large Inventor drawing and associated files.

In general, SQL Server memory will grow over time. This is because the database server is using memory as fast cache buffers for frequently used queries. As other programs request memory on the server, SQL Server releases memory as needed. Similarly, the IIS worker process (*w3wp.exe* in Windows 2003 server) reserves memory for caching as well. When the system starts running low on physical memory, the operating system reclaims some of this memory. In general, unless you have a large site with many users or large models, this will not need to be changed.

Disk Performance

Using multiple disks generally enhances system performance. There are many types of disk technologies available, such as the Redundant Array of Inexpensive Disks (RAID). Choosing which type of disk technologies depends on the number of users, vault size, frequency of updates, and so on.

Disk fragmentation can also greatly affect Autodesk Vault server performance. Most Windows editions provide a disk tool that measures how the files on your computer are stored on disk.
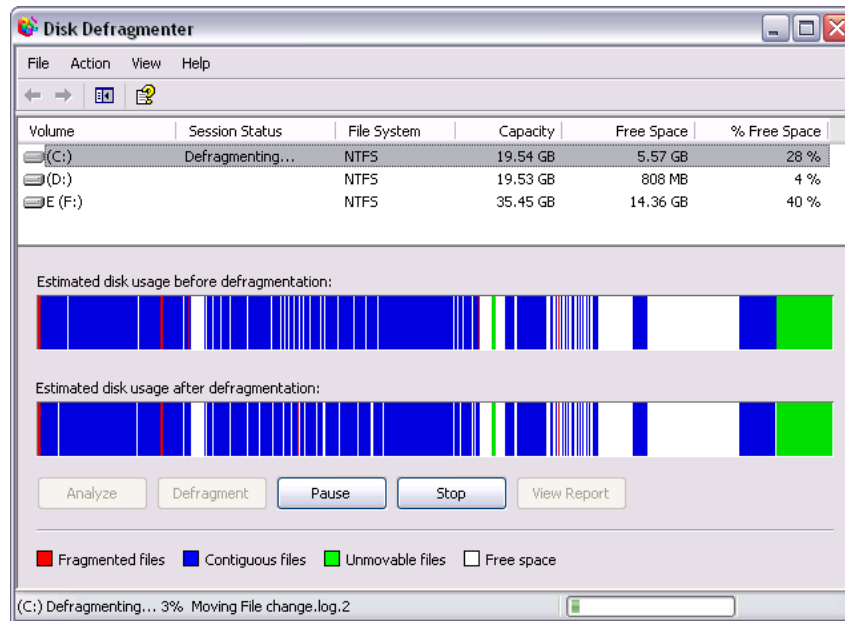
Running the disk defragmenter

1 Click Start ➤ All Programs ➤ Accessories ➤ System Tools ➤ Disk Defragmenter.
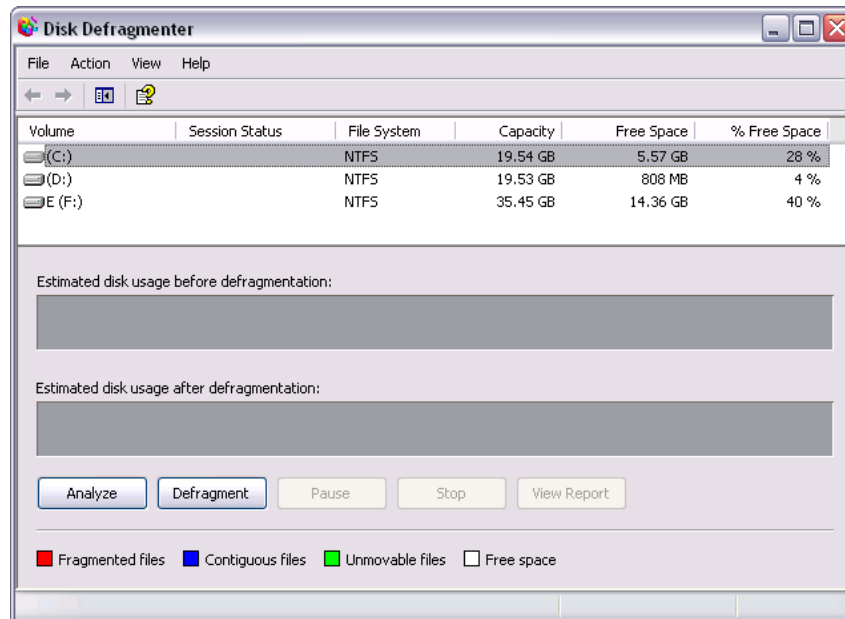
2 Choose a disk (volume) and click Analyze. Following analysis, a report appears.
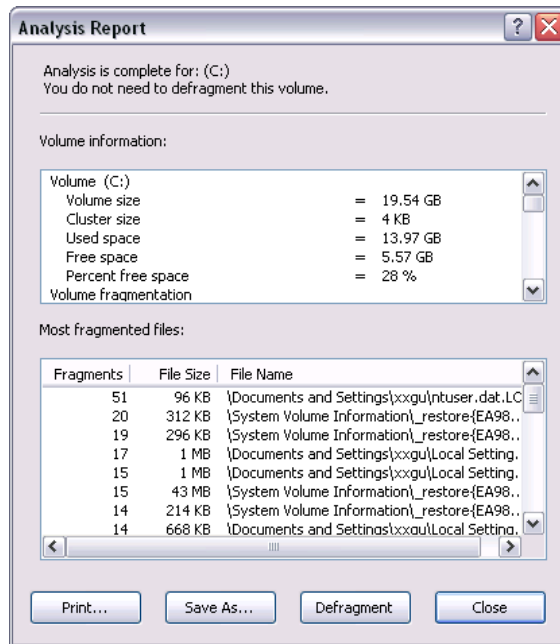
3 Click the Defragment button.

Aggressive Anti-virus Programs

Some types of Anti-virus programs scan data coming from the network and data being written to the file store. If your anti-virus software appears to be engaged for too long on vault operations, such as uploads, adjusting the scanner settings may help.

There is, of course, a trade-off between security and performance. Because of this, performing some test cases and benchmarks on your own data and server is recommended.

CPU

Faster or multiple CPUs can improve vault performance, but this is typically a more expensive option than the others and should mainly be considered after the other areas have been reviewed.

Vault Client Performance

There are a number of factors that can be tuned to get the optimal performance from the data management clients. Review this section and tune your configuration accordingly to get the most from your data management solution.

Client Settings

Certain settings within the client application can affect performance not only in the client, but in the Vault add-ins as well.

Customize View command

■ This is a commonly used setting in the Productstream and Vault Explorer client programs. It is used to add additional information to display grids. Usually, this does not have much additional impact on performance. However, some display fields, such as the thumbnail property, may take a longer to display. Enabling these settings only on an 'as needed' basis can help to improve day-to-day performance.

Memory

Add-ins for design applications consume additional memory. The amount of memory they consume is typically small. But, in certain circumstances, it makes sense to review the memory usage on the client. The most common problems occur when the original client CAD model uses most the available memory of a computer before introducing a vault into the workflow. Please refer to the Server Memory section for additional instructions on how to review the memory usage on your systems.

Disk Performance

Like the server, client computers can suffer from disk fragmentation as well. The concept of analyzing disk fragmentation is the same for both clients and servers.

Troubleshooting

Learn how to use the Autodesk® Server Diagnostics Tool or the Autodesk online Knowledge Base to solve problems that might occur when installing or using Autodesk® data management server.

Key Terms

Key Terms	Definition
Autodesk Server Diagnostics Tool	A program that can perform a series of checks to identify possible Autodesk Vault server problems and gather system information to help diagnose the problem.
Autodesk Knowledge Base	An online support for all Autodesk products.
Autodesk Vault server	The server used in conjunction with Autodesk Vault, Autodesk® Productstream®, and Content Center for storing files and version data.
Log file	A text file generated by the Autodesk Server Diagnostics Tool containing important system configuration information.

Server Diagnostics Tool

The Autodesk Server Diagnostics Tool is a collection of tests that can help determine why a vault installation is not working properly. Changes to the server machine configuration over time can interfere with the Autodesk Vault server. The Autodesk Server Diagnostics Tool performs a series of tests to identify possible Autodesk Vault server problems and compiles system information to help diagnose the problem.

Run the diagnostics tool

1   On the Windows® Start menu, select Programs ➤ Autodesk ➤ Autodesk Data Management ➤ Tools ➤ Autodesk Server Diagnostics Tool.

2   In the Diagnostics Tool Setup dialog box, click Run checks.
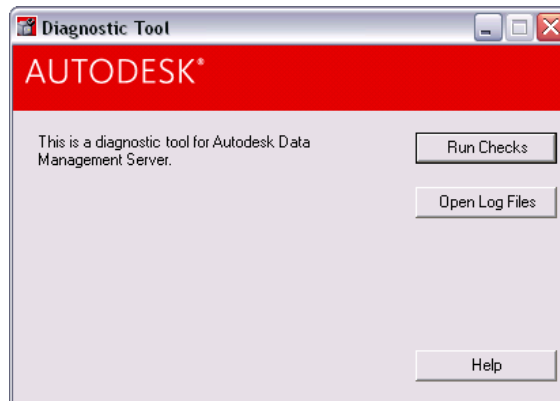
When Checking, all the results of the diagnostic tests are displayed in a list indicating which of the checks have passed successfully, have generated a warning, or have failed.
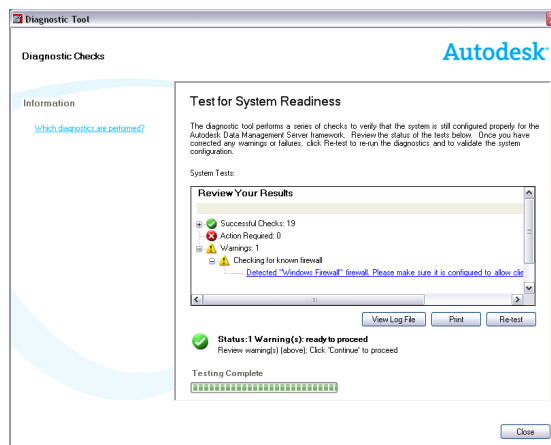
■ If a warning is returned, click the link in the Warning list to get more information.

■ If any of the checks fail, click the link displayed under the Action Required list to learn more about the error.

3 When the diagnostics are complete, click Close and then click Open Log Files to open the directory containing the log files.

Learn more about errors and corrections

■ In the Review Your Results list, click the error information under the Action Required list. It is linked to the corresponding pages of Autodesk Vault server installation help.

View Diagnostic Log Files

The diagnostic log file lists the name of each condition that is checked along with its information and test results. This includes the version of the operating system, the IIS information, the firewall, and any other related configuration information. Other log files are also created during the installation. The log files are stored in the EDMLog folder located in *C:\Documents and Settings\Administrator\Local Settings\Temp*.

Access the log files using one of the following methods:

■ In the Diagnostics Tool dialog box, click Open Log File. The EDMLog directory containing all the log files is opened. Select a log file to open.

■ Once you run the diagnostic checks, click View Log File to display the diagnostic log file.

Should it be necessary to seek assistance, you can forward log files to your IT personnel or to Autodesk Technical Support.

Recheck Operating System Environments

After you correct all the errors according to the log files or online help, click Recheck. The Diagnostics Tool will again check the operating system. Repeat this process until the all errors are corrected.

Common Installation Solutions

The following solutions given for installation problems which may occur if the data management server is not properly configured.

Error 404: File Not Found

During the pre-checks of the data management server installation you receive the message "Error 404: File Not Found".

Solution

This error may occur if the ASP.NET Web service Extension is not allowed to run in Internet Information Services (IIS). Follow the steps below to resolve the error.

1 Open the Internet Information Services Manager.

2 Expand the Web Services Extension Folder

3 From the right pane, select ASP .NET v2.0.50727.

4 Select the ASP .NET extension in the right pane.

5 Click Allow.

6 Restart the pre-checks.

Error: ASPX failed to run...

During the pre-checks of the data management server installation you receive the message "Error ASPX failed to run ASP .NET filter is prohibited".

Solution

1 Open the Internet Information Services Manager.

2 Expand the Web Services Extension Folder.

3 From the right pane, select ASP .NET v2.0.50727.

4 Select the ASP .NET extension in the right pane.

5 Click Allow.

6 Restart the pre-checks.

Error: ASPX file failed to run...

During the pre-checks of the data management server installation you receive the message "ASPX failed to run at URL:'*http://localhost/TestASPNet.aspx*'".

This error may be caused if .NET 2.0 is installed prior to installing Internet Information Services (IIS) and ASP >NET account does not have the proper permissions on the IIS Metabase:

Solution

1 Open a Windows® command prompt and navigate to the *%systemroot%\microsoft.net\framework\2.0.50727* directory.

2 Enter *aspnet_regiis.exe -ga ASPNet* If you are running Windows® XP or Windows Vista®. If you are running Windows server 2003, enter *aspnet_regiis.exe -ga "%computername%\Network Service"*.

3 Enter *IISRESET*.

4 Restart the pre-checks.

Error 29001. Performance counter...

During the pre-checks of the data management server installation you receive the message "Error 29001. Performance counter installation error. Input string was not a correct format."

Solution

This error may occur when the installation attempts to add performance counters for the data management server.

To check the current state of the performance counters

1 Click Start (Windows) ➤ Run.

2 In the Run dialog box, enter *Perfmon*.

3 Verify that you can add performance counters to the list to be monitored.

An inability to add performance counters indicates that system files have been corrupted.

To repair these files

1 Using Windows Internet Explorer®, browse to C:\WINDOWS\system32

2 Rename the perfc009.dat and perfh009.dat files to *perfc009.dat.OLD* and *perfh009.dat.OLD*, respectively.

3 Click Start (Windows) ➤ Run.

4 In the Run dialog box, enter *lodctr /r:PerfStringBackup.ini*.

5 Export a copy of HKEY_LOCAL_MACHINE\Software\Microsoft\Windows NT\Current Version\Perflib\009 from the system registry of a working computer and transfer it to your computer.

6 Change the Data Values of the Last Counter and Last Help keys so that they are the same as in the system registry of the working computer.

7 Restart your computer.

ISAPI Filter error while running...

While running the data management server on the 64-bit version of Windows server 2003 you notice an Event ID 2274 error in the Event Viewer Application log, indicating a problem with ISAPI filter.

Solution

Refer to the following Microsoft Knowledge Base article:*http://support.microsoft.com/kb/894435/en-us*.

Advanced Troubleshooting

Additional troubleshooting resources for the Autodesk data management system can be found online. They include a searchable Knowledge Base available on the Autodesk support page. You can access the Autodesk Knowledge Base online at *www.autodesk.com*.

Index