

Advanced Configuration Guide for Autodesk® Vault Server 2014

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Introduction

The Advanced Configuration Guide contains additional information for setting up the Autodesk® Vault Server 2014. The topics in this guide relate to the Autodesk® Vault Server and can be used for all versions of Vault 2014 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.

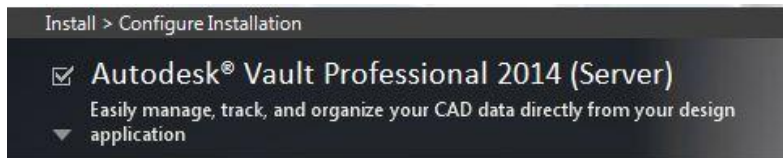
Installing Autodesk Vault Server 2014

For standard installation configurations, consult the Autodesk Vault Server 2014 Implementation guide.

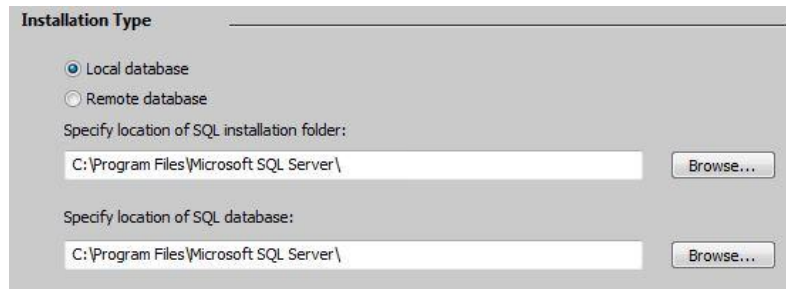
Customizing your Autodesk Vault Server 2014 installation

To customize your installation perform the following:

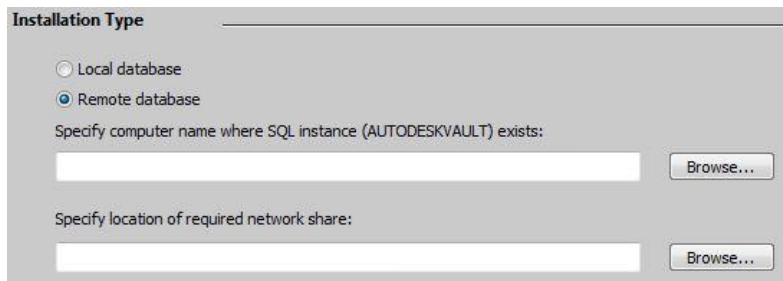
1. From the Install > Configure Installation screen, select the down arrow “Easily manage, track, and organize your CAD data directly from your design application”.



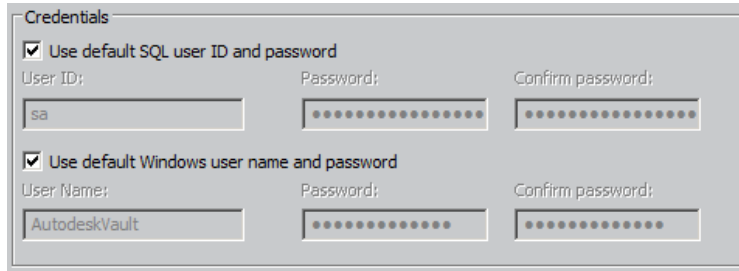
2. Installation Type can be a Local Database, or a Remote Database. You may specify the SQL installation location if SQL has not been installed previously.



If a Remote database will be used, enter these options.

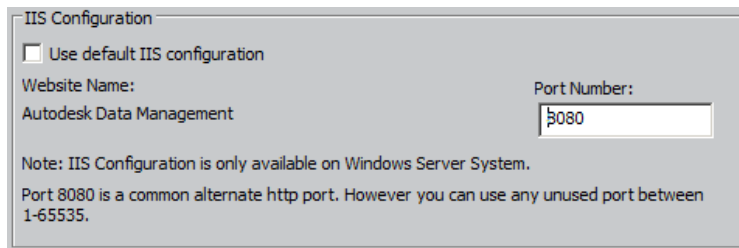


- Optionally, you may set the SQL sa password during installation by checking the box next to Use my SQL credentials.
This will need to be entered if the AutodeskVault SQL instance was installed prior to the Autodesk Vault Server with a sa password other than the default **AutodeskVault@26200. Additionally, you can specify the impersonation user account if desired.



The screenshot shows the 'Credentials' window with two sections. The first section, 'Use default SQL user ID and password', has a checked checkbox, a 'User ID' field with 'sa', and 'Password' and 'Confirm password' fields with masked dots. The second section, 'Use default Windows user name and password', also has a checked checkbox, a 'User Name' field with 'AutodeskVault', and 'Password' and 'Confirm password' fields with masked dots.

- Vault Server 2014 has the option to automatically configure IIS to a port other than the default HTTP port, 80.



The screenshot shows the 'IIS Configuration' window. It has an unchecked checkbox for 'Use default IIS configuration'. Below it, the 'Website Name' is 'Autodesk Data Management' and the 'Port Number' is '8080'. A note states: '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.'

- Click the up arrow at the top of the available options to return to the installation product list and proceed with the installation.



The screenshot shows the 'Autodesk Vault Professional 2014 (Server)' installation window. At the top, there is a blue bar with a checked checkbox and the text 'Autodesk Vault Professional 2014 (Server)'. Below this, the text 'AUTODESK® VAULT PROFESSIONAL 2014' is displayed. Underneath, it says 'Install > Configure Installation'. Then, there is a checked checkbox followed by 'Autodesk® Vault Professional 2014 (Server)'. At the bottom, there is an up arrow icon and the text 'Click to close and return to product list'.

Installing IIS on Windows 7, Windows 8, Server 2008, Server 2008 R2, Windows 2012

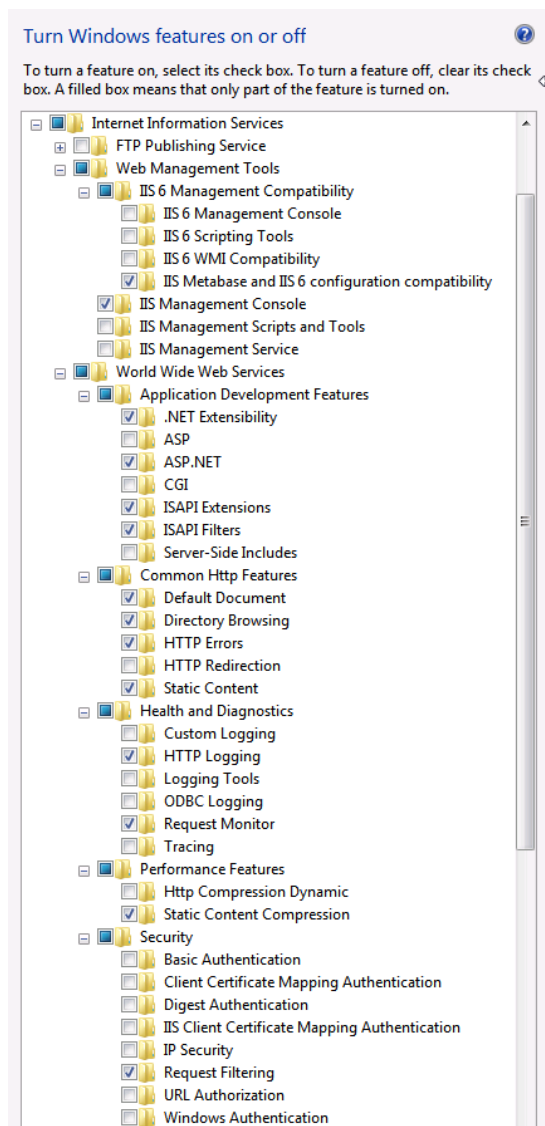
Note: IIS 7.x, 8.x has a limit of 10 simultaneous requests on non-server OS editions. When the connection limit is reached, the request is queued until the number of currently processing requests drops below the limit. IIS then will take the first request in the queue and starts to process it. Previous versions of IIS would return an **Error 403.9 Access Forbidden – Too many users are connected**.

Configuring Internet Information Services (IIS) 7.x, 8.x

IIS 7.x/8.x can be installed by the Autodesk Vault Server 2014 installation process. If you are installing IIS 7.x/8.x manually, follow the steps below to configure the system options:

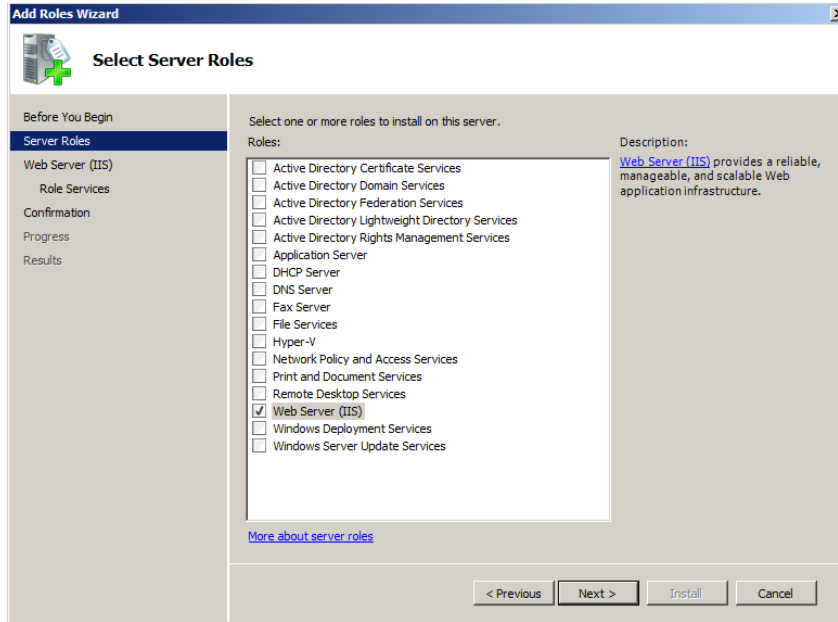
Windows 7/Windows 8

1. From the Windows **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**.
5. 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.

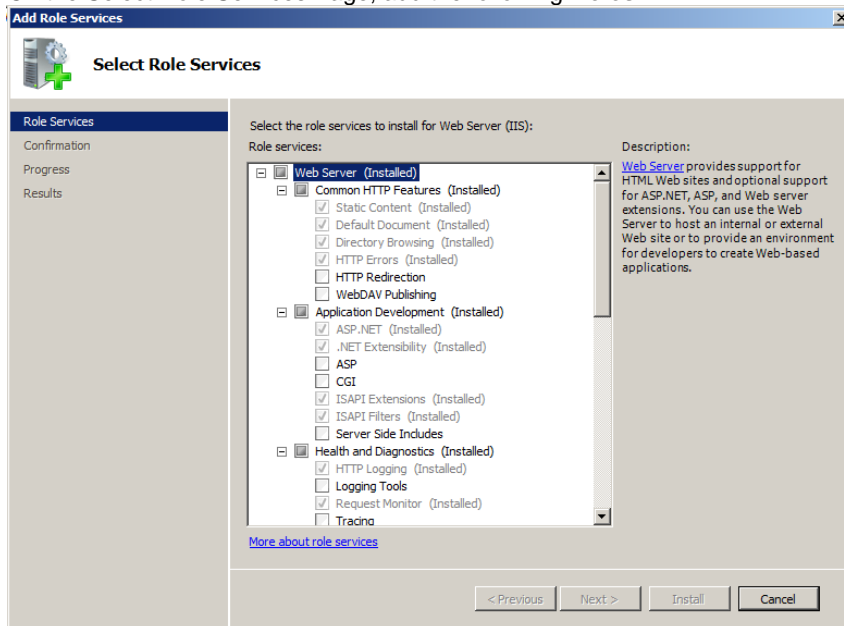


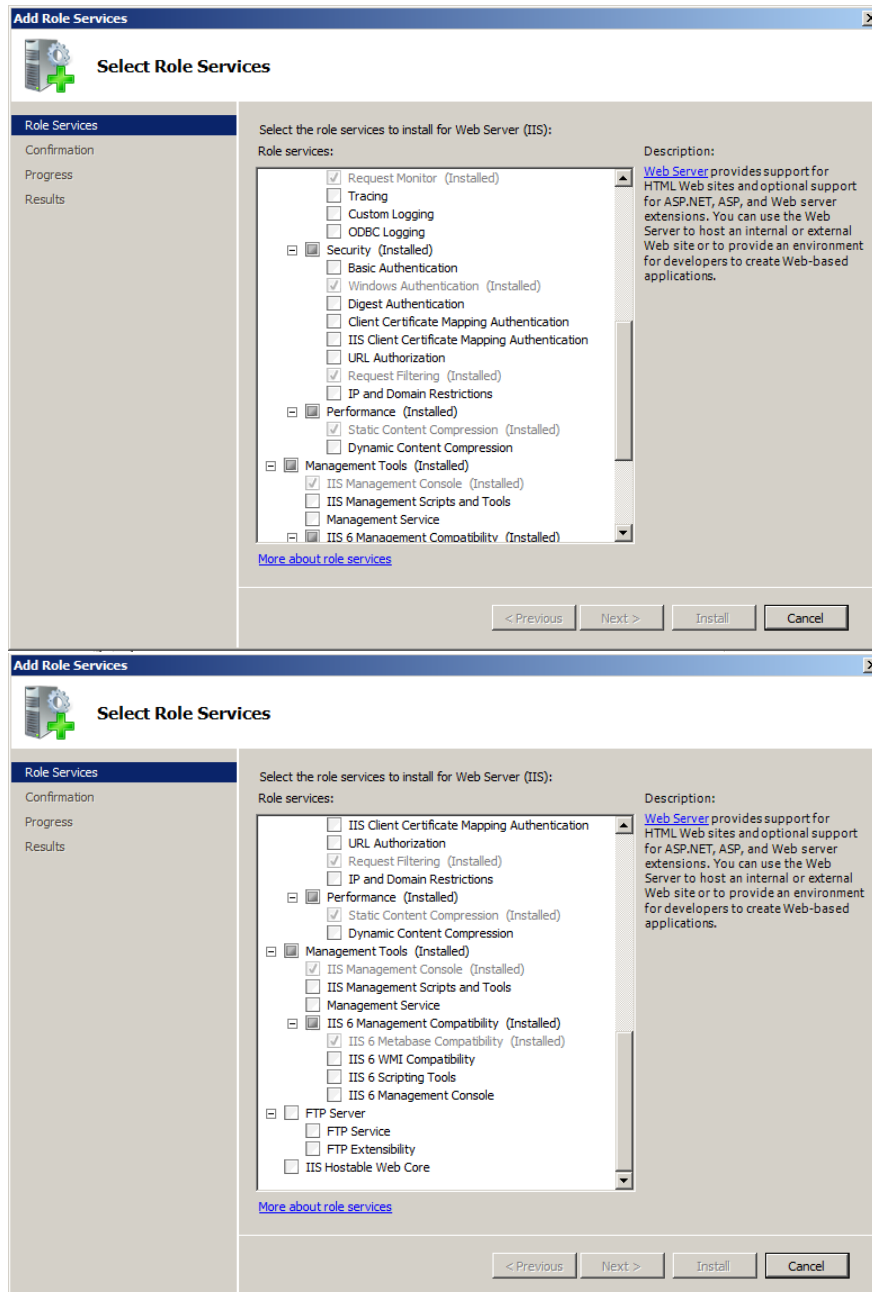
Windows 2008 / 2008 R2

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)**














































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



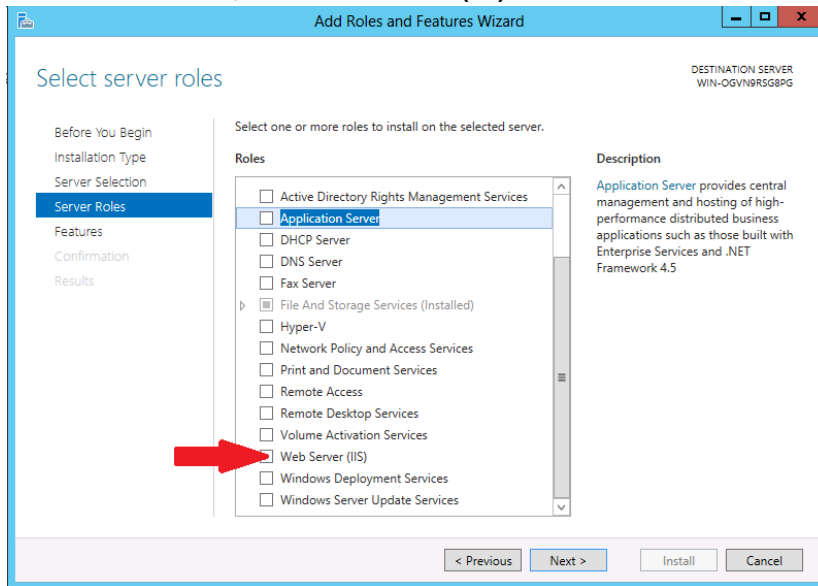


^ **Role Services:** 22 installed

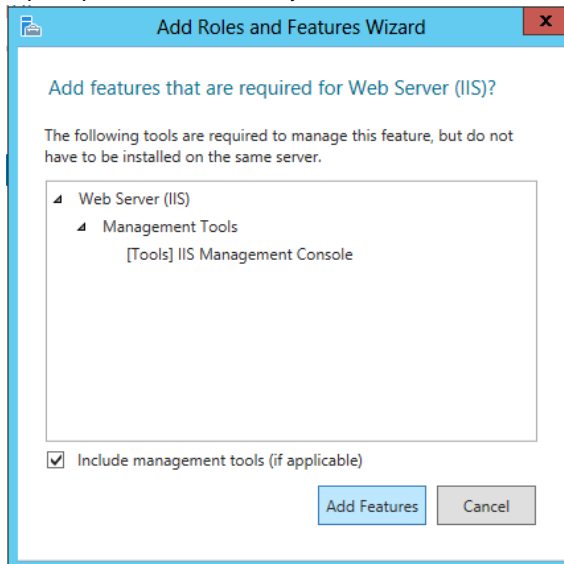
Role Service	Status
 Web Server	Installed
 Common HTTP Features	Installed
 Static Content	Installed
 Default Document	Installed
 Directory Browsing	Not installed
 HTTP Errors	Installed
 HTTP Redirection	Not installed
 Application Development	Installed
 ASP.NET	Installed
 .NET Extensibility	Installed
 ASP	Not installed
 CGI	Not installed
 ISAPI Extensions	Installed
 ISAPI Filters	Installed
 Server Side Includes	Not installed
 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
 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
 IIS 6 Metabase Compatibility	Installed
 IIS 6 WMI Compatibility	Not installed
 IIS 6 Scripting Tools	Not installed
 IIS 6 Management Console	Not installed

Windows 2012

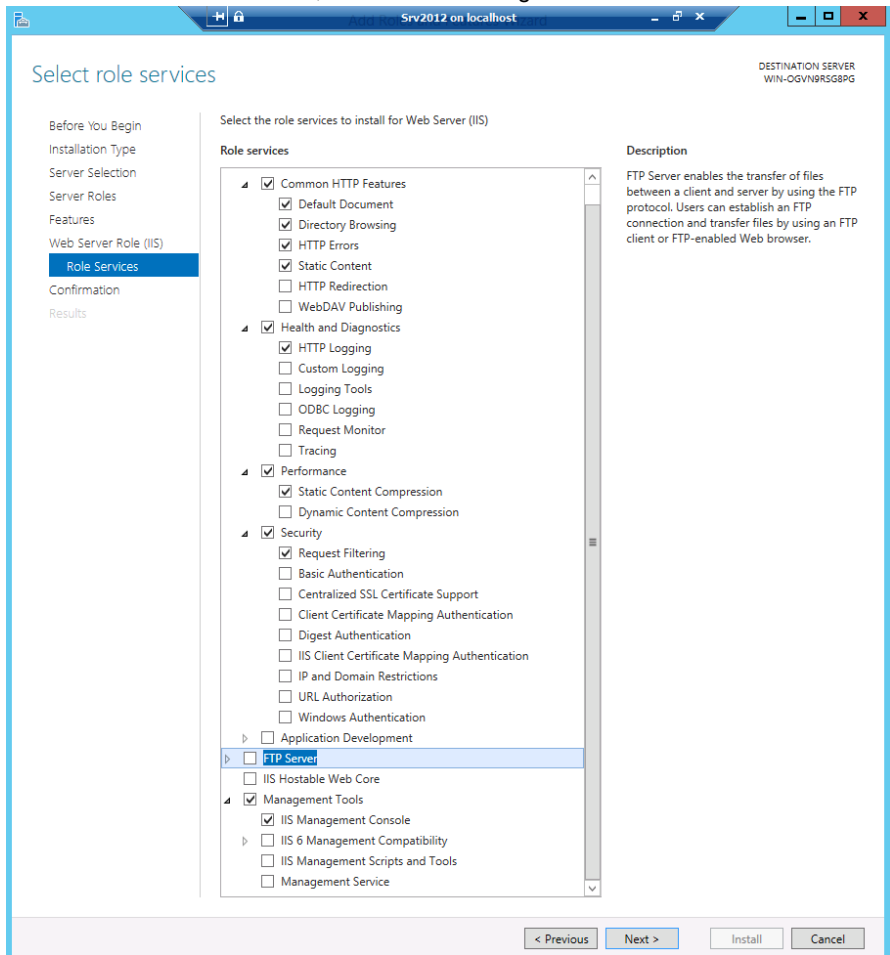
1. From the Windows Desktop Bar, select **Server Manager**.
2. In the **Quick Start** section of the **Dashboard**, select **Add roles and features**.
3. For the **Installation Type**, select **Role-based or feature-based installation**.
4. For **Server Selection**, select the server you are currently working on.
5. On the **Server Roles**, select **Web Server (IIS)**



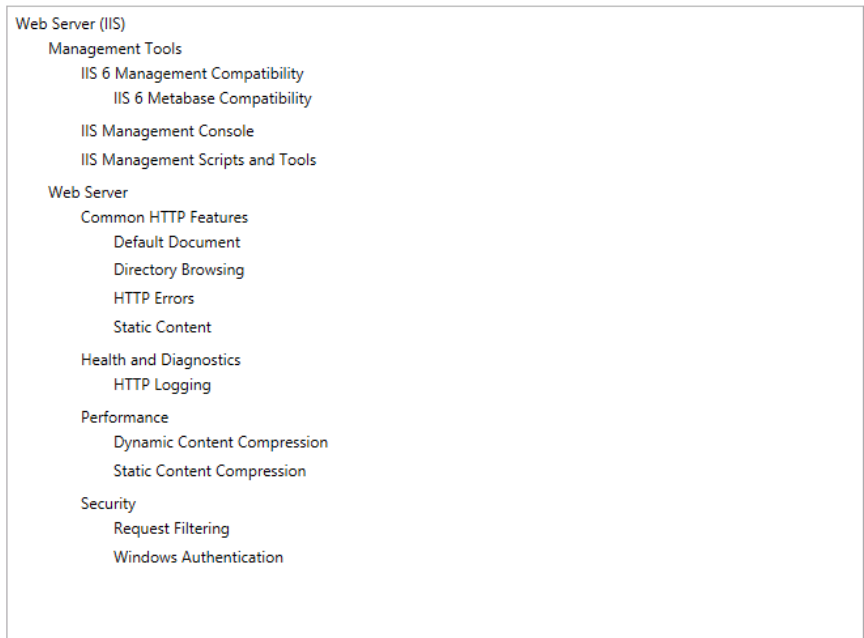
6. If prompted to automatically add other services, select **Add Features**.



7. On the **Server Roles** section, select the following Roles



8. On the **Confirmation** section, verify your selections.



Installing Autodesk Vault Server 2014 with other web applications using a different .NET version

The Autodesk Vault Server 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. 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) 7.x, 8.x

To create an Application Pool

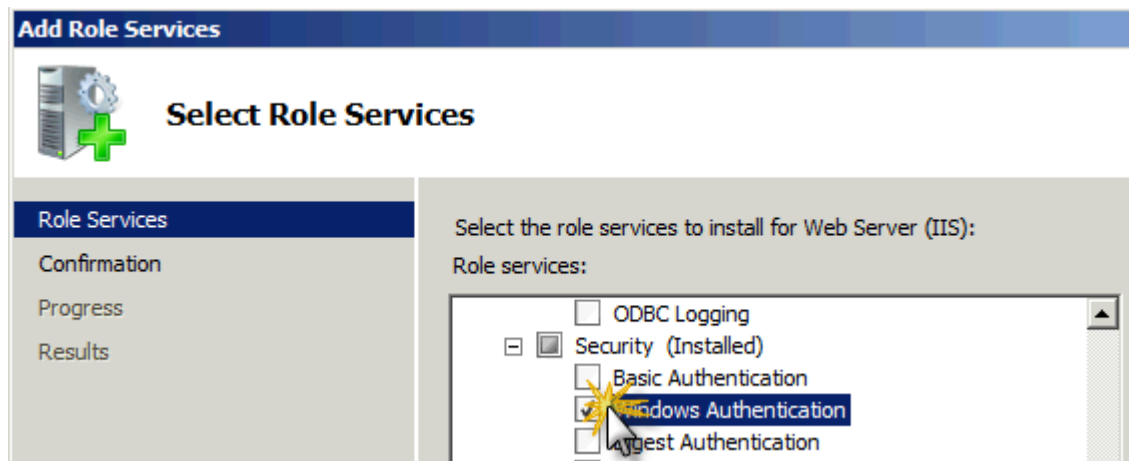
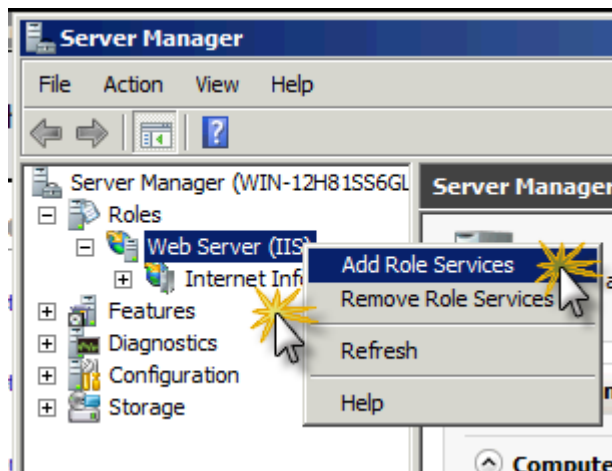
1. Open **Internet Information Services (IIS) Manager** in the **Administrative Tools** of the **Control Panel**.
2. Right-click the **Application Pools** folder. Click **Add Application Pool**.
3. In the **Name** field, enter **AutodeskAppPL**.
4. Ensure
 - .NET Framework version:** is set to **".NET Framework v4.0.30319"**
 - Managed pipeline mode:** is set to **"Integrated"**
 - Start application pool immediately** is checked
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.

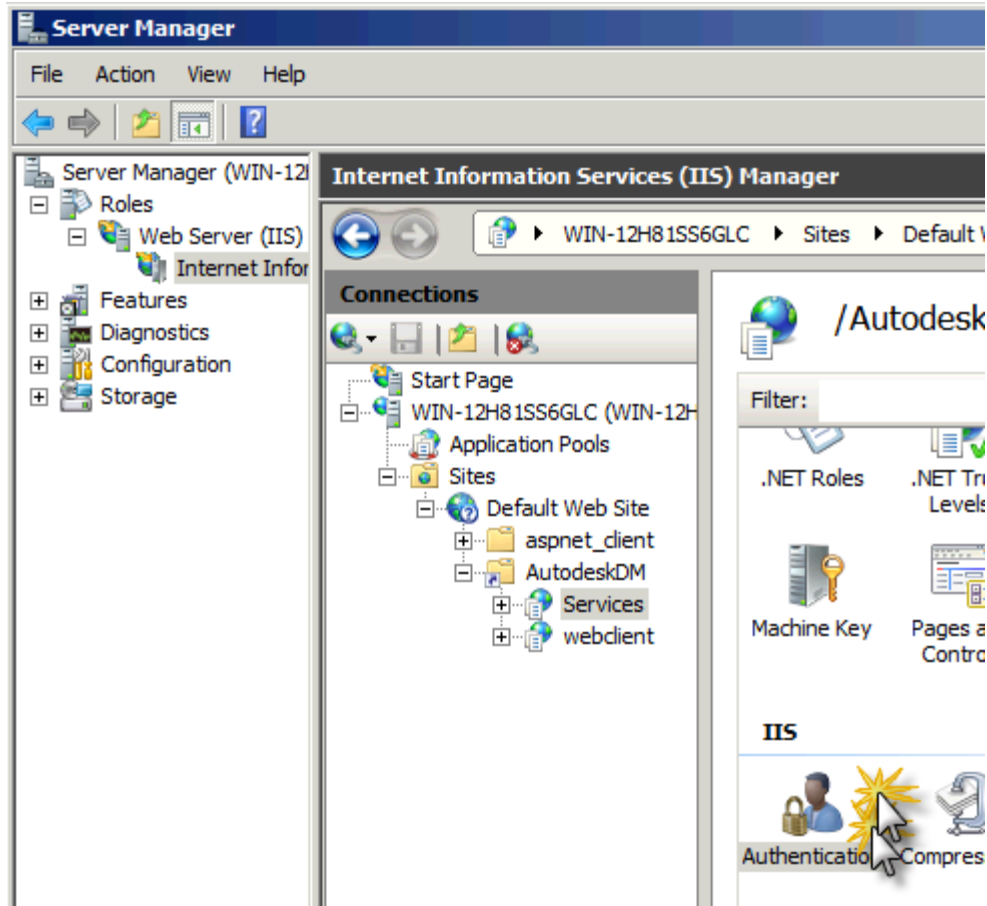
Enabling Windows Authentication on Windows 2008/R2/2012 after Installing Vault Server

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

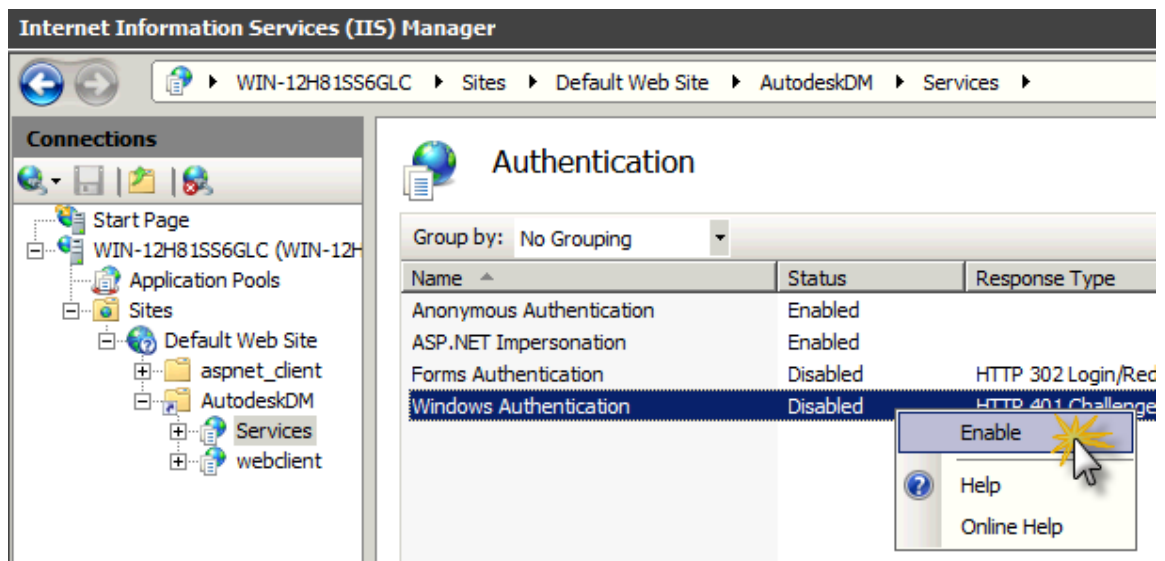


2. While still in Server Manager, expand Web Server (IIS), click on IIS Manager, and navigate through to MachineName>Sites>Default Web Site>AutodeskDM. Select **Services** and Dbl-click on Authentication feature under the IIS section.

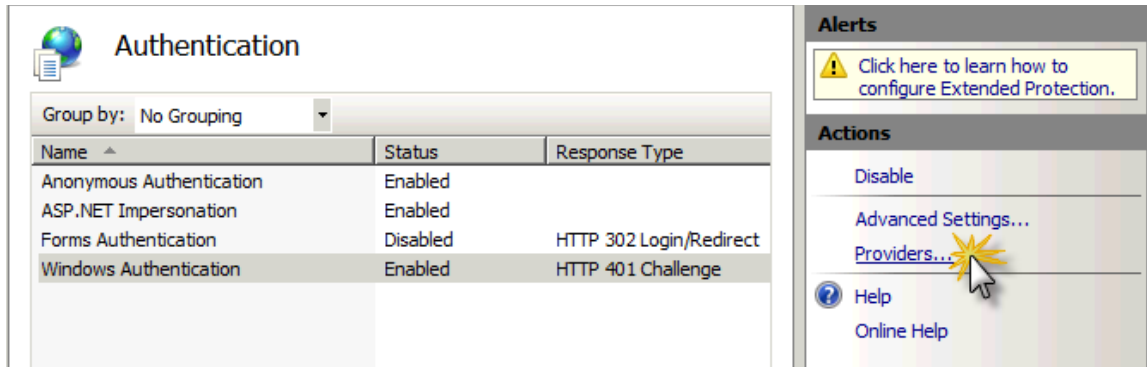
NOTE: Services is the only tree node that would need Windows Authentication enabled. It is not necessary to enable WinAuth on Default Web Site or AutodeskDM directories.



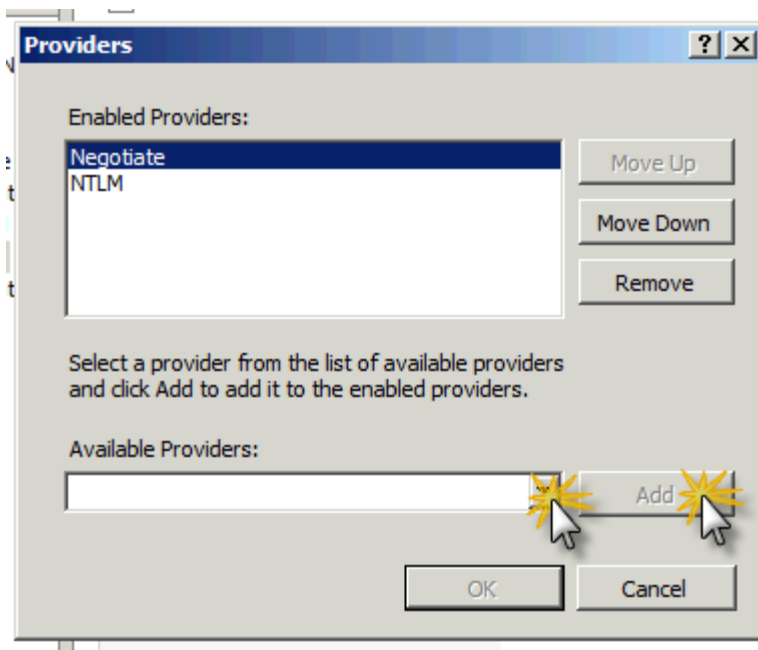
3. Ensure Windows Authentication is Enabled; right-click and select Enable if otherwise.



For Windows 2008 R2/Windows 2012, while Windows Authentication is still selected select “Providers” and ensure that “Negotiate” and “NTLM” are listed.



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



Ensure that they are listed in this Order:-

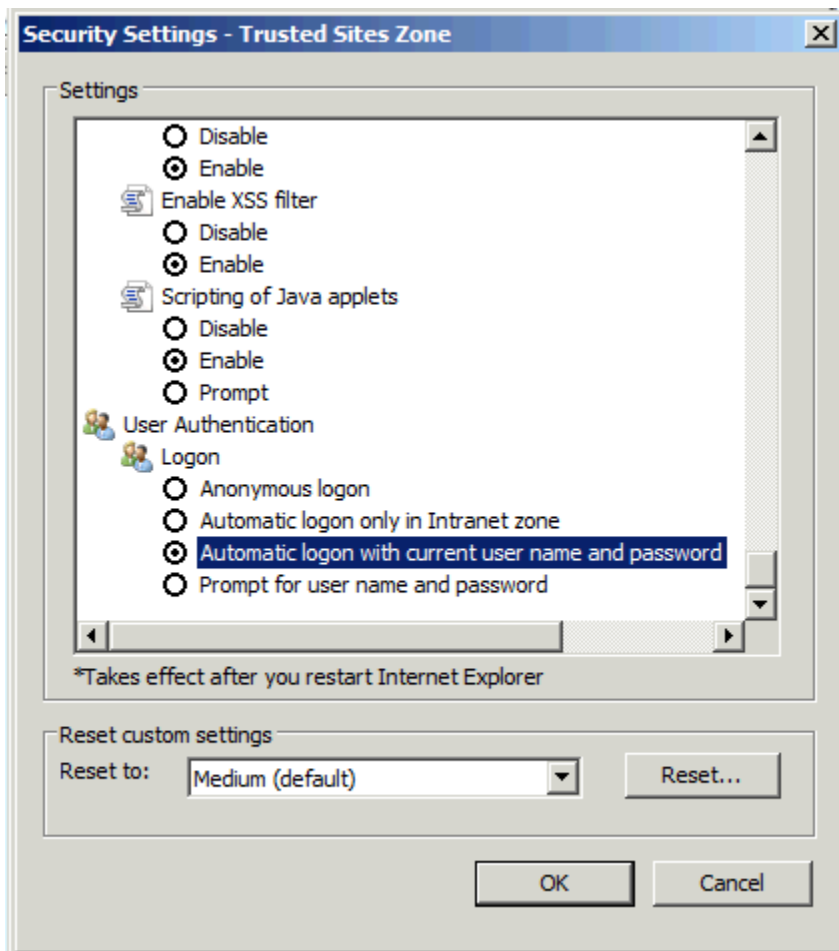
1. Negotiate
2. NTLM

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"`

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



Reconfigure IIS Worker Process and Application Pool

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_IUSRS** 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 [\\FSMachine\VaultData](#) 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 -> Advanced Settings.
 1. Change the Application Pool to the newly created **AutodeskAppPL** Application Pool.
 2. Apply the changes and close the properties of the Default Web site.
 3. Close the IIS Manager.
 4. Open a Command prompt and type **IISRESET**.
13. Add new files to the vault and verify that the properties are able to be indexed

Installing Microsoft SQL Server prior to Autodesk Vault Server 2014

Vault Server 2014 will install Microsoft SQL 2008 SP3 x86 or x64 Express Edition (Build Number 10.0.5000.0) depending on the version of Vault that you are installing. If it is unable to find an existing SQL instance named **AUTODESKVAULT**. It is important to note, if Full SQL is installed without the AutodeskVault instance name, SQL Express will be installed.

If you plan on running a full SQL version with Vault Server 2014, it can be installed before or upgraded after the installation of Vault Server 2014.

Note: This installation process may require the server to reboot multiple times. Please be sure you are able to perform the necessary reboots. As noted previously, if a custom password for the SQL SA account is used, it will need to be specified during the installation of the Autodesk Vault Server. If using a custom password for the SA account, use something that adheres to your company's password policy. We do not record the password for the SA account during installation.

Please see the [Customizing your Autodesk Vault Server 2014 Installation](#) section in this document.

Microsoft SQL 2008

1. 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.
2. The installation process installs any necessary prerequisites and begins running the pre-installation checks. Note any errors and take the necessary corrective actions before continuing.
3. In the 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**.

5. **Note:** If you install SQL without using this instance name, the Autodesk Vault Server installation will create its own instance of SQL Server named **AutodeskVault** using Microsoft SQL Express 2008 SP3. It will **NOT** recognize any SQL instance not named **AutodeskVault**.
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.**

Server Configuration

Specify the configuration.

Setup Support Rules

Feature Selection

Instance Configuration

Disk Space Requirements

Server Configuration

Database Engine Configuration

Error and Usage Reporting

Installation Rules

Ready to Install

Installation Progress

Complete

Service AccountsCollation

Microsoft recommends that you use a separate account for each SQL Server service.

Service	Account Name	Password	Startup Type
SQL Server Database Engine	NT AUTHORITY\NETW...		Automatic

Use the same account for all SQL Server services

These services will be configured automatically where possible to use a low privilege account. On some older Windows versions the user will need to specify a low privilege account. For more information, click Help.

Service	Account Name	Password	Startup Type
SQL Server Browser	NT AUTHORITY\LOCA...		Disabled

< Back

Next >

Cancel

Help

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.**

The screenshot shows the 'Database Engine Configuration' window with the 'Account Provisioning' tab selected. The window title is 'Database Engine Configuration' and the subtitle is 'Specify Database Engine authentication security mode, administrators and data directories.' The left sidebar lists various configuration steps, with 'Database Engine Configuration' highlighted. The main area contains the following elements:

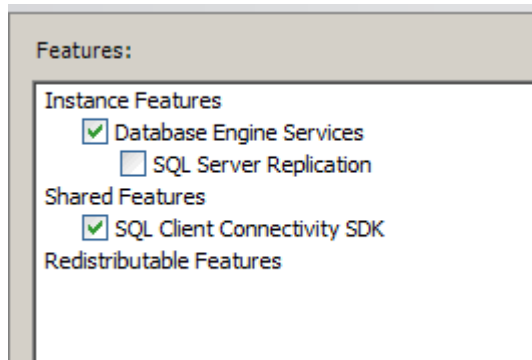
- Account Provisioning** tab (selected), with other tabs: Data Directories, User Instances, FILESTREAM.
- Instruction: 'Specify the authentication mode and administrators for the Database Engine.'
- Authentication Mode** section:
 - ☐ Windows authentication mode
 - ☒ Mixed Mode (SQL Server authentication and Windows authentication)
- Built-in SQL Server system administrator account** section:
 - Enter password: [password field]
 - Confirm password: [password field]
- Specify SQL Server administrators** section:
 - A list box containing 'Administrator (Administrator)'.
 - Buttons: 'Add Current User', 'Add...', 'Remove'.
 - Tooltip text: 'SQL Server administrators have unrestricted access to the Database Engine.'
- Navigation buttons at the bottom: '< 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 [Customizing your Autodesk Vault Server 2014 Installation](#) section in this document.

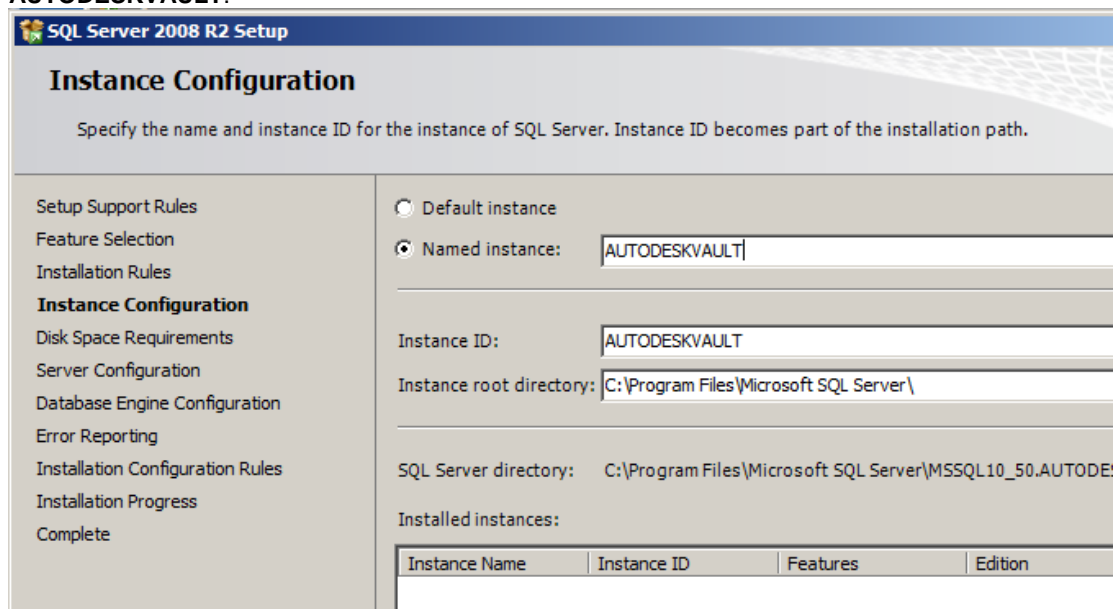
8. Verify the installation options chosen and **Install**. Once the installer has finished, it can be closed.
9. Download and install SQL 2008 SP3 and applicable hot fixes from Microsoft's web site if needed. The database engine version will be 10.0.5### once SP 3 has been successfully installed. **Verify Vault System Requirements.**

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 existing installation** from the **Installation** menu.
2. The installation process installs any necessary prerequisites and begins running the pre-installation checks. Note any errors and take the necessary corrective actions before continuing.
3. 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 checked. Keep **SQL Client Connectivity SDK** checked.

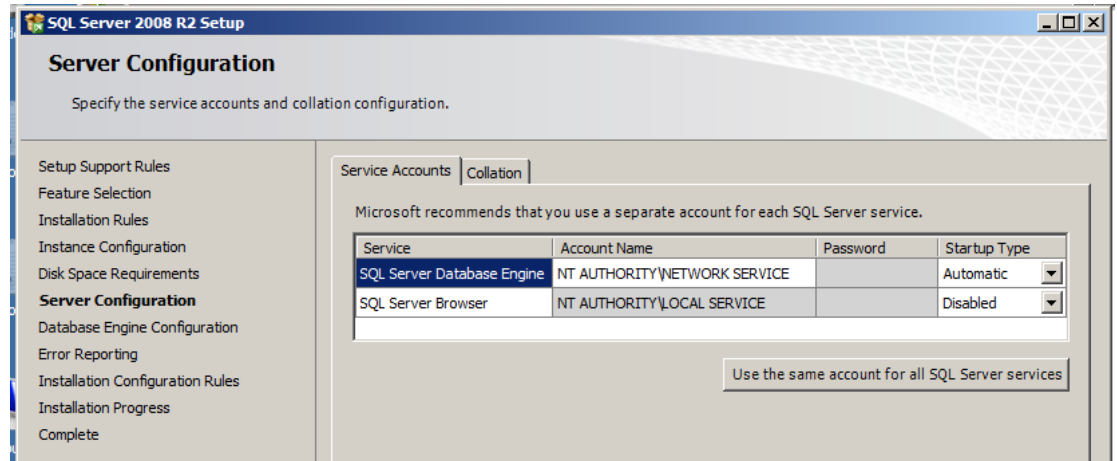


4. In the Instance Configuration window, select Named instance and enter the name as **AUTODESKVAULT**.

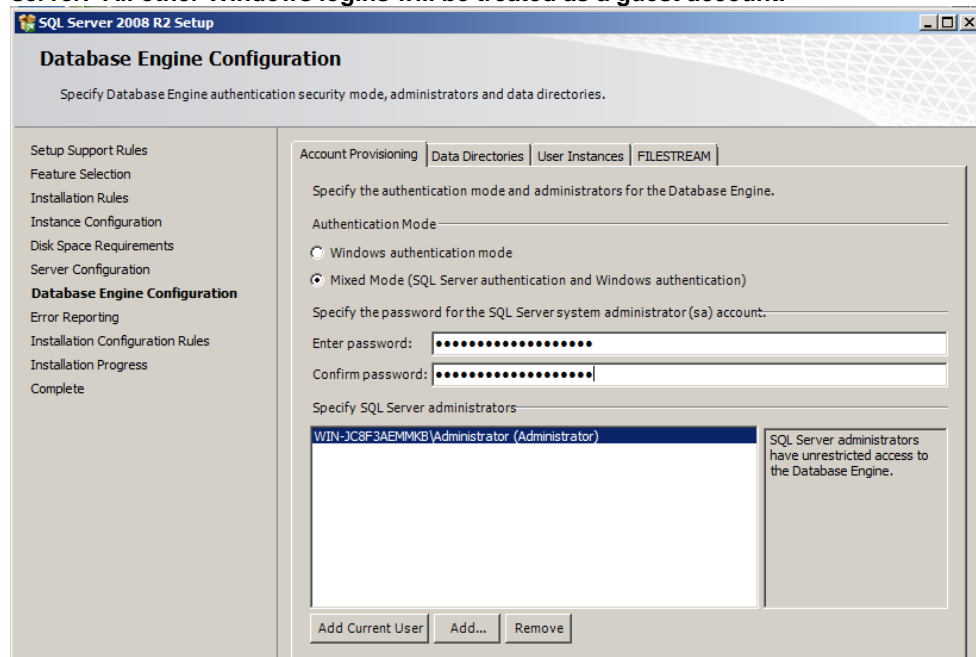


Note: If you install SQL without using this instance name, the Autodesk Vault Server installation will create its own instance of SQL Server called **AUTODESKVAULT** using Microsoft SQL Express 2008 SP2. It will **NOT** recognize any other SQL Instance name.

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.



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.**

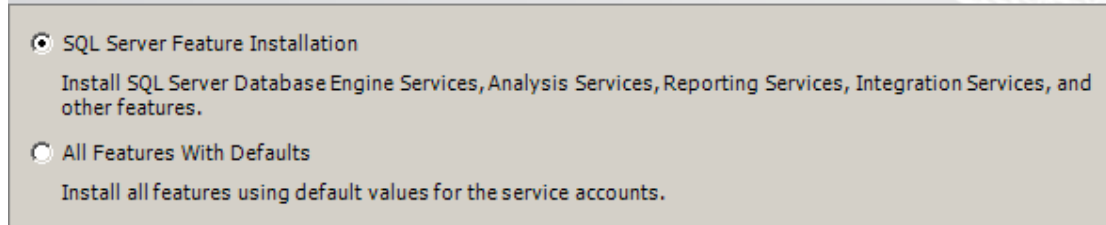


Note: If you use a different SA password, you will need to use the **use my SA Credentials** option in the [Customizing your Autodesk Vault Server 2014 Installation](#) section in this document.

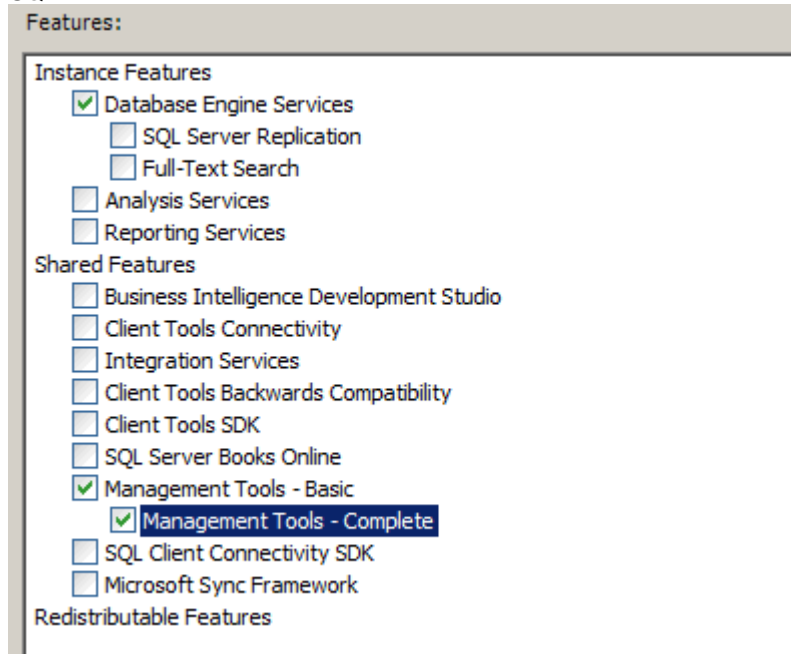
7. Verify the installation options chosen and **Install**. Once the installer has finished, it can be closed.
8. Download and install SQL Server Service Packs from Microsoft's web site if needed. [Verify Vault System Requirements](#).

Microsoft SQL 2008 R2 / 2012 (Standard or Enterprise)

1. Start the installation process for Microsoft SQL 2008 R2 / SQL Server 2012 (Standard or Enterprise) 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 pre-installation checks. Note any errors and take the necessary corrective actions before continuing.
3. During Setup Role, select **SQL Server Feature Installation**



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.



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

Instance Configuration

Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.

Setup Support Rules
Setup Role
Feature Selection
Installation Rules
Instance Configuration
Disk Space Requirements
Server Configuration
Database Engine Configuration
Error Reporting
Installation Configuration Rules
Ready to Install
Installation Progress
Complete

☐ Default instance

☒ Named instance:

Instance ID:

Instance root directory: ...

SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL10_50.AutodeskVault

Installed instances:

Instance Name	Instance ID	Features	Edition	Version

< Back
Next >
Cancel
Help

Note: As noted previously, if SQL is installed 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 SP3. It will **NOT** recognize a 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.**
 - i. NOTE: The image below displays the startup type as manual. This must be set to Automatic.

Server Configuration

Specify the service accounts and collation configuration.

Setup Support Rules
Setup Role
Feature Selection
Installation Rules
Instance Configuration
Disk Space Requirements
Server Configuration
Database Engine Configuration
Error Reporting
Installation Configuration Rules
Ready to Install
Installation Progress
Complete

Service Accounts Collation

Microsoft recommends that you use a separate account for each SQL Server service.

Service	Account Name	Password	Startup Type
SQL Server Agent	NT AUTHORITY\NETWORK...		Manual
SQL Server Database Engine	NT AUTHORITY\NETWORK...		Automatic
SQL Server Browser	NT AUTHORITY\LOCAL S...		Automatic

Use the same account for all SQL Server services

< Back
Next >
Cancel
Help

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.**

The screenshot shows the 'Database Engine Configuration' window with the 'Account Provisioning' tab selected. The window title is 'Database Engine Configuration' and the subtitle is 'Specify Database Engine authentication security mode, administrators and data directories.' The left sidebar lists various setup steps, with 'Database Engine Configuration' highlighted. The main area contains the following sections:

- Account Provisioning** (selected tab), **Data Directories**, and **FILESTREAM** tabs.
- Instruction: 'Specify the authentication mode and administrators for the Database Engine.'
- Authentication Mode:**
 - ☐ Windows authentication mode
 - ☒ Mixed Mode (SQL Server authentication and Windows authentication)
- Instruction: 'Specify the password for the SQL Server system administrator (sa) account.'
- Enter password:** [password field]
- Confirm password:** [password field]
- Specify SQL Server administrators:**
 - A list box containing 'Administrator (Administrator)'.
 - Buttons: 'Add Current User', 'Add...', and 'Remove'.
 - Text on the right: 'SQL Server administrators have unrestricted access to the Database Engine.'

At the bottom right, there are navigation buttons: '< Back', 'Next >', 'Cancel', and 'Help'.

Note: If you use a different SA password, you will need to use the **use my SA Credentials** option in the [Customizing your Autodesk Vault Server 2013 Installation](#) section in this document.

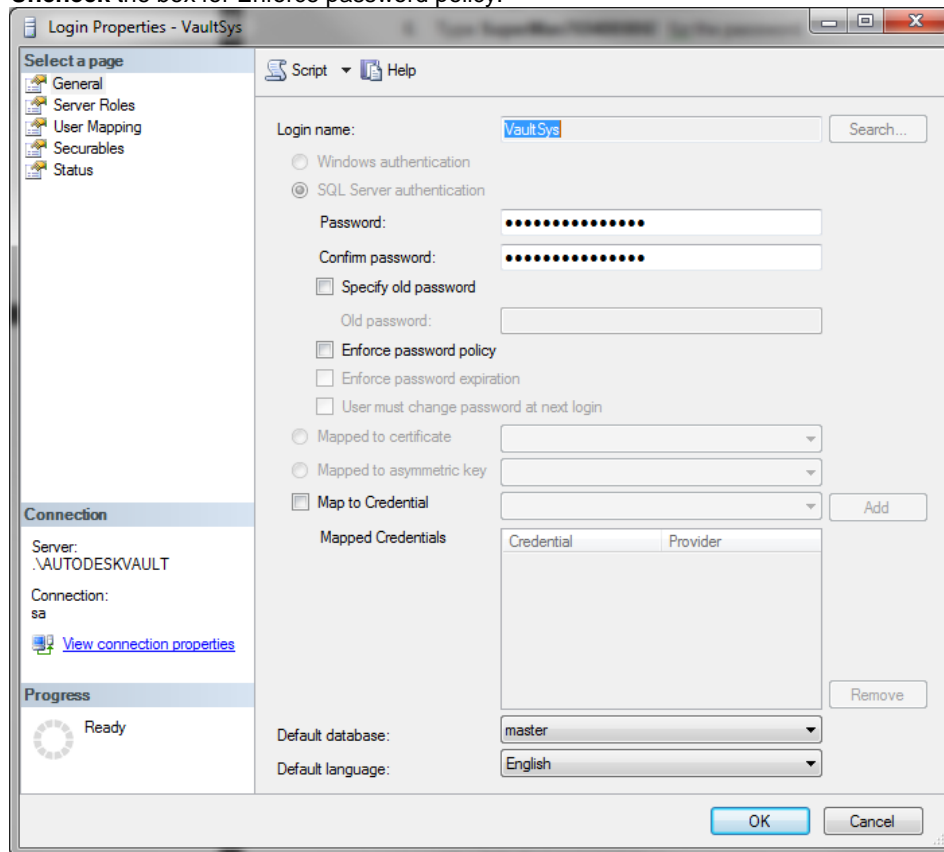
8. Verify the installation options chosen and **Install**. Once the installer has finished, it can be closed.
9. Download and install Service Packs from Microsoft's web site if needed. [Verify Vault System Requirements](#).

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
4. Select **New Login**.
5. Type **VaultSys** for the login name.
6. Select **SQL Server Authentication**.
7. Type **SuperMan769400006!** as the password.
8. **Uncheck** the box for Enforce password policy.



9. Select the **Server Roles** page.

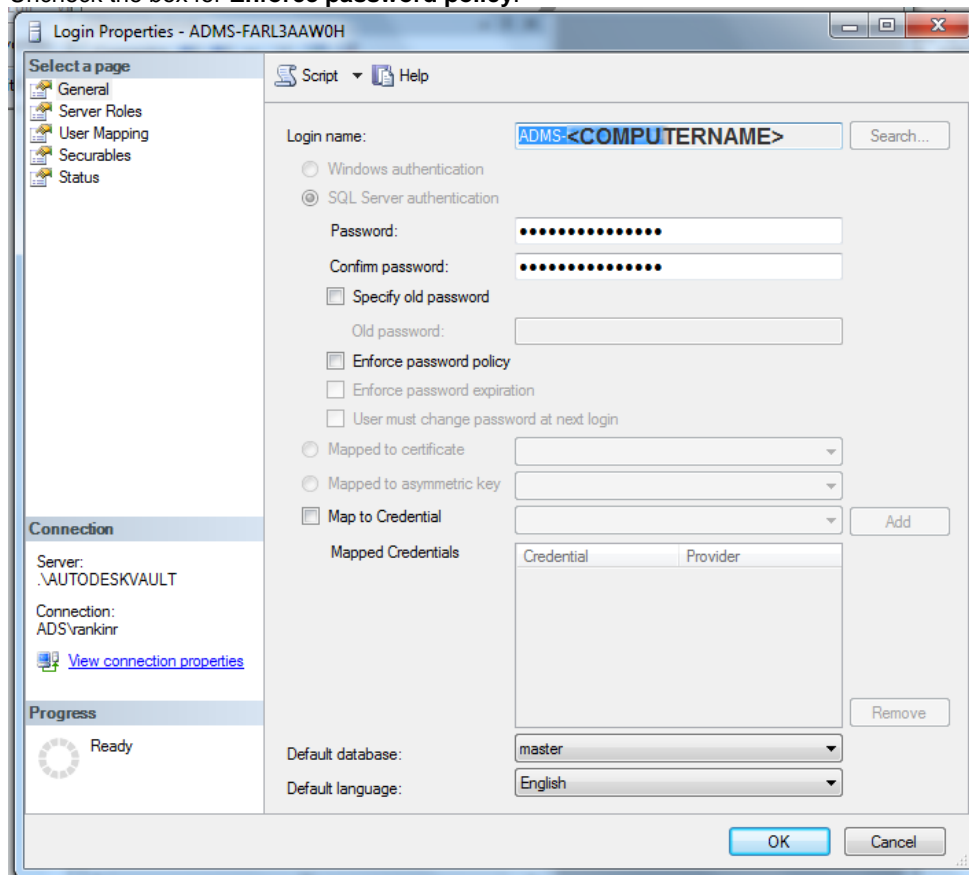
10. Check the boxes next to the following roles:

- **dbcreator**
- **processadmin**
- **setupadmin**

11. Click **OK** to create the account.

To create the ADMS-<COMPUTERNAME> account.

12. Open the **Microsoft SQL Server Management Studio**.
13. Expand the **Security -> Logins** folder.
14. Right-click on the Logins folder
15. Select **New Login**.
16. 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**.
17. Select **SQL Server Authentication**.
18. Type **WeakerMan769400006!** as the password.
19. Uncheck the box for **Enforce password policy**.



20. Select the **Server Roles** page.
 - Ensure that only **public** is selected.
21. 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 / 2012 on a domain controller**. SQL Server Setup will not block installation on a computer that is a domain controller, but the following limitations apply:

- 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 or the AutodeskVault instance is installed and before Vault Server is 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.

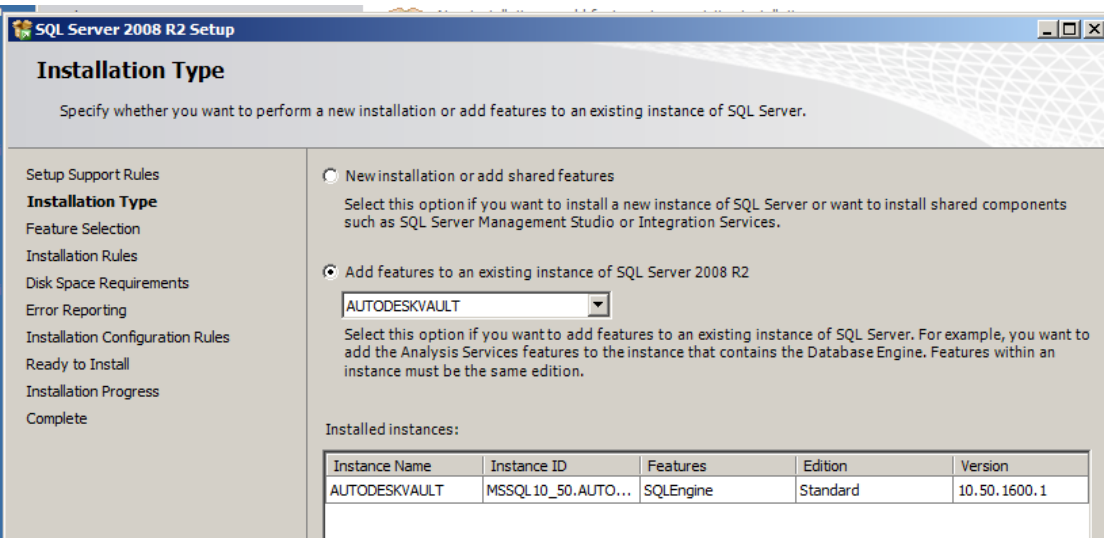
See the Microsoft's guide on [Upgrading to SQL Server 2012](#).

Microsoft does not support cross-platform, in place, upgrades to **or** from 64 bit SQL. See the Microsoft "[Version and Edition Upgrades](#)" website for more information. This means that you cannot upgrade from 32 bit SQL to 64 bit SQL.

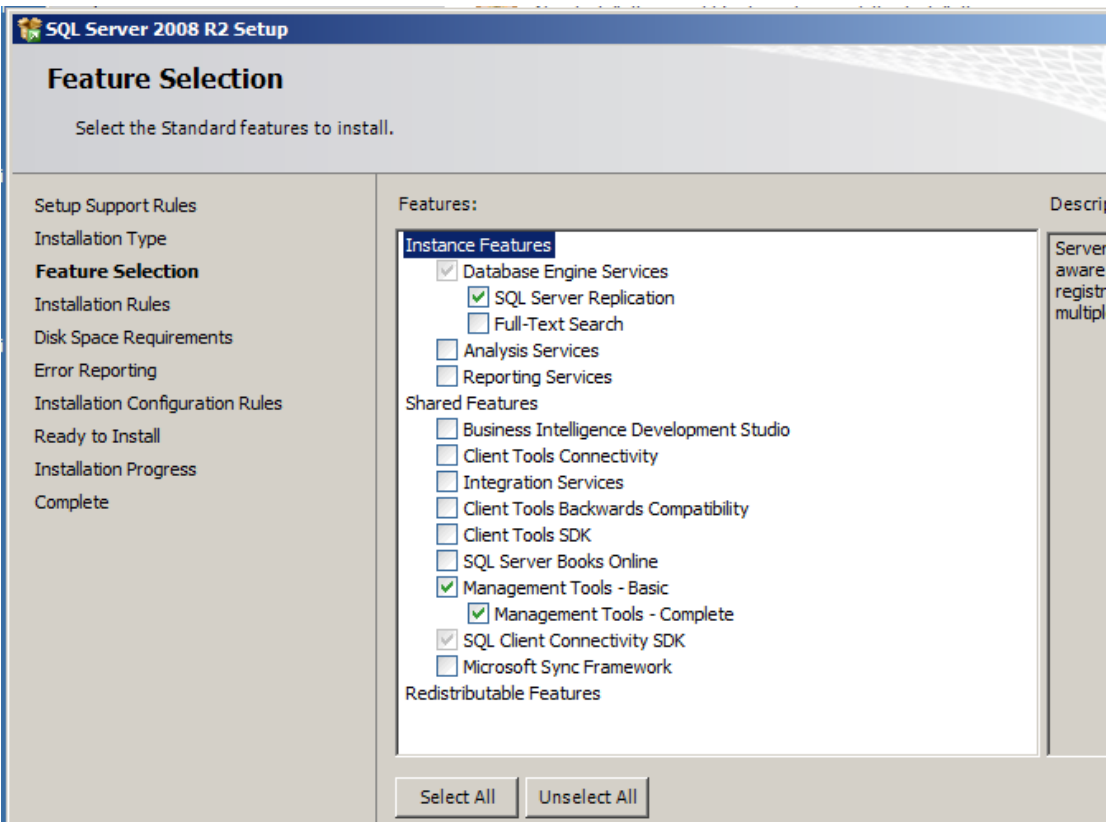
After Upgrading to SQL Standard or Enterprise

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.**

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 intended to be installed are selected.



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

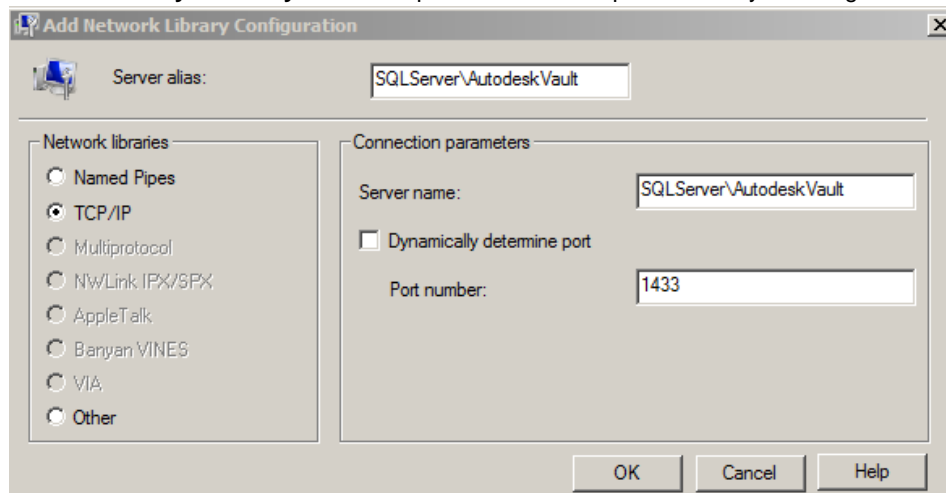
This section outlines the steps to set SQL to a non-standard TCP/IP port.

SQL Server 2008, 2008R2 or 2012

1. Install full SQL Server 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 **IPAll** 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.

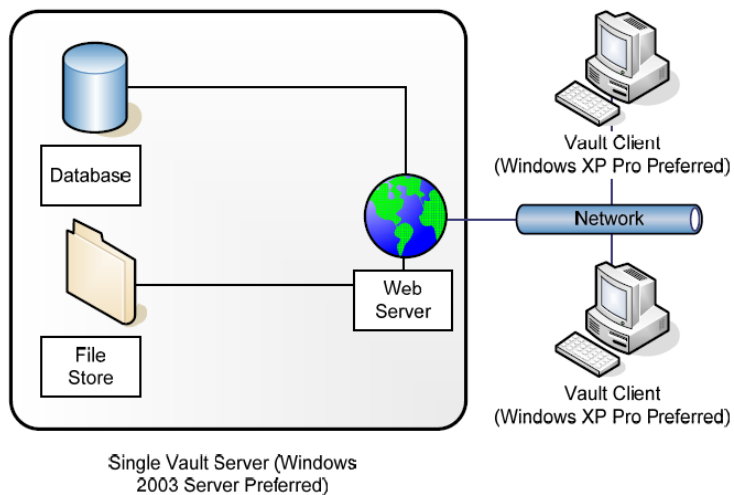


7. Click the **OK** button to apply the settings.
8. **Start** your Autodesk Vault Server **installation**.

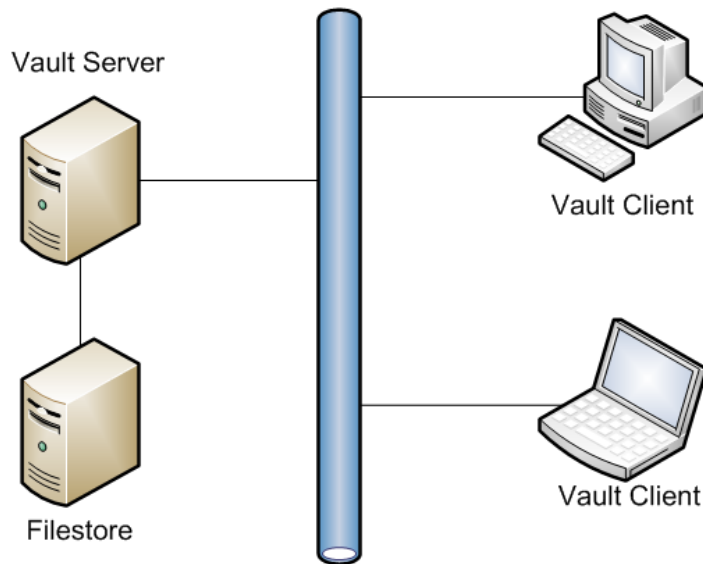
Managing a remote file store

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.



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\AutodeskRemote

Password: *****

Connection

Connection Timeout: 1000 Seconds

Share Path

Current Path:

New Path: [] ...

Log File Configuration

Limit the number of log files before they are recycled. Value must be between 6 and 99.

☐ Maximum number of console logs: 6

☐ Maximum number of server logs: 6

☐ Maximum number of email logs: 6

Server Task History

Number of days to retain history: 14

Value must be between 0 and 99.

Reset Defaults

OK Cancel Help

5. Apply the changes
6. Click **OK**.

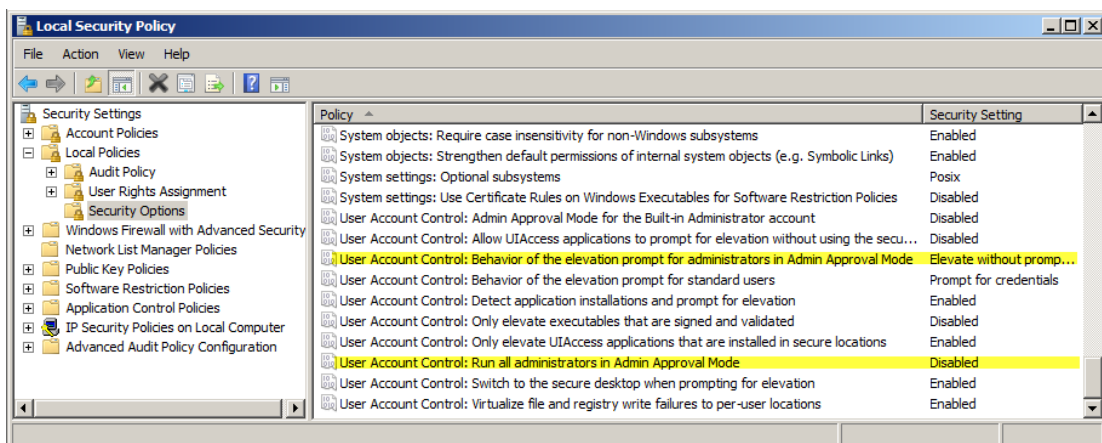
Moving the vault file store

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 [\\FSMachine\VaultData](#).
4. Click **OK**.

User Account Control

If you plan to schedule automatic backups using ADMS Console, the User Account Control settings in Windows 7 \Windows 8 \ 2008 \ 2008 R2 \ 2012 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**
5. Locate the “**User Account Control: Behavior of the Elevation Prompt for Administrators**” (Windows Server 2008 R2 and 2012 = “**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**
 - 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**,
8. Click OK



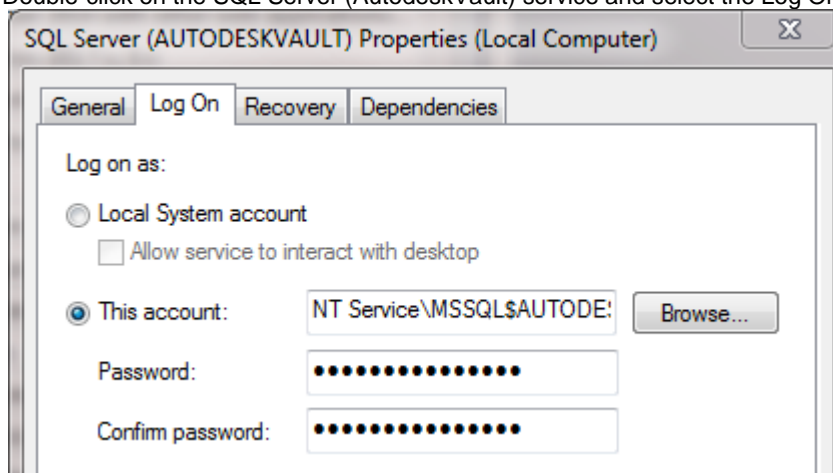
Post-install Configuration Changes

Setting up a remote backup location

If you plan to back up your vault data to a remote share, follow the steps in the [Creating a new domain user account](#), [Create a remote share](#) and [Setting the new account in the Autodesk Vault Server Console](#) 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.



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 2014\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 than **1000**, you must increase the **executionTimeout** value to an equal or higher value. This is found on the following line:

```
171      <httpRuntime maxRequestLength="51200" executionTimeout="1000" />
```

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, 9, 10

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 <http://webserver.domainname.com> or <http://10.0.0.1>, then change it to <http://webserver> only.
3. Click OK and close Internet Explorer Options.

For more information on advanced proxy bypass configurations:

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

Bypassing a Proxy Server with the Application configuration 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 configuration file is located in the following directory. Each client application has a similar configuration file. Make a backup copy of the file then edit the file using Notepad.exe ONLY.

"C:\Program Files\Autodesk\Inventor 2014\Bin\Inventor.exe.config"

Add this line of code to the file:

```
<system.net>  
<defaultProxy  
  enabled="false"  
  bypassonlocal="true"  
/>  
</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 will refer to the %temp% folder. This is the temporary folder location defined in Windows for the user account that is currently logged into the computer. By default, this folder is located in the following location for all supported Operating Systems.

C:\Users\<Accountname>\AppData\Local\Temp

Vault server log files

There are the different log files to look for in the following location for all supported Operating Systems.

C:\ProgramData\Autodesk\Vaultserver\Filestore

Vlog-YYYYMMDD.txt – Contains all other ADMS activities and events.

AVFS-YYYYMMDD.txt – Contains all FileStore specific functionality (file upload, download, sign-in) errors. Also any events related to the filestore such as replication.

ADMSConsoleLog-YYYYMMDD.txt – Contains any server-side problems related to backup, restore, purge, reindex or other operations performed within the Autodesk Vault Server Console.

Emaillog-YYYYMMDD.txt – Contains errors in regards to email sent from the server.

LicensingLog.txt – Contains errors encountered by the Vault server when attempting to get a license from the license manager.

%TEMP%\DWGFILT.*.log - DWG iFilter Log Files – This is the log files use by the DWG iFilter when performing various Vault operations such as a re-index.

Autodesk Vault Server 2014 installation log files

During the installation of the Autodesk Vault Server, errors may be encountered and reported by the diagnostic tool or during the installation.

%TEMP%\EDMLog\prechecks.xml

%TEMP%\EDMLog\prechecks.xsl

Autodesk Vault <Version> 2014 Client Installation Logs

%TEMP%\Autodesk Vault <Version> 2014 Install.log

%TEMP%\Autodesk Vault <Version> 2014 Setup.log

Autodesk Vault <Version> 2014 Server Installation Logs

%TEMP%\Autodesk Vault <Version> 2014 (Server) Install.log

%TEMP%\Autodesk Vault <Version> 2014 (Server) Setup.log

Microsoft SQL Server log files

Folder – C:\Program Files\Microsoft SQL Server\<SQL Instance>\LOG

Filenames – Errorlog, Errorlog.1 – Errorlog.7

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.

Enabling Logging in IIS (7.x or later)

IIS 7.0 (Which comes with Windows 7, Windows Server 2008, Windows Server 2008 R2) 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.

In Control Panel > Programs and Features. Click "Turn Windows features on or off".

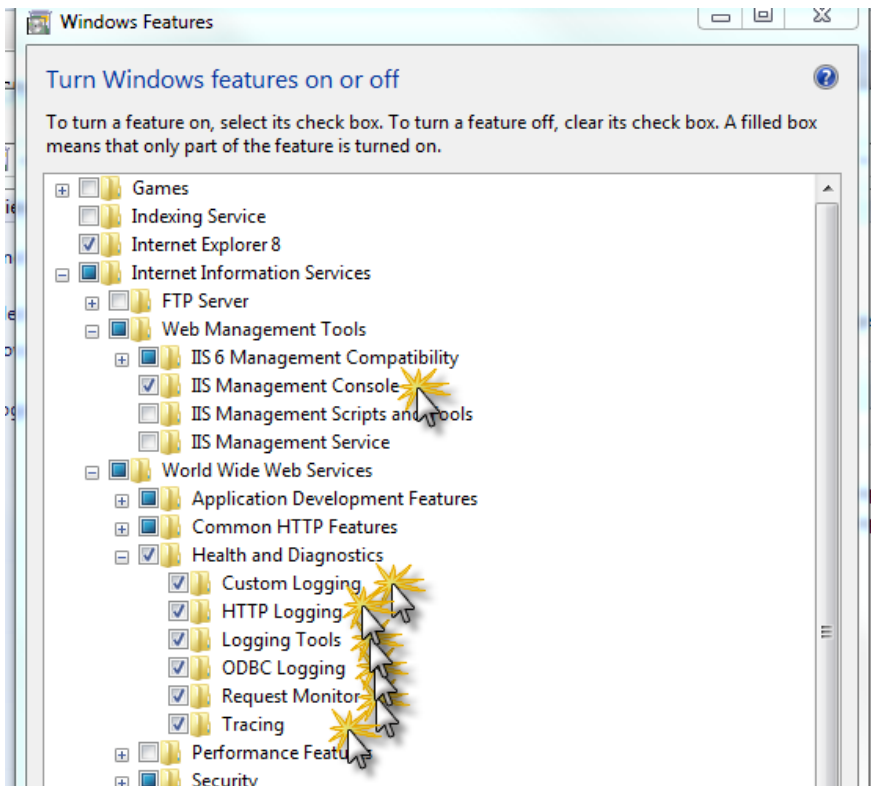
Internet Information Services

Web Management Tools

IIS Management Console, **Check this**

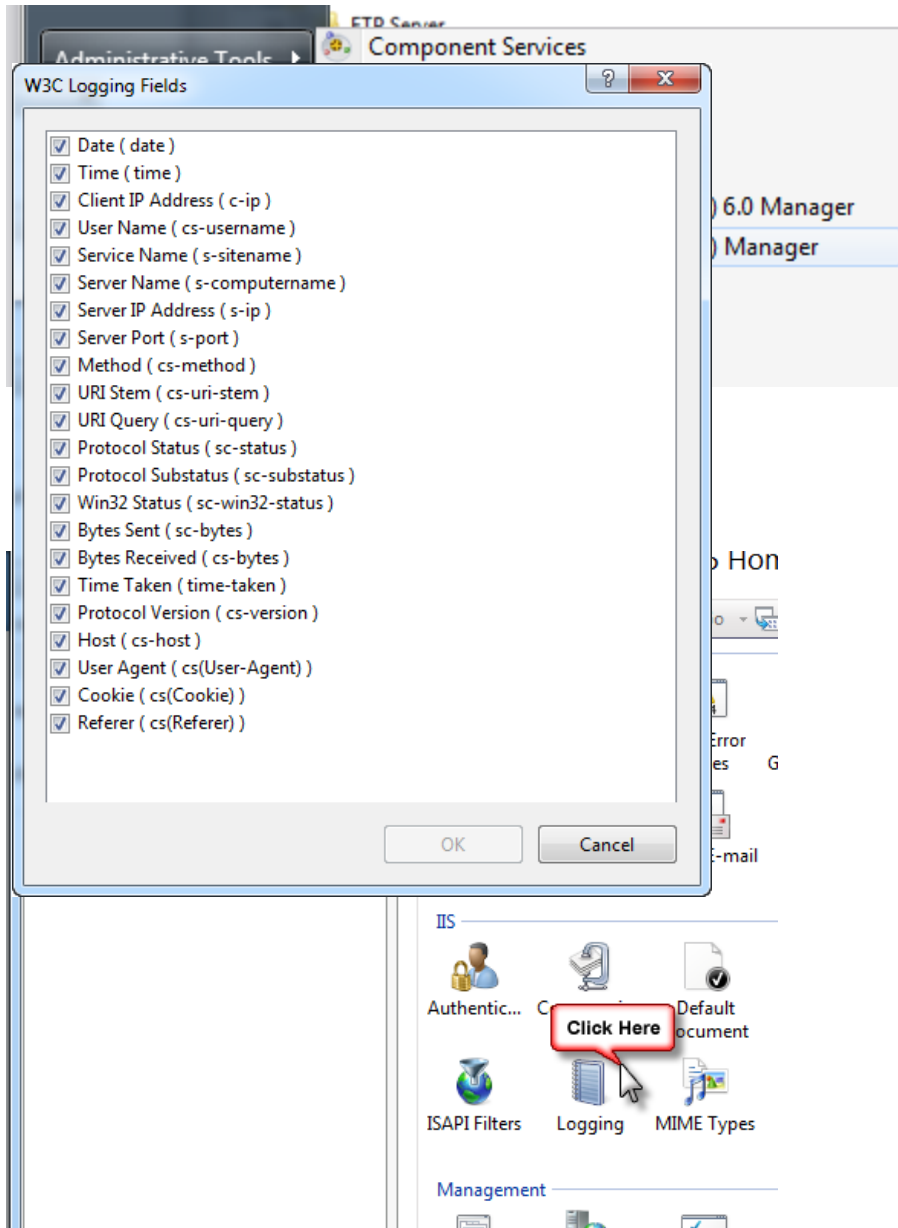
World Wide Web Services

Health and Diagnostics, **Check all options**




Restart the web service (From a command line type IISRESET).

Once Logging is installed, Open **Internet Information Services (IIS) Manager**.



Select the Site and clicking **Logging**

Click **Select Fields** and make sure all values are selected

 **Logging**

Use this feature to configure how IIS logs requests on the Web server.

One log file per:

Site

Log File

Format:

W3C

Select Fields

Click Here

Directory:

%SystemDrive%\inetpub\logs\LogFiles

Browse...

Encoding:

UTF-8

Log File Rollover

Select the method that IIS uses to create a new log file.

☒ Schedule:

Daily

☐ Maximum file size (in bytes):

☐ Do not create new log files

☐ Use local time for file naming and rollover

W3C Logging Fields

☒ Date (date)
☒ Time (time)
☒ Client IP Address (c-ip)
☒ User Name (cs-username)
☒ Service Name (s-sitename)
☒ Server Name (s-computername)
☒ Server IP Address (s-ip)
☒ Server Port (s-port)
☒ Method (cs-method)
☒ URI Stem (cs-uri-stem)
☒ URI Query (cs-uri-query)
☒ Protocol Status (sc-status)
☒ Protocol Substatus (sc-substatus)
☒ Win32 Status (sc-win32-status)
☒ Bytes Sent (sc-bytes)
☒ Bytes Received (cs-bytes)
☒ Time Taken (time-taken)
☒ Protocol Version (cs-version)
☒ Host (cs-host)
☒ User Agent (cs(User-Agent))
☒ Cookie (cs(Cookie))
☒ Referer (cs(Referer))

OK

Cancel

Vault Professional 2014 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.

Vault Professional 2014, Service Pack 1, now offers Autodesk Vault File Server (AVFS) to be used at the remote site for multisite replication. Please see [subscription center>Downloads>Product Enhancements](#) for more information.

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 instantiated these components are stored in a folder defined by the Inventor project file. When the assembly is then checked into Vault, the instantiated 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.

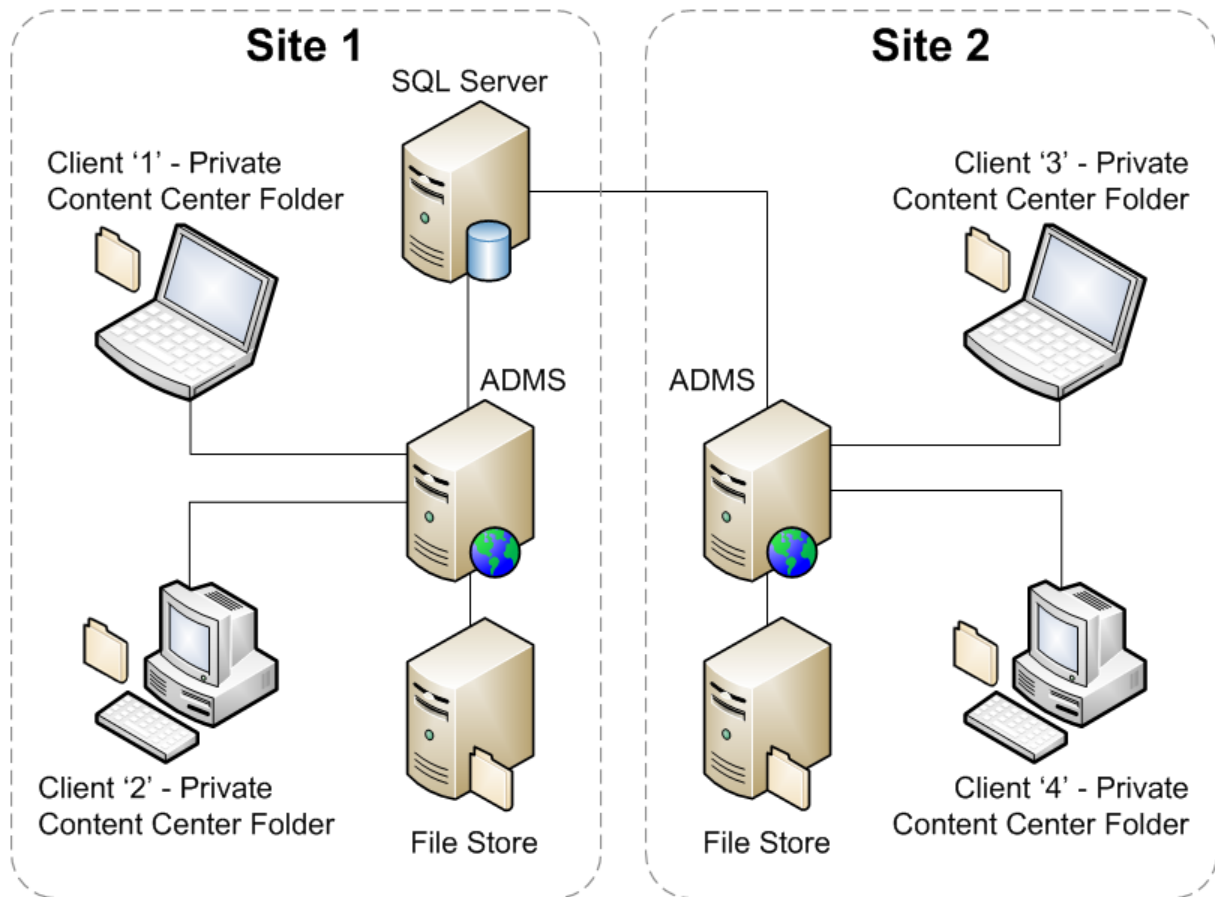
Advantages:

- 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



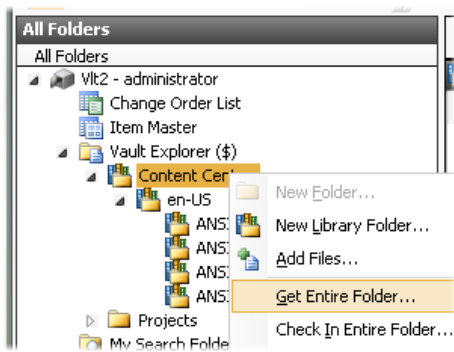
1. Client 1 creates an instance of a component from the Content Center database. The instanced part file is written to the Private Content Center folder located on the client computer.
2. User checks in the instanced component as part of an assembly. The Content part is copied into the Vault file store.

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 advantageous to perform this operation on regular basis.



Revision History:

Revision	Comments	Date
1.5	Transferred contents of ACG 2014 to new Autodesk template. Reformatted and fix headings, navigation, table of contents	10/10/13
2.0	Removed sections	10/17/13

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