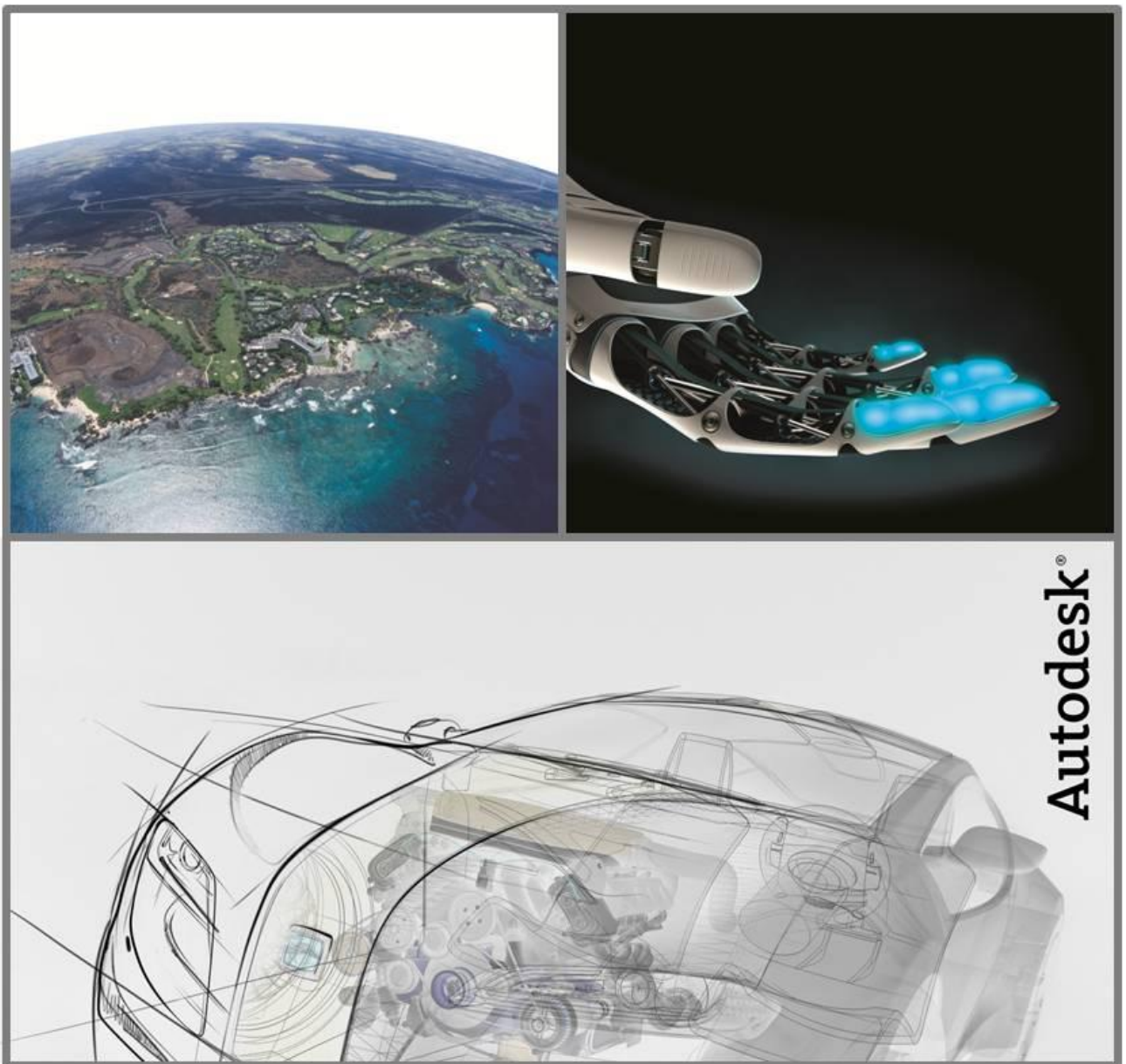




# AUTODESK®

## Enterprise Add-On for Autodesk Vault 2014

Installation, Configuration and Usage Instruction



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## Overview

This document provides usage, configuration and installation instructions for the "Enterprise Add-On for Autodesk Vault", as developed by Autodesk Consulting. In this document the short form "Vault Add-On" or VAO will be used.

### History of changes

Date	Author	Notes
25/08/2011	Fabian Peters	Initial version
15/09/2011	Ian Carr	Update for release 1.2.0
27/09/2011	Ian Carr	Update for release 1.3.0
30/09/2011	Fabian Peters	Update support model
06/10/2011	Fabian Peters	Minor corrections
01/11/2011	Ian Carr	Update for 1.4.0
16/11/2011	Dominik Leuthold	Update for 1.4.1
17/04/2012	Rainer Pröhl	Minor corrections
14/06/2012	Michael Sosnik	Release for 2013
21/06/2012	Luca Bazzocchi	Update for 2013 Release
27/07/2012	Rainer Pröhl	Product name update, Minor corrections
27/09/2012	Michael Sosnik	Describing the functionality – New Main Topic
31/10/2012	Michael Sosnik	Further Editions (throughout whole document); Added VGet
15/11/2012	Dominik Leuthold	Added multiple small additions
10/06/2013	Thomas Helm	Release for 2014

### Goal

The Enterprise Add-On for Autodesk Vault is a set of productivity tools that are integrated with Vault 2014. It provides following functionalities:

- Property Management
- Publish Jobs
- Clone Structure
- Drawing Compare
- E-Mail Notification
- Object Classification
- Four Eyes Check
- Content Center Part Generator
- Vault User Accounts
- Import Object Properties
- Import Property List
- Import Folder Structure
- Object Link Browser
- VGet

# Installation

## System Requirements

The Enterprise Add-On for Autodesk Vault supports Vault 2014 product family (Vault Workgroup, Vault Professional), Autodesk Inventor 2014 and AutoCAD (Civil 3D) 2014. Software and hardware requirements of the Enterprise Add-On for Autodesk Vault are identical with Autodesk software.

The Vault Addon 2014 will deliver in two different installers which contains installs for 32 and 64 bit clients. The installs are MSI files and are executed from the `setup.exe`. The contents of the Zip are as follows:

File	Notes
Setup.exe	Main setup executable
AC Vault-Add-On Guide 2014.pdf	Enterprise Add-On for Autodesk Vault 2014 Installation, Configuration and Usage Instruction
x64/VaultAddOn.msi	64 bit install file
X86/VaultAddOn.msi	32 bit install file

The installer in Vault Addon 2014-Complete-n.n.n.zip contains all components. The installer in Vault Addon 2014-NFR-n.n.n.zip not includes the following components:

- Content Part Generator
- Vault User Accounts
- Import Folder Structure
- Import File and Item Properties
- Import Property List

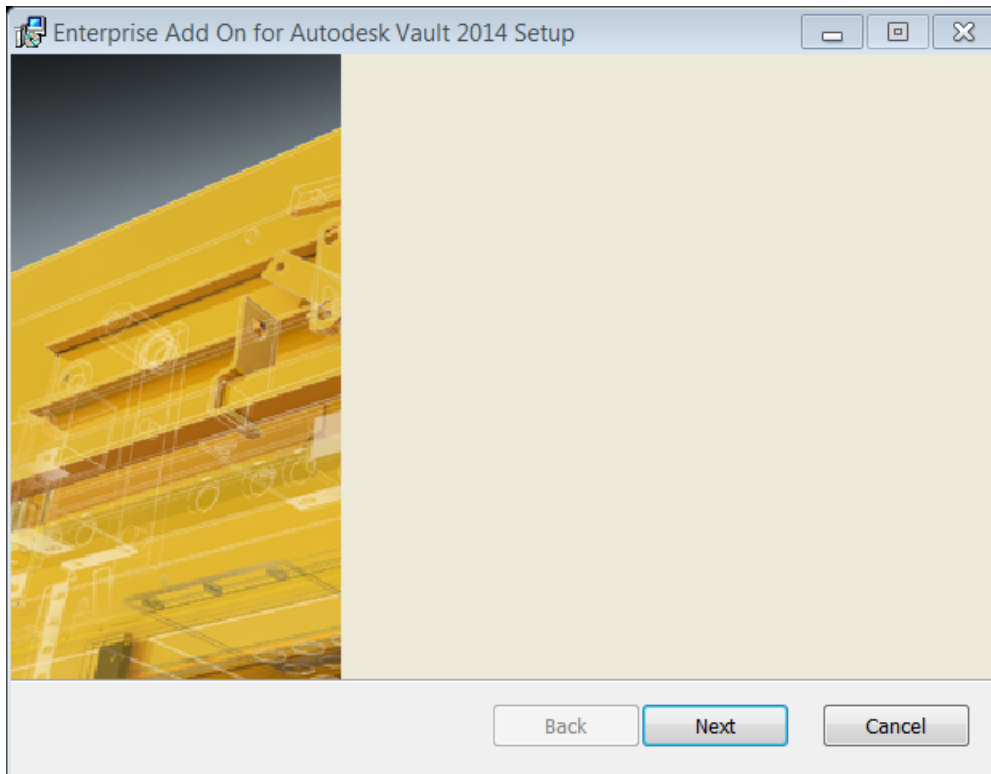
## Install Enterprise Add-On for Autodesk Vault 2014

To install the Enterprise Add-On for Autodesk Vault follow these steps.

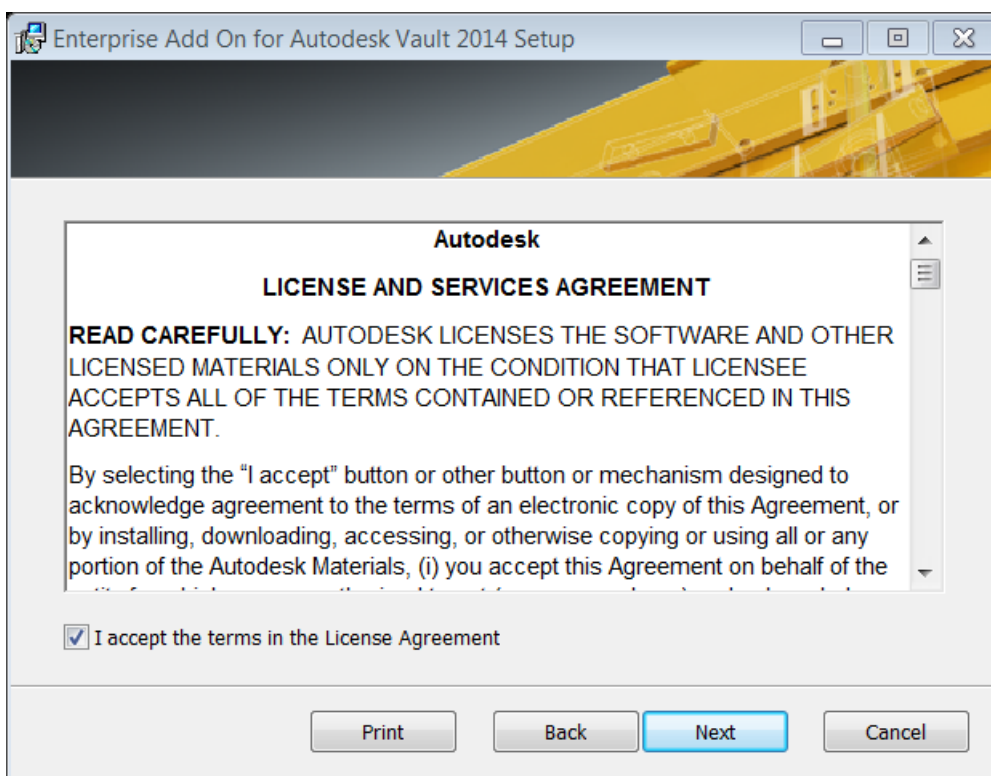
1. Stop the Job Processor service if running.<sup>1</sup>
2. Copy the `Vault Addon 2014-Complete-n.n.n.zip` to a local directory and unzip.
3. Run the `setup.exe`
4. Select the next button to progress the install.

---

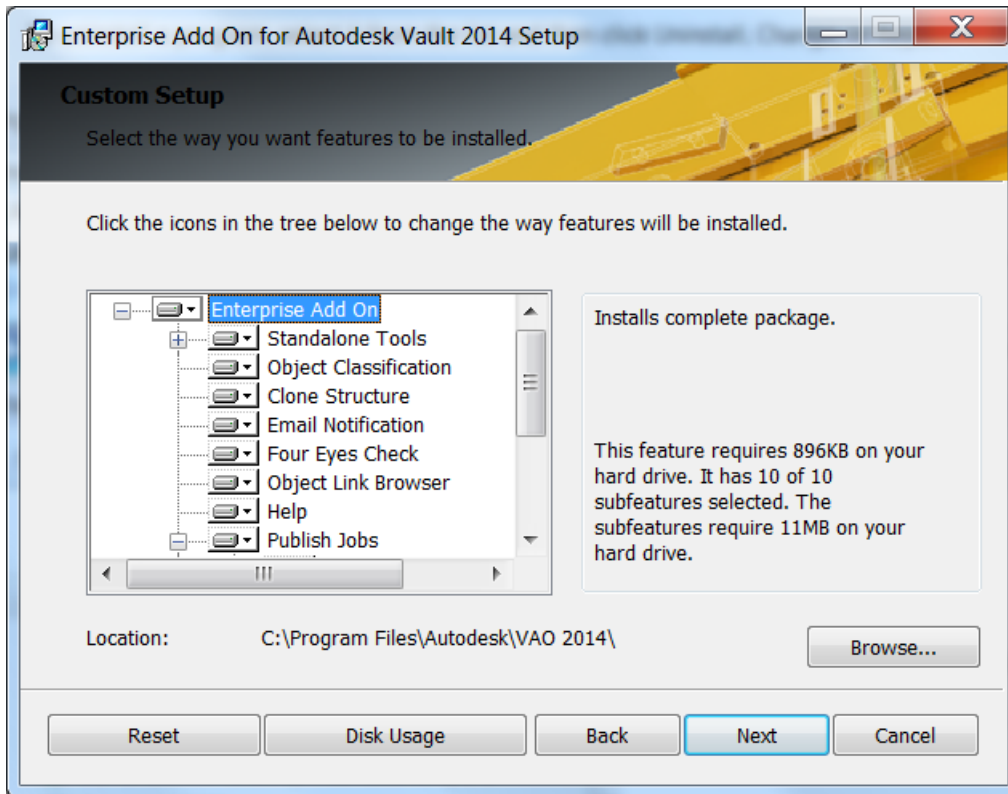
<sup>1</sup> This is highly recommended since as part of the installation process, new Job types will be available. Stopping the service before the installation will ensure that all the changes take effect properly.



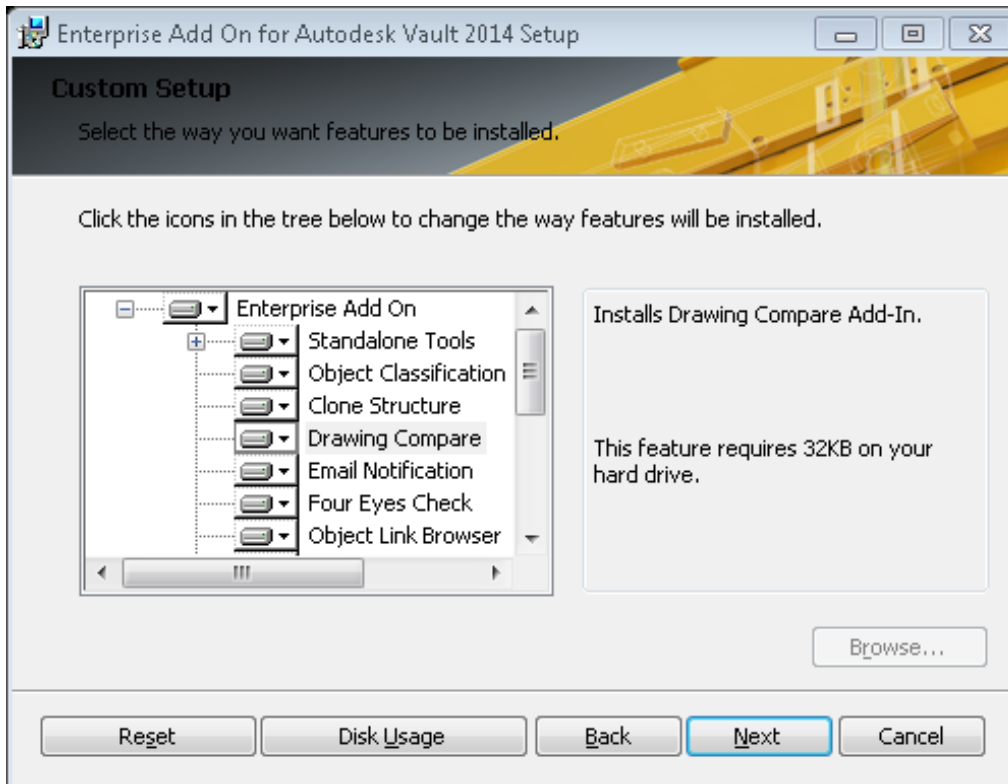
5. Read and agree to the license terms and condition. Check the agree check box. Then select the next button to progress the install.



6. Review and select the features and location of the target installation folder. Then select the next button to progress the install.

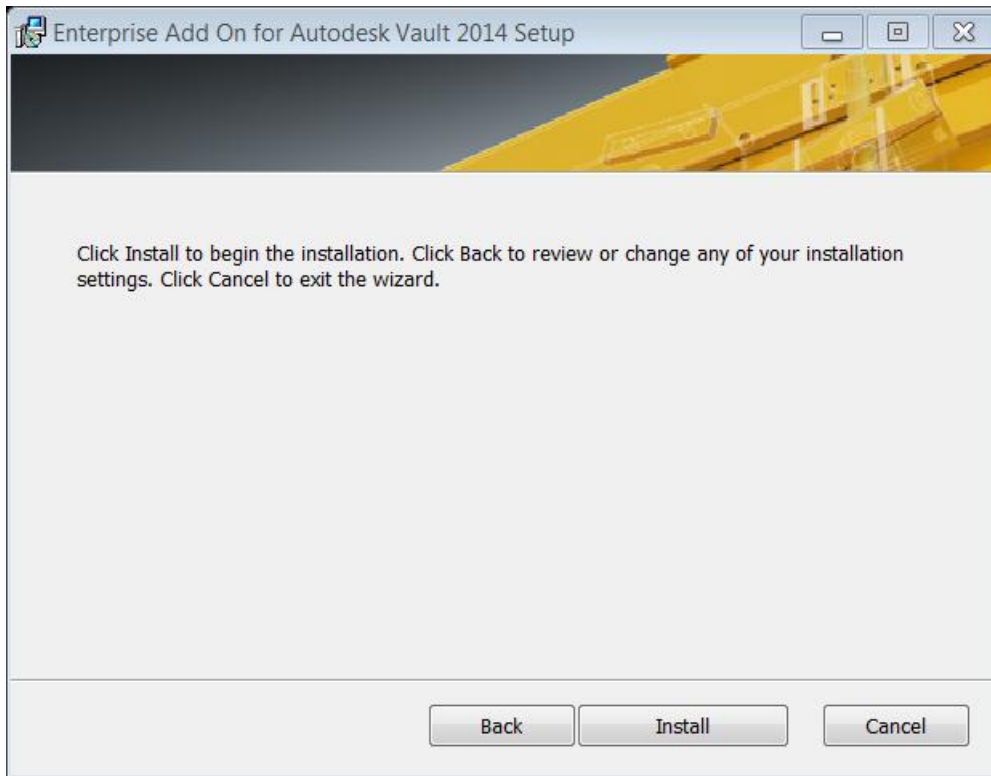


**Note:** on a 64 bit machine the Drawing Compare feature is not supported and therefore not selectable.

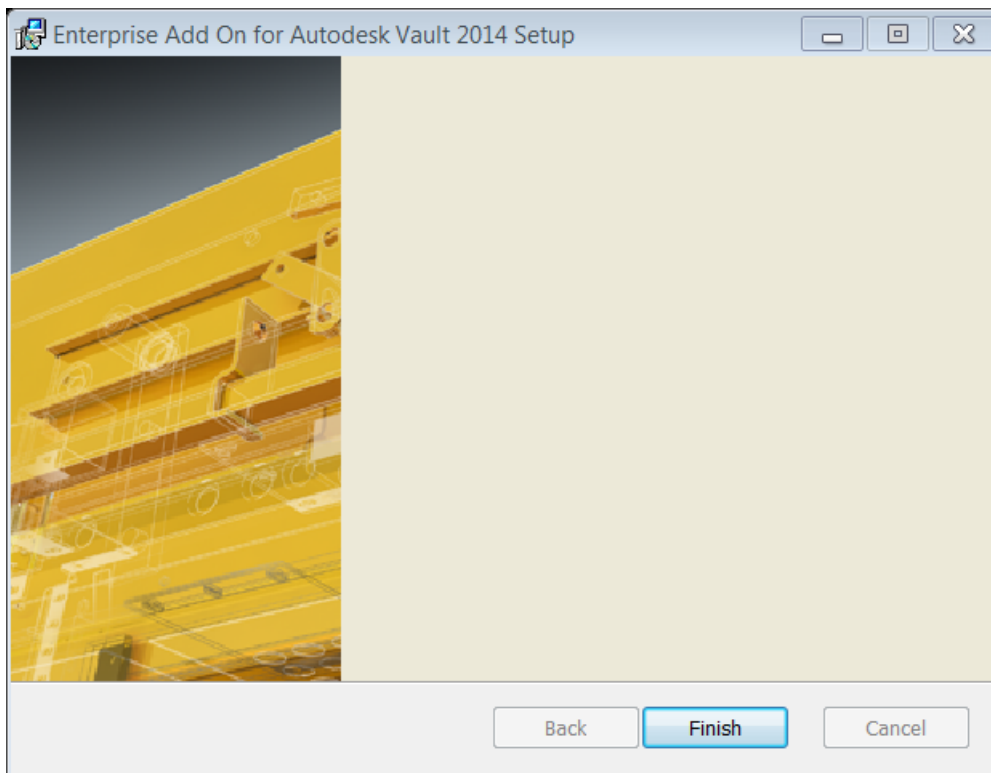


**Note:** on a 32 bit machine the Drawing Compare is available

7. Select the next button to progress the install.



8. The installation is complete.



9. Restart the Job Processor service.

If you have issues with the installation then the MSI can be run manually to generate a log file of the install. To run the install manually follow these steps.

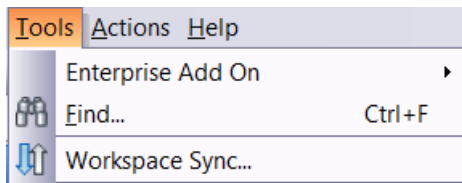
1. Stop the Job Processor service if running.



2. Copy the Vault Addon 2014-Complete-n.n.n.zip to a local directory and unzip.
3. Open a command window at the location of the MSI file that matches your operating system version.
4. Run the MSI manually using `msiexec /i VaultAddOn.msi /L install_vao.log`
5. Follow the steps above and then review the log file.
6. Restart the Job Processor service.

### Post Install Enterprise Add-On for Autodesk Vault 2014 Tasks

To verify that the commands are visible in Vault client, select Tools in the menu. The Enterprise Add On is available.



If the Enterprise Add On isn't available, it's required to reset the menu:

1. Run Vault Client and connect to your Vault server.
2. In Vault Explorer go to Tools > Customize.
3. On Toolbars tab select "Main Menu" then click on "Reset". This step will "reset" user interface to default state.

## Property Management

A file property in Vault is the information about a document stored in vault. The file properties are visible and accessible only inside the Vault. The user can create own ("user defined") properties.

The properties of a file (stored on file level) exist independently of Vault (e.g. iProperty for Inventor files or properties of a doc-file) and can be mapped to Vault file properties.

The property management is used to edit properties on file level. The main purpose of the property management is to provide an "easy" way for a CAD manager to provide property templates where user can enter document properties prior adding documents to the Vault.

It consists of two parts:

#### **Synchronize**

- Inventor Add In
- Works for drawings only
- Copies designated properties automatically from model document to the drawing
- Based on definitions uploaded to the Vault the user is connected to

#### **Edit Properties**

- Inventor Add In
- Provides an interface in Inventor to edit Vault properties with (from Inventor)

According to the configuration it is possible to validate properties against selected schema. A dialog will be displayed in case of error. Please note that there is no way to force dialog on every save. If properties changed outside of the dialog and marked as mandatory the check-in will fail and a message box is displayed.

## Configuration

The property management utility enables access to Vault properties in Inventor and AutoCAD clients. The configuration of property schemas is stored in XML file.

Make sure that all properties are created in vault prior to configuring the XML File.

The example Properties.xml file should be located in

C:\Program Files\Autodesk\VAO 2014\Configuration\Property Management.

The XML file can contain the following elements:

Element Name	Attribute Name	Description
<b>Property Options</b>		Main configuration.
	SynchronizeOnSave	Specifies if the properties should be synchronized after the properties have been saved.
	ValidateOnSave	Specifies if the mandatory properties should be checked when the properties are being saved.
	ValidateOnCheckIn	Specifies if the mandatory properties should be checked before file will be checked in to Vault
<b>PropertySchemas</b>		Contains one or more property schemas.
<b>PropertySchema</b>		Contains one or more property sets.
	Name	Name of schema. Must be unique.
	FileType	List of supported file extensions. Vertical bar is used as separator.
	Default	If true then schema is used as default for given file type.
<b>PropertySet</b>		Contains one or more properties.
	Name	Name of property set.
<b>Property</b>		Defines property.
	Name	Name of property.
	Required	Is true then property value must be specified.
	DataSourceType	Data source type of the property: "VaultProperty" – the source for property is Vault property. "VaultFile" - the source for property is file in Vault. "Expression" – the source for property is expression. Inventor.Model – the source for property is the Inventor model Inventor.Parameter – the source for property is an Inventor parameter

Element Name	Attribute Name	Description
	DataSource	<p>Contains data source for the property. Depends on "DataSourceType".</p> <p>Source file must be inside Vault.</p> <p>For the DataSourceType "VaultFile" two DataSources file types are possible:</p> <ul style="list-style-type: none"> <li>• csv – files are used for defining a list of values which should appear in the defined editor<sup>2</sup></li> <li>• csv – files are used for defining a list of replaced values using the DataSource – Lookup - keyword<sup>3</sup></li> <li>• xml – files are used for defining a selection set depending on a previous selection of the user<sup>4</sup> - XmlQuery</li> </ul>
	Target	Specifies where value is stored.
	DefaultValue	Optional: Can contain default values
	Editor	<p>Defines the editor user will be able to use when editing the values. They all belong to the type "Autodesk.VaultToolkit.PropertyEditor.Editors.*"</p> <p>The following editors exist:</p> <ul style="list-style-type: none"> <li>• TextBoxEditor</li> <li>• ValueListEditor</li> <li>• DataTableEditor</li> </ul>
<b>Override</b>		Optional element which can be used to override DataSource based on the simple condition.
	Condition	<p>Simple condition for equality test:</p> <p>[PropertyName]=[Value]</p> <p>If result is true then DataSource in property is replaced with associated value.</p>
	DataSource	Alternate data source.

### Property Synchronization

Inventor Add-In can automatically synchronize properties between the Inventor model and drawing. The properties can be specified using **SynchronizedProperty** element.

<sup>2</sup> Example: In the file C:\Program Files\Autodesk\VAO 2014\Configuration\Property Management\Properties.xml; PropertySetName="Common". The reference to the DataSource "\$/Configuration Files/Titles.csv" is used for showing a list of titles.

<sup>3</sup> Example: In the file C:\Program Files\Autodesk\VAO 2014\Configuration\Property Management\Properties.xml; PropertySetName="Rotation (CSV Data)". The reference to the DataSource "Lookup({RotationData.DataSource}, {Rotation}, 1, 2)" is used for replacing the 1<sup>st</sup> value of the list with the 2<sup>nd</sup> value.

<sup>4</sup> Example: In the file C:\Program Files\Autodesk\VAO 2014\Configuration\Property Management\Properties.xml; PropertySetName="Product (XML Data)" the DataSources "XMLQuery" are used to determine a selection. The values are shown in the Property Data.xml (referenced in the first DataSource parameter.

Element Name	Attribute Name	Description
<b>SynchronizedProperties</b>		Defines list of properties for synchronization.
<b>SynchronizedProperty</b>		Defines property for synchronization.
	Name	Name of the property in a full Inventor definition – (see code example)

#### Note

- An example XML File is included in the  
C:\Program Files\Autodesk\VAO 2014\Configuration\Property Management.
- The configuration needs to be imported into Vault via the XML file before using Inventor add-in. Without this action Inventor will not be aware about the needed actions to perform.
- Reading the information is performed in an on-line mode from the dataset and not from file.
- Changes to the Vault configuration will immediately change the next property assignment performed on the network from any connected client.
- The function is not available when not connected to Vault.

#### Property Names

Document property names can be specified using following syntax:

*PropertySet.PropertyName*

Following property set names are supported for Inventor:

- DesignTrackingProperties
- SummaryInformation
- DocumentSummaryInformation
- UserDefinedProperties

#### Import Configuration

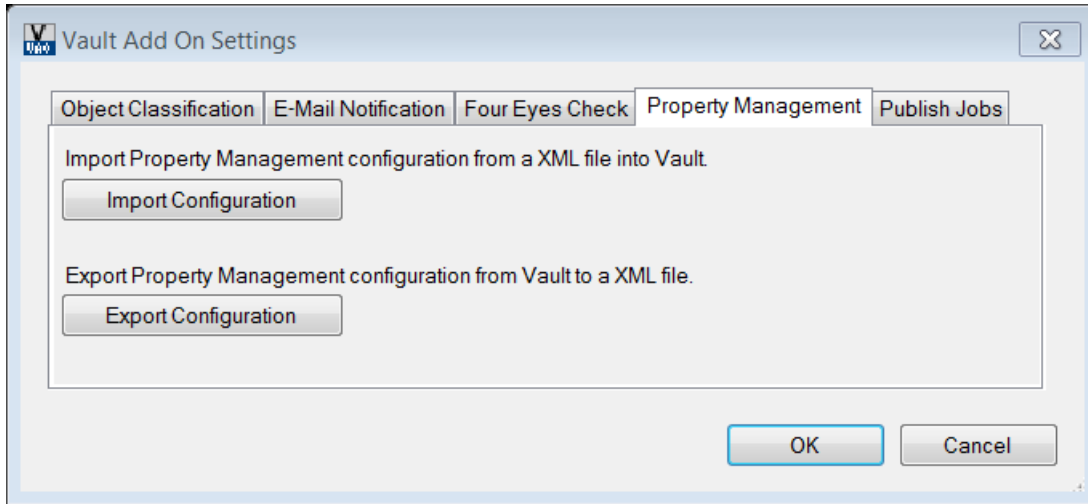
To import configuration use following steps:

1. Run Vault Explorer.
2. Go to Tools → Enterprise Add-On → Settings.
3. In Settings dialog under tab Property Management select Import configuration.
4. Select XML file for import.

#### Export Configuration

To export configuration use following steps:

1. Run Vault Explorer.
2. Go to Tools → Enterprise Add-On → Settings.
3. In Settings dialog under tab Property Management select Export configuration.
4. Enter name for XML file.



## Usage

The command for property management is available in Inventor and AutoCAD.

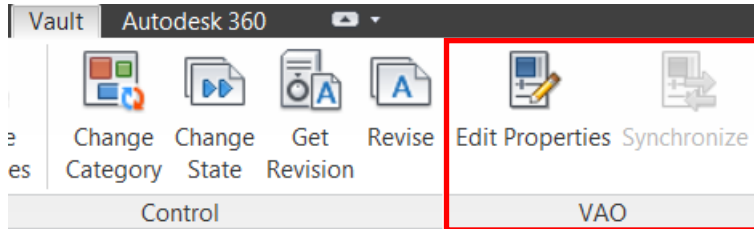
## AutoCAD Add-In

The VTKEDITPROPERTIES command is available after loading of AutoCAD.

## Inventor Add-In

The Inventor Add-In commands are available in the Vault ribbon under VAO panel:

The commands require an active connection to the Vault.



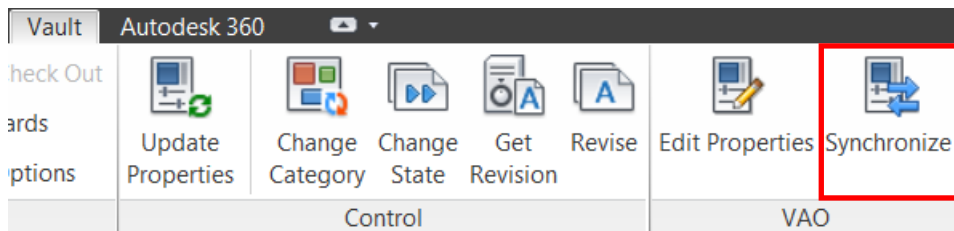
## Synchronize Properties

The command is available only for drawing documents. It copies selected properties from associated model document to the drawing. All based on the definitions uploaded to the Vault Server the user is connected to.

It's possible to copy properties manually (using command) or automatically.

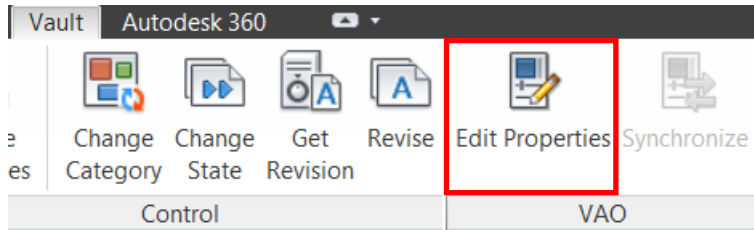
The automatic synchronization is executed within the document save action with the interactive Inventor session. It will not be executed with a JobServer driven save process. During the JobProcessor actions all Inventor addins are usually disabled by default.

If mandatory properties defined for the drawing schema model and be empty, the edit properties dialog appears. Are all properties filled in or optional, the dialog will not open automatically after the first save process.

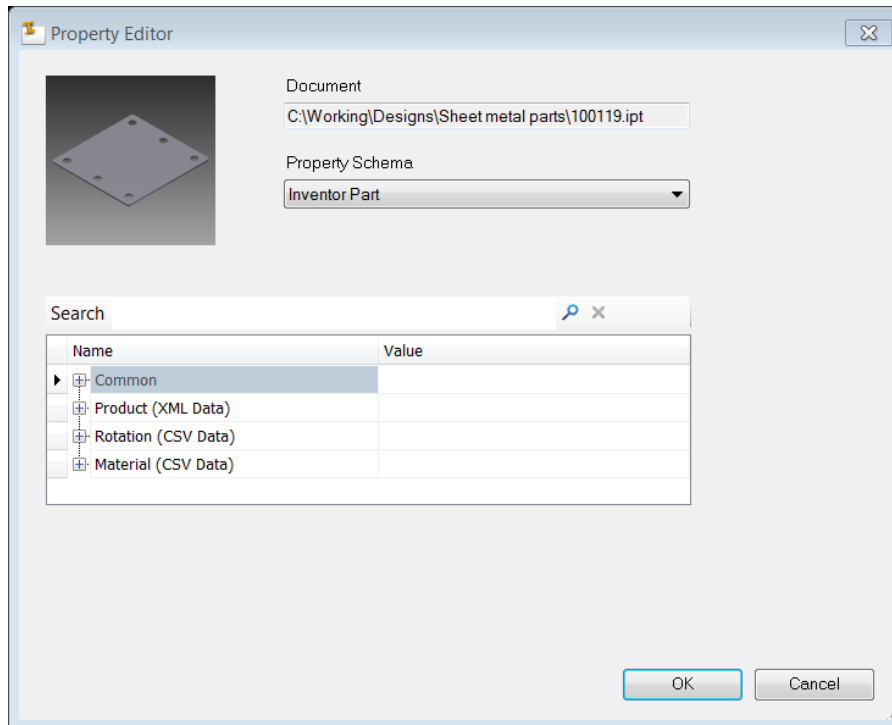


## Edit Properties

The Edit properties command provides advanced user interface for selection of property values. The command is enabled only if connection to Vault server is established.

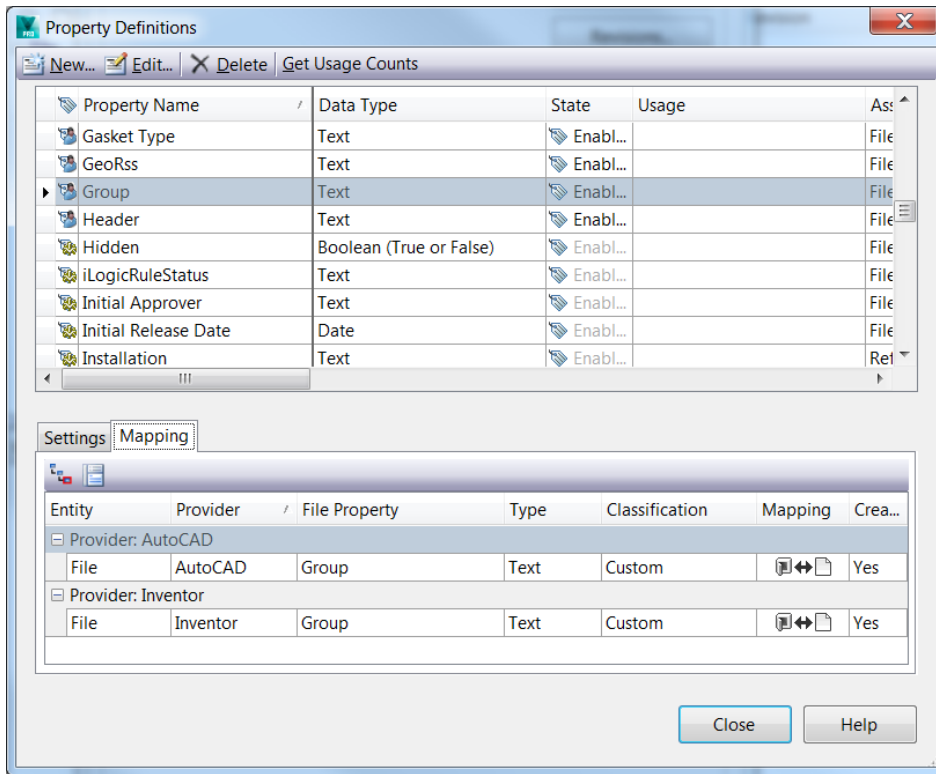


The "Inventor Part" Property Schema and the four named Property sets ("Common", "Product", "Rotation" and "Material") correspond to the Property sets defined in the `property.xml` mentioned in the configuration – chapter (Property Management) of this document.



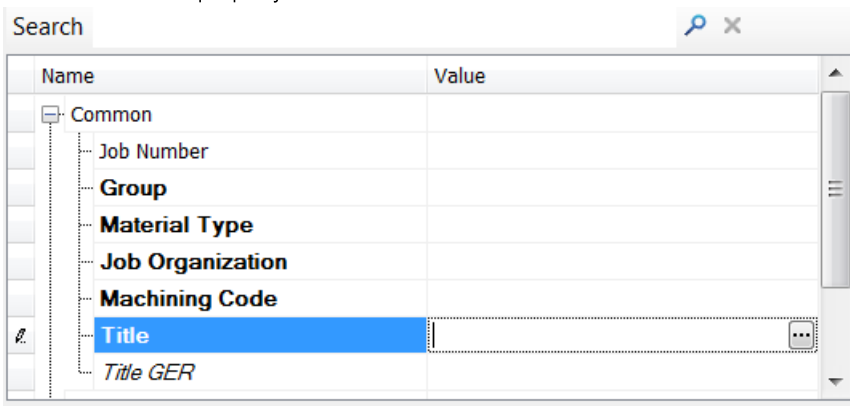
### Note:

- The value of mapped iProperties will be updated after click OK
- To map the properties back to Vault it is necessary to configure the Vault property mapping

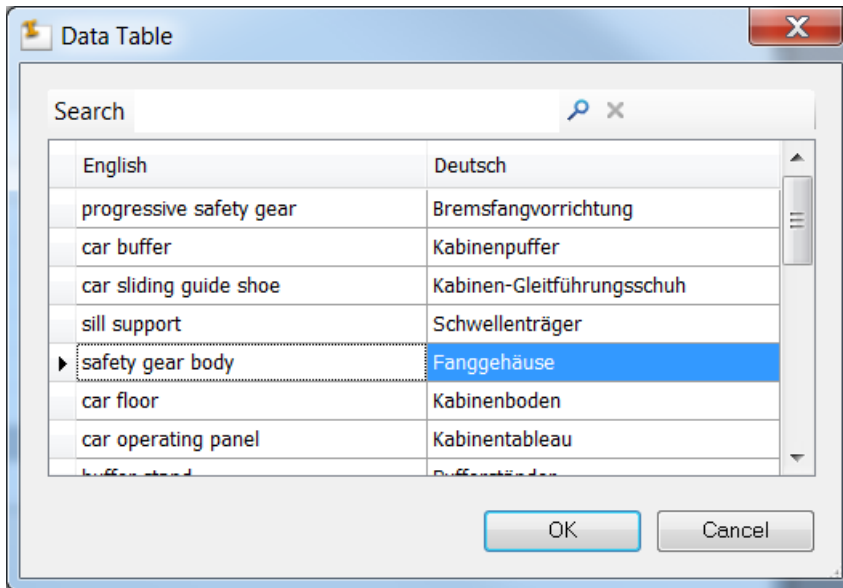


**DataTable Example**

1. Click on Edit Properties command in Vault Tools panel.
2. In the Property Editor locate the title property. Mandatory properties are highlighted with bold font.
3. Click on ... next to property value.



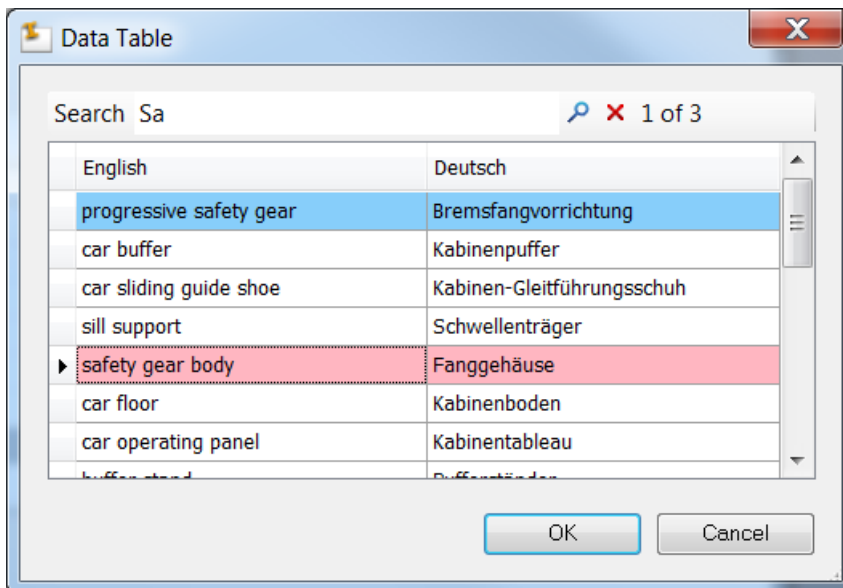
4. In the Data Table dialog locate new property value.



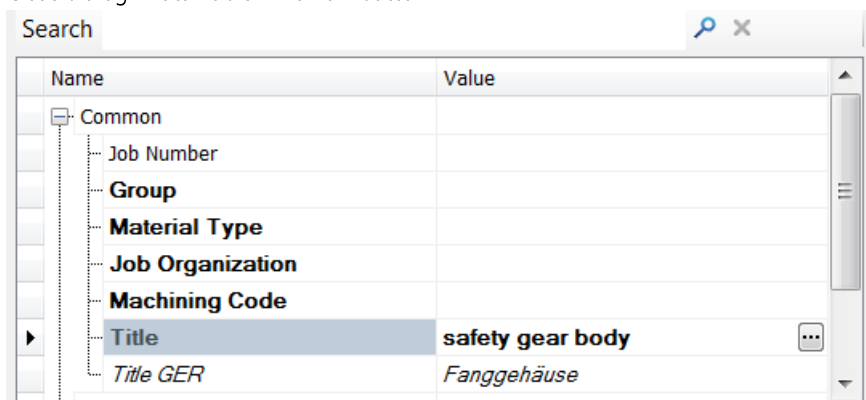
The dialog uses same grid as Vault. Thus it's possible to use same method for data sorting and filtering. When using custom filter following placeholder characters could be used:

- % represents series of characters
- \_ represents single character

The search option on top bar, searches for possible matches over all columns (highlighted in blue)



5. Close dialog "Data Table" with OK button.





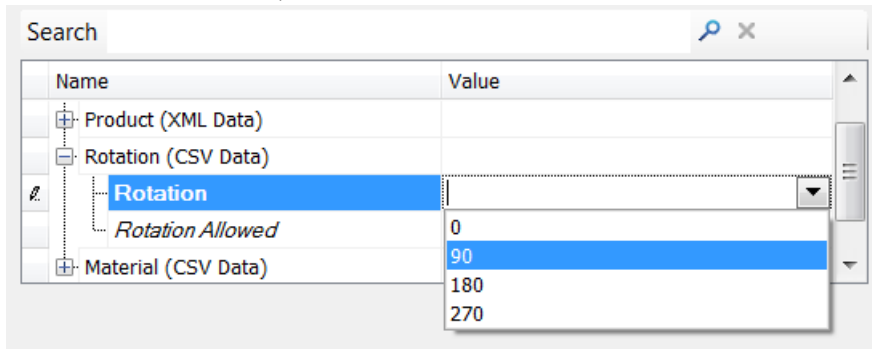
In the properties.xml file, the code looks as follows:

```
<Property Name="TitleData" DataSourceType="Vault.File" DataSource="$/Configuration Files/Titles.csv"
Visible="false" />
<Property Name="Title" Required="true" DataSourceType="Vault.File" DataSource="$/Configuration Files/Titles.csv"
Target="SummaryInformation.Title">
  <Editor Type="Autodesk.VaultToolkit.PropertyEditor.Editors.DataTableEditor"/>
</Property>
<Property Name="Title GER" Required="false" DataSourceType="Expression" DataSource="Lookup({TitleData.DataSource},
{Title}, 1, 2)" Target="UserDefinedProperties.Title_GER" />
```

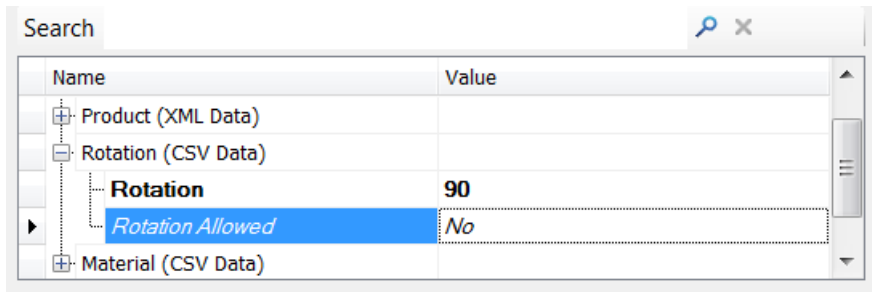
### LookUp Example

The LookUp example of property edition is the following one.

1. Select the Property set Rotation
2. In the Property Editor locate the Rotation property. Mandatory properties are highlighted with bold font.
3. Select a value from the drop down list



4. The Rotation Allowed is calculated from the Rotation value above.



The Edition of the Rotation (CSV Data) Property Sets is supported by the definition in the file Rotation.csv mentioned in the configuration – chapter (Property Management) of this document.

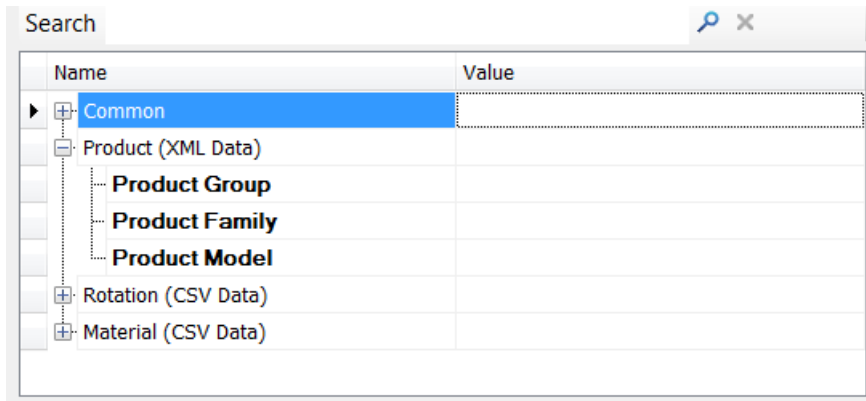
In the properties.xml file, the code looks as follows:

```
<Property Name="RotationData" DataSourceType="Vault.File" DataSource="$/Configuration Files/Rotation.csv"
Visible="false" />
<Property Name="Rotation" Required="true" DataSourceType="Vault.Property" DataSource="Rotation"
Target="UserDefinedProperties.Rotation">
  <Editor Type="Autodesk.VaultToolkit.PropertyEditor.Editors.ValueListEditor" />
</Property>
<Property Name="Rotation Allowed" Required="true" DataSourceType="Expression"
DataSource="Lookup({RotationData.DataSource}, {Rotation}, 1, 2)" Target="UserDefinedProperties.Rotation Allowed"
/>
```

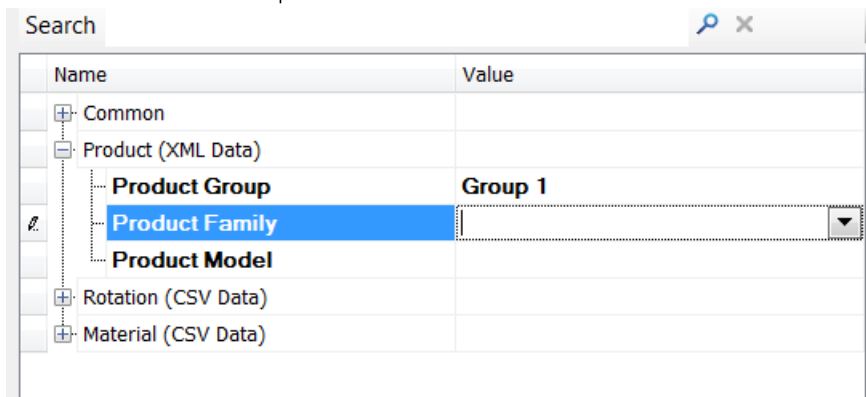
### XmlQuery Example

The XmlQuery feature provides referenced list values related to the value from another list.

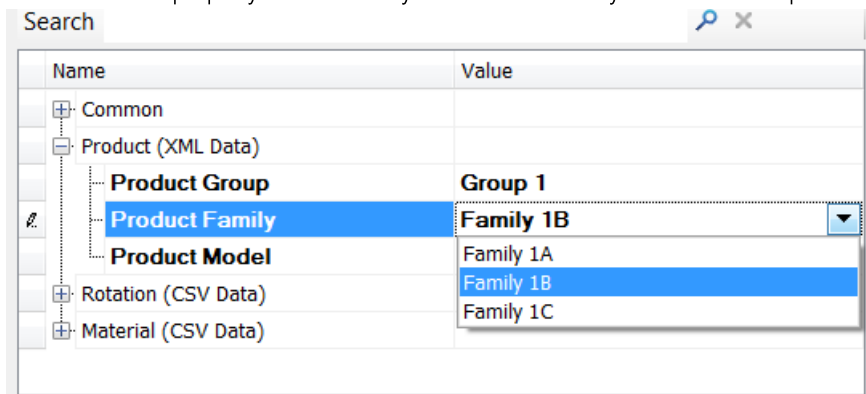
1. Select the Property set Product



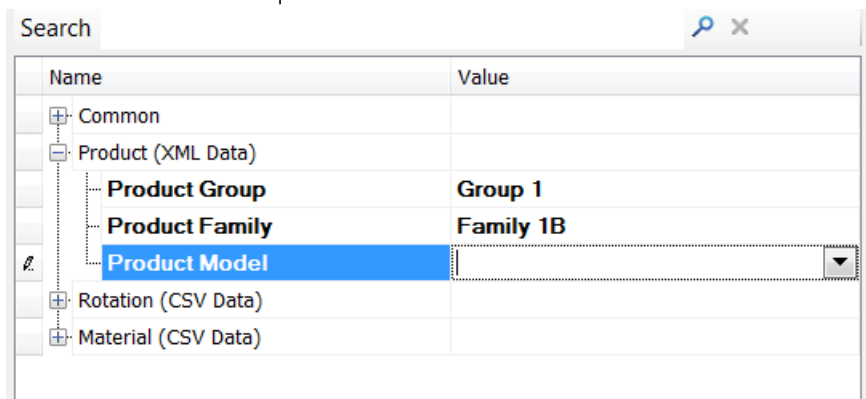
- In the Property Editor locate the Product Group property. Mandatory properties are highlighted with bold font.
- Select a value from the drop down list



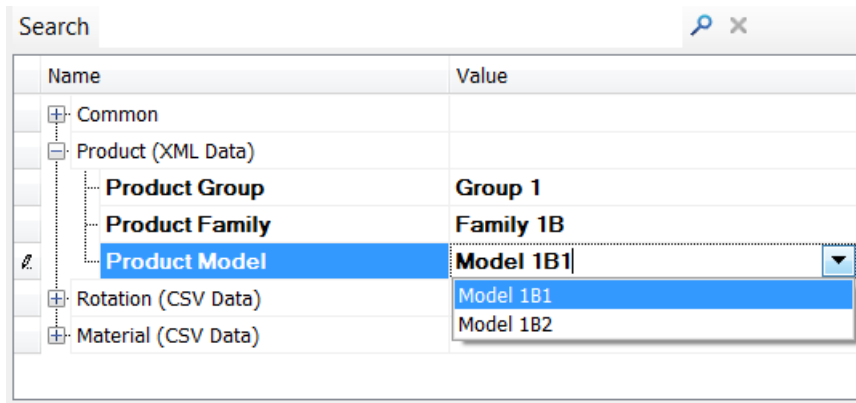
- The values from property Product Family are now selected by the Value "Group 1"



- Select a value from the drop down list



- The values from property Product Model are now selected by value "Family 1B"



In the properties.xml file, the code looks as follows:

```
<Property Name="ProductData" DataSourceType="Vault.File" DataSource="$/Configuration Files/Property Data.xml"
Visible="false" />
<Property Name="Product Group" Required="true" DataSourceType="Expression"
DataSource="XmlQuery({ProductData.DataSource}, //Data/ProductGroup/@Name)" Target="UserDefinedProperties.Product
Group">
  <Editor Type="Autodesk.VaultToolkit.PropertyEditor.Editors.ValueListEditor" />
</Property>
<Property Name="Product Family" Required="true" DataSourceType="Expression"
DataSource="XmlQuery({ProductData.DataSource}, //Data/ProductGroup[@Name='{Product Group}']/ProductFamily/@Name)"
Target="UserDefinedProperties.Product Family">
  <Editor Type="Autodesk.VaultToolkit.PropertyEditor.Editors.ValueListEditor" />
</Property>
<Property Name="Product Model" Required="true" DataSourceType="Expression"
DataSource="XmlQuery({ProductData.DataSource}, //Data/ProductGroup[@Name='{Product
Group}']/ProductFamily[@Name='{Product Family}']/ProductModel/@Name)" Target="UserDefinedProperties.Product
Model">
  <Editor Type="Autodesk.VaultToolkit.PropertyEditor.Editors.ValueListEditor" />
</Property>
```

And the used DataSource file looks like this:

```
<ProductGroup Name="Group 1">
  <ProductFamily Name="Family 1A">
    <ProductModel Name="Model 1A1" />
    <ProductModel Name="Model 1A2" />
    <ProductModel Name="Model 1A3" />
  </ProductFamily>
  <ProductFamily Name="Family 1B">
    <ProductModel Name="Model 1B1" />
    <ProductModel Name="Model 1B2" />
  </ProductFamily>
  <ProductFamily Name="Family 1C">
    <ProductModel Name="Model 1C1" />
  </ProductFamily>
</ProductGroup>
<ProductGroup Name="Group 2">
  <ProductFamily Name="Family 2A">
    <ProductModel Name="Model 2A1" />
    <ProductModel Name="Model 2A2" />
  </ProductFamily>
  <ProductFamily Name="Family 2B">
    <ProductModel Name="Model 2B1" />
  </ProductFamily>
  <ProductFamily Name="Family 2C">
    <ProductModel Name="Model 2C1" />
    <ProductModel Name="Model 2C2" />
  </ProductFamily>
  <ProductFamily Name="Family 2D">
    <ProductModel Name="Model 2D1" />
    <ProductModel Name="Model 2D2" />
  </ProductFamily>
</ProductGroup>
```

### ***Inventor Parameter Example***

For Inventor files it can be useful to get some information direct from the file (e.g. material, thickness). Therefore the property management feature support all available parameter defined in the file. To extract this parameter it's required to use as `DataSourceType=Inventor.Parameter` and as `DataSource` the name of the parameter from the Inventor file.

This can look like this:

```
<Property Name="Material Thickness" DataSourceType="Inventor.Parameter" DataSource="Thickness"
Target="UserDefinedProperties.Material Thickness"/>
```

#### **Note:**

- Inventor parameter especially thickness are used with property type number, if you configure the property in Vault, please be aware of the correct types

## Publish Jobs

The Vault standard functionality is to publish a visualization file (e.g. a \*.dwf – file for Inventor – files) using the job server. The standard doesn't support any other file formats.

The Publish Jobs functionality allows you to create files in formats, like:

- CATV5Product
- CATV5Part
- IGES
- JT
- PDF
- STEP
- Flat Pattern DXF
- STL

The creation might be triggered manually or through a state change. You have some options concerning the resulting files:

- Resulting file name patterns can make use of Vault – properties
- Resulting files can be attached to the original file
- Resulting files can be dropped in a specific folder

### Configuration

All job handlers are registered in the `Autodesk.VaultToolkit.Vault.JobHandler.vcet.config` file. The file is located under `C:\ProgramData\Autodesk\Vault 2014\Extensions\Autodesk.VAO.JobHandler`.

During Enterprise Add-On for Autodesk Vault installation, it is recommended to stop the job processor service before installing Enterprise Add-On for Autodesk Vault and to restart it once the installation is completed, this will ensure that all the changes take effect properly.

The JobHandler element uses following syntax:

```
<setting key="JobType1" value="Class Name"/>
```

Following entries are in the default configuration file:

```
<setting key="JobType1" value="Autodesk.VaultToolkit.Publish.CATV5Part"/>
<setting key="JobType2" value="Autodesk.VaultToolkit.Publish.CATV5Product"/>
<setting key="JobType3" value="Autodesk.VaultToolkit.Publish.IGES"/>
<setting key="JobType4" value="Autodesk.VaultToolkit.Publish.JT"/>
<setting key="JobType5" value="Autodesk.VaultToolkit.Publish.PDF"/>
<setting key="JobType6" value="Autodesk.VaultToolkit.Publish.STEP"/>
<setting key="JobType7" value="Autodesk.VaultToolkit.Publish.FlatPatternDXF"/>
<setting key="JobType8" value="Autodesk.VaultToolkit.Publish.STL"/>
```

### Configuration of publish jobs

It is possible to specify default options for each supported file format. The configuration is via XML file which needs to be imported into Vault.

A configuration template is stored in the following directory

```
C:\Program Files\Autodesk\VAO 2014\Configuration\Publish Jobs\JobConfiguration.xml.
```

If you edit configuration file in the location above, don't forget to import it using custom command (Tools → Enterprise Add On → Settings... → Publish Jobs) which is available in Vault Explorer. This guarantees that same options will be available for all users connected to same server and Vault database.

Additional to the example configuration file the installer provide 3 new \*.scr files and the PublishSettings.xml file to support the usage of AutoCAD Core Console and printing of multiple layouts into on PDF. Therefore it's important to import the following files into Vault and specify the location in the configuration file.

- PublishConsolePDF.scr
- PublishMultiPDF.scr
- PublishPDF.scr

The PublishSettings.xml file can be saved in each local location. After the installation the file is saved in folder C:\Program Files\Autodesk\VAO 2014\Configuration\Publish Jobs.

Table below contains detailed list of common options:

Option Name	Default Value	Description
<b>UploadToVault</b>	true	If true then output file is stored in Vault.
<b>AttachToParentFile</b>	true	If true then output files is attached to original input file.
<b>HideAttachment</b>	false	If true then attachment is hidden.
<b>AttachAsVisualization</b>	false	If true then attachment is added as visualization attachment. If is true but there is more than one output document then the behaviour is as if is false.
<b>DestinationVaultPath</b>	(empty)	If empty then file is stored in same location as input file. If specified then file is stored in provided Vault location. (e.g.: \$/Visualizations/..)
<b>OutputVaultFileName</b>	{FileName}.ext	Expression which defines filename of output file. If empty then name is same as original file.
<b>OutputFileCategory</b>	(empty)	Category name which will be automatically assigned to the output file. If empty no category will be assigned.
<b>OutputFileProperties</b>	Designer Part Number Category Name=Comments	List of property names which should be copied from input file to newly created output file. The vertical bar ( ) character is used as separator between property names.  UDP's can be listed / System Properties will be copied as well (in this case the Mapping is "System Property's name=User Defined Property's name")
<b>CopyToOtherDestination</b>	false	If true then file will be copied to other destination outside of Vault.
<b>DestinationPath</b>	path	Path where file should be copied.
<b>OutputFileName</b>	{FileName}.ext	Expression which defines filename of output file. If empty then name is same as original file.  The name can be different from Vault name.
<b>SynchronizeProperties</b>	true	If true a synchronize of properties are included in the job
<b>UpdateRevisionBlock</b>	true	If true an update of revision block are included in the job
<b>UseLatestFileVersion</b>	false	If true the latest version of the file is used when the job is processed rather than the version of the file when the job was put on the queue.

Following keywords can be used when specifying name of output file.

Keyword	Description
<b>FileName</b>	Filename of input file (without extension).
<b>FileRevision</b>	File revision of input file.

Keyword	Description
FileMasterId	Vault File Reference number
Any Vault Property	If the Vault property value is empty "NA" will be used for the file naming

Following keywords can additionally be used when specifying DestinationVaultPath setting.

Keyword	Description
WorkgroupDesc	Workgroup Name
WorkgroupLabel	Workgroup Label
WorkgroupId	Workgroup Identifier

#### Note

- An example configuration file is included in the  
C:\Program Files\Autodesk\VAO 2014\Configuration\Publish Jobs
- Common options can be overridden when job is initiated from Vault Explorer using Publish File, resp. Publish Folder commands.
- Only UDP's in bi-directional or Vault to File assignment can be used to update properties.
- AutoCAD can display additional dialog boxes when opening files (e.g. missing SHX files, opening DWG from non-Autodesk application, DWG containing VBA macros). To guarantee correct processing on job processor it is important to configure AutoCAD to suppress such dialogs. This must be done manually before using Job Processor.
- JobProcessor.exe must running for handling all Jobs
- The manual Publish and the automatic execution of a specific job via LifeCycle status change will use the first configuration. Therefore it is necessary to rename the Class names for Job type in the configuration file and in the Autodesk.VaultToolkit.Vault.JobHandler.vcet.config if more than one job with different content exist (see example in Usage Chapter for Publish Jobs)
- If custom job option "SynchronizeProperties" and/or "UpdateRevisionBlock" is set to "true", it is important to change the C:\Program Files\Autodesk\Vault Professional 2014\Explorer\JobProcessor.exe.config file and comment the line <queueUpdateRevisionBlockJob extension=".idw" /> in level <syncPropertiesPostJobExtensions>; otherwise an additional update revision block job will be added and failed as it is not possible to run a job on a non-tip version

#### Import Configuration

To import configuration use following steps:

1. Run Vault Explorer.
2. Go to Tools → Enterprise Add-On → Settings.
3. In Settings dialog under tab Publish Jobs select Import configuration.
4. Select XML file for import.

#### Export Configuration

To export configuration use following steps:

1. Run Vault Explorer.
2. Go to Tools → Enterprise Add-On → Settings.
3. In Settings dialog under tab Publish Jobs select Export configuration.
4. Enter name for XML file.

#### Configuration of Publish Settings

The file PublishSettings.xml contains all possible sheet settings. Each format must be added within the following syntax.

```
<PublishSheetSettings>
  <Scope>All</Scope>
  <StyleSheet Name="acad.ctb" />
  <PlotConfiguration Name="DWG To PDF.pc3" />
  <MediaMappings>
```

```

    <MediaMapping Frame="A0" Media="ISO_A0_(1189.00_x_841.00_MM)" />
    <MediaMapping Frame="A1" Media="ISO_A1_(841.00_x_594.00_MM)" />
    <MediaMapping Frame="A2" Media="ISO_A2_(594.00_x_420.00_MM)" />
    <MediaMapping Frame="A3" Media="ISO_A3_(420.00_x_297.00_MM)" />
    <MediaMapping Frame="A4" Media="ISO_A4_(210.00_x_297.00_MM)" />
  </MediaMappings>
</PublishSheetSettings>

```

Option Scope can be

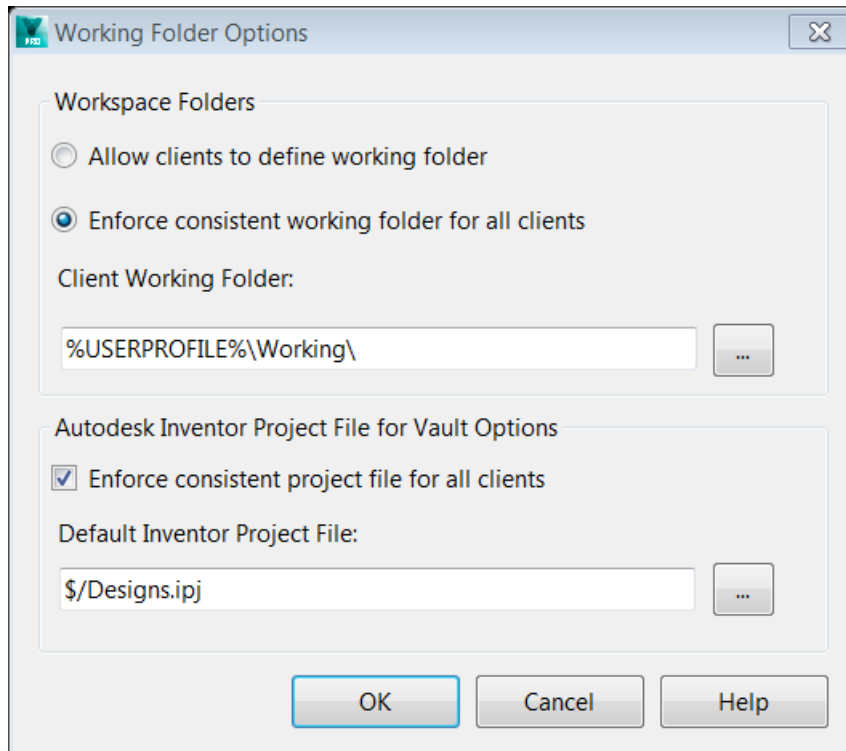
Scope=Model: publishes only model space

Scope=Current: publishes only the current layout (either model or plot layout)

Scope=All: publishes all plot layout (no model space)

## Vault Configuration

The job handler requires that Vault uses consistent working folder and project file for all clients:



### Note

- During job processing files are downloaded from Vault to local workspace and overwrite existing files.
- The Client Working folder can also contain environment variable (%USERPROFILE%\Vault).

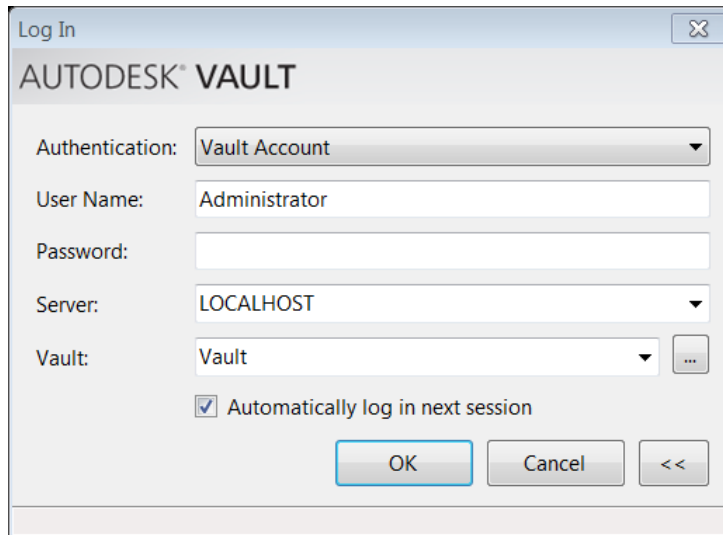
## Lifecycle Event Jobs

It's possible to configure Vault to run publish job on lifecycle state change. The Vault SDK is required to enable this to work; the LifecycleEventEditor is used to fulfil this functionality. The application is include in Vault SDK (under C:\Program Files (x86)\Autodesk\Autodesk Vault 2014 SDK\util\LifecycleEventEditor).

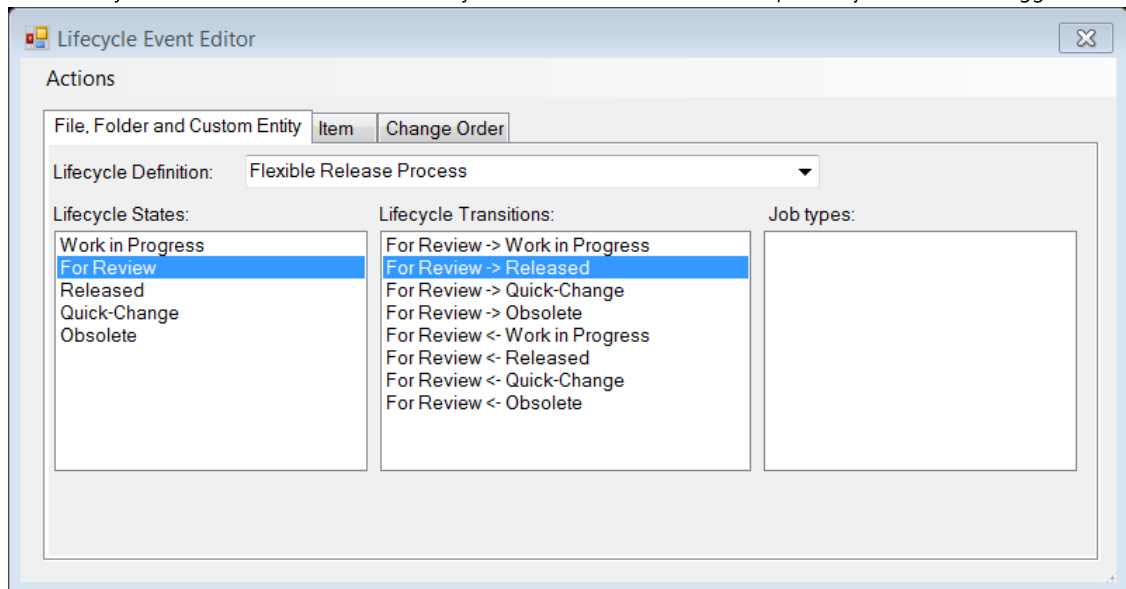
Use following steps to add a Job Class Name to a LifeCycle status transition:

1. Run LifecycleEventEditor.
2. Login to Vault.

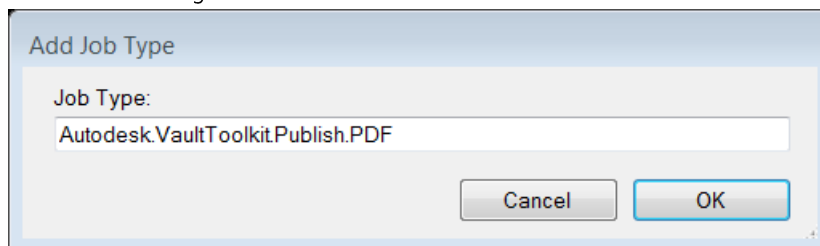




3. Select lifecycle definition and then select lifecycle state and transition where publish job should be triggered.



4. Double click on empty space within Job types list. This displays Add Job Type dialog. Add the specific Class Name which is also configured in the `Autodesk.VaultToolkit.Vault.JobHandler.vcet.config` file.



5. Changes need to be saved using Actions > Commit Changes option.

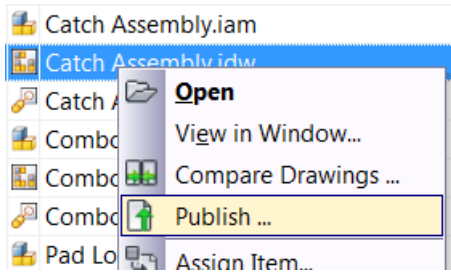
## Usage

In addition to automated file published on lifecycle state changes it's possible to schedule job manually from Vault Explorer.

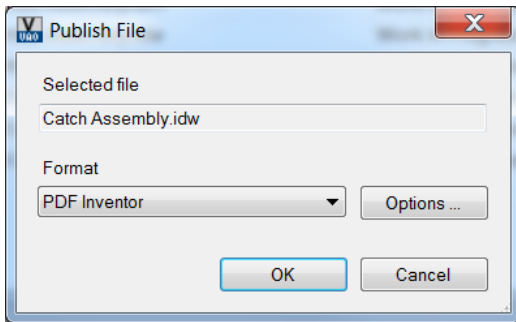
Beside of Autodesk visualization files (\*.dwf, \*.dwg) it's possible to publish MS Office 2010 files as well. Therefore the MS Office 2010 package should be installed on the Job-Processor Machine.

## File Publishing

1. Find document in Vault Explorer. Press right mouse button to display context menu.



2. Select Publish... The command displays following dialog. The Format dropdown-list contains all publishing formats available for selected file.



The Format dropdown contains all publishing formats available for selected file type.

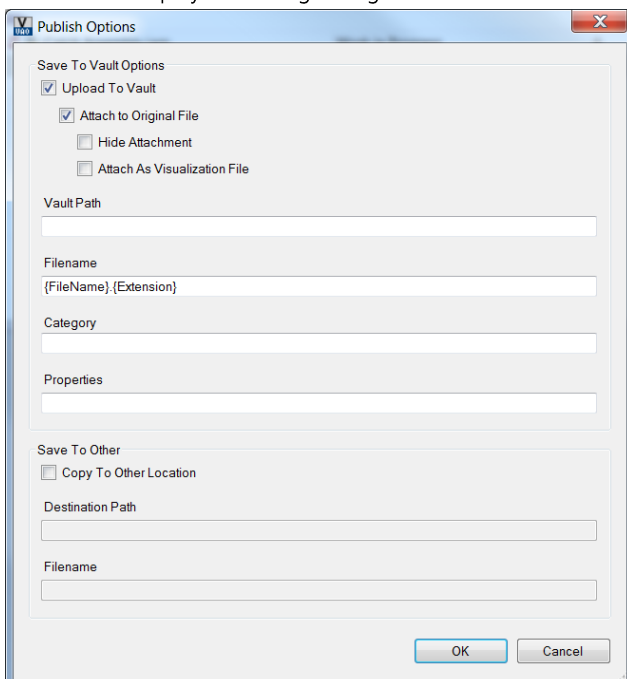
In case you did a multi selection of documents this list will only contain the common formats for all different file types selected in the vault explorer window. To guarantee correct processing on job processor machine it's important to configure AutoCAD to suppress such dialogs. In AutoCAD the best way to suppress theses dialogs is to do it manually and select the same option as preferred choice, this should be done before using Job Processor.

The following cases should be avoided:

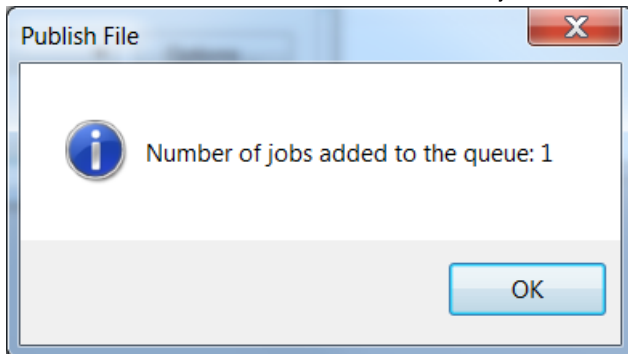
- Missing SHX file warning dialogs
- Opening DWG from non-Autodesk application dialogs
- Drawing Containing VBA macros dialogs

It is suggested that each document type be opened from Vault client before setting them up for correct processing on job processor machine.

3. The select format is published using predefined configuration. However it's possible to override settings using Options button. This displays following dialog.



- If necessary you can change the values in dialog to generate a different temporary result. Close dialog using OK button.  
**Note:** Next time the default settings from the DB will be used again.
- The command will now check for the number of jobs to be created (multi select).



- Close Publish dialog using the OK button. This will add a new job into the job queue within vault. You can use the Job Queue window to check if the job was processed / is processing / or is pending to be processed soon.

ID	Priority	Status	Description	Submitted D
135	1	Pending	Publish file (PDF Inventor): C...	09/07/2013

Note:

- When more than one publishing formats defined for the given file type the first definition will be used.
- Therefore the recommendation is to create new Job Class Names defined in the Autodesk.VaultToolkit.Vault.JobHandler.vcet.config file to be able to handle more than one publish format

### **Multiple Publish Formats for one File Type**

The first thing is to add new Job Class Names to the Autodesk.VaultToolkit.Vault.JobHandler.vcet.config file which is located under C:\ProgramData\Autodesk\Vault 2014\Extensions\Autodesk.VAO.JobHandler.

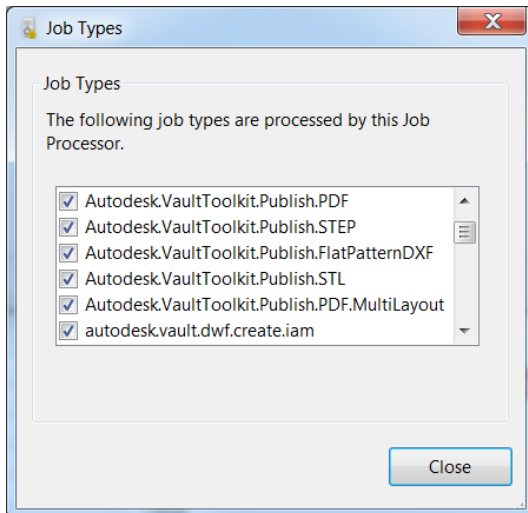
- Open the file in an text editor and add a new Class Name

```

...
<setting key="JobType3" value="Autodesk.VaultToolkit.Publish.IGES"/>
<setting key="JobType4" value="Autodesk.VaultToolkit.Publish.JT"/>
<setting key="JobType5" value="Autodesk.VaultToolkit.Publish.PDF"/>
<setting key="JobType6" value="Autodesk.VaultToolkit.Publish.STEP"/>
<setting key="JobType7" value="Autodesk.VaultToolkit.Publish.FlatPatternDXF"/>
<setting key="JobType8" value="Autodesk.VaultToolkit.Publish.STL"/>
<setting key="JobType9" value="Autodesk.VaultToolkit.Publish.PDF.MultiLayout"/>
</extension>
</connectivity.ExtensionSettings3>
</configuration>

```

- Restart the JobProcessor.exe to load the new defined jobs.



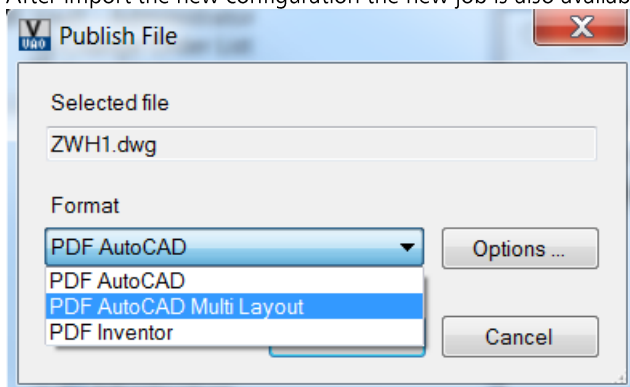
3. Export the existing JobConfiguration from Vault Client and open the file in a text editor
4. Copy and reuse the existing PDF publish format and change the JobHandlerClass to the new Class Name. Change the Name to be able to identify the format in the publish function in Vault client

```
<Publisher Name="PDF AutoCAD Multi Layout"
JobHandlerClass="Autodesk.VaultToolkit.Publish.PDF.MultiLayout"
SupportedFileExtensions=".dwg"
OutputExtension=".pdf"
PublisherType="Autodesk.VaultToolkit.Vault.Autocad.AutocadCoreConsolePublisher,
Autodesk.VaultToolkit.Vault.JobHandler">
```

5. Change the Option AcadScriptTemplate to the PublishMultiPDF.scr file, was uploaded to Vault in chapter [Configuration of publish jobs](#)

```
<Option Name="AcadScriptTemplate" Value="$/Configuration Files/PublishMultiPDF.scr" />
```

6. Change the other options as needed
7. Open the PublishMultiPDF.scr in a text editor (if the file is already checked in Vault, check the file out to be able to change something)
8. Add/Change the path to the file
9. Import back the new Job configuration xml file "PublishSettings.xml" (per default the file is located in the VAO installation path \Configuration\Publish Jobs)
10. Open the file PublishSettings.xml and add additional/missing sheet settings for your layouts
11. Save both files; Check in the PublishMultiPDF.scr into Vault
12. To include the new Job definition in a LifeCycle status change, open the SDK LifeCycle Event Editor as described in chapter [Lifecycle Event Jobs](#) and add the new JobHandlerClass to the required transition
13. After import the new configuration the new job is also available via publish function



### Cancel Condition for Jobs

The Job Handler provides an option where a specific defined condition will cancel the job. The condition can be set for each publish format definition and check the value of defined Vault properties. System and user defined properties are supported. The condition can contain one or more criteria and can be combined with "and" and "or".

```
<Option Name="Condition" Value="Name = &quot;Created By&quot;; and Value.ToString() = &quot;Administrator&quot;" />
```

If the condition is true, the job will be canceled. In the example above, it means that if the Administrator was creating a file and starting a publish job, the job will be added to the job queue. No file will be created and no application will be started to finish such a job.

### Show "positive" failed jobs in the Queue

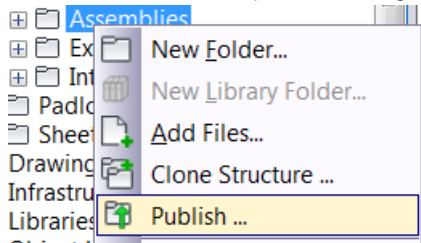
If the Administrator will see the result of a failed job, the option `FlagError` must set to `True`. If this is the case, the job queue will let the job as failed with a message about the failure. Otherwise the job will be marked in the log file as finished successfully without staying in the queue.

Details			
Job Type:	Autodesk.VaultToolkit.Publish.PDF	Description:	Publish file (PDF AutoCAD): ZWH1.dwg
Submitted By:	Administrator	Status:	Error
Submitted Date:	09/07/2013 16:31:25	Results:	Error during job processing.;File cannot be published due to configured property criteria

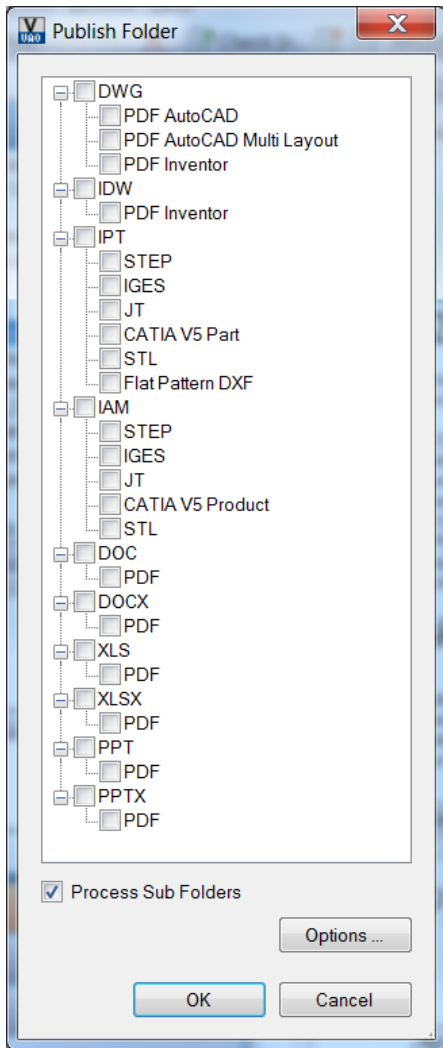
### Folder Publishing

Similar to file publishing it's possible to publish selected folder.

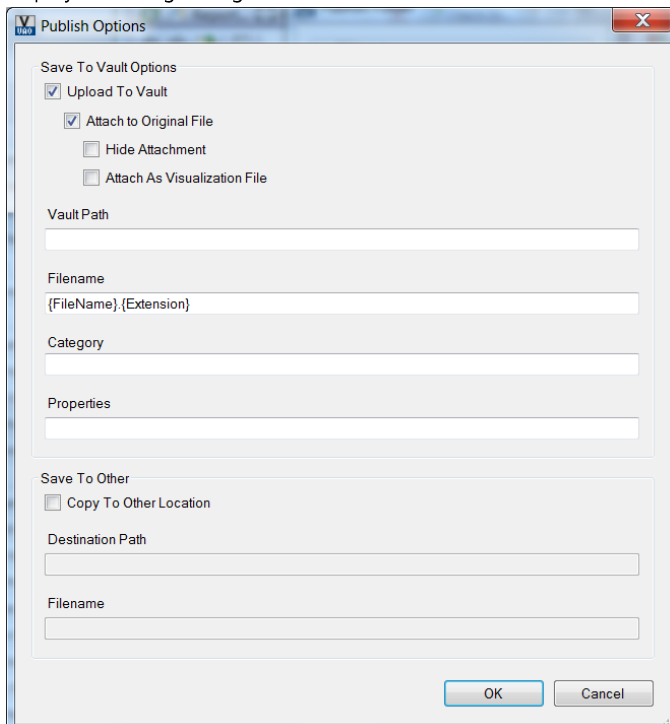
1. Locate folder in Vault Explorer. Press right mouse button to display context menu.



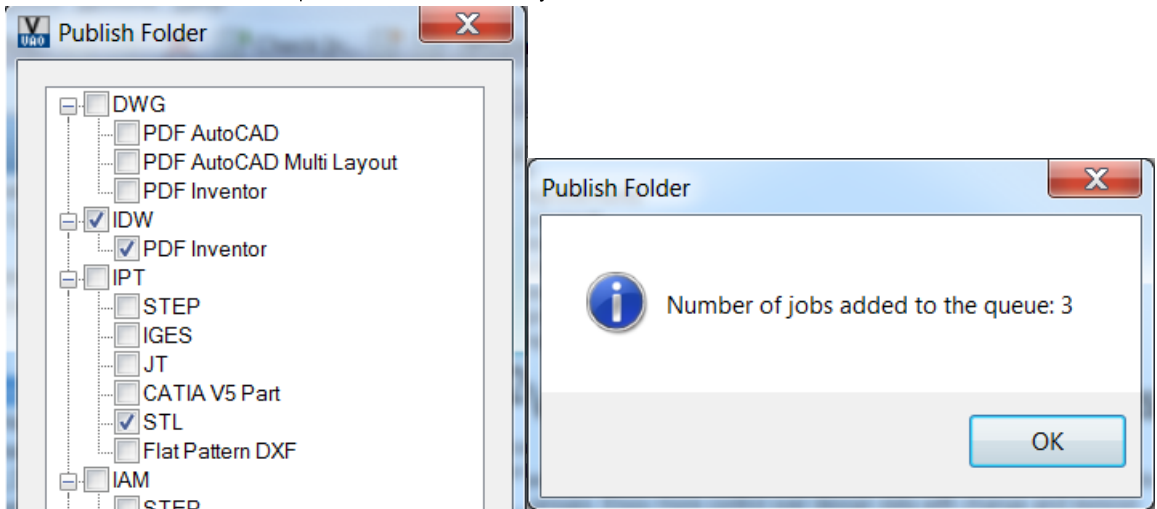
2. Select Publish. The command displays dialog below. The dialog displays list of supported file formats and for each file format list of available formats for publishing.



3. Select desired format for publishing. It is possible to select multiple formats.
4. Files will be publisher using predefined options. It's possible to override settings using Options button. Click on button to display following dialog.



- Set options as needed. Close dialog using OK button. Close Publish Folder dialog using OK button. The command will check for suitable files and report number of created jobs.



- New jobs will be added into queue.

The screenshot shows the 'Job Server Queue' window with a table of pending jobs. The table has columns for ID, Priority, Status, Description, Submitted Date, and Submitted By.

ID	Priority	Status	Description	Submitted Date	Submitted By
142	1	Pending	Publish file (PDF Inventor): Pad Lock.idw	10/07/2013 09:13:16	Administrator
143	1	Pending	Publish file (PDF Inventor): Combo Assembly.idw	10/07/2013 09:13:16	Administrator
144	1	Pending	Publish file (PDF Inventor): Catch Assembly.idw	10/07/2013 09:13:16	Administrator

## Clone Structure

While in the standard functionality of Vault you can only move folders in Vault and no copy is possible, this functionality offers you a way to copy folders selecting any folder.

With the Clone Structure functionality:

- Select a folder and copy it
- You can define new folder name, new folder location, and other options
- Properties and Permissions can be considered as well

### Configuration

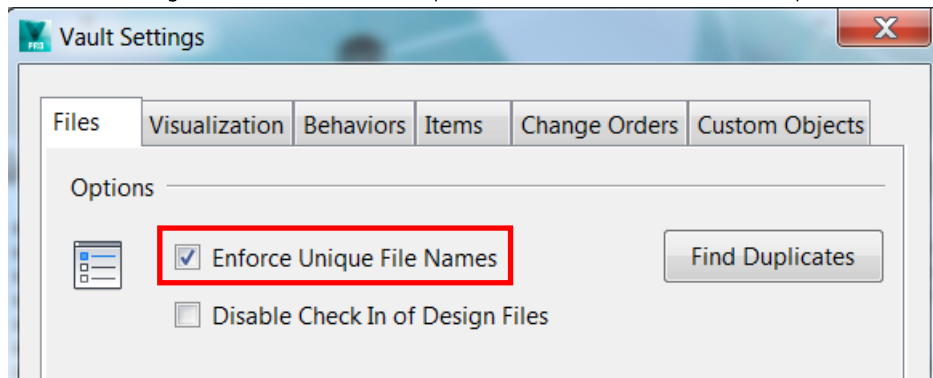
The Clone Structure command supports any folder structure including project structure used by AutoCAD Civil3D. In this case the structure contains additional files required by Civil3D – i.e. `PointsGeometry.db`.

The list of such files can be defined in the file named `IncludedProjectFiles.xml`. The file is located in `C:\ProgramData\Autodesk\Vault 2014\Extensions\Autodesk.VAO`.

Element Name	Attribute Name	Description
IncludedFile		One or more entries which specify which files has to be copied when copying folder structure.
	Path	Relative path (including filename) of the file.

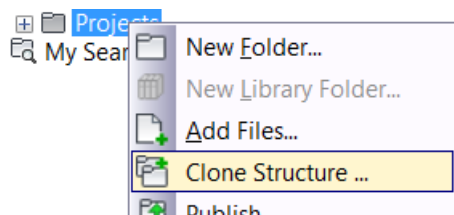
### Note

- The files specified in the `IncludedProjectFiles.xml` are handled without any references.
- The Vault Setting for Files to “Enforce Unique File Names” will cause that the specified Civil 3D files will not be copied.



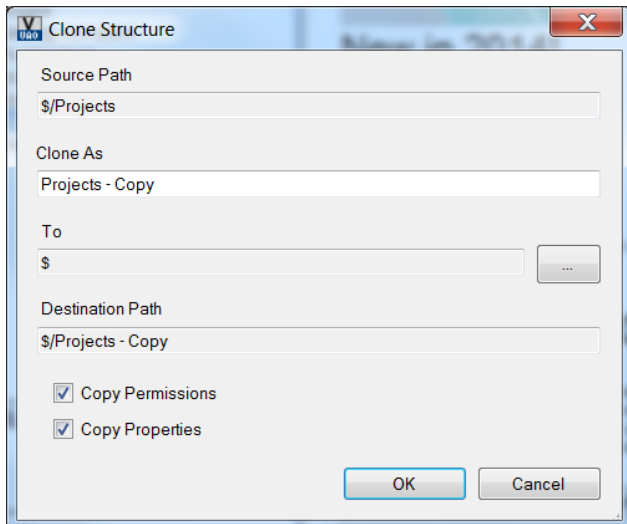
### Usage

1. Selected folder to copy in the Navigation Pane. Press right mouse button to display context menu.
2. From context menu select Clone Structure command.

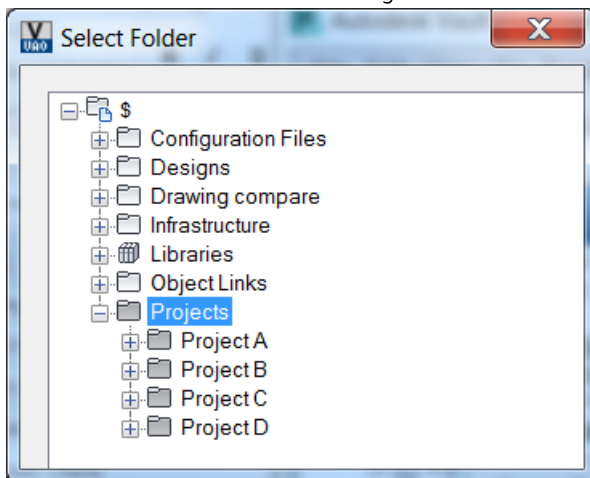


3. The command will display following dialog. Enter name of new folder in Close as text box. It's possible to specify destination location in To text box.





4. You can select destination folder using ... button.



5. The Copy Permissions check box allows copy folder permissions to new folders. The Copy Properties check box allows copy properties from source folder to new folder.

**Note**

- The clone structure utility copies the folder/project structure only. It does not copy the files.

## Drawing Compare

The Compare Drawings command integrates drawings comparison of Autodesk Design Review into Vault command. The command lets you compare two drawings or two different revisions/versions of same drawing.

### Configuration

**Note:** The Drawing Compare function is only working on a 32 bit machine. No configuration is required.

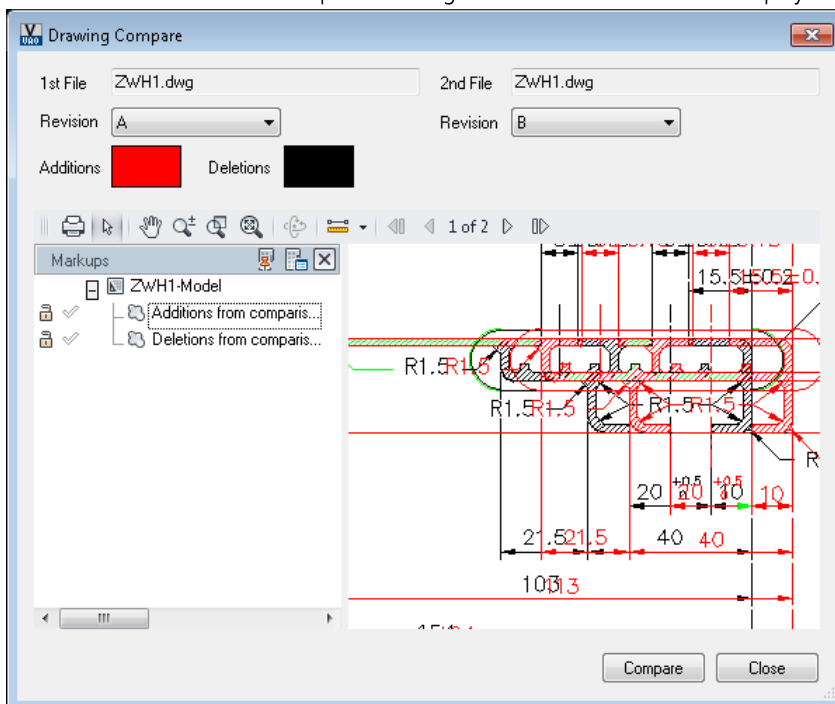
### Usage

Please follow these instructions to use the drawing compare functionality:

1. Select a document in Vault Explorer. Press right mouse button to display context menu.

As alternate option you can select two different files in navigation pane. It's also possible to select two different file versions on History tab of preview pane.

2. From context menu select Compare Drawings command. The command displays following dialog.



3. The Revision dropdown below 1<sup>st</sup> File shows list of available revision for first file. The Revision dropdown under 2<sup>nd</sup> File shows list of available revisions for second file.
4. Click on Compare button. The graphical comparison is displayed in the dialog.
5. Use Additions/Deletions buttons to change color for additions and deletions.

### Note

- Only Revisions where DWF preview is available are listed in dropdown.
- This feature is not working on a 64 bit machine

## E-Mail Notification

The E-Mail Notification in the standard Vault is related to ECO's and ERP.

This functionality of the VAO allows an E-Mail being sent to Vault Users triggered by a specified action (state change).

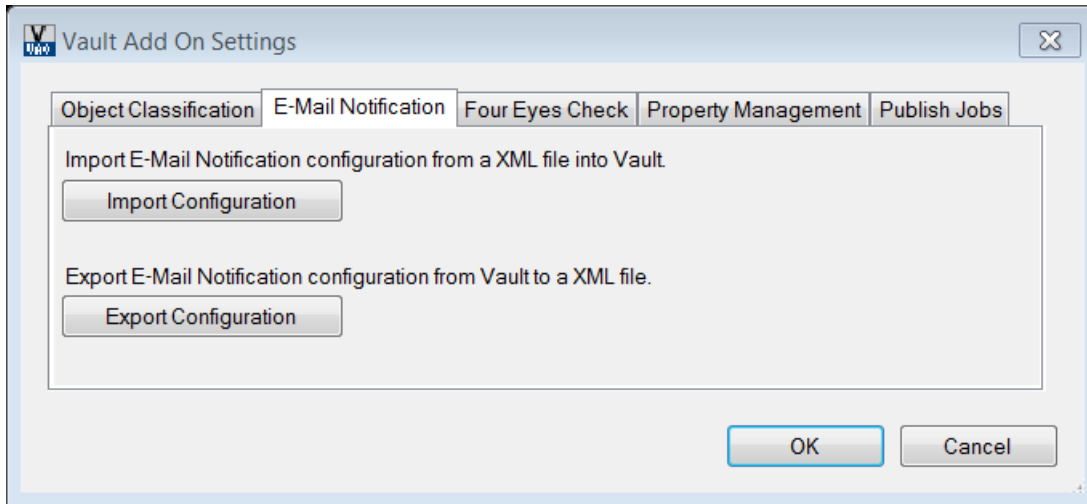
Generally we have two options:

- Recipient of E-Mail is the user which executed the last state change
- Recipient of E-Mail will be selected from a list

Further user interaction (e.g. confirmation of the E-Mail) is only needed when selecting the users from a list. In other cases there is no User interaction necessary.

### Configuration

The configuration for the email notification is defined using XML file. The import and export of configurations, as well the creation of a template configuration file can be done from the Settings UI.



Following parameters must be defined in the XML file:

Element Name	Attribute Name	Description
<b>LifeCycleStateTransition</b>		One or many entries which specify how the email notification engine has to behave.
	RecipientGroups	A list of Vault user groups. If UserChooseRecipients is set to 'false', this will be used to restrict the list of possible recipients.
	LifeCycleStateDefinitionName	The name of the life cycle state definition which is used by the files.
	LifeCycleStateNameFrom	The name of the life cycle state from which the files are being changed from.
	LifeCycleStateNameTo	The name of the life cycle state to which the files are being changed to.
	EmailSubject	The subject which will be written in the email.
	EmailBody	The content which will be written in the email.
	UserChooseRecipients	'true' if the user has to choose from a list of possible recipients, 'false' if the application has to determine the recipient automatically from the previous life cycle state

Element Name	Attribute Name	Description
		change.
<b>SmtpSettings</b>		Defines the configuration for the used SMTP server.
	Host	The name of the Host, e.g. Smtg.gmail.com.
	Port	The port which is used to connect to the SMTP server, e.g. 587.
	EnableSsl	'true' if the SMTP uses SSL, otherwise 'false'.
	Login	The login name for the SMTP server, e.g. myadress@gmail.com.
	Password	The password for the above specified login.
<b>VaultAdminUsername</b>		The username of a Vault administrator user. This is being used to get the users and groups.
<b>VaultAdminPassword</b>		The password for the above specified Vault administrator user.

The email subject and –body configuration can include placeholders which will be replaced by real values before an email is being sent out. Valid placeholders are:

Placeholder	Description
{Username}	The First- and Last name of the user who did the life cycle state change.
{LifeCycleStateNameTo}	The name of the life cycle state to which the file(s) were changed.
{Files}	The name(s) of the file(s) which were affected.
{Vault}	The name of the Vault instance.

#### Note

- An example XML File is included in  
C:\Program Files\Autodesk\VAO 2014\Configuration\Email Notification
- If UserChooseRecipients is set to True, but no active users exist to display, the Administrator defined in the configuration will be displayed instead.
- If UserChooseRecipients is set to False and the user to which the email should be sent is not active, the email will be sent to the Administrator defined in the configuration instead.
- To display each filename in a separate line the user should note that by default Outlook might remove newline characters which it considers unnecessary. The user has an option to restore the remove characters though.

#### Usage

The email notification works in two different ways, depending on how it has been configured:

- Send email automatically to the user who made the previous life cycle state change.  
There's no interaction with the user required for this. Vault automatically sends the email after a file's life cycles state change has been completed.
- Let the user select the recipients to which the email will be sent

1. After a file's life cycle state change has been completed, a screen will be shown the recipients.
2. The user has to specify one or many email recipients and clicks Ok.
3. The email is being sent to the selected recipients

#### Note

- An information log entry will be created for each sent email notification in the Windows Event log.

## Object Classification

The edition of properties can be – especially when editing various wide - spread properties – a time intensive task.

This functionality can be used for visually joining together properties which have to be edited or reviewed. Therefore the edition or reviewing is faster and more secure.

The user can see a new tab in the Vault preview pane, where he can select the schema, which defines the properties to be shown.

This functionality is suitable for items and documents, once an item or document is selected.

### Configuration

The configuration of the object classification rules is stored in an XML file. The Classification XML can also be generated manually. A template can be found in the installation path `C:\Program Files\Autodesk\VAO 2014\Configuration\Classification`.

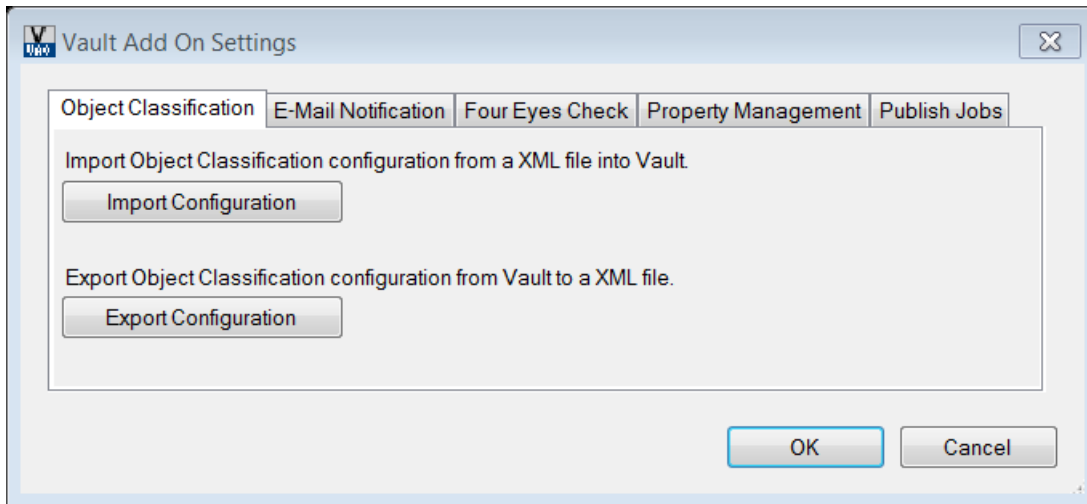
The vault properties used for the DOCUMENT or/and ITEM classification need to be as a minimum member of the Vault "File" or "Item" category. They do not need to be (but can be) part of the categories definition in Vault.

Key field description of the Classification XML:

Element Name	Attribute Name	Description
<b>ClassificationSchemaGroup</b>		Defines one Classification Schema Group. Defined ClassificationSchemaGroup can have 1 or more ClassificationSchemas.
	PropertyName	Name of Vault property where classification is stored.
	Category	Either <b>File</b> or <b>Item</b> .
<b>ClassificationSchema</b>		The ClassificationSchema can contain one or more Properties. This Tag contains the real Class definition for the UI.
	Name	Name of schema. Must be unique within one schema group.
	Category	The category has to be one of the categories specified in vault. Multiple category names can be specified using vertical bar as separator, for example: Engineering Documentation
<b>ClassificationProperty</b>		One Property Definition to be used by the Class defined by the ClassificationSchema tag. (no System property!)
	PropertyName	Name of Vault property.
	Mandatory	Indicates if property is mandatory or not (true/false).
	DefaultValue	Default property value for given schema. This is optional.
	Description	Description of the property for given schema.

The XML file must be configured to fit the business requirement and then imported in to Vault prior usage of the add-in functionality. The XML file can be imported using Autodesk Vault 2014 client.

Tools → Enterprise Add On → Settings... → Tab Object Classification → Import Configuration

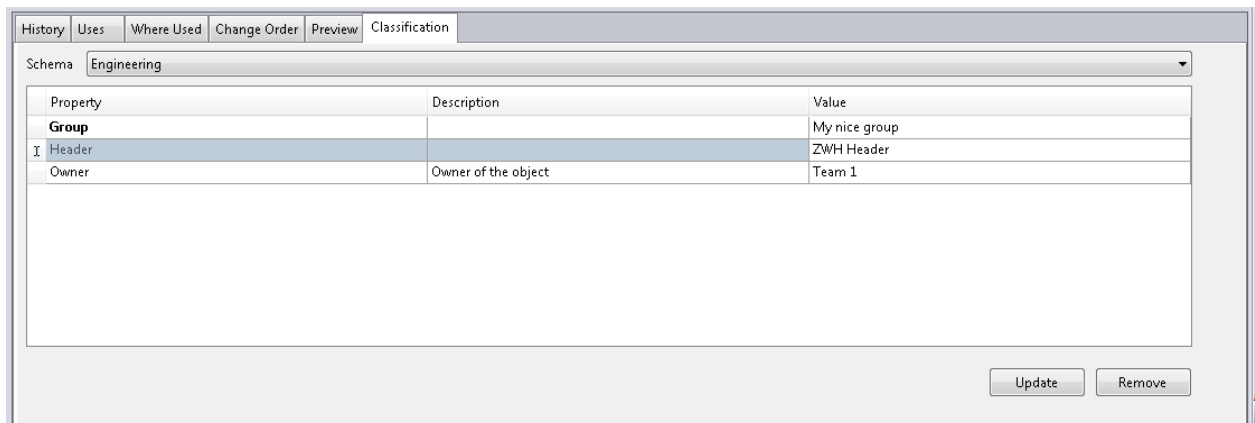


**Note:**

- Vault Client must be restarted after importing an object classification xml configuration file.
- The xml file needs to be a UTF-8 encoded document when you plan to use "Special Characters" such as < " , \* , ' , ä , Ä , ..... > in the "Description" attribute. Only in this case Vault will display the characters correct as it is a UniCode application.
- System properties are not supported by the classification because it is not possible to write values to them
- User Defined properties are only supported.

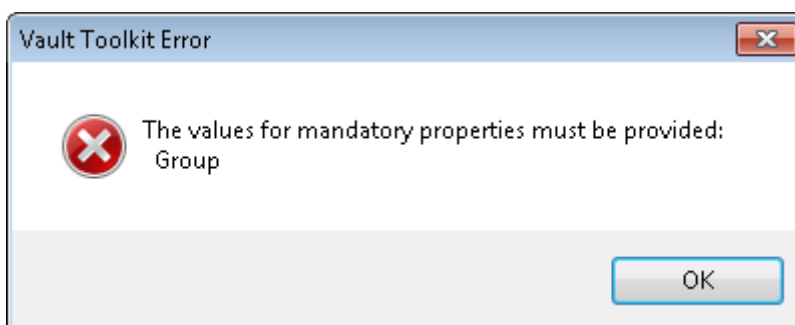
**Usage**

The custom Classification tab is available for files and items. The Schema dropdown contains list of available schemas.



The grid displays list of properties associated to the schema:

- Mandatory properties are displayed using bold font.
- Properties where corresponding Vault property is missing are displayed in grey color.
- If value of mandatory property is not provided then similar error will be displayed during update.



- The columns are sortable.
- It's possible to set filtering based on the values in selected column.
- The Schema dropdown and Update buttons are disabled if current object can't be edited.

The steps to use the object classification utility are as follows:

1. Locate file in the file list.
2. Go to Classification tab.
3. Set property values.
4. Press Update to save changes.

**Note**

- By using the "Remove" button it is possible to remove classification properties from a document. This will remove all properties associated to currently assigned class as long as they are not associated to the current object by means of the Category of Vault. However the "Class" attribute will be deleted from the object to successfully detach the class. When you want to reassign a class later on the property "Class" will be reassigned again automatically.

## Content Center Part Generator

The Content Center Part allows the creation of CC-Parts and saves them into the Working Directory.

This can be used when the CC-Parts has been updated by the CC-Administrator. Instead of the updated parts being selected one by one by the design engineer, this task can be separated (by time and person) and done by another person at another time (e.g. starting during the night).

It allows the creation of the CC Parts in a stack – the CC Parts are selected and processed (downloaded) in order to be used directly.

For the CC Part Generator it makes no difference if your CC is locally stored or located inside the vault. If you want to upload parts into the CC you can use the Autoloader or Inventor Task Scheduler.

### Configuration

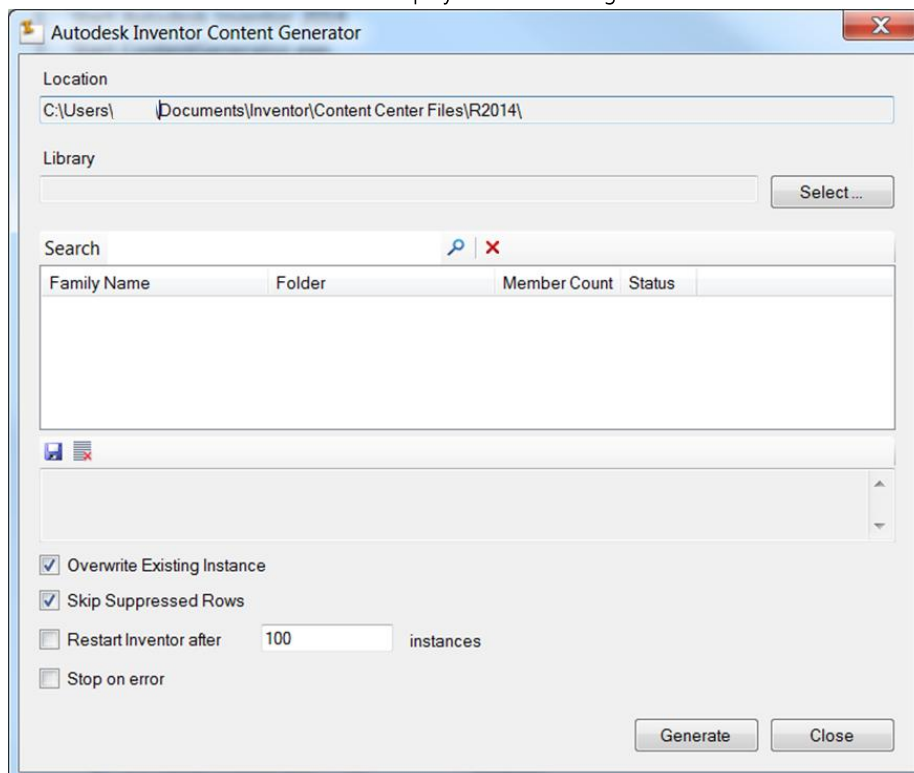
There is no configuration needed. The application is located in the installation path of VAO 2014 C:\Program Files\Autodesk\VAO 2014.

### Usage

The Inventor Content Center Part Generator application allows creation of selected content center parts before these are used during modelling. This saves some time for designers as they can use already created parts instead of creating them during design process.

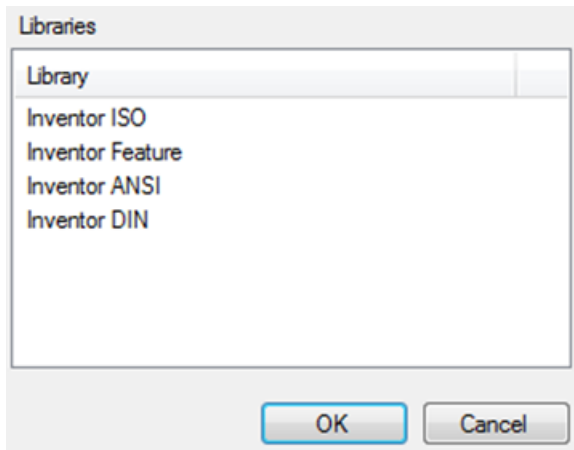
#### Generating content parts

1. Start Autodesk Inventor 2014
2. Start ContentGenerator.exe. This will display the main dialog.

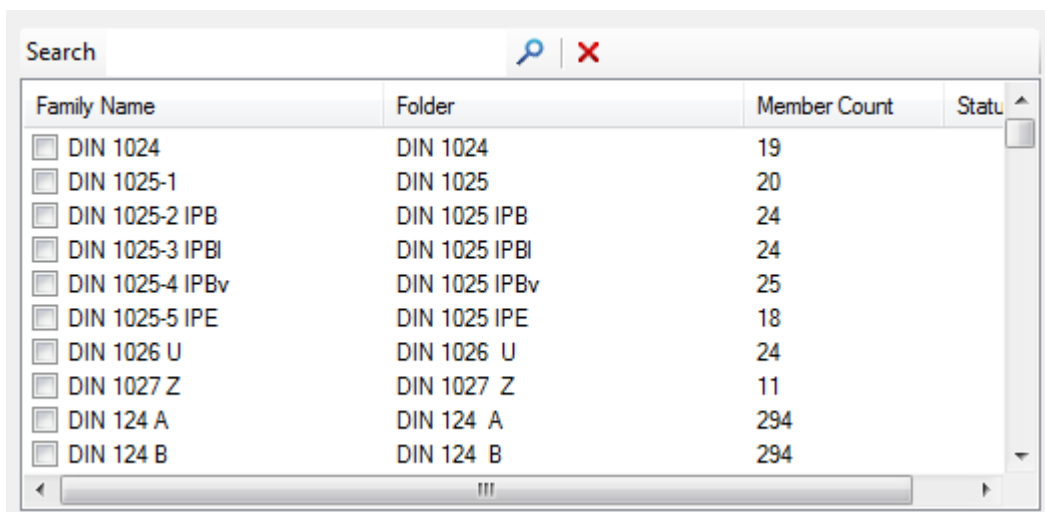


3. Click on Select button to choose library name.

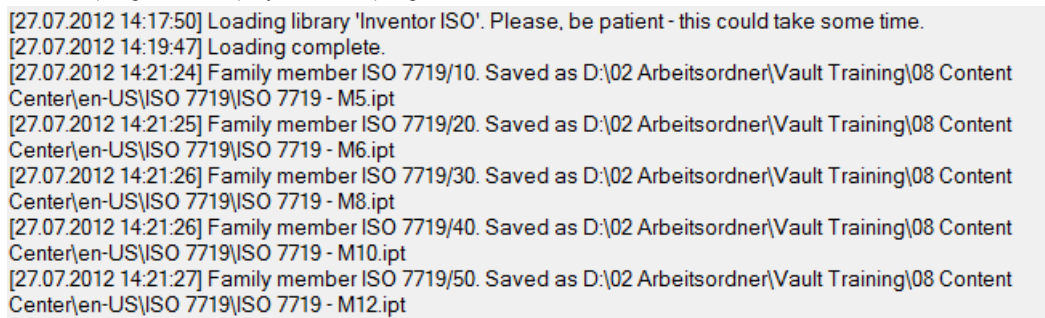




- The family list shows list of available families.



- Use checkbox on the left side to select/unselect family. As an alternative you can use context menu and use Select All/Clear All option to select/unselect family.
- If desired you can activate the "Skipped Supressed Rows" option box. In case of activation, the suppression of rows will be honoured by the tool.
- Click on Generate button to start creation of the content center parts. The progress of creation will be indicated in separate window.
- Detailed progress is displayed in the progress window.

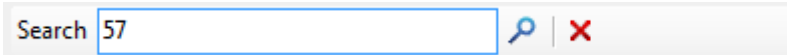


- The Status Column displays result of processing. If there was an error during processing then status is displayed using red color.

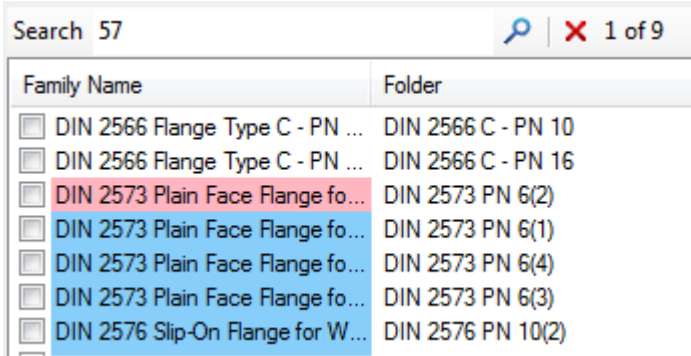
Member Count	Status
19	Done
20	Done
...	

### Search functionality

1. Type text into Search box.



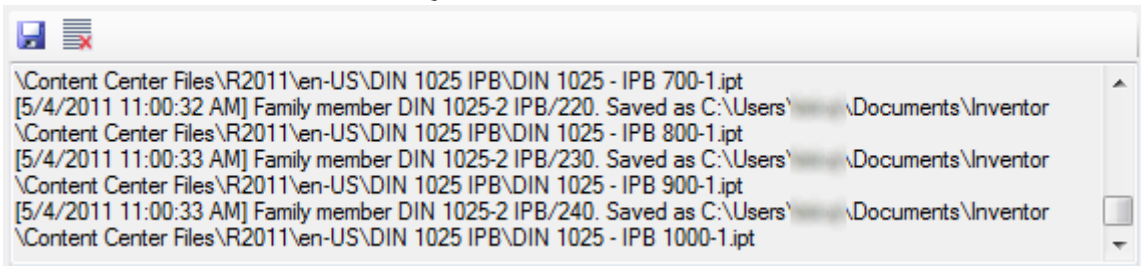
2. Click on Search button. The items containing given text will be highlighted in blue color.



3. The search button allows you to cycle in the selection. The current item will be highlighted in pink color.
4. Search can be cancelled using Cancel Search button.

### Log window

1. Use Save button to save content of the log window into text file.
2. Use Clear button to clear content of the log window.



### Note

- If the option "Restart Inventor after XX instances" is activated in the Content Center Generator, it is required to manually login to Vault every time Inventor restarts. The alternative to this is to change to a local Inventor project.

## Four Eyes Check

This functionality is used for supporting security measures (another user than originator must check / approve).

The check is applied during a state change on a document. It contains a control whether the current user is the same user who has executed the previous state change. It contains two parts:

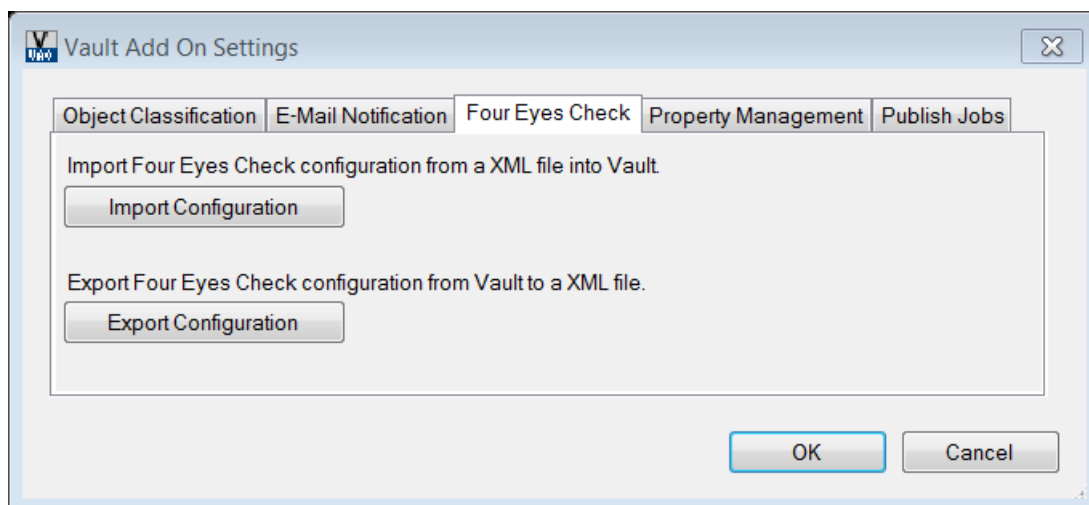
- Pre Check
  - The state change must be defined (lifecycle name including from state and to state)
  - The pre-check contains several conditions at two different levels
  - Level of the selected document
    - File extension
    - Property condition
  - Level of the related documents (only first level documents)
    - File extension
    - Property condition
  - Please have a look at the flow chart to determine the circumstances which have to be met by the Pre Check in order to be successful.
- User Check
  - After a successful Pre Check the User Check will be done.
  - Current User will be compared with the previous User
  - Previous User: the user who has changed the previous state to the current state
  - The state change will be cancelled when Current User and Previous User are equal. In other words: The two users must be different.

If the Pre Check wasn't successful the user check won't be executed, and therefore the state change won't be cancelled under any circumstances.

So in other words: As a default, there is no check – or the check defaults to true.

### Configuration

The configuration for the four eyes check is defined by a specified XML file. The import and export of configurations, as well as the creation of a template configuration file can be done from the Settings UI of the Enterprise Add-On for Autodesk Vault within the Vault Explorer.



Following parameters will have to be defined in the XML file to make it work:

Element Name	Attribute Name	Description
<b>FourEyesCheck</b>		One or many entries which specify for which life cycle state transitions a 4eyes check have to be executed.
	LifeCycleStateDefinitionName	The name of the life cycle state definition.
	LifeCycleStateNameFrom	The name of the life cycle state from which the files are being changed from.
	LifeCycleStateNameTo	The name of the life cycle state to which the files are being changed to.
	InformationMessage	The message which is shown to the user if a four eyes check failed.
	FileTypeRestrictionExtensions	Lists of file extensions for which the 4eyes check apply. The extensions are separated by a " " character (e.g. "idw dwg")
	PropertyCheck	A <a href="#">LINQ</a> query expression which will be executed on the file properties. The 4eyes check will only be executed, if the file matches the property check expression. The PropertyCheck will only be executed if no FirstLevelCheck is specified.
<b>FirstLevelCheck</b>	FirstLevelTypeRestrictionExtension	A list of file extensions for associated files (only first level). The 4eyes check will only be executed if one of the associated files is of the specified type. The extensions are separated by a " " character (e.g. "idw dwg"). If a FirstLevelPropertyCheck should be executed for any type of file, use a "*" character.
	FirstLevelPropertyCheck	A <a href="#">LINQ</a> query expression which will be executed on the associated first level file properties with above specified extensions. The 4eyes check will only be executed if a file matches the property check expression.

The application will compare the name of the VaultUser which did the LifeCycle change prior to the current state change with the current VaultUser login.

In the case that they are the same the system will issue an exception and a message box will be displayed.

The workflow change process will be stopped and the user will need to change to a different VaultUser to change the state after checking the documents.

However the application of the 4 Eyes Check can be bound to a number of pre-conditions:

- LifeCycleStateDefinitionName
- State From & State To (Transition to be observed)
- FileTypeRestrictionExtensions (Which File Type will qualify for the check)
- PropertyCheck (Check a Property Value to match)
- FirstLevelTypeRestrictionExtension (Check if the Content of the drawing is IPT/IAM/...)
- FirstLevelPropertyCheck (Check a Property Value to match)

With this pre-condition you can position the check to the absolutely needed objects in Vault when changing their state. Multiple configurations (one per LifeCycleStateDefinitionName) are supported.

This function assumes the enforcement of a workflow definition native to the customer's current environment and legal requirements by government or ISO regulations.

### LINQ expression

A LINQ query expression can execute checks on the following objects:

Keyword	Description
<b>Name</b>	The name of the property (type: string).
<b>Value</b>	The value of the property (type: object).
<b>PropDef</b>	The property definition object (see Webservice documentation)
<b>PropInst</b>	The property instance object (see Webservice documentation)

An example expression could look like this:

Name = "Created By" and Value.ToString() = "Administrator"

**Note:**

- for now an expression has to be defined for each user

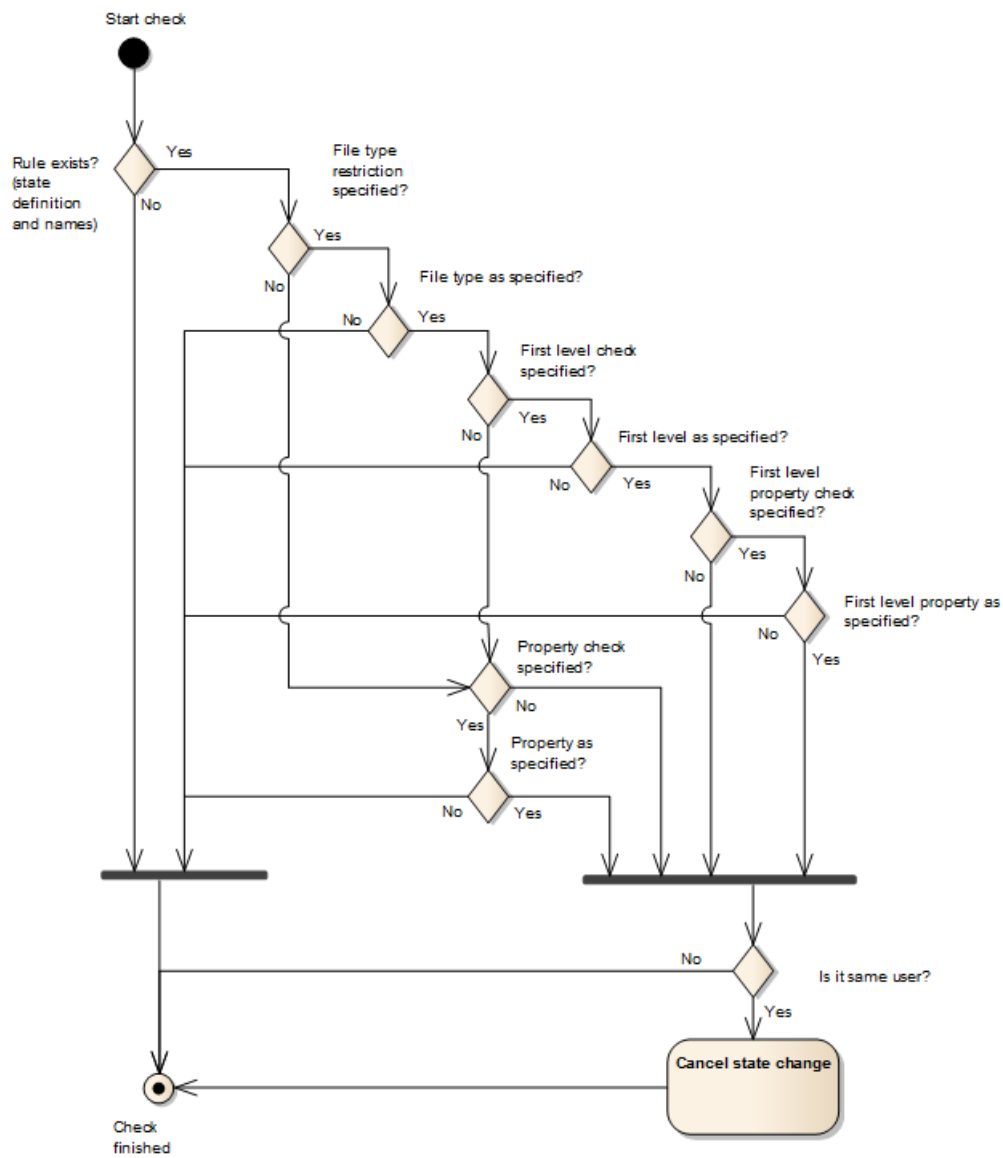
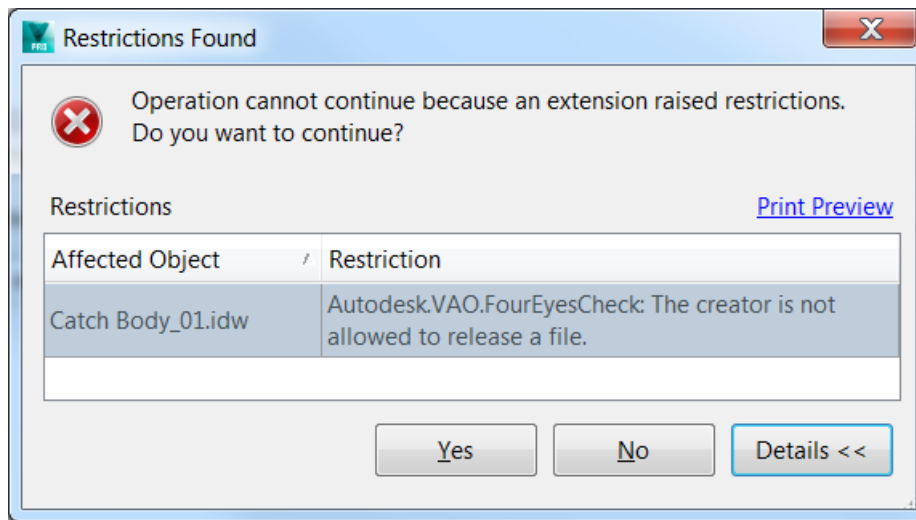


Figure 1: Act Four Eyes Check

## Usage

Based on a configuration that does not allow that a user can release a file and if he has created the file, the following message would appear.



## VGet

A command line interface based functionality which enables users to retrieve files or folders from Vault and download them to the local file system, to specific files or folders.

### Configuration

There are two main actions:

- Synchronize folder structure (no file download, optionally including all files in the folder)
- Synchronize file(s). This will create the folder structure as needed.

In a command window, typing the VGet.exe filename will display the syntax:

```

Administrator: C:\WINDOWS\system32\cmd.exe

C:\Program Files\Autodesk\UA0 2014>VGet.exe
Usage: UGET [-s sru] [-db dbase] [-u user] [-p pwd] [-a Vault] [-t] [-r] [-f] <-sr source> [-tg target] [-x filter]
-s          Name of server (default = localhost).
-db         Name of database (default = Vault).
-u         UserName for access to database (default = Administrator).
-p         Password for access to database (default = empty password).
-a         Authentication Type - Windows or Vault (default = Vault).
-t         Only synchronize folder structure.
-r         Recursiv synchronization.
-f         Force refresh/sync.
-sr        Full Vault folder and (optionally) file path.
-tg        Local target path.
-x         Include file ending filter (e.g. dwg;dwf).

C:\Program Files\Autodesk\UA0 2014>
  
```

Parameter	Description	Optional
-a <authentication>	2 possible values windows or vault	N
-u <user name>	Vault user to be used to connect and get files/folders from Vault	N
-p <password>	Vault password to be used in conjunction with the above user name	N
-s <server>	Server with Vault (Publisher server, in case of replicated systems)	N
-db <database>	Vault database to connect to	N
<option>	<p><b>-t</b> if a folder is specified; only the structure will be synchronized (not the files). Ignored when a single file is specified.</p> <p><b>-r</b> recursively get files is a folder is specified as a source. Ignored when a single file is specified in &lt;source&gt; (default is not recursive)</p> <p><b>-f</b> force the refresh/sync operation (default is N: file is synchronized only if the target file is different)</p>	Y
-sr <source>	Full vault path to the file to be synchronized or Full folder path to be synchronized	N
-tg [target]	If a local path is specified, VGET will automatically try to download the files and/or folders to a target location. By default, if a file already exists, the file is replaced only if the source file is different from the target file.	Y
-x [filter]	A file extension which is used when synchronizing folder structure. Not used if a file is specified as a source.	Y

### Usage

Please find below some examples for the usage of the tool.

### **Sync folder structure (no files)**

```
vget -u Administrator -p test -db vault -t -sr $/prj001/cooker/modell1/
```

In this case all files will be copied from the source vault folder to the local workspace.

```
vget -u Administrator -p test -db vault -t $/prj001/cooker/modell1/ -tg :\\mycfg\
```

In this case the tool copied all files to the target folder.

### **Sync folder structure (including files)**

```
vget -u Administrator -p test -db vault -sr $/prj001/cooker/modell1/  
vget -u Administrator -p test -db vault -sr $/prj001/cooker/modell1/ -tg f:\\mycfg\  
dwg;dxf
```

### **Sync individual files**

```
vget -u Administrator -p test -db vault -sr $/prj001/cooker/modell1/best.dwg
```



## Vault User Accounts

This functionality belongs to the administrative tasks and is only available through a command line interface (cmd.exe) on your computer.

It is used in order to import users and groups from a file. In this file the name of the user together with other information about the user (roles, vaults and groups) has to be provided. This reduces the effort when creating user in a new Vault.

### Configuration

This command line utility (VaultUserAccounts.exe) is located in the C:\Program Files\Autodesk\VAO 2014 directory.

In a command window, typing the VaultUserAccounts.exe filename will display the syntax:

```
Administrator: C:\WINDOWS\system32\cmd.exe
C:\Program Files\Autodesk\VAO 2014>VaultUserAccounts.exe
VaultUserAccounts v3.0.0.0 - imports/exports ADMS user accounts
Copyright (c) 2012 Autodesk, Inc. All rights reserved.

Usage: VaultUserAccounts [-u username] [-p password] [-s server] [-a authenticationType] [-g] IMPORT|EXPORT filename
-u          UserName for access to database (default = Administrator).
-p          Password for access to database (default = empty password).
-s          Name of server (default = localhost).
-a          Authentication Type - Windows or Vault (default = Vault).
-g          Exports group information instead of user user information.
-e          Encoding. Provide either codepage or name. (default = UTF-8).
IMPORT|EXPORT
filename   CSU File which is used to write or read user information.

Examples:
VaultUserAccounts -U Joe -P 123Password -S VaultServer -A Vault -e UTF-8 EXPORT users.txt
VaultUserAccounts -S VaultServer -A Windows EXPORT users.txt

C:\Program Files\Autodesk\VAO 2014>
```

Parameter	Switch	Description
<b>Authentication Type</b>	-a	2 possible values windows or vault
<b>User</b>	-u	Vault user to be used to connect and get files/folders from Vault
<b>Password</b>	-p	Vault password to be used in conjunction with the above user name
<b>Server</b>	-s	Server with Vault (Publisher server, in case of replicated systems)
<b>User Option</b>	-g	Exports / Imports group information
<b>IMPORT EXPORT</b>		Set the action type to import or export the information
<b>Filename</b>		CSV file which is used to write or read user / group information

### Usage

This utility allows to export and import user and group definitions, greatly speeding up the creation and configuration of Vault accounts when many users and groups are required by the customer.

This is a command line utility, and reads from/writes to a CSV file.

As best practice you should export your current user and group list from Vault to view the correct syntax of the CSV file, and then adding into this your new user accounts either by typing, or adding in an export from Windows security lists, MS-Outlook Contacts, or similar.

It is a simple syntax, even allowing for the type of user account to be exported/imported with the -A "AuthenticationType" parameter.

- A vault            means Vault created user accounts will be exported/imported
- A windows        means that windows AD user accounts will be exported/imported

## Export user accounts

```
VaultUserAccounts -u Administrator -s localhost -a Vault EXPORT "C:\Temp\Users.csv"
```

```
Administrator: C:\WINDOWS\system32\cmd.exe
C:\Program Files\Autodesk\UAO 2014>VaultUserAccounts -u Administrator -s localhost -a Vault EXPORT "C:\Temp\Users.csv"
VaultUserAccounts v3.0.0.0 - imports/exports ADMS user accounts
Copyright (c) 2012 Autodesk, Inc. All rights reserved.

Processing user 'Project Manager 1'
Processing user 'Project Manager 2'
Processing user 'Project Manager 3'
Processing user 'Project User 1'
Processing user 'Project User 2'
Processing user 'Project User 3'
Processing user 'Project User 4'
Processing user 'Project User 5'

C:\Program Files\Autodesk\UAO 2014>
```

## Note

- It is easier to use the tool by creating a batch file (e.g. exportuser.cmd) with the syntax:  
`VaultUserAccounts.exe -u administrator -p "" -s localhost -a Vault EXPORT "C:\Temp\users.csv"`
- That the `-A` parameter is set to export VAULT defined user accounts. To export Active Domain enabled vault accounts, the `-A` parameter would be set to "windows" as per the syntax description above. If the `-A` parameter is set to "windows"; there is no need to use the parameter `-u` and `-p`.
- Import only if the user list contains exclusive vault users or exclusive windows user; do not use a user list with mixed user accounts!
- To create the **Domain User** accounts the command passed to the VAO must contain a **Domain User Account** that is in the **Administrator** Role within the Vault.

We have exported to a CSV file called "Users.csv" which looks like this:

	A	B	C	D	E	F	G	H	I
1	FirstName	LastName	Username	Email	Password	Role	Vault	Group	Enable
2			Project Manager 1	Project.Manager.1@company.com				Project 1	1
3			Project Manager 2	Project.Manager.2@company.com				Project 2	1
4			Project Manager 3	Project.Manager.3@company.com				Project 3	1
5			Project User 1	Project.User.1@company.com				Project 1	1
6			Project User 2	Project.User.2@company.com				Project 2	1
7			Project User 3	Project.User.3@company.com				Project 3	1
8			Project User 4	Project.User.4@company.com					1
9			Project User 5	Project.User.5@company.com					1

Columns A-E define the users "firstname", "lastname", "username", "email address", and "password"; as you would normally create a new Vault user.

Column F contains ALL the roles that this user should have, concatenated into one string and separated by a semi-colon for each role.

These must be exactly as the descriptions in Vault, hence the recommendation to always start with an export of your current user list from Vault; then it easier to cut and paste required roles for new users within MS-Excel.

Column G contains all the vaults that this user should be assigned to, again semi-colon separated.

Column H shows which groups this user should be assigned to.

Column I is set to "1" for all user so that they are enabled.

Once you have made your manual changes to this CSV file, save it, and re-import with the syntax like:

```
VaultUserAccounts -u Administrator -s localhost -a Vault IMPORT "C:\Temp\Users.csv"
```

```

Administrator: C:\WINDOWS\system32\cmd.exe
C:\Program Files\Autodesk\UAO 2014>VaultUserAccounts -u Administrator -s localhost -a Vault IMPORT "C:\Temp\Users.csv"
VaultUserAccounts v3.0.0.0 - imports/exports ADMS user accounts
Copyright (c) 2012 Autodesk, Inc. All rights reserved.

Processing user 'Project Manager 1'
Processing user 'Project Manager 2'
Processing user 'Project Manager 3'
Processing user 'Project User 1'
Processing user 'Project User 2'
Processing user 'Project User 3'
Processing user 'Project User 4'
Processing user 'Project User 5'

C:\Program Files\Autodesk\UAO 2014>

```

## Export groups

`VaultUserAccounts -u Administrator -s localhost -a Vault -g EXPORT "C:\Temp\Groups.csv"`

```

Administrator: C:\WINDOWS\system32\cmd.exe
C:\Program Files\Autodesk\UAO 2014>VaultUserAccounts -u Administrator -s localhost -a Vault -g EXPORT "C:\Temp\Groups.csv"
VaultUserAccounts v3.0.0.0 - imports/exports ADMS user accounts
Copyright (c) 2012 Autodesk, Inc. All rights reserved.

Processing group 'Office'
Processing group 'Engineering'
Processing group 'Email Send Group'
Processing group 'Project 1'
Processing group 'Project 2'
Processing group 'Project 3'

C:\Program Files\Autodesk\UAO 2014>

```

We have exported to a CSV file called "Groups.csv" which looks like this:

	A	B	C	D	E	F
1	Name	Email	Role	Vault	Group	Enable
2	Office			Vault		1
3	Engineering			Vault		1
4	Email Send Group			Vault		1
5	Project 1		Document Editor (Level 2);Document Manager (Level 2);Item Editor (Level 2)	Vault		1
6	Project 2		Document Editor (Level 2);Document Manager (Level 2);Item Editor (Level 2)	Vault		1
7	Project 3		Document Editor (Level 2);Document Manager (Level 2);Item Editor (Level 2)	Vault		1

Column A defines the name of the group.

Column B defines the name of the email address for the group.

Column C defines a list of roles that the group has been granted access to.

Column D define a list of vaults that the group has been granted access to.

Column E defines a list of groups that the group has been granted access to.

Column F is set to "1" for all users so that they are enabled.

Once you have made your manual changes to this CSV file, save it, and re-import with the syntax like:

`VaultUserAccounts -u Administrator -s localhost -a Vault -g IMPORT "C:\Temp\Groups.csv"`

```
Administrator: C:\WINDOWS\system32\cmd.exe
C:\Program Files\Autodesk\UA0 2014>UvaultUserAccounts -u Administrator -s localhost -a Uvault -g IMPORT "C:\Temp\Groups.csv"
UvaultUserAccounts v3.0.0.0 - imports/exports ADMS user accounts
Copyright (c) 2012 Autodesk, Inc. All rights reserved.

Processing group 'Office'
Processing group 'Engineering'
Processing group 'Email Send Group'
Processing group 'Project 1'
Processing group 'Project 2'
Processing group 'Project 3'

C:\Program Files\Autodesk\UA0 2014>
```

For larger implementations, this utility will save you a lot of time; even when using Active Domain user accounts.

## Import Object Properties

This functionality belongs to the administrative tasks and is only available through a command line interface (cmd.exe) on your computer.

It is used in order to populate properties reading the values from a file. This file contains the entities, with the properties to be updated and the values. Supported are file- and item properties.

Please note, that the properties will not be created – they must exist before.

### Configuration

This utility allows you to update file and item properties from an external text file, such as for instance if one is migrating data from a legacy document management system that also holds property data not present in the files.

This command line utility is located in C:\Program Files\Autodesk\VAO 2014 directory.

In a command window, typing the ImportObjectProperties.exe filename will display the syntax:

```
Administrator: C:\WINDOWS\system32\cmd.exe
C:\Program Files\Autodesk\VAO 2014>ImportObjectProperties.exe
Usage: ImportObjectProperties [-t File|Item] [-a Vault|Windows] [-s srv] [-db dbase] [-u user] [-p pwd] [-l d] [-e codepage|name] filename
-t          Type of object whose properties are being imported (default = File).
-a          Authentication type (default = Vault).
-s          Name of server (default = localhost).
-db        Name of database (default = Vault).
-u          UserName for access to database (default = Administrator).
-p          Password for access to database (default = empty password).
-l          Logging level (d = Debug).
-e          Encoding. Provide either codepage or name. (default = UTF-8).
filename   CSU File which contains property values.

C:\Program Files\Autodesk\VAO 2014>
```

Parameter	Switch	Description
<b>Object Type</b>	-t	Type for target object in Vault, must be match the content of csv file
<b>Authentication Type</b>	-a	2 possible values windows or vault
<b>User</b>	-u	Vault user to be used to connect and get files/folders from Vault
<b>Password</b>	-p	Vault password to be used in conjunction with the above user name
<b>Server</b>	-s	Server with Vault (Publisher server, in case of replicated systems)
<b>Database</b>	-db	Vault database to connect to
<b>Logging</b>	-l	Level of Logging
<b>Encoding</b>	-e	Encoding. Provide either code page or name
<b>Filename</b>		CSV file which contains property values and Item or file name

### Note

- This utility supports the importing into properties of following types: Text, Number, Boolean and Date.
- when importing into properties that have mapping defined then the mapping will override the data that is trying to be imported, this is without error or warning
- when importing into properties that have list values the list will not be checked and so invalid data may be imported, this data will be marked in the Autodesk Vault 2014 client
- when importing into properties of type NUMBER, that have a range value then out of range values may be imported and so invalid data may be imported, this data will be marked in the Autodesk Vault 2014 client

- When importing into properties of type BINARY then only values of True or False. Any other string will produce a null string in the property.
- when importing into properties a null string may be used by defining filename,"", property\_2 in the file rather than filename,,property\_2
- When importing into properties a null string may sent to a mandatory property, this data will be marked in the Autodesk Vault 2014 client.
- When importing into properties only the first occurrence of the property will be used. For example the following file would produce a new\_prop\_1 values of 1 not 2 for the file P100-A-00743.DWG

```
Name, new_prop_1,new_prop_2,new_prop_1
P100-A-00743.DWG,1,col2,2
```

- When importing into properties the file is read from top to bottom one line at time. Duplicate file names in the file may mean data corruption. For example the following file would produce a new\_prop\_1 values of 2 not 1 for the file P100-A-00743.DWG

```
Name, new_prop_1
P100-A-00743.DWG,1
P100-A-00743.DWG,2
```

- When importing into properties only file names that are distinct in the vault can be updated.

## Usage

There are some rules that apply, for the import to be successful.

First, you need a text file something like below:

```
Name, Owner, Project Number, Header ,Purpose
Catch Assembly.iam, 1st owner, 1, Catch Assembly, Testing
Combo Assembly.iam, 2nd owner,2, Combo Assembly, Testing
Pad Lock.iam, 3rd owner,3, Pad Lock, Testing
```

The top row contains the property names.

### Importing File Properties

For importing file properties, the first column must be called "Name", and contain the full filenames of the vaulted documents to be updated.

### Importing Item Properties

For importing item properties, the first column must be called "Number" and contain the full Item Number of the vaulted items to be updated.

The following columns contain the property name, as it appears in Vault. These properties must be pre-configured in Vault. The import will not create new properties for you; since there is no way of knowing the type and category application in advance.

Where the ADMS server computer is called "localhost", we use the "administrator" login, with a blank password, to log into the "Vault" vault, and the import text file called `FileProperties.txt`

```

Administrator: C:\Windows\system32\cmd.exe

C:\Program Files\Autodesk\U00 2014>importobjectproperties -s localhost -db Uault -u Administrator -p "" FileProperties.txt
ImportObjectProperties v3.0.1.0 - imports UDP values from CSU file
Copyright (c) 2012 Autodesk, Inc. All rights reserved.

Input file: 'FileProperties.txt'
Number of rows: '3'

[1/3]: Processing file 'Catch Assembly.iam'...
Imported properties: 6
[2/3]: Processing file 'Combo Assembly.iam'...
Imported properties: 6
[3/3]: Processing file 'Pad Lock.iam'...
Imported properties: 6

C:\Program Files\Autodesk\U00 2014>

```

The expected results should show that:

The screenshot shows the Project Explorer window with search results for \*.iam files. The table below represents the data shown in the interface.

Name	State	Revision	Version	Owner	Project Number	Header	Purpose
Pad Lock.iam	Work in Progress	A	3	3rd owner	3	Pad Lock	Testing
Combo Assembly.iam	Work in Progress	A	3	2nd owner	2	Combo Assembly	Testing
Catch Assembly.iam	Work in Progress	A	3	1st owner	1	Catch Assembly	Testing

All file properties have been updated accordingly.

## Import Property List

This functionality belongs to the administrative tasks and is only available through a command line interface (cmd.exe) on your computer.

It is used in order to import lists of values to UDP. This means that the lists of the user defined properties don't have to be created manually. The UDP should exist upfront (before starting importing the property list) but the values itself get populated into the UDP.

### Configuration

This command line utility is located in C:\Program Files\Autodesk\VAO 2014 directory.

In a command window, typing the ImportPropertyList.exe filename will display the syntax:

```
Administrator: C:\WINDOWS\system32\cmd.exe
C:\Program Files\Autodesk\VAO 2014>ImportPropertyList.exe
Usage: ImportPropertyList [-s sru] [-db dbase] [-u user] [-p pwd] [-t File|Item] propertyName filename
-s          Name of server (default = localhost).
-db         Name of database (default = Vault).
-u          UserName for access to database (default = Administrator).
-p          Password for access to database (default = empty password).
-e          Encoding. Provide either codepage or name. (default = UTF-8).
-t          Property Type (default = File).
propertyName  Property Name.
filename      File which contains property values.

C:\Program Files\Autodesk\VAO 2014>
```

Parameter	Switch	Example Value	Notes
Server	-s	MyServer	would be substituted with the applicable Vault server name
Database	-db	Vault	would be the Vault database name
User	-u	Administrator	would be replaced with the login you wish to use
Password	-p	password	needs to be included if a password is associated
Type	-t	File	is File for a file property, and Item for an item based property
Property name		Source_Country	is the Vault property name
Source File		Countries.txt	is the text file to import the values from.

### Note

- The import replaces any previous list values, and so should be regarded as "new list" rather than "add to list".

### Usage

This is a command line tool that can be used to populate the configured list values of either file or item properties.

In a vault called "Demo1", I have an item property called "Source\_Country", and this needs to cater for the following list:

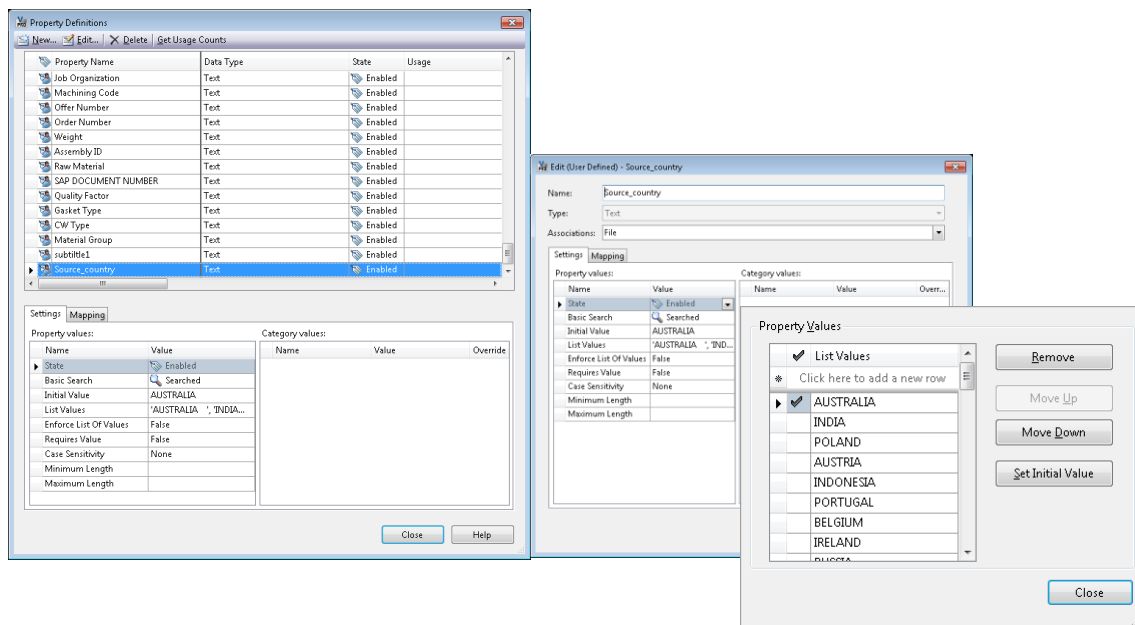


AUSTRALIA	INDIA	POLAND
AUSTRIA	INDONESIA	PORTUGAL
BELGIUM	IRELAND	RUSSIA
BRAZIL	ISRAEL	SINGAPORE
CHILE	ITALY	SLOVAK REPUBLIC
CHINA	JAPAN	SOUTH AFRICA
COLOMBIA	LATVIA	SOUTH KOREA
CZECH REPUBLIC	LUXEMBOURG	SPAIN
DENMARK	MALAYSIA	SWEDEN
ESTONIA	MEXICO	SWITZERLAND
FINLAND	NETHERLANDS	TAIWAN
FRANCE	NEW ZEALAND	THAILAND
GERMANY	NORWAY	UNITED KINGDOM
GREECE	PANAMA	URUGUAY
HONG KONG	PERU	USA
HUNGARY	PHILIPPINES	VENEZUELA

There is no way we want to have to manually enter all of these when creating the property in Vault.

So, we create the item property as a list type, with one value (does not matter what that is, since the import will overwrite the existing list values of the property).

The end result is the populated list:



## Import Folder Structure

This functionality belongs to the administrative tasks and is only available through a command line interface (cmd.exe) on your computer.

It is used in order to import folder structure, apply categories, LifeCycle status, permissions and properties to folders. The categories, users / user groups and UDP must exist upfront before starting the import.

### Configuration

This is a command line tool that can be used to create/update a folder structure with assigning of folder categories and status, user and user group permissions and properties.

At a windows command prompt, simply running the `ImportFolderStructure.exe` file will display the required syntax.

```
Administrator: C:\WINDOWS\system32\cmd.exe
C:\Program Files\Autodesk\UA0 2014>ImportFolderStructure.exe
Usage: ImportFolderStructure [-a Vault|Windows] [-s srv] [-db dbase] [-u user] [-p pwd] [-e codepage|name] filename
-a Authentication type (default = Vault).
-s Name of server (default = localhost).
-db Name of database (default = Vault).
-u UserName for access to database (default = Administrator).
-p Password for access to database (default = empty password).
-e Encoding. Provide either codepage or name. (default = UTF-8).
filename CSV File which contains folder information.

C:\Program Files\Autodesk\UA0 2014>
```

Parameter	Switch	Description
Authentication Type	-a	2 possible values windows or vault
User	-u	Vault user to be used to connect and get files/folders from Vault
Password	-p	Vault password to be used in conjunction with the above user name
Server	-s	Server with Vault (Publisher server, in case of replicated systems)
Database	-db	Vault database to connect to
Encoding	-e	Encoding. Provide either code page or name
Filename		CSV file which contains folder information

The Import Folder Structure command line tool can also be used to update existing folders.

#### Note:

- Existing permissions would be override with the new permissions defined in the csv file
- Properties will be override with the new properties in the csv file
- If a property doesn't exist, the import folder structure will not create the property
- If a user or user group doesn't exist, the import folder structure will not create the user/group
- If a user/group is missing in the csv file, they will have no access and view to that folder
  - Therefor it's important to add each user or group to the route folder \$ (see chapter Usage – Import folder Structure)
- User/group permissions are not propagated to subfolders

## Usage

The import folder structure allows creating or updating folders in Vault. This includes properties, Lifecycle status, categories and user permissions.

The input file needs the following columns:

Column name	Description	Optional
<b>Path</b>	Path in Vault explorer	No
<b>ACL Read</b>	read permission for the specific folder (1 = allow, 0 = deny)	Yes – if no value is set, the user / group have no permission
<b>ACL Write</b>	write permission for the specific folder (1 = allow, 0 = deny)	Yes – if no value is set, the user / group have no permission
<b>ACL Delete</b>	delete permission for the specific folder (1 = allow, 0 = deny)	Yes – if no value is set, the user / group have no permission
<b>User Group Name</b>	User or group name	No
<b>Category</b>	Folder category	Yes – if no category is set, the default folder category will be used
<b>State</b>	Status for folder if they has assigned a lifecycle	Yes – default status will be used if no value is available
<b>UD Property</b>	Each UDP which is defined and assigned to folder category	Yes

Each path must be added to the csv file with the specific permissions; especially for the root folder. Otherwise the user will have no longer access to each subfolder.

## New Structure

Import a folder structure for Projects in Vault based on existing structure used in other applications. The structure can be created in a cvs file (or excel) and will include some information and user permissions. The following example creates 3 new Project folder names Project A, Project B and Project C.

```

Path,ACL Read,ACL Write,ACL Delete,User Group Name,Category,State,Project,Project Number,Description
$,1,1,1,Administrator,,,,,
$,1,1,,Everyone,,,,,
$,1,,,Project 1,,,,,
$,1,,,Project 2,,,,,
$,1,,,Project 3,,,,,
$/Projects,1,1,1,Administrator,,,,,
$/Projects,1,1,1,Project Manager 1,Project,,,,,
$/Projects,1,1,1,Project Manager 2,,,,,
$/Projects,1,1,1,Project Manager 3,,,,,
$/Projects,1,,,Project User 1,,,,,
$/Projects,1,,,Project User 2,,,,,
$/Projects,1,,,Project User 3,,,,,
$/Projects/Project A,1,1,1,Administrator,,,,,
$/Projects/Project A,1,1,1,Project Manager 1,Project,Pending,VAO 2014,2014300,AC Consulting FY 2014
$/Projects/Project A,1,1,,Project User 1,,,,,
$/Projects/Project A,1,,,Project Manager 2,,,,,
$/Projects/Project A,1,,,Project Manager 3,,,,,
$/Projects/Project B,1,1,1,Administrator,,,,,
$/Projects/Project B,1,1,1,Project Manager 2,Project,Pending,VAO 2013,2013200,AC Consulting FY 2013
$/Projects/Project B,1,1,,Project User 2,,,,,
$/Projects/Project B,1,,,Project Manager 1,,,,,
$/Projects/Project B,1,,,Project Manager 3,,,,,
$/Projects/Project C,1,1,1,Administrator,,,,,
$/Projects/Project C,1,1,1,Project Manager 3,Project,Pending,VAO 2012,2012100,AC Consulting FY 2012
$/Projects/Project C,1,1,,Project User 3,,,,,
$/Projects/Project C,1,,,Project Manager 1,,,,,
$/Projects/Project C,1,,,Project Manager 2,,,,,

```

In the command line run:

```
ImportFolderStructure -s localhost -db Vault "ProjectFolders.csv"
```

```

Administrator: C:\WINDOWS\system32\cmd.exe
C:\Program Files\Autodesk\UA0 2014>ImportFolderStructure ProjectFolders.csv
ImportFolderStructure v3.0.0.0 - imports folder structure from CSV file
Copyright (c) 2013 Autodesk, Inc. All rights reserved.

Input file: 'ProjectFolders.csv'
Number of rows: '27'

[1/27] Processing path '$'.
[2/27] Processing path '$'.
[3/27] Processing path '$'.
[4/27] Processing path '$'.
[5/27] Processing path '$'.
[6/27] Processing path '$/Projects'.
[7/27] Processing path '$/Projects'.
    Applying category 'Project'
[8/27] Processing path '$/Projects'.
[9/27] Processing path '$/Projects'.
[10/27] Processing path '$/Projects'.

```

## Update Structure

It is also possible to update (or add) the existing folder structure. Therefore the following example add a new Project folder and assign new users to existing projects. The bold marked columns are the new information.

```

Path,ACL Read,ACL Write,ACL Delete,User Group Name,Category,State,Project,Project Number,Description
$,1,1,1,Administrator,,,,,
$,1,1,,Everyone,,,,,
$,1,,,Project 1,,,,,
$,1,,,Project 2,,,,,
$,1,,,Project 3,,,,,
$,1,,,Project User 4,,,,,
$,1,,,Project User 5,,,,,
$/Projects,1,1,1,Administrator,,,,,
$/Projects,1,1,1,Project Manager 1,Project,,,,,
$/Projects,1,1,1,Project Manager 2,,,,,
$/Projects,1,1,1,Project Manager 3,,,,,
$/Projects,1,,,Project User 1,,,,,
$/Projects,1,,,Project User 2,,,,,
$/Projects,1,,,Project User 3,,,,,
$/Projects,1,,,Project User 4,,,,,
$/Projects,1,,,Project User 5,,,,,
$/Projects/Project A,1,1,1,Administrator,,,,,
$/Projects/Project A,1,1,1,Project Manager 1,Project,Pending,VAO 2014,2014300,AC Consulting FY 2014
$/Projects/Project A,1,1,,Project User 1,,,,,
$/Projects/Project A,1,1,,Project User 4,,,,,
$/Projects/Project A,1,,,Project Manager 2,,,,,
$/Projects/Project A,1,,,Project Manager 3,,,,,
$/Projects/Project C,1,1,1,Administrator,,,,,
$/Projects/Project C,1,1,1,Project Manager 3,Project,Pending,VAO 2012,2012100,AC Consulting FY 2012
$/Projects/Project C,1,1,,Project User 3,,,,,
$/Projects/Project C,1,1,,Project User 4,,,,,
$/Projects/Project C,1,1,,Project User 5,,,,,
$/Projects/Project C,1,,,Project Manager 1,,,,,
$/Projects/Project C,1,,,Project Manager 2,,,,,
$/Projects/Project D,1,1,1,Administrator,,,,,
$/Projects/Project D,1,1,1,Project Manager 1,Project,Pending,VAO 2015,2015400,AC Consulting FY 2015
$/Projects/Project D,1,1,,Project User 1,,,,,
$/Projects/Project D,1,1,,Project User 4,,,,,
$/Projects/Project D,1,,,Project Manager 2,,,,,
$/Projects/Project D,1,,,Project Manager 3,,,,,

```

## Object Link Browser

This functionality is used to show the links of files, folders, items and change orders.

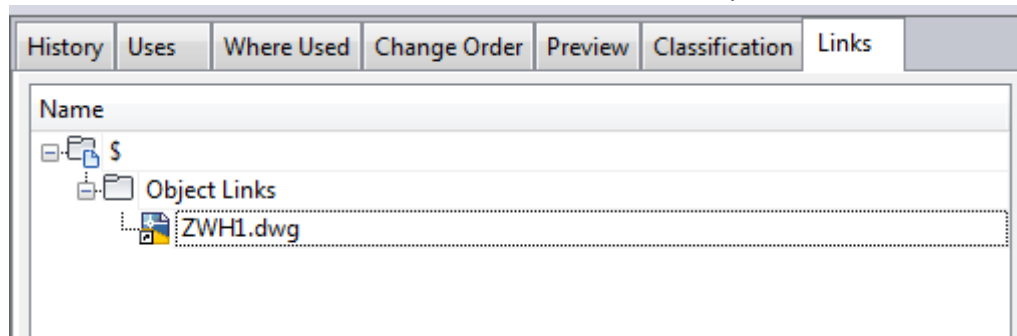
### Configuration

There is no configuration needed.

### Usage

Please follow these instructions to use the object link browser functionality:

1. Select a file, folder, item or change order entity in the Vault Client.
2. Click on the Links tab to show the link information for the selected entity.



# Troubleshooting

## Event log

All exceptions in the Vault Add On are being logged to the Windows event logging mechanism. They can be seen using standard Event Viewer application. The log contains the error message and full stack trace.

## Unable to load Vault Add On

If Vault is not able to load a plugin, it just throws an exception which doesn't contain any additional information. It is therefore hard to determine why it can't be loaded.

To get additional information, there's a tool on the [It's just ones and zeros blog](http://justonesandzeros.typepad.com/blog/2011/05/extension-deployment-checklist.html) which helps to get more information about the issue:

<http://justonesandzeros.typepad.com/blog/2011/05/extension-deployment-checklist.html>

How to use it:

1. Download the tool
2. Copy the executable into your Vault Client program folder
3. Run the tool
4. Point to your Vault extension and click on Load
5. Analyse the output

## Missing stdole.dll

If, as a result of the above procedure, the `stdole.dll` library is missing from the Explorer folder in Vault, use Microsoft Windows Search capability to locate it in the system and copy it to the Explorer folder.

## Unblock assemblies

Sometimes it happens that when assemblies are being copied from a ZIP archive that they have to be unblocked before the first use.

This is the case if you encounter following message: **"Attempt was made to load assembly from a network location"**.

To unblock the assembly, do the following:

1. Right-click on the assembly in windows explorer
2. Open the Properties
3. Click on Unblock in the General tab

## Installation Issues

If you have issues with the installation then the \*.msi can be run manually to generate a log file of the install. To run the install manually follow these steps.

1. Copy the Vault Addon 2014-Complete-n.n.n.zip to a local directory and unzip.
2. Open a command window at the location of the \*.msi file that matches you operating system version.
3. Run the \*.msi manually using `msiexec /i VaultAddOn.msi /L install_vao.log`
4. Follow the steps above and then review the log file.

## Post Install Enterprise Add-On for Autodesk Vault 2014 Issues

If the Enterprise Add-On is not in the Tools menu then you will need to reset the menus. To make the commands visible in Vault Client, it's required to reset the menu:

1. Run Vault Client and connect to your Vault server.
2. In Vault Explorer go to Tools > Customize.
3. On Toolbars tab select Main Menu then press Reset. This step will "reset" user interface to default state.

## **User Rights Issues**

It has been documented that sometimes User Rights are not properly set for Enterprise Add-On for Autodesk Vault installation folders and files.

It is then recommended to check that the current user belongs, at minimum, to Power User Group as well as this group has to be added to the Enterprise Add-On for Autodesk Vault installation folder

`C:\Program Files\Autodesk\VAO 2014\`

## **Special characters in CSV files**

Some of the VAO components are working with CSV files. If special characters (like öäüèê) are used, the CSV files have to be encoded in UTF-8. Some VAO components additionally allow specifying the used encoding as well.

## **Email Notification – missing address**

If you get the following message: “The parameter ‘address’ cannot be an empty string” while sending an email notification, make sure that you’re using correct email addresses.

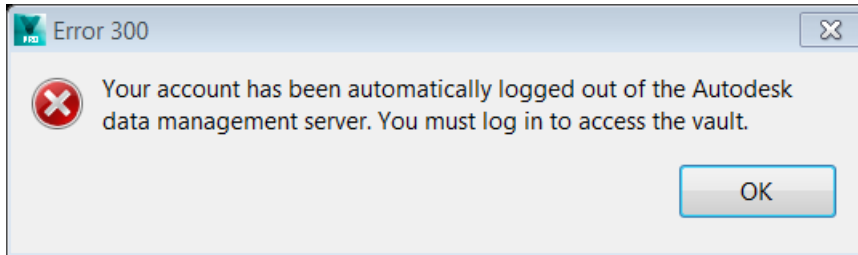
The Email Notification requires for both sender and recipient a valid email address. The address for the sender is being taken from the currently logged in Vault User.

## Good to know - FAQs

### Visualization files

Please note that Vault client recognizes only DWF file when displaying preview of the document. This means that even if you set the attachment as a visualization file (`AttachAsVisualization = True`) it won't be displayed in the preview tab. However it will be correctly displayed when you select attached file (e.g. the pdf file) directly in the main pane.

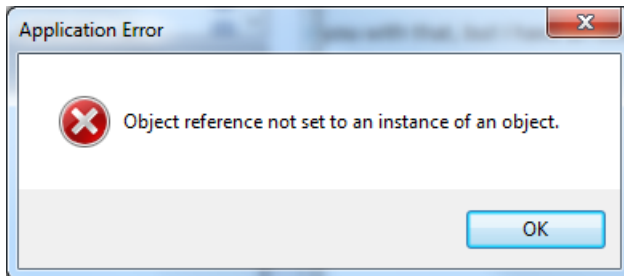
### Logout



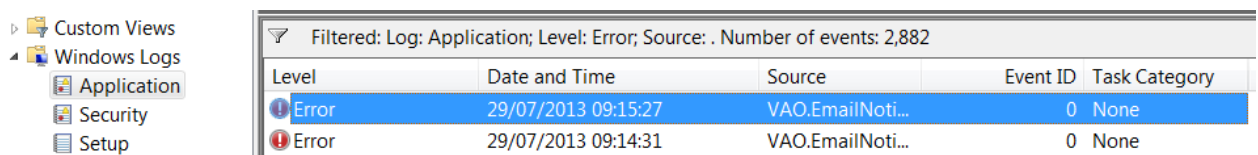
An automatic logout after 30 minutes has been reported in Vault 2012 Collaboration. This happens only on machines which have VAO 2012 installed

This is a standard behaviour which affects all custom applications. If user is inactive for 30 minutes then the license is automatically released. If standard command is used after this time it automatically reconnects to the server. If custom command is used then you may get an error 300. The solution in this case is to use standard command (i.e. Refresh) and then use custom command (e.g. VAO command).

### Application Error



After installing the VAO it could happen that during the start of Vault Client an error message appears. To identify the reason look into Windows Event Viewer to find any messages there. Expand the Windows Logs for Application and filter for Level Error and VAO.



Level	Date and Time	Source	Event ID	Task Category
Error	29/07/2013 09:15:27	VAO.EmailNoti...	0	None
Error	29/07/2013 09:14:31	VAO.EmailNoti...	0	None

In the Source column you will find the VAO feature which will cause the error. If you don't need the feature, go to Programs and Features and uninstall the component. In any other cases, check the configuration or ask Autodesk Consulting for support.



## Localization

If the VAO is being used on non-English environments, it's required adopt the provided template configurations to the used language.

This includes the renaming of the English names of following elements:

- Property names
- Categories
- Life Cycle Definitions/Names

## Send E-Mail Notification via ADMS

If you want to use the VAO Email notification and however the client is not allowed to contact the SMTP server directly (port 25 blocked to the client subnet). The ADMS server can send email to an SMTP server on port 25 as normal and therefore the following steps describe how to set up the ADMS server to work as an SMTP server:

1. On ADMS server install SMTP server software
  - a. Server Manager -> Features -> Add Features -> SMTP Server
  - b. Install all extra software that is required a prerequisite
2. Start IIS 7.0 Manager
  - a. General tab -> Advanced -> change port on all unassigned to 60000
  - b. Access tab -> Authentication -> add Anonymous access
  - c. Access tab -> Authentication -> add Basic authentication
  - d. Access tab -> Relay -> switch radio button to "All except the list below"
  - e. Delivery tab -> Advanced -> smart host -> "set to SMTP server, the working on"

This should mean that the ADMS server can receive mail on port 60000 and send to SMTP server on 25.

3. Configure the xml for VAO
  - a. Host = ADMS Server
  - b. Port = 60000
  - c. Login = Valid user on the machine
4. Update Vault with VAO import of xml and restart the client

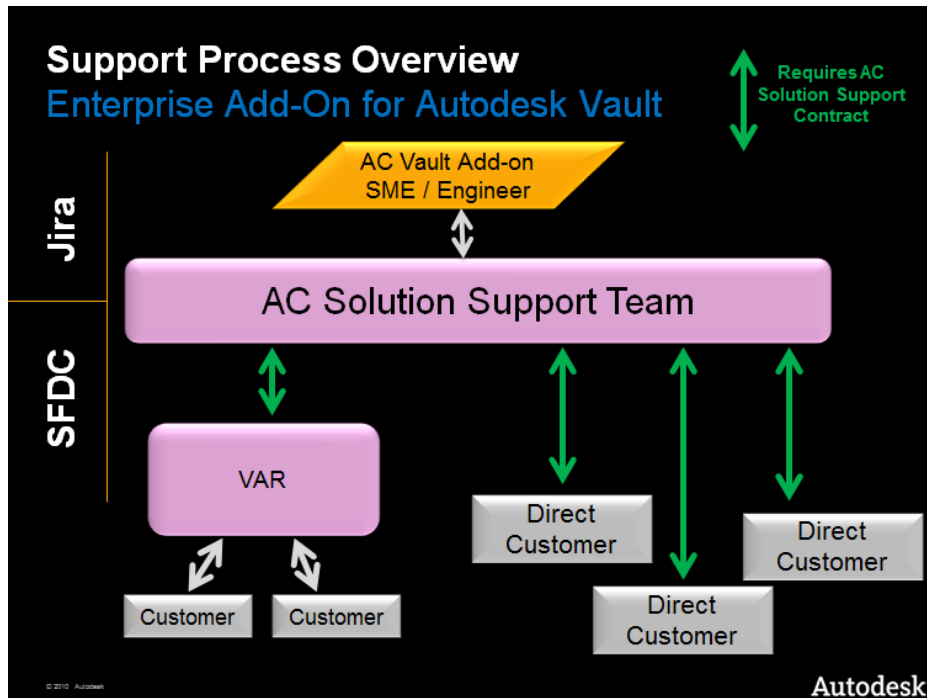
This means that when the client life transitions from state to state the process is called to send SMTP mail on port 60000 to the ADMS server, this server then passes the mail to real SMTP server for sending to the real world.

## Support

Customers and Partners are entitled to be directly supported by Autodesk Consulting in case of a valid "Autodesk Solution Support" contract. (Separate services offering)

The subscription entitles customers to get all available updates, versions, hot-fixes and service packs of the Enterprise Add-On for Autodesk Vault. Defects are also handled under the subscription contract. Support is not included in the subscription.

The support model and process looks like this



1. In case of accepted defects, direct customers and Autodesk Channel Partners are directly supported by Autodesk if a valid subscription contract is in place
2. Direct Customers are directly supported by Autodesk Consulting in case of a valid "Autodesk Solution Support" contract.
3. Indirect Customers are supported by their Autodesk Channel Partner.
4. The Channel Partner is supported by Autodesk Consulting in case of defects in the Enterprise Add-On for Autodesk Vault and in case of a valid "Autodesk Solution Support" contract (for all related questions).