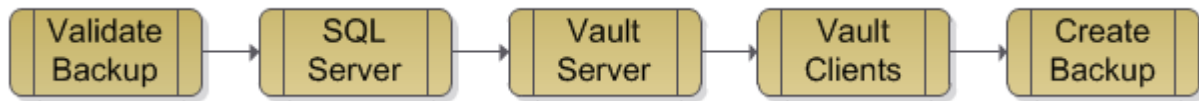


Autodesk Vault Upgrade

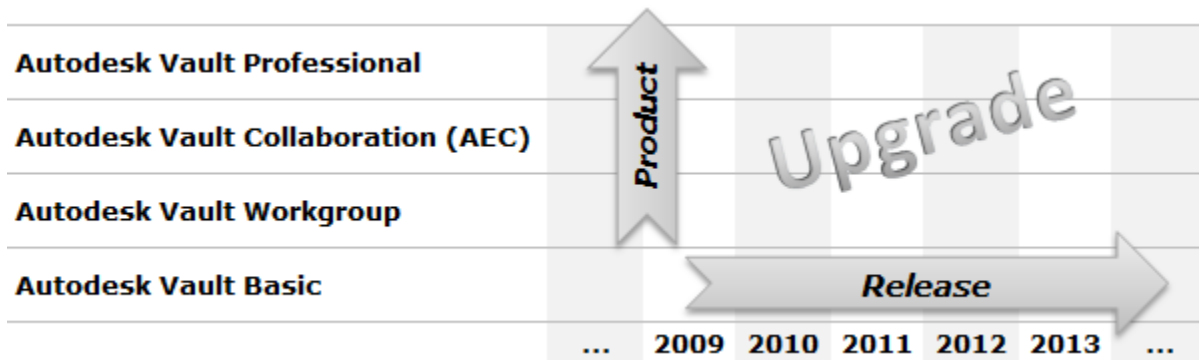
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 - UPGRADE ASSISTANCE.....2
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Upgrade Autodesk Vault



The upgrade process described in these pages applies to all Autodesk Vault product editions. Details are provided for release 2009 and higher, however the general process can be applied to all releases. An upgrade may mean a newer release, a higher product edition, or both. When upgrading, upgrade to the highest release first and then upgrade the product edition.

For example, if moving from Vault Workgroup 2010 to Vault Professional 2013, first upgrade the release to Vault Workgroup 2013 and then upgrade the edition to Vault Professional 2013.



The migration process for an Autodesk Vault environment is composed of five stages: validate backup, upgrade SQL, upgrade Vault server, upgrade clients, and create backup. The number of steps within each stage varies depending on the existing Vault implementation.

The instructions in this document assume that you are familiar with common server administration tasks. At a minimum, you should be familiar with installing and uninstalling software on Microsoft Windows™.

Upgrade Assistance

If there are concerns or additional complexities in the Autodesk Vault environment, the best practice is to involve your Value Added Reseller or Autodesk Consulting. This is especially important when using clustered SQL or business line integrations with Vault.

Autodesk Vault Wiki Help

The wiki help for Autodesk Vault contains detailed information about the Autodesk Vault products. Several topics in this paper refer to the wiki help for further information. You are encouraged to explore the wiki. Details for the current and previous two releases of Autodesk Vault are available: <http://wikihelp.autodesk.com/vault>

Validate Backup / Test Migration



Autodesk recommends that every Vault upgrade start with a validated backup. The following procedure for testing the upgrade is the preferred method for validating a backup.



Test Environment

The best practice is to perform a test upgrade of the Vault server on a machine that is similar to the production server. A test upgrade provides confidence that the backup is valid and identifies potential pitfalls with no impact on the production environment. Following is an overview of test environment benefits.

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

If a test environment similar to production is not attainable, a low cost alternative is virtual machines like VMWare or Virtual PC from Microsoft. Virtual machines lack many of the benefits outlined above but are far better than not performing a backup and migration validation.

Restore Backup

Use the Vault server application to restore the production backup in the test environment. If you're not familiar with Vault Backup or Restore, refer to the Autodesk Vault wiki help.

Migration Timeout

If the migration stops because of a timeout error, the following steps will help resolve the issue. In the ADMS Console look in the Console log for today's date and search for 'timeout'. If a timeout error is found, perform the following steps.

Look in the ADMS log file to determine if the cause is a timeout:

C:\ProgramData\Autodesk\VaultServer\Filestore\ADMSConsoleLog-YYYYMMDD.txt

Search the log file from the bottom up for 'timeout.' If a timeout error is found with a time stamp matching the time of the stopped migration, perform the following steps:

1. On the Vault server, open Windows Explorer and navigate to **C:\Program Files\Autodesk\ADMS Product 20__\Server\Web\Services**.
2. Create a backup copy of the Web.config file.
3. Open the Web.config file with Notepad and look for the following line:

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

Note: The values may be different from those shown.

4. Double the existing values for **defaultcommand** and **longcommand**.

Note: If the **defaultCommand** value is set higher than 1000, increase the **executionTimeout** value to an equal or higher value. This is found on the following line:

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

5. Save the **Web.config** file.
6. Open the ADMS console.
7. Perform one of the following sets of tasks:
 - a. If a yellow bang symbol appears next to a Vault, right click the vault and select migrate.
 - b. If no yellow symbol appears, close ADMS console and perform a build-to-build migration with the following steps:
 - i. Open a command prompt and navigate to the installed location of Connectivity.ADMSConsole.exe.
 - ii. Run ADMS b2bmigrate operation in command line mode:

Example: **Connectivity.ADMSConsole.Exe -Ob2bmigrate -VUadministrator -VPadmin_password -DBUsqI_user -DBPsqI_password**

Replace **admin_password** with the appropriate administrator password for the **-VP** switch.

The last two command line parameters, **-DBU** and **-DBP**, are required only if the **sa** password is not the default password.

Additional Vault server command line details are available on the Vault Wiki Help.

Validate Restored Data

Verify the filestore and databases are complete and that the restored environment is operational. Use a client to verify the content and the Vault server application to verify the configuration.

Migration Test

Apply the processes detailed in this paper to the test environment. Using the test environment provides a safe option to experience the migration process and discover unexpected hurdles. Although this process takes time it can, in the long run, save time and stress by avoiding impact to the production environment.

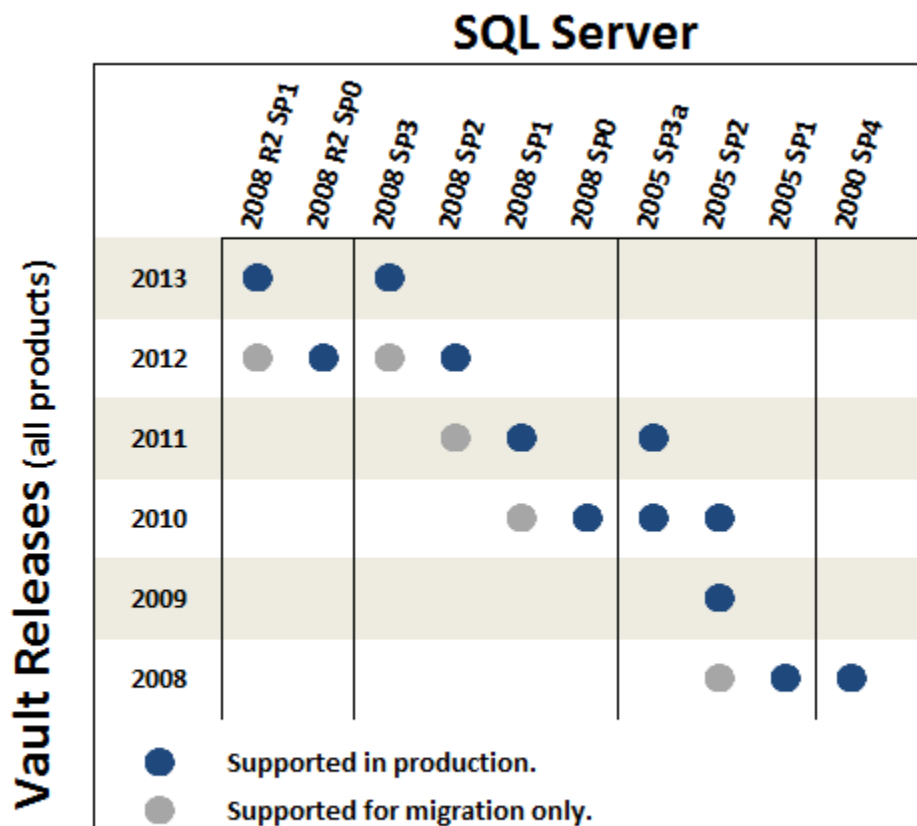
Upgrade SQL



SQL Releases

The stage *Validate backup* should be completed prior to starting *Upgrade SQL*.

The following chart summarizes the compatible releases of Vault and SQL with dark blue dots. The light gray dots are the recommended upgrade path. Refer to Vault release documentation, available on the wiki, to ensure compatibility between Vault and SQL product editions.

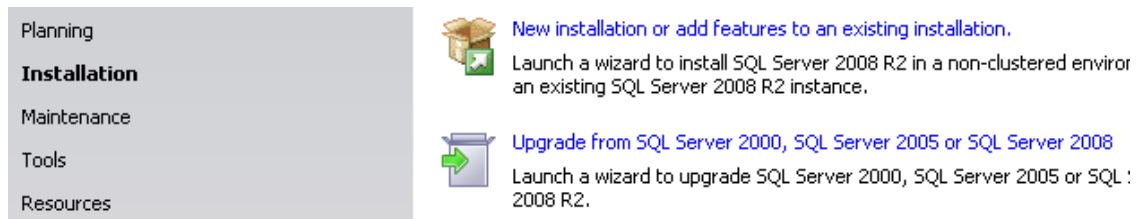


See the documentation for each release of Vault for details about supported SQL products.

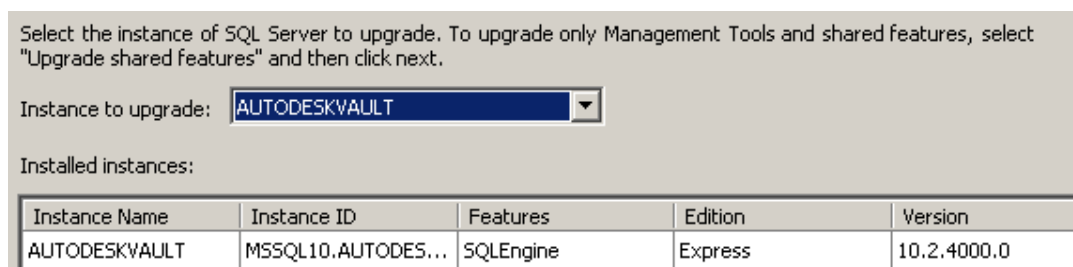
If a SQL upgrade is necessary, refer to the following topics for a summary of the most common scenarios. Complete SQL documentation is available from Microsoft. Prior to upgrading SQL, read the next section in this document: *Upgrade Vault Server*.

Upgrade Microsoft SQL Express 2008 to SQL Express 2008 R2

1. Launch Setup from the SQL Express 2008 R2 installation media. Select the Installation option, and begin the Upgrade wizard.



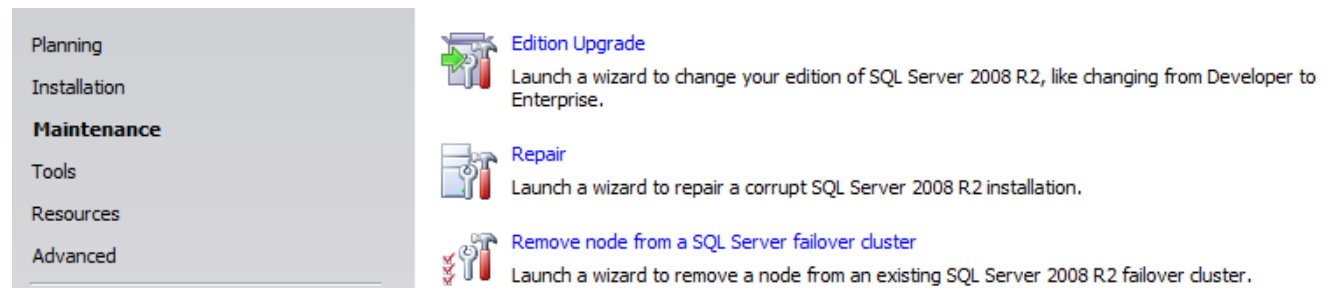
2. Select the AutodeskVault SQL instance.



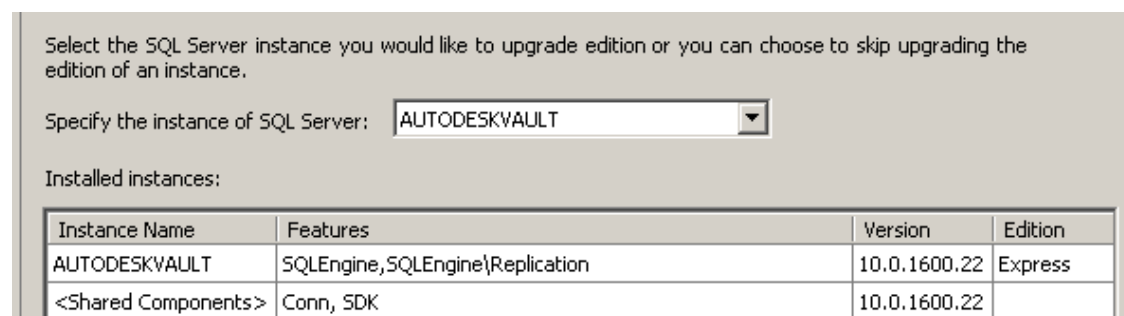
3. Upgrade the instance by completing the wizard.

Upgrade Microsoft SQL Express 2008 to Full Microsoft SQL 2008

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



2. Verify version and product key for Full SQL 2008. Proceed to the Select Instance window and choose the AutodeskVault instance.

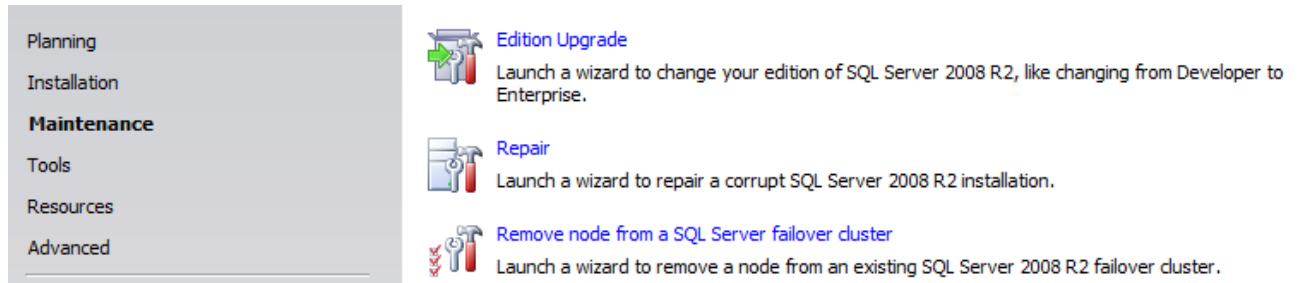


VAULT UPGRADE

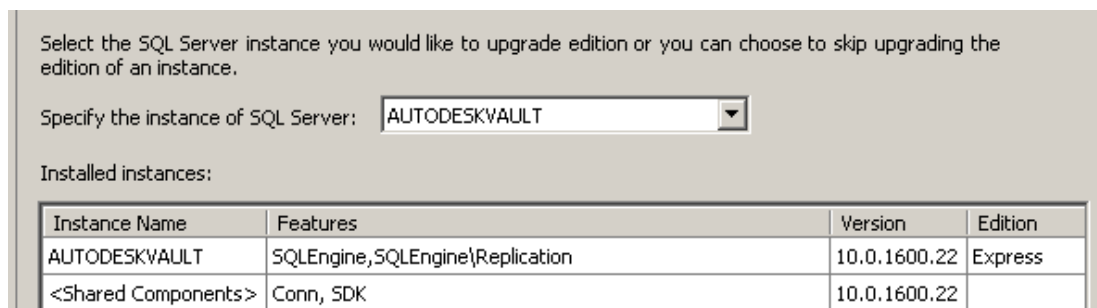
3. Upgrade the Instance. Once the instance has been upgraded, you can install the SQL Management Studio by returning to the "Installation" option and beginning the New SQL Server stand-alone installation or add features to an existing installation wizard.
4. Download and apply service packs.

Upgrade Microsoft SQL Express 2008 R2 to Full Microsoft SQL 2008 R2

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



2. Verify version and product key for Full SQL 2008. Proceed to the Select Instance window, and choose the AutodeskVault instance.



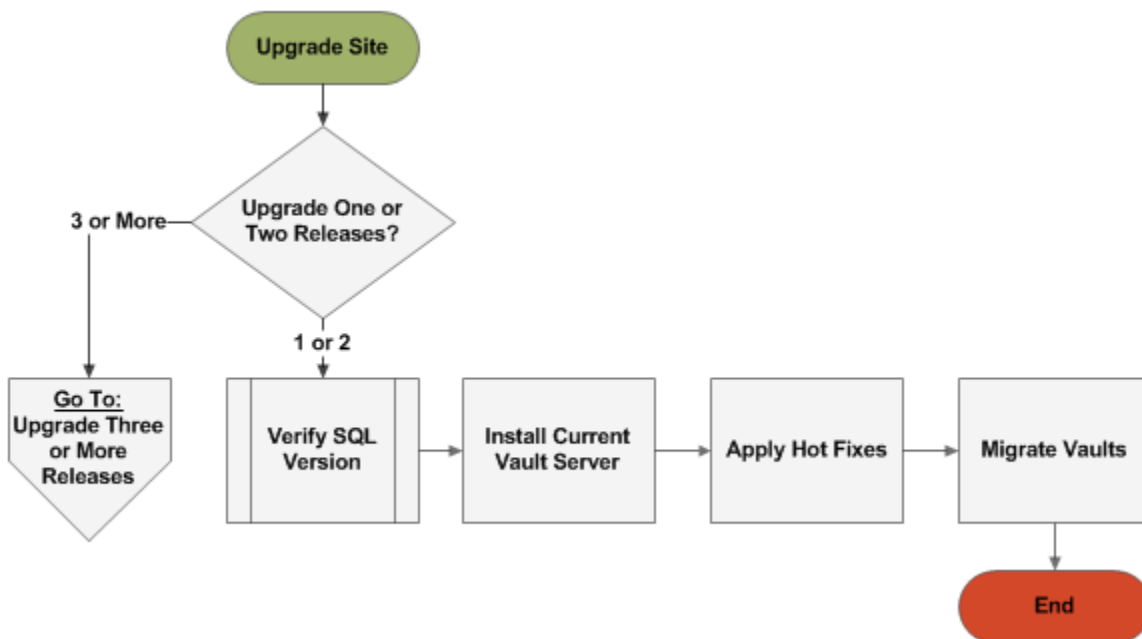
3. Upgrade the Instance. Once the instance has been upgraded, you can install the SQL Management Studio by returning to the "Installation" option and beginning the New SQL Server stand-alone installation or add features to an existing installation wizard.
4. Download and apply service packs.

Upgrade Vault Server



The best practice is to complete the *Validate Backup* stage and review the stage for *Upgrade SQL* prior to starting *Upgrade Vault Server*.

Single Site



Upgrade One or Two Releases?

Upgrading one or two releases involves one installation of Vault server. Upgrading three or more releases requires intermediate installations of the Vault server.

For example, if upgrading from Vault Professional 2009 to Vault Professional 2013, use the '3 or More' migration path.

Verify SQL Version

Verify the existing version of SQL is compatible with the next Vault Release to be installed. If the existing SQL release requires an upgrade (See the preceding chapter in this paper *Upgrade SQL*) perform any necessary upgrades then return to this section.

Install Current Vault Server

Installing Vault server 2011 or a newer release supports automatic uninstall of Vault server 2010 or newer. Therefore, it is not necessary to uninstall Vault 2010 or a newer release.

During every installation of Vault server, enable the option to download and apply Service Packs.

VAULT UPGRADE

At the end of the installation, you are prompted to start the Vault server application and migrate the Vaults. **Do not migrate the vaults at this time.**

Apply Hot Fixes

All hotfixes created after the final Service Pack should be manually installed at each site. Installing the hotfixes ensures that the latest updates are applied for proper migration.

Migrate Vaults

When Vault Server first launches, the administrator is prompted to migrate the vault and library databases. Users are not able to log into a vault until migration is complete. Do not migrate until all service packs and hot fixes have been applied.

If a service pack or hotfix is applied after migration, a build-to-build (b2b) migration is required. B2B migration is a command line option detailed in the section *Migration Timeout* and on the Autodesk Vault wiki.

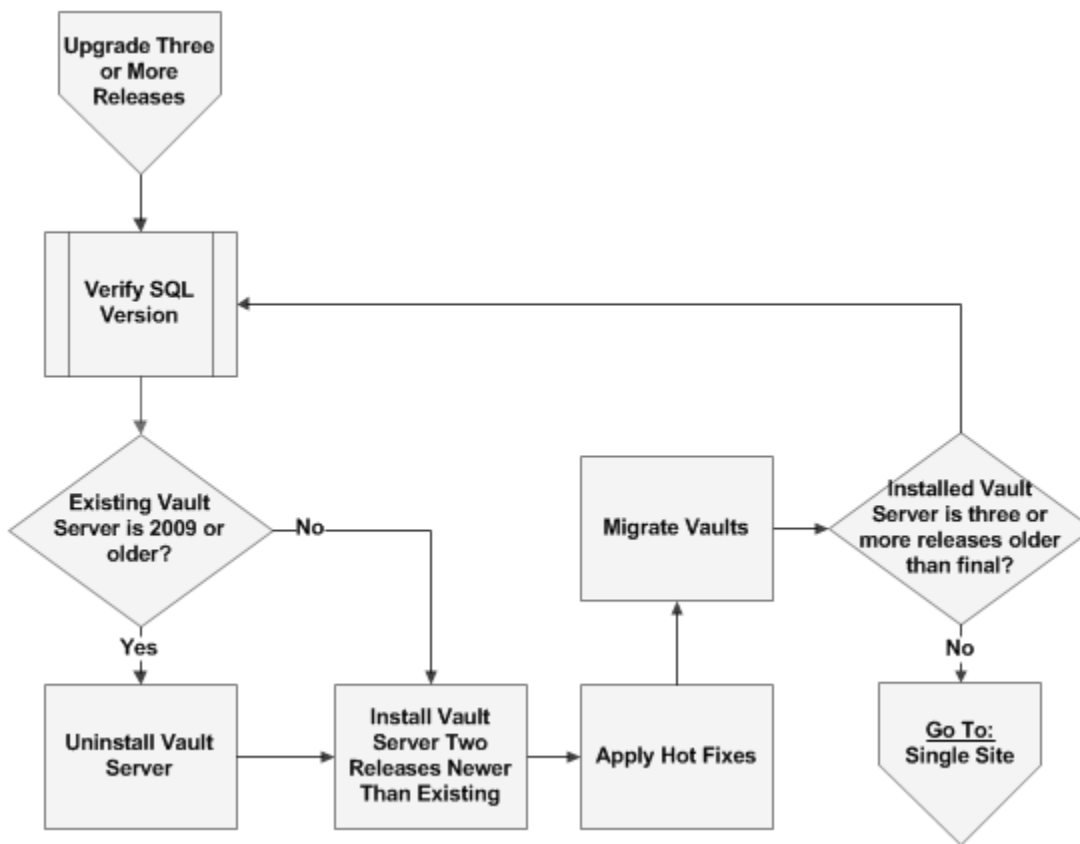
Upgrade Three or More Releases

Installing Intermediate Releases

Each release of Autodesk Vault server supports migration from the previous two releases. When upgrading over three or more releases, it is necessary to migrate the SQL database through intermediate releases of Vault. This is done by installing every other release of the Vault server up to the final release.

For example: In order to migrate from 2009 to 2013, Vault 2011 must be installed as an intermediate step.

Release	Supports Migration From	
2013	2012	2011
2012	2011	2010
2011	2010	2009
...	...-1	...-2



Verify SQL Version

Verify that the existing version of SQL is compatible with the next Vault release to be installed. If the existing SQL release requires an upgrade (See the preceding chapter in this paper *Upgrade SQL*) perform any necessary upgrades then return to this section.

Existing Vault Server is 2009 or Older?

Vault 2009 and older releases require a manual uninstall before installing a newer release. Vault 2010 and newer releases do not require you to uninstall before installing a newer release.

Uninstall Vault Server

This step only applies to Vault 2009 or older releases. Be sure to copy the `.../server/web/services/web.config` and `connectivity.vaultmanager.exe.config` files prior to uninstalling Vault server 2009 or an older release. Uninstall Vault server only; do not remove SQL or the Vault database.

Install Vault Server Two Releases Newer Than Existing

During installation enable the option to download and apply Service Packs. If prompted, do not migrate at the end of the installation.

Upgrading from release 2008/2009 to 2010/2011

Custom values in the following configuration files must be manually copied into the new configuration files. Be mindful of typos, a mistake in these files can block proper operation of the server. Do not replace the new files with the older files, and do not change any settings outside this list. Older configuration files may not contain all the fields listed in the newer configuration files. The field names in the older configuration files may also vary slightly.

Web.config file:

```
<httpRuntime maxRequestLength="_____" executionTimeout="_____" />
<identity impersonate="true" userName="_____"
password="_____" />
<timeouts connection="_____" defaultCommand="_____" longCommand="_____" />
<fragmentationCriteria minPageCount="_____" minScanDensity="_____" maxLogicalFrag="_____" />
<remoteServer enabled="_____" protocol="tcp" transferLocation="_____" />
<creationParameters vaultSize="_____" vaultGrowth="_____" librarySize="_____"
libraryGrowth="_____" />
<connectivity.settings>
<!-- wait interval for retrying failed one-time events -->
<add key="EventRetryInterval" value="_____" />
<!-- maximum amount of time to wait for indexing to complete during search -->
<add key="IndexingSearchWakeupDelay" value="_____" />
<!-- maximum amount of time to wait for before doing an index update -->
<add key="IndexingUpdateWakeupDelay" value="_____" />
<!-- time to delay email processing. This allow notification events to be 'batched' -->
<add key="EcoNotificationProcessingDelay" value="_____" />
<!-- time of day to update database statistics. This value is enforced during build2build migration. -
->
<add key="DatabaseStatisticsUpdateTime" value="_____" />
<!-- time of day to run the filestore vacuum. This value is enforced on the startup of each ADMS
site. -->
<add key="FilestoreVacuumTime" value="_____" />
<!-- time of day to run the index optimizer. This value is enforced on the startup of each ADMS
site. -->
<add key="OptimizeIndexesTime" value="_____" />
<!-- The amount of time between Full content updates -->
<add key="FullcontentIndexing" value="_____" />
<!-- time of day to clear entity locks. This value is enforced during build2build migration. -->
```

```

<add key="LockVacuumTime" value="_____" />
<!-- wait interval for Updating of Effectivities -->
<add key="EffectivityUpdateTime" value="_____" />
<!-- life time of each ADMS cache object . Cache objects set to use the SystemCfg expiration look
to this value. Min=5 Max=30 -->
<add key="CacheObjectExpiration" value="_____" />
<!-- server-side paging of result sets -->
<add key="PageSizeMaximum" value="_____" />
<!-- maximum setting in the UI -->
<add key="PageSizeDefault" value="_____" />
<!-- initial default before user applies a value -->
<add key="PageSizeIndexing" value="_____" />
<!-- Page size to index-->
</connectivity.settings>
<connectivity.web>
<server port="_____" sslRequired="_____" />
</connectivity.web>
<smtpserver name="_____" port="_____">
<authenticate enabled="_____" username="_____" password="_____" />
</smtpserver>
<maxLength value="_____" />
<server value="_____" />

```

Copy the following values from **connectivity.vaultmanager.exe.config** into **ADMSConsole.config**:

```

<add key="WebServiceTimeout" value="_____" />
<webServer>
<add key="SSL" value="_____" />
<add key="PORT" value="_____" />
</webServer>

```

Apply Hot Fixes

All hotfixes created after the final Service Pack should be manually installed at each site. Installing the hotfixes ensures that the latest updates are applied for proper migration.

Migrate Vaults and Libraries

Do not migrate the vaults until all service packs and hot fixes have been applied. When ready, start the Vault server application. The administrator is prompted to migrate the vault and library databases. Accept the offer and migrate all vaults.

The vaults must be migrated to the installed release before the next release of Vault can be installed. If a service pack or hotfix is applied after migration, a build-to-build (B2B) migration is required. B2B migration is a command line option detailed in the section *Migration Timeout* on the Autodesk Vault wiki.

Installed Vault Server is Three or More Releases older than the Final Release?

If the installed release is three or more releases older than the final release, restart these steps

Upgrade Three or More Releases.

Go To: Single Site

No more intermediate releases are required. Go to the steps *Single Site*.

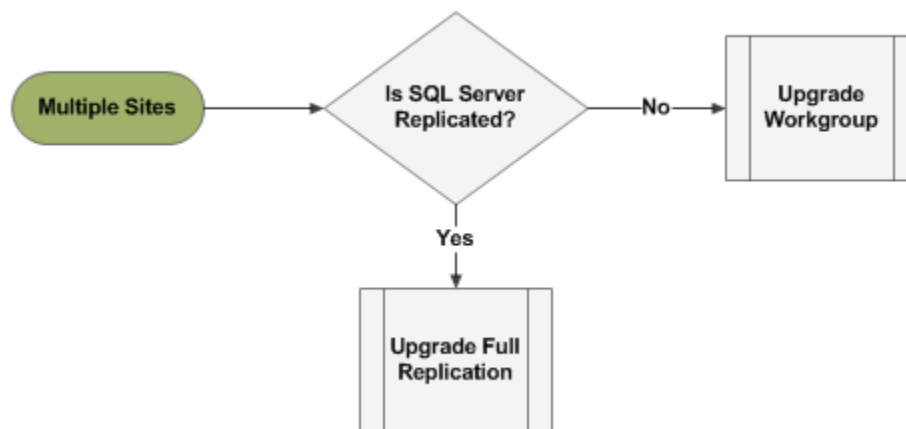
Multiple Sites

Autodesk Vault supports two styles of replicating data across multiple sites. First is a workgroup where there are multiple installations of the Vault server connecting to and sharing one SQL server. The second type is full replication where there are two or more replicated SQL servers. Further details are available on the Vault wiki.

Upgrading Three or More Vault Releases with Multi-Site or Replication

The concept of an intermediate installation is introduced in the section

Upgrade Three or More Releases under *Single Site* within this document. The purpose of the intermediate installation is to ensure proper migration of the SQL database (this migration applies to the database not the content). In a multi-site or replication environment, the first server upgraded migrates the SQL database. Therefore installation of intermediate Vault releases is only required for the first server upgraded. After the first site is migrated to the final release, all of the other sites can install the final release and skip intermediate releases of Vault server.



Upgrade Workgroup

In a workgroup any of the Vault servers may be the first to upgrade. The selected site will also migrate the SQL database. All other sites will be unable to access the SQL server until they are brought up to the same product, release, and service pack.

Best practice is to start with the site that has the fastest connection to the SQL server. When ready to perform the upgrade, follow the steps outlined in the section *Single Site*. Upgrade the selected server to the final release and service pack before moving onto other sites.

When the first site update is complete, install Vault server at the remaining sites. If upgrading from Vault server 2009 or older, uninstall the Vault server at all other sites. Then install the final release and service pack, skipping intermediate releases. The intermediate server releases are not required at the other workgroup sites.

Upgrade Connected Workgroups

Migration of a fully replicated environment must start with the Publisher workgroup. All subscriber workgroups must be online and available during migration of the publisher. As long as one Vault server and the SQL server are available from a workgroup, that workgroup is considered available. If a subscriber workgroup is offline and cannot be made available, postpone the migration.

Validate the replication status of all workgroups and databases prior to migration. If replication issues exist, they must be resolved before proceeding. Details about replication status are available on the Vault wiki under Administrator's Tasks/Manage Replication.

Migrate one site from the publisher workgroup following the steps in the section *Single Site*. Installing the Vault server automatically migrates the SQL database. The SQL database migration is automatically replicated to all subscriber databases. After installation of the Vault server at the first site is complete, install the final Vault release, service packs, and hot fixes at all other sites across all workgroups.

If intermediate server releases are required they are only necessary on the first server. All other Vault servers in all workgroups should install the final Vault server release, service packs, and hotfixes, skipping intermediate releases.

Upgrade Vault Clients



Vault 2013 and Forward Compatibility

Vault 2013 introduces the ability for the ADMS server to support the previous release client integrations. This provides Enterprise and SMB operators who need to stagger the client and server side roll out the flexibility to do so. The company's ADMS server can now be migrated to 2013 and commissioned without any need to upgrade or otherwise patch the numerous client machines connecting to the current 2012 server.

Upgrade Vault Clients

The Autodesk Vault clients are available with the product installation media as well as on the Autodesk Vault 2013 media.

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

- Word® 2003/2007/2010
- Excel® 2003/2007/2010
- PowerPoint® 2003/2007/2010

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

Install the clients for an Autodesk design application

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

Install the clients for a non-Autodesk design application

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

Install clients from the Autodesk Vault 2013 Media

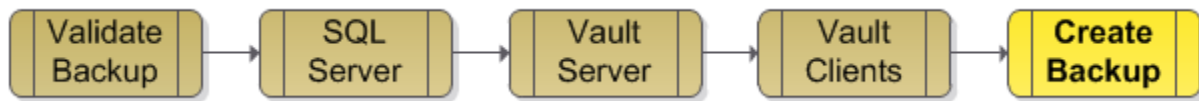
1. Insert the Autodesk Vault 2013 media.
2. Double-click setup.exe.
3. Follow the instructions in the installation wizard.

Add-in Integration

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

Additional details about installing Vault clients are available on the [Vault Wiki](#).

Create Backup



The best practice is to create a backup of the vault as soon as the upgrade is complete. Then perform a validation of the backup using the process described in the first stage of this document.

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