AUTODESK[®] VAULT SERVER

Advanced Configuration Guide for Autodesk[®] Vault Server 2013

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Introduction

The Advanced Configuration Guide contains additional information for setting up the Autodesk[®] Vault Server 2013. The topics in this guide relate to the Autodesk[®] Vault Server and can be used for all versions of Vault 2013 unless otherwise noted in the instructions for each configuration. As these topics cover advanced configurations, some familiarity with IT procedures is assumed. For more information, refer to the Autodesk[®] Vault Server Implementation and Managing Your Data guides.

Installing Autodesk Vault Server 2013

For standard installation configurations, consult the Autodesk Vault Server 2013 Implementation guide.

Customizing your Autodesk Vault Server 2013 installation

To customize your installation perform the following:

1. From the Install >Configure Installation screen, select the down arrow "Easily manage, track, and organize your CAD data directly from your design application".



 Database options will allow you to specify the SQL installation location if SQL has not been installed previously. Also, if a remote SQL location is available this option will be available. You will have the option to set the SQL sa password during installation by checking the box next to Use my SQL credentials.

This will need to be entered if the AutodeskVault SQL instance was installed prior to the Autodesk Vault Server with a sa password other than the default **AutodeskVault@26200. Additionally, you can specify the impersonation user account if desired.

Credentials					
✓ Use default SQL user ID and password					
User ID:	Password:	Confirm password:			
sa	•••••	•••••			
✓ Use default Windows user name and password					
User Name:	Password:	Confirm password:			
AutodeskVault	••••	•••••			

3. Vault Server 2013 has the option to automatically configure IIS to a port other than the default HTTP port, 80.

IIS Configuration		
Use default IIS configuration		
Website Name:	Port Number:	
Autodesk Data Management	\$080	
Note: IIS Configuration is only available on Windows Server System		
Port 8080 is a common alternate http port. However you can use any unused port between 1-65535.		

4. Selecting the up arrow at the top of the available options will return you to the installation product list.

🗹 Autodesk [®] Vault Professional 2013 (Server)			
Click to close and return to product list			
Installation Type			
C Local database			
C Remote database			
Specify location of SQL installation folder:			
C:\Program Files (x86)\Microsoft SQL Server\	Browse		
Specify location of SQL database:			
C:\Program Files (x86)\Microsoft SQL Server\	Browse		

IIS

Installing Autodesk Vault Server 2013 on Windows 7, Server 2008, Server 2008 R2

Note: IIS 7.0 has a limit of 10 simultaneous requests on non-server OS editions. When the connection limit is reached, the request is queued until the number of currently processing requests drops below the limit. IIS then will take the first request in the queue and starts to process it. Previous versions of IIS would return an **Error 403.9 Access Forbidden – Too many users are connected**.

Configuring Internet Information Services (IIS) 7.0

If you will be using Microsoft® Internet Information Services (IIS) 7.0 with Autodesk Vault Server, IIS 7.0 may be configured before you install Autodesk Vault Server. IIS 7.0 can be installed by the Autodesk Vault Server 2013 installation process as well. If you are installing IIS 7.0 manually, follow the steps below to configure the system options:

Windows 7

- 1. From the Windows Start menu select **Settings** > **Control Panel**.
- 2. In the Control Panel, double-click **Programs and Features**.
- 3. In the Programs and Features group, click Turn Windows Features On or Off.
- 4. If prompted to allow the application to run, click **Continue**.
- Select the following options underneath Internet Information Services: IIS Metabase and IIS 6 configuration compatibility; IIS Management Console; .NET Extensibility; ASP.NET; ISAPI Extensions; ISAPI Filters; Default Document; Directory Browsing; HTTP Errors; Static Content; HTTP Logging; Request Monitor; Static Content Compression; Request Filtering.



Windows 2008 / 2008 R2

- 1. From the Windows Start menu select Server Manager.
- 2. Under Roles Summary select Add Role.
- 3. On the Select Server Roles Page, select Web Server (IIS)

Add Roles Wizard		×
Select Server Ro	les	
Before You Begin Server Roles Web Server (IIS) Role Services Confirmation Progress Results	Select one or more roles to install on this server. Roles: Active Directory Certificate Services Active Directory Domain Services Active Directory Lightweight Directory Services Active Directory Rights Management Services Active Directory Rights Management Services DHCP Server DHCP Server File Services Hyper-V Network Policy and Access Services Print and Document Services Windows Deployment Services Windows Server Update Services Windows Server Update Services	Description: Web Server (IIS) provides a reliable, manageable, and scalable Web application infrastructure.
	< Previous Next	> Install Cancel

4. On the Select Role Services Page, add the following **Roles:**

Add Role Services		×
Select Role Servi	ces	
Role Services Confirmation Progress Results	Select the role services to install for Web Server (IIS): Role services: Web Server (Installed) Static Content (Installed) Default Document (Installed) Directory Browsing (Installed) HTTP Redirection WebDAV Publishing Application Development (Installed) NET Extensibility (Installed) ASP.NET (Installed) NET Extensions (Installed) ISAPI Extensions (Installed) Server Side Includes HTTP Logging (Installed) HTTP Logging (Installed) HTTP Logging (Installed) Health and Diagnostics (Installed) HTTP Logging (Installed) Request Monitor (Installed) Request Monitor (Installed) Tracina	Description: Web Server provides support for HTML Web sites and optional support for ASP.NET, ASP, and Web server extensions. You can use the Web Server to host an internal or external Web site or to provide an environment for developers to create Web-based applications. Image: the server of the ser



S Role Services: 22 installed				
Role Service Status				
<u></u>	Web Server	Installed		
<u>ہ</u>	Common HTTP Features	Installed		
5	Static Content	Installed		
•	Default Document	Installed		
	Directory Browsing	Not installed		
.	HTTP Errors	Installed		
	HTTP Redirection	Not installed		
•	Application Development	Installed		
<u>-</u>	ASP.NET	Installed		
5	.NET Extensibility	Installed		
	ASP	Not installed		
	CGI	Not installed		
-	ISAPI Extensions	Installed		
<u>-</u>	ISAPI Filters	Installed		
	Server Side Includes	Not installed		
<u>-</u>	Health and Diagnostics	Installed		
•	HTTP Logging	Installed		
	Logging Tools	Not installed		
.	Request Monitor	Installed		
	Tracing	Not installed		
	Custom Logging	Not installed		
	ODBC Logging	Not installed		
	Security	Installed		
	Basic Authentication	Not installed		
	Windows Authentication	Installed		
	Digest Authentication	Not installed		
	Client Certificate Mapping Authentication	Not installed		
	IIS Client Certificate Mapping Authentication	Not installed		
	URL Authorization	Not installed		
	Request Filtering	Installed		
	IP and Domain Restrictions	Not installed		
	Performance	Installed		
<u> </u>	Static Content Compression	Installed		
	Dynamic Content Compression	Not installed		
	Management Tools	Installed		
	IIS Management Console	Installed		
	IIS Management Scripts and Tools	Not installed		
	Management Service	Not installed		
.	IIS 6 Management Compatibility	Installed		
<u> </u>	IIS 6 Metabase Compatibility	Installed		
	IIS 6 WMI Compatibility	Not installed		
	IIS 6 Scripting Tools	Not installed		
	IIS 6 Management Console	Not installed		

Installing Autodesk Vault Server 2013 with other web applications using a different .NET version

The Autodesk data management software will usually coexist with other web applications in the Default Web Site of IIS. However, there are certain applications that require a different .NET Framework version. This section illustrates how you can configure the Autodesk Vault Server

Virtual directory to run under a different .NET version in the Default Application pool. You cannot run two different versions of .NET Framework in the same application pool with IIS 6.0. To work around this limitation, you will need to create a second application pool, and then configure it to run .NET Framework 4.0. Prior to running the Autodesk Vault Server installation you will have to configure the Default Web Site to use .NET 4.0.

Internet Information Services (IIS) 6

Note: Changing this setting will disable all other virtual folders under the Default Web Site to use .NET 4.0 until you change it back to the required .NET version for that application.

Open the IIS management console.

- 1. Open each virtual directory and note the .NET version that it is configured to use.
- 2. Right-click the Default Web Site and select Properties.
- 3. On the ASP.NET tab, select the **.NET 4.0.30319** from the drop-down list and click OK.
- 4. Install Autodesk Vault Server 2013.

To create an Application Pool

- 1. Open (IIS Manager in the Administrative Tools of the Control Panel.
- 2. Right-click the Application Pools folder. Click New Application Pool.
- 3. In the Application pool ID field, enter AutodeskAppPL.
- 4. Select the **Use existing application pool** as template radio button and use the **DefaultAppPool** as a template.
- 5. Click the **OK** button to apply the changes.

To assign the new Application Pool

- 1. Expand the Default Web Site and navigate to the AutodeskDM\Services virtual directory.
- 2. Right-click on the Services directory and select Properties.
- 3. In the **Directory** tab, change the **Application Pool** drop-down to the newly created **AutodeskAppPL** Application Pool.
- 4. Apply the changes and close the properties of the Services virtual directory.

To reset the .NET Framework version

- 1. Open the properties of the **Default Web Site**.
- 2. In the **ASP.NET** tab, select the original .Net version from the drop-down list. **Note:** If you are changing this from .NET 4.0 to a different version you will have to reconfigure the AutodeskDM\Services virtual directory back to .NET 4.0.
- 3. Re-check all Virtual directories to make sure the correct .NET version is configured for the application.

Internet Information Services (IIS) 7

To create an Application Pool

- 1. Open Internet Information Services (IIS) Manager in the Administrative Tools of the Control Panel.
- 2. Right-click the Application Pools folder. Click Add Application Pool.
- 3. In the Name field, enter AutodeskAppPL.

4. Ensure

.NET Framework version: is set to ".NET Framework v4.0.30319"

Managed pipeline mode: is set to "Integrated"

Start application pool immediately is ticked

5. Click the OK button to apply the changes.

To assign the new Application Pool

- 1. Under Sites, expand the Default Web Site and navigate to the AutodeskDM\Services virtual directory.
- 2. Right-click on the **Services** directory and select **Manage Application -> Advanced Settings.**
- 3. Under General, change the Application Pool to AutodeskAppPI
- 4. Click **OK** to apply the changes and close the properties of the Services virtual directory.

Enabling Windows Authentication on Windows 2008 After Installing Vault Server

With the release of '*TS1110787 – Passing Win Auth Login on Web Client*' users will encounter an issue with enabling their environment properly. The following steps are required to correctly use Windows authentication. Instructions below are for Windows 2008, Windows 2008 R2 and Windows 2003

Steps to enable Win Auth in Windows 2008 (IIS7)

1. Open Server Manager in Windows 2008, expand Roles, select Add Role Service upon rightclicking on Web Server (IIS). Then press install after checking Windows Authentication role.

	Server Manager
FI	le Action View Help
	• 🔿 📊 👔
	Server Manager (WIN-12H81SS6GL Server Manager Roles Web Server (IIS) Add Role Services Remove Role Services Refresh Diagnostics Refresh Help Configuration Configuratio Configuratio C
Add Role Services	
Select Rol	e Services
Role Services	Select the role services to install for Web Server (IIS):
Confirmation	Role services:
Progress Results	ODBC Logging ODBC Logging Security (Installed) Basic Authentication Authentication Authentication Authentication

2. While still in Server Manager, expand Web Server (IIS), click on IIS Manager, and navigate through to MachineName>Sites>Default Web Site>AutodeskDM. Select **Services** and Dbl-click on Authentication feature under the IIS section.

NOTE: Services is the only tree node that would need Windows Authentication enabled. It is not necessary to enable WinAuth on Default Web Site or AutodeskDM directories.



3. Ensure Windows Authentication is Enabled; right-click and select Enable if otherwise.

Internet Information Services (IIS) Manager					
Connections	Authentication				
Start Page	Group by: No Grouping -				
Application Pools	Name 🔺	Status	Response Type		
E is Sites	Anonymous Authentication	Enabled			
🗄 🏀 Default Web Site	ASP.NET Impersonation	Enabled			
🗄 📲 aspnet_client	Forms Authentication	Disabled	HTTP 302 Login/Red		
🖻 🔂 AutodeskDM	Windows Authentication	Disabled	HTTP 401 Challenge		
E Services			Enable		
'±… <u></u> ™ webclient		(2)	Help 43		
			Online Help		

For Windows 2008 R2, whilst Windows Authentication is still selected select "Providers" and ensure that "Negotiate" and "NTLM" are listed.

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Authentication			Alerts Click here to learn how to configure Extended Protection.
Group by: No Grouping	Contra 1		Actions
Name A	Status	Response Type	Disable
Anonymous Authentication	Enabled		Disable
ASP.NET Impersonation	Enabled		Advanced Settings
Forms Authentication	Disabled	HTTP 302 Login/Redirect	Providera
Windows Authentication	Enabled	HTTP 401 Challenge	
			Help VS
			Online Help
			on mile thep

If one is missing click "Available Providers" select the provider and click Add

_		
Pr	oviders	?×
	Enabled Providers:	pi
2	Negotiate	Move Up
t		Move Down
t		Remove
	Select a provider from the list of available providers and click Add to add it to the enabled providers.	
	Available Providers:	
	1 ×	Add
	OK	Cancel
_		

Ensure that they are listed in this Order:-

- 1. Negotiate
- 2. NTLM

If you have installed the "IIS Management Scripts and Tools" role in IIS, an alternative for setting the UI as shown in the above two screenshots, open a CMD prompt and execute the following commands (no quotes); if your website is other than 'Default Web Site', make the substitution prior to running each command:

A) "C:\Windows\System32\inetsrv\appcmd.exe set config "Default Web Site/AutodeskDM/Services" section:system.webServer/security/authentication/windowsAuthentication /+"providers.[value='Negotiate']" /commit:apphost" B) "C:\Windows\System32\inetsrv\appcmd.exe set config "Default Web Site/AutodeskDM/Services" section:system.webServer/security/authentication/windowsAuthentication /+"providers.[value='NTLM']" /commit:apphost"

In Internet Explorer, set web browser security settings to automatic logon with current user name and password.

Security Settings - Trusted Sites Zone
Settings
O Disable
Enable
Enable XSS filter
O Disable
Enable
Scripting of Java applets
O Disable
Enable
O Prompt
User Authentication
A Assessment Lang
Anonymous logon Automatic logon only in Intranet zono
Automatic logon with current user name and nassword
Prompt for user name and password
*Takes effect after you restart Internet Explorer
Reset custom settings
Reset to: Medium (default)
OK Cancel

Windows Server 2003 (IIS6)

1. **Right-click** on the **WinAuth** folder under AutodeskDM\Services inside of IIS and select **Properties**. Choose the **Directory Security** tab and click **Edit** under **Authentication and Access Control**.

Image: Big Action View Window Help Image: Big Action View Window Help Image: Big Action View Window Help Image: Big Action Proof Services Image: Big Action View Big Action Proof Services Image: Big Action Proof Services Image: Big Action View Big Action Proof Services Image: Big Action Proof Service Servic	🍯 Internet Information Services (IIS) Mana	iger		
 ← → C C X C X	🗊 Eile Action <u>V</u> iew <u>W</u> indow <u>H</u> elp			
 Internet Information Services PSDMX06 (local computer) AutodeskDM Bin ValkTTML WalkTTML Web Stervice Extensions 	← → 🗈 📧 🗙 🖆 🖻 😫 😫 🖬	是 ▶ ■ Ⅱ		
Edit	Internet Information Services PSDMX06 (local computer) Application Pools PdD Veb Sites PdD Actodesk0M PdD Services PdD Actodesk0M PdD Veb Service PdD Veb Ser	I WinAuth Properties HTTP Headers Custom Errors Witual Directory Documents Authentication and access control Enable anonymous access and edit the authentication methods for this resource IP address and domain name restrictions Grant or deny access to this resource us IP addresses or Internet domain names.	ASP.NET Directory Security	?
Secure communications Require secure communications and enable client certificates when this resource is accessed.		Secure communications Require secure communications and enable client certificates when this resource is accessed. OK Cancel	Server Certificate yew Certificate Edit	

2. Ensure that only Integrated Windows Authentication is enabled.

Authentication M	1ethods			×
Enable anor	nymous acci	ess		
Use the followin	ig Windows	user accoun	t for anonyn	nous access:
User name:	IUSR_PS	5DMX06		Browse,
Password:				
Authenticated a	ccess			
For the followin	g authentic	ation method	ls, user nam	e and password
are required with anony	ien: /mous acce:	ss is disabled	, or	
- acces	s is restricte	ed using NTF:	5 access cor	ntrol lists
Integrated	Wi <u>n</u> dows au	uthentication		
Digest auth	entication f	or Windows o	lomain serve	ers
Basic auther	ntication (p	assword is se	nt in clear to	ext)
I .NET Passpo	ort au <u>t</u> henti	ication		
Default <u>d</u> oma	in:			Select
<u>R</u> ealm:	Г			Select,
	1			
	ок	Cancel		Help

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3. Using **Notepad**, **Open** file C:\Program Files\Autodesk\ADMS Professional 2013\Server\Web\Services\WinAuth**web.config**

4. Change <identity impersonate="true"/> to <identity impersonate="false"/>

5. Save the file, then Close notepad.

6. Select the Application pool used by the AutodeskDM website, Right-Click and select

Properties.

🝹 Internet Information Services (IIS) Mana	DefaultAppPool Properties
Sile Action View Window Help ← → € Ⅲ 😭 I 🕄 😫 😢 Ⅰ	Recycling Performance Health Identity
Internet Information Services Spontage Service Servi	Recycle worker processes (in minutes): 17400 Recycle worker process (number of requests): 35000 Recycle worker processes at the following times: 4dd Remove Remove
	Edit Memory recycling Recycle worker process after consuming too much memory: Maximum <u>vi</u> rtual memory (in megabytes):
	Maximum used memory (in megabytes):

7. Increase the time the worker process will recycle (Suggested value of 17400).

8. Stop IIS . [using command iiisreset /stop]

9. Delete the folder: C:\Windows\Microsoft.NET\Framework\v4.0.30319\Temporary ASP.NET Files\autodeskdm_services

10. Starts IIS. [using command iiisreset /start]

Configure IIS 7.0 with an SSL Certificate. Configure the Server.

NOTE: The following procedure uses the Internet Information Services (IIS) Manager to configure IIS7 to require SSL for access.

- 1. Log into the computer hosting the Vault Server as a local or domain administrator.
- 2. From the Start Menu, select **Control Panel**.
- 3. Double-click the **Administrative Tools**, then double click the **Internet Information Services (IIS) Manager**.
- 4. Select the IIS server listed on the left hand pane, and then double-click **Server Certificates**.

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	NOV12358533 Home	Actions
Start Page NOV12358533 (NOV12358533\Administrator)	Group by: Area	Manage Server
Application Pools ⊞-a Sites	ASP.NET ASP.NET ASP.NET NET Compilation NET Compilation Globalization Pages and Controls Providers Session State Strings	 Restart Start Stop View Application Pools View Sites Help Online Help
	IIS ASP Authentication Compression Default Default Document Directory Browsing Error Pages	
	Failed Request Handler HTTP Redirect HTTP Tracing Rules Mappings HTTP Redirect HTTP Logging MIME Types Modules Output Caching Certificates Worker Processes	
	Management	

- 5.
- 6. If you already have a certificate from a Certificate Authority, you can Import your certificate by using the Actions pane on the right hand side of the Server Certificates window. You can also create a Self-Signed Certificate from the Actions pane. NOTE: The remainder of this document outlines using a Self-Signed Certificate named AutodeskDM.
- 7. Select Create Self-Signed Certificate. Name the certificate AutodeskDM, click OK.
- 8. Expand the **Sites** tree and select the website that is hosting the AutodesDM virtual Directory. In the image below, the website is Default Web Site. Select Default Web Site and click **Bindings** from the **Actions** pane.

Connections	🔮 Def	fault Web	Site Hom	5			Actions
Start Page NOV12358533 (NOV12358533\Administrator)	Group by: A	rea	-				Edit Permissions
Default Web Site		٢					Bindings
AutodeskDM CertEnroll	.NET Compilation	.NET Globalization	.NET Profile	.NET Roles	.NET Trust Levels	.NET Users	View Applications View Virtual Directories
⊡ _ 🔐 CertSrv	5-	P _			C	۲.	Manage Web Site

- 9. Click Add and change the type to https and change the SSL Certificate to AutodeskDM (or your imported certificate.) Click **OK**
- 10. If you wish to restrict all non SSL vault communication, click the http binding and select remove.
- 11. Close the Internet Information Services (IIS) Manager.

Reconfigure IIS Worker Process and Application Pool

IIS 6

- 1. Open the Active Directory Users and Computers and select an Organizational Unit (OU) to create the account in.
- 2. Create an account named **AutodeskID**. Set the password to match your domain password policy
- 3. Make the **AutodeskID** account a member of the **IIS_WPG** local group on DMMachine.
- 4. Give AutodeskID account Full Control permissions to the **%SystemRoot%\Temp** directory on DMMachine.
- 5. Give the AutodeskID account Full Control permissions to the <u>\FSMachine\VaultData</u> remote file store directory.
- 6. Open Internet Information Services (IIS) Manager and create a new Application Pool named **AutodeskAppPL**.
- 7. Open the properties of the AutodeskAppPL Application Pool and go to the **Identity** tab.
- 8. Add the domain account AutodeskID, set the password and apply the changes.
- 9. Expand the Default Web Site and navigate to the AutodeskDM\Services virtual directory.
- 10. Right-click on the Services directory and go to the **Directory** tab.
- 11. Change the Application Pool pull-down to the newly created **AutodeskAppPL** Application Pool.
- 12. Apply the changes and close the properties of the Default Web site.
- 13. Close the IIS Manager.
- 14. Open a Command prompt and type **IISRESET**.
- 15. Add new files to the vault and verify that the properties are able to be indexed.

IIS 7

- 1. Open the Active Directory Users and Computers and select an Organizational Unit (OU) to create the account in.
- 2. Create an account named **AutodeskID**. Set the password to match your domain password policy
- 3. Make the AutodeskID account a member of the IIS_WPG local group on DMMachine.
- 4. Give AutodeskID account Full Control permissions to the **%SystemRoot%\Temp** directory on DMMachine.
- 5. Give the AutodeskID account Full Control permissions to the <u>\FSMachine\VaultData</u> remote file store directory.
- 6. Right click on the Application Pools and select Add Application Pool.
- 7. In the Add Application Pool dialog, name the application pool **AutodeskAppPL** and keep the other options at their default.
- 8. In the Applications Pool listing, find your newly created application pool and right click on it.
- 9. Select the Advanced Settings.
- 10. Under Process Model, Select Identity and change the Identity to use the Domain account (AutodeskID) that you created earlier.
- 11. Expand the Default Web Site and navigate to the AutodeskDM\Services virtual directory.
- 12. Right-click on the Services directory and select Manage Application -> Advacned Settings.
- 16. Change the Application Pool to the newly created AutodeskAppPL Application Pool.
- 17. Apply the changes and close the properties of the Default Web site.

- 18. Close the IIS Manager.
- 19. Open a Command prompt and type **IISRESET**.
- 13. Add new files to the vault and verify that the properties are able to be indexed

SQL

Installing Microsoft SQL Server prior to Autodesk Vault Server 2013

Vault Server 2013 will install Microsoft SQL 2008 SP2 x86 Express Edition (Build Number 10.0.4000.0) if it is unable to find an existing SQL instance named **AUTODESKVAULT**. If you plan on running a full SQL version with Vault Server 2013, it can be installed before or after the installation of Vault Server 2013.

Note: This installation process may require the server to reboot multiple times. Please be sure you are able to perform the necessary reboots. Also, if you use a custom password for the SQL SA account, you will need to specify this password during the installation of the Autodesk Vault Server. Please see the <u>Customizing your Autodesk Vault Server 2013 Installation</u> section in this document.

Microsoft SQL 2008:

- Start the installation process for Microsoft SQL 2008 Server by selecting New SQL Server stand-alone installation or add features to an existing installation from the installation menu.
- The installation process installs any necessary prerequisites and begins running the preinstallation checks. Note any errors and take the necessary corrective actions before continuing.
- 3. In the Feature Selection window, select **Database Engine Services**. You can also specify the installation location at this point.
- 4. In the Instance Configuration window, select Named instance and enter the name as **AutodeskVault**.

Instance Configuration Specify the name and instance ID	for the SQL Server instance.				
Setup Support Rules Feature Selection Instance Configuration Disk Space Requirements	 Default instance Named instance: 	AutodeskVau	t		
Disk Space Requirements Server Configuration Database Engine Configuration Error and Usage Reporting Installation Rules Ready to Install Installation Progress	Instance ID: Instance root directory: 	AutodeskVaul C:\Program F C:\Program Fi	t iles\Microsoft SQL Se les\Microsoft SQL Ser	rver\ ver\MSSQL10.Autor	deskVault
Complete	Installed instances:	atures	Edition	Version	Instance ID
			< Back	Vext > Can	ncel Help

Note: If you install SQL without using this instance name, the Autodesk Vault Server installation will create its own instance of SQL Server called **AutodeskVault** using

Microsoft SQL Express 2008 SP2. It will **NOT** recognize any SQL instance not named **AutodeskVault**.

- 5. In the Server Configuration window, select the Service Accounts tab.
 - a. Specify the NT AUTHORITY\NETWORK SERVICE account for the SQL Server Database Engine. The local system account is also acceptable to use. If you plan on performing backups and restores to remote locations specify a Domain User account. Set the Startup Type to Automatic.

Setup Support Rules	Service Accounts Collation			
Feature Selection	Microsoft recommends that yo	u use a senarate account for ea	ch SOL Servers	envice
Instance Configuration			en oge oerver s	
Disk Space Requirements	Service	Account Name	Password	Startup Type
erver Configuration	SQL Server Database Engine			Automatic
stabase Engine Configuration				
or and Usage Reporting		Lies the serve	account for all	
or and osage hepotenig		LICO THO COMO		
stallation Rules		Use the same	account for an	SQC Server Services
istallation Rules eady to Install		Use the same	account for an	SQC Server Services
istallation Rules eady to Install istallation Progress	There reprires will be configure	Use the same		rivilege account
istallation Rules eady to Install istallation Progress	These services will be configur On some older Windows versic	ed automatically where possible	to use a low p	rivilege account.
nstallation Rules eady to Install nstallation Progress Complete	These services will be configur On some older Windows versic more information, click Help.	ed automatically where possible	to use a low privilege	rivilege account. account. For
nstallation Rules leady to Install Installation Progress	These services will be configur On some older Windows versic more information, click Help. Service	ed automatically where possible ons the user will need to specify Account Name	to use a low p a low privilege Password	rivilege account. account. For Startup Type
stallation Rules ady to Install stallation Progress omplete	These services will be configur On some older Windows versic more information, click Help. Service SQL Server Browser	ed automatically where possible ons the user will need to specify Account Name NT AUTHORITY\LOCA	to use a low p a low privilege Password	rivilege account. account. For Startup Type Disabled

- 6. In the Database Engine Configuration window, select the Account Provisioning tab.
 - a. Select **Mixed Mode** authentication and set the SA password. The default password used during a default installation for the SA password is **AutodeskVault@26200**.
 - b. Add the local administrator account (or desired account) as a SQL Server administrator. Only Windows users entered in this dialog will have full rights when logging into the SQL server. All other Windows logins will be treated as a guest account.

etup Support Rules	Account Provisioning Data Directories User Instances FILEST	REAM		
eature Selection nstance Configuration	Specify the authentication mode and administrators for the Da	tabase Engine.		
Disk Space Requirements	Authentication Mode			
Gerver Configuration	Windows authentication mode			
Database Engine Configuration Error and Usage Reporting Installation Rules	Mixed Mode (SQL Server authentication and Windows authentication) Built-in SQL Server system administrator account			
Ready to Install	Built-in SQL Server system administrator account			
nstallation Progress				
Complete	Confirm password:			
	Specify SQL Server administrators			
	Administrator (Administrator)	SQL Server administrators have unrestricted access to the Database Engine.		
	Add Current User Add Remove			

Note: If you use a different SA password, you will need to use the **use my SA Credentials** option in the <u>Customizing your Autodesk Vault Server 2013</u> <u>Installation</u> section in this document.

- 7. Verify the installation options chosen and **Install**. Once the installer has finished, it can be closed.
- Download and install SQL 2008 SP2 and applicable hot fixes from Microsoft's web site if needed. The database engine version will be 10.0.4### once SP 2 has been successfully installed. In addition, SQL 2008 SP3 can be applied.

Microsoft SQL 2008 R2 (Express Edition)

- 1. Start the installation process for Microsoft SQL 2008 R2 Server Express Edition by selecting **New installation or add features to an exisiting installation** from the **Installation** menu.
- 2. The installation process installs any necessary prerequisites and begins running the preinstallation checks. Note any errors and take the necessary corrective actions before continuing.
- 3. Select the **Database Engine Services** and any additional roles required by the environment. **SQL Server Replication** is required in a Connected Workgroup environment and not supported with the Express edition of SQL, so it is not necessary to

keep it ticked. Keep SQL Client Connectivity SDK ticked.

Features:
Instance Features
Database Engine Services
SQL Server Replication
Shared Features
SQL Client Connectivity SDK
Redistributable Features

4. In the Instance Configuration window, select Named instance and enter the name as **AUTODESKVAULT**.

🍀 SQL Server 2008 R2 Setup				
Instance Configuration				
Specify the name and instance ID f	or the instance of SQL Serv	er. Instance ID become	es part of the installati	on path.
Setup Support Rules	C Default instance			
Feature Selection	Named instance:			
Installation Rules		horocentricen		
Instance Configuration				
Disk Space Requirements	Instance ID:	AUTODESKVAULT		
Server Configuration	Instance root director	(C) Program Files Micro	soft SOL Server\	
Database Engine Configuration	instance root directory	- Jes virogram i nes vilor	3011 3QE 3CI VEI (
Error Reporting				
Installation Configuration Rules	SQL Server directory:	C:\Program Files\Mic	rosoft SQL Server\MSS	QL10_50.AUTODE
Installation Progress	Testalladinatanaaa			
Complete	Installed Instances:			
	Instance Name	Instance ID	Features	Edition

Note: If you install SQL without using this instance name, the Autodesk Vault Server installation will create its own instance of SQL Server called **AUTODESKVAULT** using the 32 bit version of Microsoft SQL Express 2008 SP2. It will **NOT** recognize any other SQL Instance name.

- 5. In the Server Configuration window, select the Service Accounts tab.
 - a. Specify the NT AUTHORITY\NETWORK SERVICE account for the SQL Server Database Engine. The local system account is also acceptable to use. If you plan on performing backups and restores to remote locations specify a Domain User account. Set the Startup Type to Automatic.

SQL Server 2008 R2 Setup					
Server Configuration					
Specify the service accounts and	collation configuration.				X
etup Support Rules	Service Accounts Collation				
Feature Selection					
installation Rules	Microsoft recommends that	you use a separate account for each !	SQL Server servic	e.	
instance Configuration	Service	Account Name	Password	Startup Type	
Disk Space Requirements	SQL Server Database Engine	NT AUTHORITY WETWORK SERVICE		Automatic	•
Server Configuration	SQL Server Browser	NT AUTHORITY/LOCAL SERVICE		Disabled	•
Database Engine Configuration					
Error Reporting					
installation Configuration Rules		Use the s	ame account for a	all SQL Server serv	ices
installation Progress					

- 6. In the Database Engine Configuration window, select the Account Provisioning tab.
 - a. Select **Mixed Mode** authentication and set the SA password. The default password used during a default installation for the SA password is **AutodeskVault@26200**.
 - b. Add the local administrator account (or desired account) as a SQL Server administrator. Only Windows users entered in this dialog will have full rights when logging into the SQL server. All other Windows logins will be treated as a guest account.

SQL Server 2008 R2 Setup	
Database Engine Configu	Iration on security mode, administrators and data directories.
Setup Support Rules Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Error Reporting Installation Configuration Rules Installation Progress Complete	Account Provisioning Data Directories User Instances FILESTREAM Specify the authentication mode and administrators for the Database Engine. Authentication Mode Windows authentication mode Mixed Mode (SQL Server authentication and Windows authentication) Specify the password for the SQL Server system administrator (sa) account. Enter password: Confirm password: Specify SQL Server administrators VIN-JCSPE3AEMMKB\Administrator (Administrator) SQL Server administrators Add Current User Add Remove

Note: If you use a different SA password, you will need to use the **use my SA Credentials** option in the <u>Customizing your Autodesk Vault Server 2013</u> <u>Installation</u> section in this document.

- 7. Verify the installation options chosen and **Install**. Once the installer has finished, it can be closed.
- 8. Download and install SQL 2008 R2 SP1 from Microsoft's web site if needed.

Microsoft SQL 2008 R2 (Standard or Enterprise)

- 1. Start the installation process for Microsoft SQL 2008 R2 Server by selecting **New SQL Server stand-alone installation or add features to an existing installation** from the installation menu.
- 2. The installation process installs any necessary prerequisites and begins running the preinstallation checks. Note any errors and take the necessary corrective actions before continuing.
- 3. During Setup Role, select SQL Server Feature Installation
 - SQL Server Feature Installation

Install SQL Server Database Engine Services, Analysis Services, Reporting Services, Integration Services, and other features.

C All Features With Defaults

Install all features using default values for the service accounts.

4. Select the Database Engine Services and any additional roles required by the environment. SQL Server Replication is required in a Connected Workgroup environment and the Management Tools is recommended. Please note that only Management Tools – Basic is available in the Express version of SQL.

Features:

Instance Features
Database Engine Services
SQL Server Replication
Full-Text Search
Analysis Services
Reporting Services
Shared Features
Business Intelligence Development Studio
Client Tools Connectivity
Integration Services
Client Tools Backwards Compatibility
Client Tools SDK
SQL Server Books Online
Management Tools - Basic
Management Tools - Complete
SQL Client Connectivity SDK
Microsoft Sync Framework
Redistributable Features

5. In the Instance Configuration window, select Named instance and enter the name as **AUTODESKVAULT**.

Instance Configuration Specify the name and instance ID for	or the instance of SQL Serv	er. Instance ID becom	es part of the installa	tion path.	
Setup Support Rules Setup Role Feature Selection Installation Rules Instance Configuration	C Default instance C Named instance: Instance ID:	AutodeskVault AutodeskVault			
Disk Space Requirements Server Configuration Database Engine Configuration Error Reporting Installation Configuration Rules Ready to Install	Instance root directory SQL Server directory: Installed instances:	: C:\Program Files\Micr C:\Program Files\Mic	osoft SQL Server\ crosoft SQL Server\MS	SQL10_50.AutodeskVa	ult
Installation Progress Complete	Instance Name	Instance ID	Features	Edition	Version
			< Back	Next > Can	cel Help

Note: If you install SQL without using this instance name, the Autodesk Vault Server installation will create its own instance of SQL Server called **AUTODESKVAULT** using 32-bit Microsoft SQL Express 2008 SP2. It will **NOT** recognize an SQL instance with a different name.

- 6. In the Server Configuration window, select the Service Accounts tab.
 - a. Specify the **NT AUTHORITY\NETWORK SERVICE** account for the SQL Server Database Engine. The local system account is also acceptable to use. If you plan on performing backups and restores to remote locations specify a Domain User account. Set the Startup Type to Automatic.

etup Support Rules	Service Accounts Collation					
etup Role						
eature Selection	Microsoft recommends that you	use a separate account for each S	QL Server servic	ie.		
nstallation Rules	Service	Account Name	Password	Startup Type		
stance Configuration	SQL Server Agent	NT AUTHORITY WETWOR		Manual	-	
isk Space Requirements	SQL Server Database Engine	NT AUTHORITY WETWOR		Automatic	-	
erver Configuration	SQL Server Browser	NT AUTHORITY\LOCAL S		Automatic	-	
vatabase Engine Configuration rror Reporting nstallation Configuration Rules eady to Install		Use the sa	ame account for	all SQL Server ser	vices	

- 7. In the Database Engine Configuration window, select the Account Provisioning tab.
 - a. Select **Mixed Mode** authentication and set the SA password. The default password used during a default installation for the SA password is **AutodeskVault@26200**.
 - b. Add the local administrator account (or desired account) as a SQL Server administrator. Only Windows users entered in this dialog will have full rights when logging into the SQL server. All other Windows logins will be treated as a guest account.

Database Engine Config Specify Database Engine authentice	uration tion security mode, administrators and data directories.
Setup Support Rules Installation Type Product Key License Terms Setup Role Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration	Account Provisioning Data Directories FILESTREAM Specify the authentication mode and administrators for the Database Engine. Authentication Mode ^C Windows authentication mode ^C Mixed Mode (SQL Server authentication and Windows authentication) Specify the password for the SQL Server system administrator (sa) account. Enter password: Confirm password:
Error Reporting Installation Configuration Rules Ready to Install Installation Progress Complete	Specify SQL Server administrators VAdministrator (Administrator) SQL Server administrators have unrestricted access to the Database Engine. Add Current User Add Remove
	< Back Next > Cancel Help

Note: If you use a different SA password, you will need to use the **use my SA Credentials** option in the <u>Customizing your Autodesk Vault Server 2013</u> <u>Installation</u> section in this document.

- 8. Verify the installation options chosen and **Install**. Once the installer has finished, it can be closed.
- 9. Download and install SQL 2008 R2 SP1 from Microsoft's web site if needed.

Reconfiguring SQL Logins

If you don't have a domain password policy, you can skip this section. If your domain has a password policy configured, you must use a password that complies with the policy. After the installation is complete, reset the sa password to **AutodeskVault@26200** and uncheck the **Enforce password policy** check box. It is also necessary to create two SQL login accounts named **VaultSys** and **ADMS-<COMPUTERNAME>**.

To create the VaultSys account:

- 1. Open the Microsoft SQL Server Management Studio.
- 2. Expand the **Security -> Logins** folder.
- 3. Right-click on the Logins folder and select **New Login**.
- 4. Type VaultSys for the login name.
- 5. Select SQL Server Authentication.
- 6. Type SuperMan769400006! as the password.

7. Uncheck the box for Enforce password policy.

Login Properties - VaultSys	t term	-	1 (g) (bar parties	
Select a page	🔄 Script 🔻 📑 Help			
Server Roles User Mapping Securables Status	Login name: VaultSys O Windows authentication O SQL Server authentication Password			Search
	Confirm password:			_
	Specify old password			
	Old password:			
	Enforce password policy			_
	Enforce password expirat	tion		
	User must change passw	ord at next login		_
	 Mapped to certificate 			-
	 Mapped to asymmetric key 			×
Connection	Map to Credential			- Add
Server: .\AUTODESKVAULT Connection:	Mapped Credentials	Credential	Provider	
sa <u>View connection properties</u>				
Progress				Remove
Ready	Default database:	master		•
~4.6~	Default language:	English		•
			ОК	Cancel

- 8. Select the Server Roles page.
- 9. Check the boxes next to the following roles:
 - dbcreator
 - processadmin
 - setupadmin
- 10. Click **OK** to create the account.

To create the ADMS-<COMPUTERNAME> account.

- 11. Open the Microsoft SQL Server Management Studio.
- 12. Expand the Security -> Logins folder.
- 13. Right-click on the Logins folder and select **New Login**.
- 14. Type **ADMS-<COMPUTERNAME>** for the login name.(Where **<COMPUTERNAME>** indicates the NT Computer name) Example, if the computer name is MAINSERVER then the login name would = **ADMS-MAINSERVER**.
- 15. Select SQL Server Authentication.
- 16. Type WeakerMan769400006! as the password.

17. Uncheck the box for **Enforce password policy**.

Select a page	🔄 Script 🔻 📑 Help	🔄 Script 🔻 📑 Help						
Server Roles User Mapping Securables Status	Login name: Windows authentication SQL Server authentication Password: Confim password: Specify old password Old password: Enforce password policy Enforce password expira User must change passw Mapped to certificate Mapped to asymmetric key	ADMS- <computername></computername>	Search					
Connection	Map to Credential		- Add					
Server: .\AUTODESKVAULT Connection: ADS\rankinr View connection properties Progress	Mapped Credentials	Credential Provider	Remove					
Ready	Default database: Default language:	master English	 Remove Temove 					

- 18. Select the **Server Roles** page.
 - Ensure that only **public** is selected.
- 19. Click **OK** to create the account.

Installing SQL Server on a Domain Controller

Referencing the following Microsoft Article:

http://msdn.microsoft.com/en-us/library/ms143506.aspx:

Installing SQL Server on a Domain Controller

For security reasons, Microsoft recommends that you do not install SQL Server 2008 / 2008 R2 on a domain controller. SQL Server Setup will not block installation on a computer that is a domain controller, but the following limitations apply:

- On Windows Server 2003, SQL Server services can run under a domain account or a local system account.
- You cannot run SQL Server services on a domain controller under a local service account or a network service account.
- After SQL Server is installed on a computer, you cannot change the computer from a domain member to a domain controller. You must uninstall SQL Server before you change the host computer to a domain controller.
- After SQL Server is installed on a computer, you cannot change the computer from a domain controller to a domain member. You must uninstall SQL Server before you change the host computer to a domain member.
- SQL Server failover cluster instances are not supported where cluster nodes are domain controllers.
- SQL Server Setup cannot create security groups or provision SQL Server service accounts on a read-only domain controller. In this scenario, Setup will fail.

Upgrading The AUTODESKVAULT SQL instance.

When upgrading to a higher version of Microsoft SQL Server, it is assumed the appropriate IT and engineering staff required, are available to allow access to the server and client systems, as well as to execute periodic system restarts. It is also recommended that the process be verified in a test environment prior to performing the upgrade on the production environment. Client side systems are needed to verify that the upgrade has been completed successfully.

The server upgrade can be performed at any time after Autodesk Vault Server has been installed.

During the upgrade, the SQL server instance and the Autodesk Vault Server Services are shut down. Anyone logged into the vault at the time is automatically disconnected. Make sure all users are logged out of the Autodesk Vault Server. The upgrade will not affect the state of checked out files, nor will it modify the database structure, state of the files, or parent child relationships.

Before upgrading SQL server, perform a backup from the Autodesk Vault Server Console application. For more information on backing up data, see the Autodesk Vault Server console Help.

NOTE Before performing any of the following steps, first identify the Version, Edition and bitness of the SQL Server Database Engine that is currently installed. See "<u>How to</u> <u>determine the version and edition of SQL Server and its components</u>" (MS Article ID 321185).

If no AUTODESKVAULT SQL instance is installed, Autodesk Vault Server 2013 will install the 32 bit version of Microsoft SQL Server 2008 (SP2) Express Edition - 10.0.4000.0. This is true for both 32 bit and 64 bit operating systems. If installing on a 64 bit operating system and a 64 bit version of SQL is required, it will need to be installed before installing Vault Server 2013.

ADVANCED CONFIGURATION GUIDE FOR VAULT SERVER 2013

Microsoft does not support cross-platform, in place, upgrades to **or** from 64 bit SQL. See the Microsoft <u>"Version and Edition Upgrades</u>" website for more information.

Upgrading MS SQL Express 2008 SP2 to SQL Express 2008 R2

1. Launch Setup from the SQL Express 2008 R2 installation media. Select the Installation option and Click Upgrade from SQL Server 2000, SQL Server 2005 or SQL Server 2008

Planning	New installation or add features to an existing installation.
Installation	Launch a wizard to install SQL Server 2008 R2 in a non-clustered enviror an existing SQL Server 2008 R2 instance.
Maintenance	
Tools	 Upgrade from SQL Server 2000, SQL Server 2005 or SQL Server 2008 Launch a wizard to upgrade SQL Server 2000, SQL Server 2005 or SQL :
Resources	2008 R2.

2. Select the **AUTODESKVAULT** SQL instance.

Select the instance of SQL Server to upgrade. To upgrade only Management Tools and shared features, select "Upgrade shared features" and then click next.								
Instance to upgrade:	Instance to upgrade: AUTODESKVAULT							
Installed instances:	Installed instances:							
Instance Name	Instance ID	Features	Edition	Version				
AUTODESKVAULT	MSSQL10.AUTODES	SQLEngine	Express	10.2.4000.0				

3. Upgrade the instance by completing the wizard.

Upgrading MS SQL Express 2008 SP2 to Full MS SQL 2008

4. Launch **Setup** from the Full SQL 2008 installation media. Select the **Maintenance** option and begin the **Edition Upgrade** wizard.



5. Verify version and or product key for Full SQL 2008 and proceed to the Select Instance window and choose the **AUTODESKVAULT** instance.

Select the SQL Server instance you would like to upgrade edition or you can choose to skip upgrading the edition of an instance.						
Specify the instance of SC	QL Server:	AUTODESKVAULT	•			
Installed instances:						
Instance Name	Features			Version	Edition	
AUTODESKVAULT	SQLEngine,	SQLEngine\Replication		10.0.1600.22	Express	
<shared components=""></shared>	Conn, SDK			10.0.1600.22		

- 6. Upgrade the Instance. Once the instance has been upgraded, you can install the SQL Management Studio by returning to the "Installation" option and being the **New SQL Server stand-alone installation or add features to an existing installation** wizard.
- 7. Download and apply SQL 2008 SP2 if needed.

Upgrading MS SQL Express 2008 R2 to Full MS SQL 2008 R2

1. Launch **Setup** from the Full SQL 2008 installation media. Select the **Maintenance** option and begin the **Edition Upgrade** wizard.

Planning Installation	Edition Upgrade Launch a wizard to change your edition of SQL Server 2008 R2, like changing from Develop Enterprise.	er to
Maintenance		
Tools	Repair Launch a wizard to repair a corrupt SQL Server 2008 R2 installation.	
Resources		
Advanced	Remove node from a SQL Server failover duster Launch a wizard to remove a node from an existing SQL Server 2008 R2 failover duster.	

 Verify version and or product key for Full SQL 2008 and proceed to the Select Instance window and choose the AUTODESKVAULT instance.

Select the SQL Server instance you would like to upgrade edition or you can choose to skip upgrading the edition of an instance.								
	Specify the instance of	SQL Server:	AUTODES	KVAULT		•		
Installed instances:								
	Instance Name	Instance ID		Features		Edition	Version	
AUTODESKVAULT MSSQL10_50			.AUTO	SQLEngine		Express with Advan	10.50.1600.1	

10.50.1600.1

After Upgrading to SQL Standard or Enterprise.

<Shared Componen...

If you intend to implement the more advance features of SQL supported by Autodesk Vault, such as Replication, you will then need to switch to the **Installation** page and click, **New installation or add new features to an existing installation.**

SSMS

On the Installation Type page, ensure that Add features to an existing instance of SQL Server 2008 R2 and the AUTODESKVAULT instance is selected.



On the **Feature Selection** page, ensure the features that you need are ticked.
SQL Server 2008 R2 Setup Feature Selection Select the Standard features to inst	tall.	
Setup Support Rules Installation Type Feature Selection Installation Rules Disk Space Requirements Error Reporting Installation Configuration Rules Ready to Install Installation Progress Complete	Features:	Descrij Server aware registr multipl
	Select All Unselect All	

In the above example, **SQL Server Replication** is needed to implement Connected Workgroups in Vault and **Management Tools – Complete** is recommended.

The SQL Server Agent needs to be set to run automatically on startup. Type **Services.msc** at a **Run** prompt. In the Services Console, locate **SQL Server Agent (AUTODESKVAULT)**, right click and select **Properties**, On the **General** tab, change the **Startup** type to **Automatic**, click **Apply.** Switch to the Log On tab, ensure that Network Service is selected, go back to General tab and click **Start**.

Assigning SQL a custom TCP/IP Port

This section outlines the steps to set SQL to a non-standard TCP/IP port.

SQL Server 2008 (and R2)

- 1. Install full SQL Server 2008 as per the Advanced Configuration Guide.
- 2. On the server where SQL is installed, start the SQL Server Configuration Manager.
- 3. In the SQL Server Configuration Manager dialog, expand the SQL Server Network Configuration and select Protocols for AUTODESKVAULT.
- 4. In the right pane double-click on the TCP\IP protocol to open its properties.
- 5. In the TCP\IP Properties dialog, select the **Protocol** tab and change the Enabled property to **Yes**.
- 6. Select the IP Addresses tab.
- 7. Scroll down to the bottom of the dialog until you get to the **IPAII** section.
- 8. Change the TCP Port field to the port you desire.
- 9. Apply your changes and select **OK** to close the TCP\IP Properties dialog.

- 10. In the SQL Server Configuration Manager dialog, select the **SQL Server Services** section in the left pane.
- 11. Select SQL Server (AutodeskVault) in the right-pane, right-click on it and select Restart.

Autodesk Vault Server

- 1. Run C:\Windows\System32\cliconfig from and the SQL Server Client Network Utility.
- 2. In the SQL Server Client Network Utility dialog, select the Alias tab.
- 3. In the Alias tab, select the Add button.
- 4. In the Edit Network Library Configuration dialog, select TCP/IP under Network Libraries.
- 5. In the **Server alias** box type the name of the server where SQL is installed along with the instance name.
- 6. **Uncheck** the **Dynamically** determine port and enter the port number you configured in step 8 above.

🕼 Add Network Library Configura	ation	×
Server alias:	SQLServer\AutodeskVault	
Network libraries	Connection parameters	
O Named Pipes	Server name:	SQLServer\AutodeskVault
TCP/IP	contormano.	
C Multiprotocol	Dynamically determine po	ort
C NWLink IPX/SPX	Port number:	1433
C AppleTalk		
C Banyan VINES		
C VIA		
C Other		
		OK Cancel Help

- 7. Click the **OK** button to apply the settings.
- 8. Start your Autodesk Vault Server installation.

SQL Maintenance Plans

Maintenance plans can be used to schedule tasks required to make sure that the database performs well, such as keeping database and transaction log file sizes small and checking the database for inconsistencies.

The following steps are universal across all versions of SQL in use with Vault 2013 (Express and Full SQL). The complete list of supported database engines is located in the product readme file.

**Please note that if you are running SQL Express and do not have the SQL Management Studio installed, the following steps can be completed through the command prompt through scripts under the section "<u>Creating a Maintenance Script for Microsoft SQL Express</u>", or you can install the SQL Management Studio for Express, available from Microsoft's web site.

- 1. Login to the SQL Management Studio.
- 2. Expand Databases, expand System Databases.
- 3. Right Click on tempdb and select properties.
- 4. Select the Files page.
- 5. If using a multi-core system, additional data files should be configured, using the guidelines below. If using a single-core system, skip to step **d** below.
 - a. Data file totals should equal half of the available physical processing cores up to a maximum of 8 data files. (example; 8 physical cores would equal 4 total data files, tempdev_2, tempdev_3, tempdev_4)
 - b. Click the **Add** button to add additional data files.
 - c. Name the new file(s) tempdev_2, tempdev_3, ... as needed.
 - *d.* Set initial size of each data file to **1,024** MB. *If using a total of 8 datafiles, an initial size of* **512** *MB can be used.*
 - e. Set Autogrowth to **100** MB, unrestricted growth for each data file.
 - f. Set the LDF log file to combined data file total. (example; if there are 2 data files total, the resulting LDF should be set to an initial size of 2048 MB)

Select a page	🔄 Script 👻 📗	Help				
🚰 General 🚰 Files	Database nar	ne:	temp	db		
I rilegroups I Options I Change Tracking	Owner:		sa			
Permissions Textended Properties	✓ Use full-tex	xt indexing				
	Database file:	s:				
	Logical N	File Type	Filegroup	Initial Size (MB)	Autogrowth	
	tempdev	Rows Data	PRIMARY	1024	By 100 MB, unrestricted growth	
	tempdev_2	Rows Data	PRIMARY	1024	By 100 MB, unrestricted growth	
	templog	Log	Not Appl	2048	By 10 percent, unrestricted growth	
Connection Server. AutodeskVault						
Connection:						
View connection properties						
Progress						
Ready	•				Add	
					Add Remove	_

g. The results will appear similar the image below.

- 6. Under the **Options** page, set the Recovery model to **Simple** and the Compatibility level to **SQL Server 2008 (100)**.
- 7. Select OK.

Creating a SQL Maintenance Plan for Full SQL

Maintenance plans can be used to schedule tasks required to make sure that the database performs well, such as keeping database and transaction log file size small and checking the database for inconsistencies.

NOTE: These settings are recommended by Autodesk and should be configured automatically for new installations. If migrated from an earlier release of Vault Server, these settings are not enforced as they may have been changed intentionally by the Administrator.

SQL Standard / Enterprise 2008 and 2008 R2

- 1. Verify that the vaults have been backed up with the Autodesk Vault Server Console before proceeding.
- 2. Make sure that all users are **logged out** of the vault server.
- 3. From the Control Panel, double-click Administrative Tools and then double-click the Services icon.
- 4. Locate the SQL Server Agent (AUTODESKVAULT) service.

- 5. Right-click on the SQL Server Agent (AUTODESKVAULT) and select Properties.
- 6. Change the Startup Type to Automatic and start the service

SQL Server Agent (A	UTODESKVAULT) Properties (Local Computer)	23			
General Log On	Recovery Dependencies				
Service name:	SQLAgent\$AUTODESKVAULT				
Display name:	SQL Server Agent (AUTODESKVAULT)				
Description:	Executes jobs, monitors SQL Server, fires alerts, and allows automation of some administrative tasks.	^ ~			
Path to executable "C:\Program Files"	Path to executable: "C:\Program Files\Microsoft SQL Server\MSSQL10.AUTODESKVAULT\MS				
Startup type:	Automatic	•			
Help me configure	Help me configure service startup options.				
Service status:	Service status: Stopped				
Start Stop Pause Resume					
You can specify the start parameters that apply when you start the service from here.					
Start parameters:					

- 7. Open the Microsoft SQL Management Studio and connect to the **AutodeskVault** instance. Use <*ComputerName*>\AUTODESKVAULT as the server name and press **Connect**.
- 8. Right-click on the Vault database and select properties.
- 9. On the Files page set:-

the Autogrowth value for all <Vault> databases to by 100MB, unrestricted growth

the Initial Size value of all **<Vault>_log** files to 500MB

the Autogrowth value for an **<Custom_Library>** files to 25MB

the Autogrowth values for all _log files to By 10 percent, unrestricted growth

Or, in table form:-

Logical name	Initial Size (MB)	Autogrowth
KnowledgeVaultMaster		By 10MB, unrestricted growth
KnowledgeVaultMaster_log		By 10 percent, unrestricted growth
<vault></vault>		By 100MB, unrestricted growth
<vault>_log</vault>	500	By 10 percent, unrestricted growth

<custom_library></custom_library>	By 25 MB, unrestricted growth	
<custom_library>_log</custom_library>		By 10 percent, unrestricted growth
<standard_library></standard_library>		By 25 MB, unrestricted growth
<standard_library>_log</standard_library>		By 10 percent, unrestricted growth

NOTE: A blank cell in the above table indicates that the default setting should not be changed.

Grey cells, indicate default values and should be set to the above if they are different.

🧊 Database Properties - Vaul	t					_ 🗆 ×
Select a page	🔄 Script 👻 📑 Hel	р				
General Files Filegroups Options Change Tracking Permissions Extended Properties	Database name: Owner: Use fulltext indi Database files: Logical Name	exing File Type	Vault Vault Sys	Initial Size (MB)	Autogrowth By 100 MB uncertricted arouth	
	Vault log	Log	Not Applicable	500	By 10 percent, restricted growth t	
Connection		Er File	nge Autogrowth nable Autogrowth Growth	h for Vault	×	
Server: .\AUTODESKVAULT Connection: ADS\spiveya		Ma	 In Megabytes ximum File Size Restricted File 	Growth (MB)		
Progress Ready	•		Unrestricted F	ile Growth	OK Cancel Add Remov	/e
					OK Ca	ancel

 On the Options page, change the Recovery Model to Simple, Compatibility Level to SQL Server 2008 (100) and change the Auto Shrink drop-down list to False. All values under the Automatic heading should be set as shown below.

Re	ecovery model:	Simple	•			
Co	Compatibility level: SQL Server 20		er 2008 (100)			
Ot	Other options:					
	2↓ 🖻					
Í	Automatic					
	Auto Close		False			
	Auto Create Statistics		True			
	Auto Shrink		False			
	Auto Update Statistics		True			
	Auto Update Statistics Asynchronou	usly	False			
	Cursor					
	Close Cursor on Commit Enabled		False			
	Default Cursor		GLOBAL			
	Miscellaneous					
	ANSI NULL Default		False			
	ANSI NULLS Enabled		False			
	ANSI Padding Enabled		False			
	ANSI Warnings Enabled		False			
	Arithmetic Abort Enabled		False			
	Concatenate Null Yields Null		False			
	Cross-database Ownership Chaining	; Enabled	False			
	Date Correlation Optimization Enable	ed	False			
	Numeric Round-Abort		False			
	Parameterization		Simple			
	Quoted Identifiers Enabled		False			
	Recursive Triggers Enabled		False			
	Trustworthy		False			
	VarDecimal Storage Format Enabled	d	True			
	Recovery					
	Page Verify		CHECKSUM			
	Service Broker					
	Broker Enabled		True			
	Honor Broker Priority		False			
	Service Broker Identifier		8c4b7137-6e3c-4079-8404-46642772d254			
	State					
	Database Read-Only		False			
	Database State		NORMAL			
	Encryption Enabled		False			
	Restrict Access		MULTI_USER			

- 11. Perform these same steps for all of the **Vault** and library databases (steps 8 10).
- 12. Expand the Management folder and select the **Maintenance Plan** folder.

13. Right-click on the Maintenance Plan folder and select **Maintenance Plan Wizard**, hit next if the following dialog appears.



14. In the Select Plan Properties dialog, enter Vault Maintenance Plan for the name and then click on the **Change** button to set the schedule.

🛐 Maintenance Plan W	izard	
Select Plan Prop How do you want to s	erties schedule your maintenance tasks?	
Name:	VaultMaintenancePlan	
Description:		×
Separate schedules Single schedule for t Schedule:	for each task he entire plan or no schedule	
Occurs every week on Su	nday at 12:00:00 AM. Schedule will be (Change
Help	< Back Next >	Finish Cancel

15. In the Job Schedule Properties dialog, set the plan to run after an Autodesk Vault Server Console backup has completed. Depending on the size of your dataset, this schedule may have to be run on a different day and time of the week. You may want to run this task on a Saturday to determine the amount of time it will take to complete and then decide the best day and time to run this job on a regular basis.

Job Schedule Proper	ties - Vault Maintenace Plan
Name:	Vault Maintenace Plan Jobs in Schedule
Schedule type:	Recurring
One-time occurrence Date:	3/17/2011 Time: 12:07:37 PM
Frequency	
Occurs:	Weekly
Recurs every:	1 week(s) on
	🗌 Monday 📄 Wednesday 📄 Friday 📄 Saturday
	Tuesday Thursday Sunday
Daily frequency	
Occurs once at:	12:00:00 AM 🚔
Occurs every:	1 - hour(s) Starting at: 12:00:00 AM
	Ending at: 11:59:59 PM
Duration	
Start date:	3/17/2011 ▼ C End date: 3/17/2011 ▼
	No end date:
Summan .	
Description:	Occurs every week on Sunday at 12:00:00 AM Schedule will be used starting on 3/17/2011
Description.	
	OK Cancel Help

16. In the Select Maintenance Task dialog, check the following options:

🛐 Maintenance Plan Wizard
Select Maintenance Tasks Which tasks should this plan perform?
Select one or more maintenance tasks:
Check Database Integrity
Shrink Database
Reorganize Index
Rebuild Index
Update Statistics
Execute SQL Server Agent Job
Back Up Database (Full)
Back Up Database (Differential)
Back Up Database (Transaction Log)
Maintenance Cleanup Task
The History Cleanup task deletes historical data about Backup and Restore, SQL Server Agent, and Maintenance Plan operations. This wizard allows you to specify the type and age of the data to be deleted.
Help < Back Next > Finish Cancel

17. In the Select Maintenance Task Order dialog, set the order to the following

🛐 Maintenance Plan Wizard	
Select Maintenance Task Order In which order should these tasks be performed?	
Select the order for the tasks to execute: Check Database Integrity	
Hebuild Index Update Statistics Clean Up History	
Move Up	love Down
The Check Database Integrity task performs internal consistency checks of index pages within the database.	of the data and
Help < Back Next > Finish	Cancel

18. In the Define Database Check Integrity Task dialog, select **All user databases** from the databases drop-down list and check the box next to **Include Indexes**.

🛐 Maintenance Plan Wizard	d	
Define Database Ch Configure the maintenance	neck Integrity Task e task.	
Databases:	All user databases	_
Include indexes		
Schedule:		
Not scheduled (On Demand)		Change
Help	< Back Next >	Finish >> Cancel

19. In the Define Rebuild Index Task dialog, select **All user databases** from the Databases drop-down list.

🛐 Maintenance Plan Wizard			_ 🗆 🗵
Define Rebuild Index Configure the maintenance ta	Γask sk.		· Ja
Databases:	All user databases		•
Object:			Ţ.
Selection:			Ē
Free space options			
Reorganize pages with the operation of the second secon	default amount of free space		
C Change free space per page	e percentage to:	%	
Advanced options			
Sort results in tempdb			
Keep index online while rein	dexing		
Schedule:			
Not scheduled (On Demand)		Chang	e
Help	< Back Next >	Finish >> C	ancel

20. In the Define Update Statistics Task dialog, select the following options.

🛐 Maintenance Plan Wizard				
Define Update Statisti Configure the maintenance ta	cs Task sk.			· Ju
Databases:	All user databases		•	
Object:			∇	
Selection:			v	
Update:				
 All existing statistics 				
C Column statistics only				
C Index statistics only				
Scan type:				
Full scan				
Sample by	50 🛨	Y		
Schedule:				
Not scheduled (On Demand)			Chan	ge
Help	< Back Ne	ext > Finis	h >> (Cancel

21. In the Define Cleanup History Task dialog, select cleanup options as needed.

🛐 Maintenance Plan Wizard	
Define History Cleanup Task Configure the maintenance task.	
Select the historical data to delete: Backup and restore history SQL Server Agent job history	
Maintenance plan history Remove historical data older than:	
Schedule: Not scheduled (On Demand)	Change
Help < Back Next >	Finish >> Cancel

- 22. In the Select Report Options dialog, specify the location for the maintenance reports.
- 23. Click **Next** and then **Finish**.

Creating a Maintenance Script for Microsoft SQL Express

Microsoft SQL Express does not allow you to create a maintenance plan inside of SQL Server Management Studio Express. Additionally SQL 2008 had a security model change from SQL 2005. You will also need to ensure the OS (Windows) user that is running the SQL maintenance plan has the **sysadmin** role inside of SQL.

Tempdb Modifications through the Command Prompt.

As noted earlier in this section, if the SQL Server Management Studio is not installed, the tempdb database changes can be completed through the command prompt by performing the following:

- 1. Open the **Command Prompt** as **Administrator**.
- 2. Copy and Paste each line below into the command prompt and press Enter.

SQLCMD -E -S".\AutodeskVault" -Q "ALTER DATABASE [tempdb] SET COMPATIBILITY_LEVEL = 100"

SQLCMD -E -S ".\AutodeskVault" -Q "ALTER DATABASE [tempdb] MODIFY FILE (NAME = N'tempdev', SIZE = 1024MB, FILEGROWTH = 100MB)"

SQLCMD -E -S ".\AutodeskVault" -Q "ALTER DATABASE [tempdb] MODIFY FILE (NAME = N'templog', SIZE = 1024MB)"



- If using a multi-core system, additional data files should be configured using the guidelines below. **Note The file system path used under FILENAME = should be the same location as the SQL data directory. In the example below, it is N'C:\Program Files\Wicrosoft SQL Server\WSSQL10.AUTODESKVAULT\WSSQL\DATA. You will want to modify the script to list your correct path.
 - a. Data file totals should equal half of the available physical processing cores up to a maximum of 8 data files. If using a total of 8 datafiles, an initial size of **512** MB can be used instead of **1024** MB as shown below. (example; 8 physical cores would equal 4 total data files, tempdev, tempdev_2, tempdev_3, tempdev_4)

SQLCMD -E -S ".\AutodeskVault" -Q " ALTER DATABASE [tempdb] ADD FILE (NAME = N'tempdev_2', FILENAME = N'C:\Program Files\Microsoft SQL Server\MSSQL10.AUTODESKVAULT\MSSQL\DATA\tempdev_2.ndf', SIZE = 1024MB, FILEGROWTH = 100MB)"



- b. If additional data files need to be created, simply modify the above example to reflect tempdev_3, etc, for both NAME and FILENAME.
- c. Set the LDF log file to combined data file total. (example; if there are 2 data files total, the resulting LDF should be set to an initial size of 2048 MB)

SQLCMD -E -S ".\AutodeskVault" -Q "ALTER DATABASE [tempdb] MODIFY FILE (NAME = N'templog', SIZE = 2048MB)"



Maintenance Plan

Copy the script below and paste it into a new file saved as VaultMaintenance.bat.

The following is an **example** of how to run the batch file from the root of **C:** against a database named **Vault** and output the results to a text file.

C:\VaultMaintenance.bat Vault > results.txt

Note: A direct copy-paste from this document will **require** the line breaks be repaired. Also note that the user executing the maintenance plan will need to have permissions to do so inside of SQL. This can be accomplished during the installation of SQL or after.

REM This begins the maintenance plan.

@echo off

if "%1"=="" goto NOPARAM

set VAULTNAME=[%1]

set VAULTLOG=[%1_log]

@echo Setting %VAULTNAME% database compatibility to 100

sqlcmd -E -S ".\AutodeskVault" -Q "ALTER DATABASE %VAULTNAME% SET COMPATIBILITY_LEVEL = 100"

@echo Setting %VAULTNAME% database recovery model to simple...

sqlcmd -E -S ".\AutodeskVault" -Q "ALTER DATABASE %VAULTNAME% SET RECOVERY SIMPLE"

@echo Setting %VAULTNAME% database Autogrowth value...

sqlcmd -E -S ".\AutodeskVault" -Q "ALTER DATABASE %VAULTNAME% MODIFY FILE (NAME=%VAULTNAME%, FILEGROWTH=100MB)"

@echo Setting %VAULTNAME% database Log filesize...

sqlcmd -E -S ".\AutodeskVault" -Q "ALTER DATABASE %VAULTNAME% MODIFY FILE (NAME = %VAULTLOG%, SIZE = 512000KB)"

@echo Setting %VAULTNAME% database Autoclose to false...

sqlcmd -E -S ".\AutodeskVault" -Q "ALTER DATABASE %VAULTNAME% SET AUTO_CLOSE OFF WITH NO_WAIT"

@echo Reindexing %VAULTNAME% database...

sqlcmd -E -S ".\AutodeskVault" -Q "USE %VAULTNAME% DECLARE tableCursor CURSOR FOR SELECT NAME FROM sysobjects WHERE xtype in('U') DECLARE @tableName nvarchar(128) OPEN tableCursor FETCH NEXT FROM tableCursor INTO @tableName WHILE @@FETCH_STATUS = 0 BEGIN DBCC DBREINDEX(@tableName, ") FETCH NEXT FROM tableCursor INTO @tableName END CLOSE tableCursor DEALLOCATE tableCursor"

@echo Updating Statistics on %VAULTNAME% database...

sqlcmd -E -S ".\AutodeskVault" -Q "USE %VAULTNAME% Exec sp_MSForEachTable 'Update Statistics ? WITH FULLSCAN'"

goto EXIT

:NOPARAM

echo [FAIL] Please indicate Vault database

pause

:EXIT

REM This ends the maintenance plan.

Upgrading a Vault Site Server to a Connected Workgroup Subscriber

To upgrade a Vault Server from being a Site in a Workgroup with no replicated SQL to a Connected Workgroup Subscriber, follow these steps.

Consider this scenario: This picture shows one Workgroup for simplification purposes. However it could be possible to already have multiple Workgroups configured.



Currently

Current State: Workgroup A consists of a Publisher and two sites.



End State: Two Workgroups, Workgroup A is the Publisher, Workgroup B is a Subscriber



- 1. On the site that is to be upgraded to be an SQL Subscriber, copy or backup the filestore.
- 2. On a different site in Workgroup A delete the site in the ADMS Console

- 3. On the site being upgraded, install SQL Server according to the instructions in the Advanced Configuration Guide.
 - a. Note, SQL can be installed on the same machine as Vault Server or on a separate machine.
- On the Publisher, add a Workgroup pointing to the newly installed SQL Server. (Workgroup B)
- 5. After Replication has completed, modify the following line in the web.config file on the Vault Server in the new workgroup (Workgroup B).
 - a. <server value="servername\AutodeskVault" /> if the SQL Server is on a separate machine
 - b. <server value=".\AutodeskVault" /> if the SQL Server is installed on a the same machine
- 6. On the Vault Server in the new workgroup (Workgroup B) Launch the ADMS Console.

Managing a remote file store

To move the location of your file store to a mapped drive or remote shared location: The vault supports two basic file store configurations:

1. File store located on the Autodesk Vault Server.



Single Vault Server (Windows 2003 Server Preferred)

2. File store located on a remote file server that has a shared folder.



A remote file server can be used for hosting the file store and/or backing up and restoring vault data. This section describes the steps required to configure a remote file store.

Moving the file store to a mapped drive or remote share

For simplicity purposes, the computer hosting Autodesk Vault Server is called **DMMachine** and the computer hosting the remote file store is called **FSMachine**. The domain name is **MyDomain**. We are also assuming that the server where Autodesk Vault Server is installed is a member server and not a domain controller.

If you have the Autodesk Vault Server installed on a domain control, the AutodeskVault domain account is used and you can go the Moving the File Store section below.

Create a new domain user account.

- 1. Open the Active Directory Users and Computers and select an Organizational Unit (OU) to create the account in.
- 2. **Create** an account named **AutodeskRemote**. Set the password to match your domain password policy and set the password to **never** expire.

Create a remote share.

- 1. Open Windows Explorer on the FSMachine and create a directory called VaultData.
- 2. Right-click on the folder and select Properties.
- 3. Go to the **Sharing** tab and create a new share named VaultData.
- 4. Click Permissions and set the AutodeskRemote, Network Service, and System user to Full Control.
- 5. Click **OK** in the Permissions for Share dialog box.
- 6. Go to the **Security** tab and add the **AutodeskRemote** account and set it to **Full Control** permission.

Setting the new account in the Autodesk Vault Server Console

- 1. On the DMMachine, open the Autodesk Vault Server console.
- 2. Select **Tools** -> **Administration**.
- 3. In the Advanced Settings tab select the Settings button next to **Advanced Configuration** settings.

4. In the Advanced Settings dialog, change the User Name to **MyDomain\AutodeskRemote** and type in the corresponding password.

Advanced Settings		×
Impersonation		
User Name:	MyDomain\Au	utodeskRemote
Password:	*******	***
Connection		
Connection Timeout:	1000	Seconds
Share Path		
Current Path:		
New Path:		
Log File Configuration		
Limit the number of log files bef must be between 6 and 99.	fore they are re	ecycled. Value
Maximum number of consol	e logs:	6 *
Maximum number of server	logs:	6 🔺
Maximum number of email l	ogs:	6
Server Task History		
Number of days to retain histo	ry:	14 📮
Value must be between 0 and	99.	
		Reset Defaults
ОК	Cancel	Help

5. Apply the changes and then click **OK**.

Moving the vault file store

- 1. Select the vault which you would like to move to a different location.
- 2. Select Actions -> Move File Store.
- 3. Set the New File Store Location field to <u>\\FSMachine\VaultData</u>.
- 4. Click OK.

User Account Control

If you plan to schedule automatic backups using ADMS Console, the User Account Control settings in Windows 7 \ 2008 \ 2008 R2 must be configured to allow applications to run without prompting for administrator permission. **Note:** Configuring the following settings will affect all of the applications on your computer. All applications will be run without prompting for administrator approval.

- 1. From the Windows Start menu, type **Run**.
- 2. In the Run dialog box, enter **secpol.msc**. Click OK.
- 3. When you are prompted to allow the security policy application to run, click Continue.
- 4. In the Local Security Policy dialog box, expand:
 - a. Security Settings
 - Local Policies
 - Security Options
- Locate the "User Account Control: Behavior of the Elevation Prompt for Administrators" (Windows Server 2008 R2 = "User Account Control: Behavior of the elevation prompt for administrators in Admin Approval Mode") policy and right-click it.
 - a. Click **Properties**.
 - > Select Elevate without Prompting, and then click OK.
- 6. Locate the User Account Control: Run all administrators in Admin Approval Mode policy and right-click it.
 - a. Click **Properties**.
- 7. Select **Disable**, and then click OK

Local Security Policy		_1	
File Action View Help			
🗢 🔿 🙍 🖬 💥 🗒 😼 🛛 🖬			
Security Settings	Policy A	Security Setting	
🗉 📑 Account Policies	🛞 System objects: Require case insensitivity for non-Windows subsystems	Enabled	
🖃 📴 Local Policies	💹 System objects: Strengthen default permissions of internal system objects (e.g. Symbolic Links)	Enabled	
🕀 📴 Audit Policy	💹 System settings: Optional subsystems	Posix	
🕀 📴 User Rights Assignment	🖏 System settings: Use Certificate Rules on Windows Executables for Software Restriction Policies	Disabled	
Security Options	💹 User Account Control: Admin Approval Mode for the Built-in Administrator account	Disabled	
Windows Firewall with Advanced Security	💹 User Account Control: Allow UIAccess applications to prompt for elevation without using the secu	Disabled	
INEtWOrk List Manager Policies	🖏 User Account Control: Behavior of the elevation prompt for administrators in Admin Approval Mode	Elevate without promp.	
Public Rey Policies	💹 User Account Control: Behavior of the elevation prompt for standard users	Prompt for credentials	
Application Control Policies	💹 User Account Control: Detect application installations and prompt for elevation	Enabled	
IP Security Policies on Local Computer	💹 User Account Control: Only elevate executables that are signed and validated	Disabled	
Advanced Audit Policy Configuration	🕃 User Account Control: Only elevate UIAccess applications that are installed in secure locations	Enabled	
	🕼 User Account Control: Run all administrators in Admin Approval Mode	Disabled	- 1
	💹 User Account Control: Switch to the secure desktop when prompting for elevation	Enabled	
	📓 User Account Control: Virtualize file and registry write failures to per-user locations	Enabled	-

Additionally, portions of the UAC can be disabled through control panel.

Post-install Configuration Changes

Setting up a remote backup location

If you plan to back up your vault data to a remote share, follow the steps in the <u>Creating a new</u> <u>domain user account</u>, <u>Create a remote share</u> and <u>Setting the new account in the Autodesk Vault</u> <u>Server Console</u> sections in this document. After that is complete, you will have to modify the SQL Service to use a domain account using the following steps:

Note: The new domain account created for these steps needs to be added to the default SQL users group for the AutodeskVault instance. The group created by SQL 2008 is called SQLServer2008MSSQLUser\$<*computername*>\$AUTODESKVAULT.

- 1. Double-click the Services icon in the Administrative Tools in the Control Panel
- 2. Double-click on the SQL Server (Autodeskvault) service and select the Log On tab.

SQL Server (AUTODES	KVAULT) Properties (Lo	cal Comp ? 🔀	
General Log On Reco	very Dependencies		
Log on as:			
Local System account Allow service to interact with desktop			
		Browse	
Password:	•••••		
<u>C</u> onfirm password:	•••••		

3. Select the This Account radio button and enter a domain account in the form of Domain_Name\Domain_account (with the correct password).

NOTE: If you change the service's login credentials, you will be prompted to restart the MS SQL Server service. Please do so for changes to take effect. In addition, ensure that clients are not using the Autodesk Vault Server before restarting SQL Server."

4. Verify that the account specified has write access on the share to which you are backing up.

Configuring a remote Vault connection using FQDN

To configure the Vault Server to allow remote connections over the internet using a Fully Qualified Domain Name (FQDN):

- 1. Create a DNS "A" or host record for your current FQDN with your ISP.
- 2. Install Autodesk Vault Server on your server and verify that it works properly.
- 3. On your server, open the Internet Information Services Manager and expand the Websites folder.
- 4. Right-click on the website that contains the AutodeskDM virtual directory. Click Properties.
- 5. In the Properties dialog box, click the Website tab.
- 6. On the Website tab, click Advanced.
- 7. In the Advanced Website Identification dialog box, under the Multiple identities for the website, click Add.
- 8. In the Add/Edit Web Site Identification dialog box, select the correct IP address that will interact with the website.
- 9. Enter the TCP port you want to use. If this is not port 80, then your clients will have to add ":<port#>" at the end of the FQDN in order for the connection to work.
- 10. In the Host Header value, enter the FQDN.
- 11. Click OK to close each dialog box.

Note: Additional settings may be required for your router or firewall. Check with your IT department for the necessary changes.

How to increase the timeout values on the Autodesk Vault Server

As the vault database increases in size, you may have to modify some timeout values on the server to allow for the server to process more data. Increase the timeout values for client and server functions:

- 1. Open Windows Explorer and navigate to the C:\Program Files\Autodesk\ADMS *Product* 2013\Server\Web\Services directory.
- 2. Create a backup copy of the **Web.config** file.
- 3. Open the **Web.config** file with Notepad and look for the following line:

190 <timeouts connection="120" defaultCommand="360" longCommand="1800" />

Note: these values may be different, depending on the size of the vault and the speed of the server it is installed on. Higher values may be necessary.

- 4. **Save** the Web.config file.
- 5. Open a command prompt and type **IISRESET**.

Note: If you increase the defaultCommand value higher then **1000**, you must increase the **executionTimeout** value to an equal or higher value. This is found on the following line: 171

Running Autodesk Vault Server with SSL

Setting up the Autodesk Vault Server to use SSL (Secure Socket Layer) is a two step process.

- 1. On the DM Server machine, install the certificate and setup the website SSL preferences.
- 2. Verify that the clients can communicate properly with SSL.

Configuring the DM Server machine

It is outside of the scope of this document to instruct you how to setup SSL under IIS. For more information, visit the following web resources. Note that some steps may be different depending upon the version of Windows that you are currently using.

Obtaining and Installing Server Certificates (IIS 6.0)

• <u>http://www.microsoft.com/technet/prodtechnol/WindowsServer2003/Library/IIS/9a4ae054-da27-4261-a980-4e7b92091eb7.mspx?mfr=true</u>

Configuring Server Certificates in IIS 7

http://technet.microsoft.com/en-us/library/cc732230(v=ws.10).aspx

By default, the Autodesk Vault Server installer does not configure the AutodeskDM Virtual Directory to require SSL. After the certificate has been installed on the Default Web Site, users are able to login to the Autodesk Vault Server using both secured and unsecured connections.

Unsecured logins can be accomplished by using localhost, 127.0.0.1, machine name or IP address in the server field of the login dialog.

Secured logins must use the common name to which the certificate was issued.

If Vault Web Client is installed on the server, clients will need to access it from their web browser with https://servername/AutodeskDM/Webclient.

Configure the AutodeskDM Virtual Directory to require SSL Access

NOTE: The following procedure uses the Internet Information Services Manager to configure the AutodeskDM Virtual Directory to require SSL for access.

- 1. Log into the computer hosting the Vault Server as a local or domain administrator.
- 2. From the Start Menu, select Settings > Control Panel.
- 3. Double-click Administrative Tools, and then double click Internet Information Services.
- 4. Click Web Sites under your server name.
- 5. Select the Default Web Site and expand it. This web site must have the certificate you created installed to it.
- 6. Right-click the AutodeskDM virtual directory and click Properties.
- 7. Select the Directory Security tab.
- 8. Click Edit under Secure Communications.

NOTE: If the View Certificate button is unavailable, the certificate that you created has not been installed on the AutodeskDM Virtual Directory's parent web site. Install a certificate before continuing with the rest of this process.

- 9. Click Require secure channel (SSL). Clients browsing to this directory must now use HTTPS.
- 10. Click OK.
- 11. Click OK.
- 12. If the Inheritance Overrides dialog is displayed, click Select All and then click OK. The new security settings are applied to all subdirectories of the AutodeskDM virtual directory.
- 13. Close the Internet Information Services Console.

Client Configurations

Configuring a Client Computer with Internet Explorer 8

To verify that the SSL client/server communication is properly setup, open Internet Explorer and browse to https://<servername>. If the connection is not working, the Security Alert dialog box is displayed.

_	
X	There is a problem with this website's security certificate.
	The security certificate presented by this website was not issued by a trusted certificate authority.
	Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.
	We recommend that you close this webpage and do not continue to this website.
	We recommend that you close this webpage and do not continue to this website.
	We recommend that you close this webpage and do not continue to this website. Image: Click here to close this webpage. Image: Continue to this website (not recommended).
	We recommend that you close this webpage and do not continue to this website. Image: Click here to close this webpage. Image: Continue to this website (not recommended). Image: More information

1. Click Continue to this website (not recommended).

- 2. Export the certificate from the server.
 - a. Open IIS Manager from Control Panel -> Administrative Tools -> Internet Information Services Manager.
 - b. Highlight the computer name.
 - c. On the right hand side find the Server Certificates Option and double click.



- d. Find the certificate that you are using in the list and highlight it.
- e. Right click and select Export.
- f. Select a shared location to save the certificate and enter a password for the certificate.

ADVANCED CONFIGURATION GUIDE FOR VAULT SERVER 2013

Export Certificate	<u>?×</u>
Export to:	
Password:	
Confirm password:	
	OK Cancel

- 3. Open the share from the client PC and find the newly created certificate.
- 4. Double click to open the certificate and start the Certificate Import Wizard.

Certificate Import Wizard	X
	Welcome to the Certificate Import Wizard
	This wizard helps you copy certificates, certificate trust lists, and certificate revocation lists from your disk to a certificate store. A certificate, which is issued by a certification authority, is a confirmation of your identity and contains information used to protect data or to establish secure network connections. A certificate store is the system area where
	certificates are kept.
	i o continue, dick Next.
	< Back Next > Cancel

5. Click next on the File to import screen as the file shown should be the certificate you selected earlier.

Certificate Import Wizard	×
File to Import Specify the file you want to import.	
File name: \\wdmsup\shared\testcer.pfx Browse	
Note: More than one certificate can be stored in a single file in the following formats: Personal Information Exchange- PKCS #12 (.PFX,.P12) Cryptographic Message Syntax Standard- PKCS #7 Certificates (.P7B) Microsoft Serialized Certificate Store (.SST)	
Learn more about <u>certificate file formats</u>	
< Back Next > Canc	el

6. Enter the password you created for the certificate when you exported it from the server.

Certificate Import Wizard	×
Password To maintain security, the private key was protected with a password.	
Type the password for the private key. Password:	
•••••	
 Enable strong private key protection. You will be prompted every time the private key is used by an application if you enable this option. Mark this key as exportable. This will allow you to back up or transport your keys at a later time. Include all extended properties. 	
Learn more about protecting private keys	
< Back Next > Canc	el

- 7. Select Place all Certificates in the following store and select the Trusted Root Certification Authorities.
- 8. Finish the wizard.

Login from client applications using SSL

1. In the Log in dialog box, enter your user name, password, and the name of the database.

2. For the name of the server, specify the machine name of the server with the prefix: https://. For example:

□ If you are using the default SSL port 443: https://ServerName

□ If you are using a different SSL port: https://ServerName:XXX where XXX is the SSL communication port number.

NOTE: The secured login depends on the certificate issued to the server machine. If it is issued for the machine name, then only https://ServerName will work. Otherwise, if the certificate is issued for a dedicated IP, then only https://serverIPAddress will work as a secure vault login.

Using Vault with a Proxy Server

This section describes setting up a proxy to enable successful Autodesk Client/Server data communication.

If a client machine connects to the web server through a proxy server, then all calls to the Autodesk Vault Server from any Autodesk client will fail. To have a successful Autodesk Client/Server communication, you need to bypass the proxy server.

Change the proxy settings in Internet Explorer 8.x, 9.x

- 1. Open Internet Explorer.
- 2. From the **Tools** menu, select **Internet Options**.
- 3. Select the **Connections** tab.
- 4. Click LAN Settings.
- 5. If Automatically Detect Settings is selected, remove the check box.
- 6. If the Use a proxy server for your LAN check box is enabled, turn on the Bypass proxy server for local addresses check box.
- 7. Click the **Advanced** button next to the **Port** field.
- 8. In the Proxy Setting dialog, add the Vault Server name and IP address into the **Exceptions** field.
- 9. Click **OK**.
- 10. Click **OK**.
- 11. Click **OK** to close Internet Options.

All addresses without a period, for example: http://webserver, will bypass the proxy and be resolved directly.

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

Configure the proxy server to use a host name

- 1. Follow steps 1-5 above for changing the proxy settings in Internet Explorer.
- 2. If the "Address" field is <u>http://webserver.domainname.com</u> or <u>http://10.0.0.1</u>, then change it to <u>http://webserver</u> only.
- 3. Click OK and close Internet Explorer Options.

For more information on advanced proxy bypass configurations:

- Read Microsoft Knowledge Base article 262981: <u>Internet Explorer Uses Proxy Server for</u> Local IP Address Even if the 'Bypass Proxy Server for Local Addresses' Option Is Turned On
- Read the Microsoft document <u>Working with Proxy Servers</u> (<u>http://technet.microsoft.com/en-us/library/cc939852.aspx</u>)

Bypassing a Proxy Server with the Application config file

By default HttpWebRequest's uses the proxy setting specified inside of Internet Explorer. You can change those settings by going to Control Panel -> Internet Options -> Connections Tab -> LAN Settings Button. You can disable auto detection by un-checking the "Automatically Detect Settings" button. In most cases this allows the client application to function properly. However, in some cases you may experience slow connectivity and delayed responses from the application when connected to Autodesk Vault Server. There is an option to disable proxy configuration through your application.exe.config file:

In this example, for Inventor, the config file is located in the following directory. Each client application has a similar config file. Make a backup copy of the file and then edit the file using Notepad.exe ONLY.

"C:\Program Files\Autodesk\Inventor 2013\Bin\Inventor.exe.config"

Add this line of code to the file:

<system.net>

<defaultProxy>

<proxy autoDetect="False"/>

</defaultProxy>

</system.net>

After you have added the text, save and close the file. The changes will take effect the next time the application is started.

Autodesk Vault Server Log Files

This section shows you where to find the various log files and other files used for troubleshooting potential problems with Autodesk Vault.

For the purposes of this section, we refer to the %temp% folder. This is the temp folder location defined for the Windows user account that is logged in on the computer. By default, this folder is located in the following location for Windows XP and Server 2003

C:\Documents and Settings\ACCOUNTNAME\Local Settings\Temp

And the following location for Windows 7, Server 2008, and Server 2008 R2.

C:\Users\ACCOUNTNAM\AppData\Local\Temp

In this example, ACCOUNTNAME is the name of your user account in Windows.

Vault server log files

There are primarily two different log files to look for in this location. Each of these is described in full detail below.

Folder location and file names:

Microsoft Windows[™] XP / Server 2003 - C:\Documents and Settings\All Users\Application Data\Autodesk\VaultServer\FileStore

Microsoft Windows 7 / Server 2008 / Server 2008 R2 -

C:\ProgramData\Autodesk\VaultServer\Filestore

Vlog-YYYYMMDD.txt

Any server-side problems relevant to Check-in, Check-out, Get Latest Version, Undo Check-out, Advanced Search and other operations performed from within Vault Explorer or one of the supported product add-ins are written into these log files.

ADMSConsoleLog-YYYYMMDD.txt

Any server-side problems relevant to backup, restore, re-index, purge or other operations performed within Autodesk Vault Server Console are written into these logs.

Emaillog-YYYYMMDD.txt

Email sent from the server.

Autodesk Vault Server 2013 installation log files

During the installation of Autodesk Vault Server there may be errors reported the by the diagnostic tool or during the installation itself. These errors are recorded in log files.

Pre-check log:

%temp%\EDMlog Prechecks.xml Prechecks.xsl

Autodesk Vault </ resion> 2013 client installation logs:

%temp% Autodesk Vault <Version> 2013 Install.log Autodesk Vault <Version> 2013 Setup.log

Autodesk Vault </ resion> 2013 server installation logs:

%temp% Autodesk Vault <Version> 2013 (Server) Install.log Autodesk Vault <Version> 2013 (Server) Setup.log

Autodesk Server Diagnostic Tool Log files

If you run the Autodesk Server Diagnostic Tool, the log files are located in the %temp%\EDMLog directory.

Autodesk Server Diagnostic Tool:

%temp%\EDMLog DiagTool.xml DiagToolLog.xsl

Microsoft SQL Server log files

Folder location and file names:

C:\Program Files\Microsoft SQL Server\%SQL_INSTANCE%\LOG

Errorlog

Errorlog.1

Errorlog.2

Errorlog.3

The SQL logs are named sequentially with the most recent (current) file being named errorlog followed by errorlog.1 then errorlog.2 and so on.

DWG iFilter Log files

There are log files maintained by the various iFilters used when performing some Vault operations like re-index. These log files can be helpful when troubleshooting problems with block attributes or properties not indexing as expected in Vault Explorer.

Folder location and file names:

Depending on your server setup, your iFilter log files may be contained in a different location.

C:\Windows\Temp\ OR %TEMP%

DWGFILT.*.log

Customize W3C Extended Logging (IIS 6)

The W3C Extended log file format is the default log file format for IIS. It is a customizable ASCII text-based format. You can use IIS Manager to select which fields to include in the log file. [W3C Extended Log File Format]

- 1. From the Windows Start menu, select Control Panel > Administrative Tools > Internet Information Services
- 2. In IIS Manager, expand the local computer, expand the Web Sites folder, right-click the Default Web site, and click Properties.



3. On the Web Site tab, select the Enable logging check box (if it is not already selected).

ault Web Site Pr	operties		
Directory Security	/ HTTP Heade	ers Custom Errors	ASP.NET
Web Site	ISAPI Filters	Home Directory	Documents
Web Site Identifie	ation		
Description:	Default Web Site	8	
IP Address:	(All Unassigned)	•	Advanced
TCP Port:	80	SSL Port:	
I HTTP <u>K</u> eep □ Enable Logg	Alives Enabled		
W3C Extende	ac. ed Log File Format	✓ Properties.	. 1
	ОК	Cancel App	y Help

4. In the Active log format drop-down list, select W3C Extended Log File Format and click the Properties button.



(BEFORE)

NOTE: Before changing the extended properties, write down or take snapshots of currently selected W3C properties in case of wanting to go back to the original state in the future.

5. On the Advanced tab (for Windows 2003 server) or Extended Properties tab (for Windows XP), select logging **ALL** properties.



(AFTER)

6. Click OK and close IIS Manager.

7. From the Windows Start menu, select Run. Type: iisreset and then click OK to restart IIS.

Run	?×
-	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:	isreset 💌
	OK Cancel Browse

- 8. IIS logs are located in the following directories:
 - a. C:\WINDOWS\system32\LogFiles**W3SVC1** for the Default Web site communication.
 - b. C:\WINDOWS\system32\LogFiles\HTTPERR for IIS errors logs.

Enabling Logging in IIS (7.0)

IIS 7.0 (Which comes with Windows 7, Windows Server 2008, Windows Server 2008 R2, Windows Vista) does not automatically install the very valuable Logging Feature by Default.

From a Windows 7 machine you need to make sure that the feature is installed before you can begin viewing the files that it generates.

So in Control Panel>Programs and Features. Click "Turn Windows features on or off". Under.

Internet Information Services

Web Management Tools

IIS Management Console, Tick this

World Wide Web Services

Health and Diagnostics, tick all options
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Restart the web service (From a command line type IISRESET)

Vault Collaboration and Professional 2013 Multisite Replication

This section addresses topics specifically related to the unique environments associated with replicating data to multiple work sites.

Scalability of Replication

Replication uses a single database for all sites and replicates the file store to each location. This architecture has distinct advantages in ease of implementation, end user experience and the instantaneous nature of the information availability. This architecture is not suited to multiple sites that are distributed over great distances or poor networks. It is recommended that the replication environments are not distributed across multiple continents.

If you are unsure of the appropriateness of Replication in your environment you can easily estimate the performance. The performance can be gauged between two remote sites by browsing a network share between the sites. If the responsiveness of the remote share is deemed acceptable for daily access Replication should also be acceptable. Vault communicates via http which is more efficient than the default windows system which is observed when browsing a remote share.

Content Center in a Replicated Environment

Introduction

Autodesk Inventor Standard Content is delivered in the form of library databases that are hosted by the Autodesk Vault Server. Users access these library databases through Inventor to automatically create selected library components as Inventor part files. Once instanced these components are stored in a folder defined by the Inventor project file. When the assembly is then checked into Vault, the instanced Content components are also checked into Vault.

In a Replicated Autodesk Vault environment we can tune the performance of Content Center by altering the configuration of the Inventor project file.

Assumptions

The following examples assume all software including the Content has been installed. These examples also assume the reader has a functional understanding of how Content is instantiated and referenced. If required please reference the Content Center help files.

The following diagrams show the SQL server as a separate computer for clarity. SQL Server may be on a separate computer or on the Autodesk Vault Server, either case is supported and has no impact on the workflows detailed in this document.

Private Content Center Folder

The default configuration when using Inventor is for each client to have a private Content folder.

Advantages:

- Suitable for assemblies that have a high volume of Content components by eliminating network traffic for existing local components.
- Allows each user to have only the content they use in their Private Content Folder.

Disadvantages:

- Consumes considerable disk space on the client
- Each client must instantiate each referenced component in their Private Content Folder

Private Content Example



- 1. Client 1 creates an instance of a component from the Content Center database. The instanced part file is written to the Private Content Center folder located on the client computer.
- 2. User checks in the instanced component as part of an assembly. The Content part is copied into the Vault file store.

Note: Keeping the part file in the local folder will remove the delays, for this user, due to instancing the part file or copying it from the file store.

- 3. Client 2 inserts the same component that Client 1 used. Since the part does not yet exist in the Private Content Center Folder for Client 2 it must be instanced from the database.
- 4. Once instanced the assembly may be checked into Vault. Vault knows that this component already exists and will resolve the assembly with the existing component in the file store.
- 5. During the scheduled replication at each Autodesk Vault Server the Content components will be copied to the local file store at each site.
- 6. Client 3 inserts the same component that Client 1 & 2 have previously used. The component must be instanced from the remote database. This is the same process as Client 2 in step 3 but the instantiation delay may be increased based upon the distance and network latency between the client and the SQL Server.

Seeding the Content Center Folders

The re-instancing of existing components can be avoided by performing a **Get Entire Folder** from the Vault thick client. This will seed the Content Center Folder with all instanced Content that has been checked into the Vault. This applies to both the Private and Shared Content Center Folders. In environments where new content is created frequently it may be advantages to perform this operation on regular basis.



Revision History

Revision	Comments	Date
1.1	Vault Server 2013 uses .NET 4.0, references to .NET 2.0 were removed.	25/4/2012
	Removed references to IE7	
	Updated links for obtaining and installing SSL Certificates for IIS 6 and IIS 7	
	Updated SQL Express Maintenance plan	
1.2	Updated SQL Service pack level for SQL 2008 R2.	18/7/2012
	Update SQL Maintenance Plans.	