

Inventor iLogic-Vault | Quickstart Library

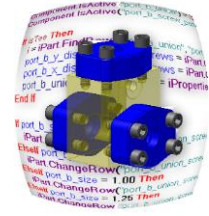
Version 2020.2.0

Solutions Engineer PDM|PLM – Autodesk Central Europe

Markus Koechl



Agenda



iLogic-Vault Library | Features & Benefits

iLogic-Vault Interaction | General Workflow

Setup Your Inventor iLogic Environment

Application Sample | Hydro Power Supply

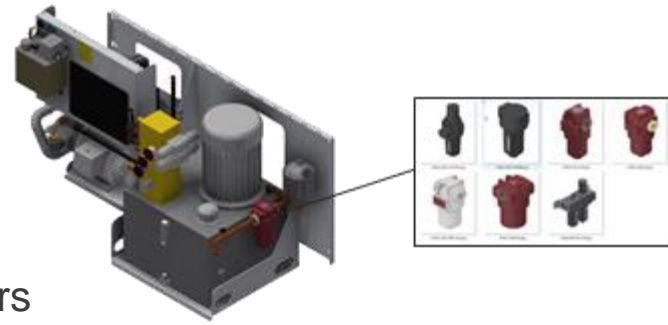
Application Sample – Inventor CAM - Vault

Tips & Tricks

The background features a series of light blue, curved, overlapping shapes that resemble a stylized bookshelf or a modern architectural design. The shapes are arranged in a way that creates a sense of depth and movement. The overall color palette is light blue and white, with a subtle gradient. The text is centered in the upper half of the image.

iLogic-Vault Library | Features & Benefits

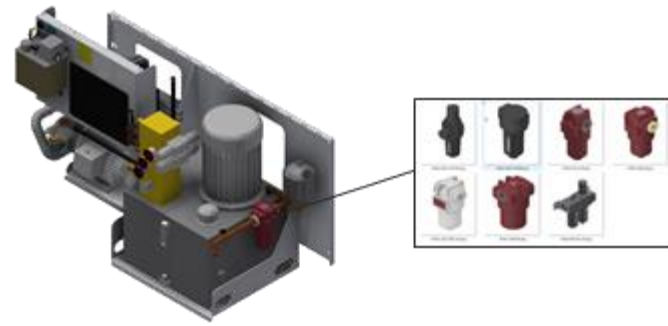
iLogic Vault | Features



- ✓ Enable Rule – Vault Interactions
 - ✓ Search files in Vault by one to many property-value pairs
 - ✓ Supports AND | OR conditions for multiple search criteria
 - ✓ Get latest file(s) by Vault path (NEW 2019.1/2020.0 Check-out Option)
 - ✓ Get latest files from Vault as a search result
 - ✓ **Get new files as copy of vaulted files** (NEW 2019.1 / 2020.0)
 - ✓ **Get new file numbers from Vault** (NEW 2019.1 / 2020.0)
 - ✓ Check-Out / Check-In / Undo Check-Out
 - ✓ Get Thumbnails as image object or image file by search or by name (**New 2020.1.0**)
 - ✓ Option to update Part Number for all copy functions (**New 2020.2.0**)

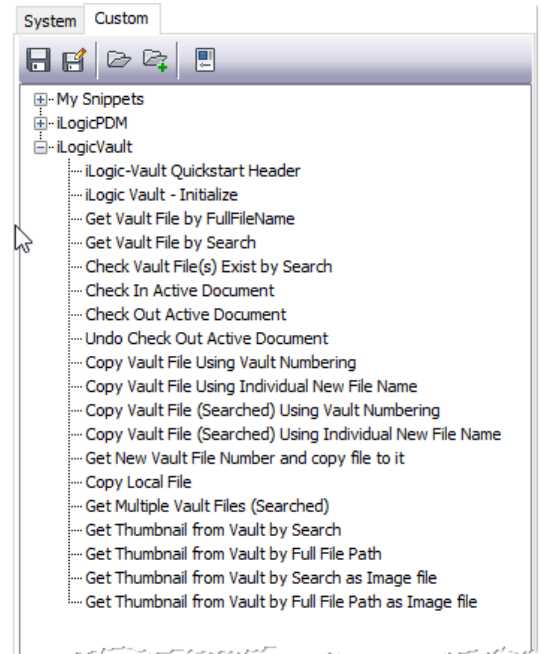
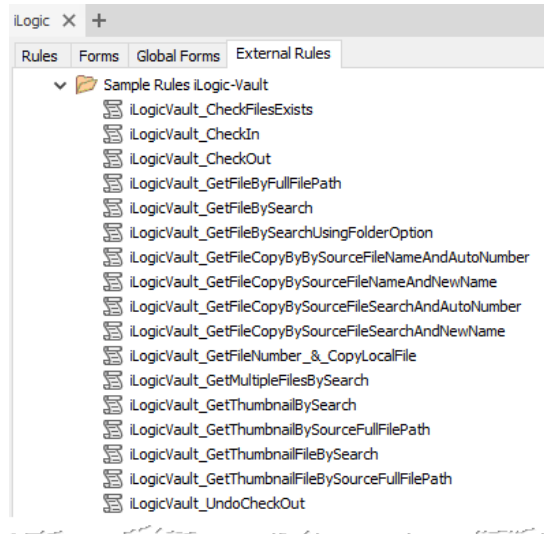
iLogic Vault | Benefits

- ✓ Continue Using Known iLogic Rule Syntax
 - ✓ *Classic & Managed Components* approach
- ✓ Identify matching components by search criteria
 - ✓ File naming independency
 - ✓ File path independency
- ✓ Create “Dynamic” variant definitions
 - ✓ Fill iLogic variant selections by search results
- ✓ Add new derivatives to Vault and skip source template changes



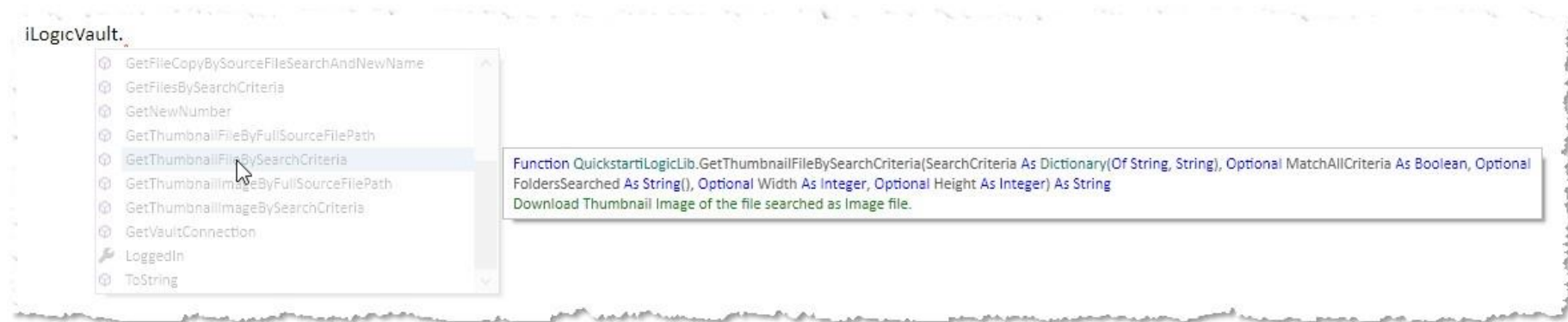
iLogic-Vault | Content

- iLogic application extension „QuickstartiLogicLibrary.dll“
- Sample rule for each function
- Snippet library to quickly reuse function calls



iLogic-Vault | Intellisense

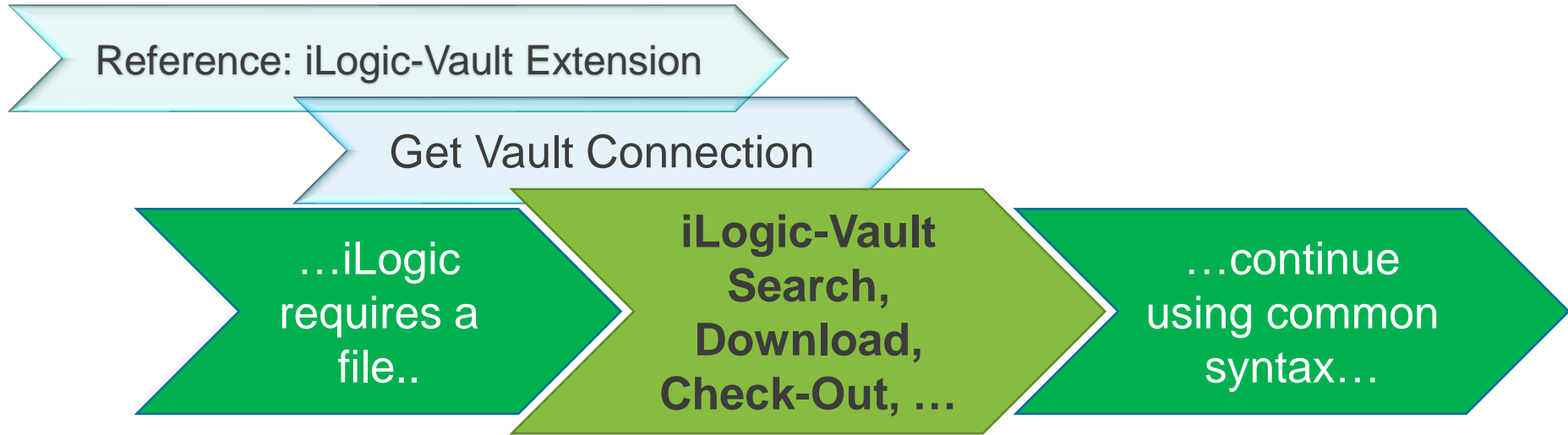
- Library includes documentation enabling Intellisense





iLogic-Vault Interaction | General Workflow

Workflow | iLogic-Vault Interaction



Workflow | iLogic-Vault Interaction

Reference: iLogic-Vault Extension

Get Vault Connection

```
mVltCon = iLogicVault.mGetVaultConn()  
If mVltCon Is Nothing Then  
    Logger.Error("Not Logged In to Vault! - Login first and repeat executing this rule.")  
Exit Sub  
Elseif mVltCon.IsConnected = True Then  
    Logger.Info("Validated Vault Connection: Connected")
```

Workflow | iLogic-Vault Interaction

Reference: iLogic-Vault Extension

Get Vault Connection

iLogic-Vault Functions

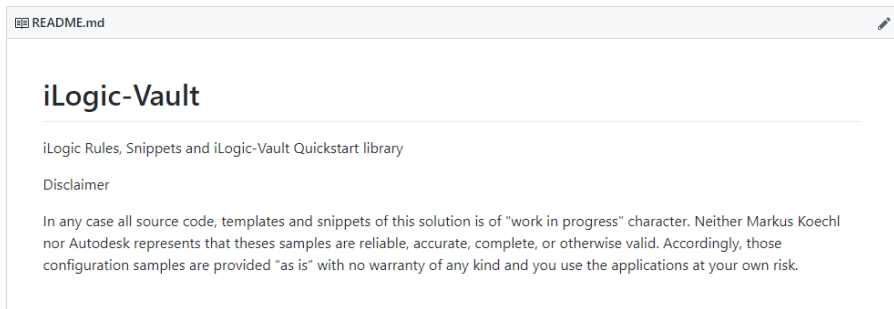
- ... Get Vault File by FullFileName
- ... Get Vault File by Search
- ... Check Vault File(s) Exist by Search
- ... Check In Active Document
- ... Check Out Active Document
- ... Undo Check Out Active Document
- ... Copy Vault File Using Vault Numbering
- ... Copy Vault File Using Individual New File Name
- ... Copy Vault File (Searched) Using Vault Numbering
- ... Copy Vault File (Searched) Using Individual New File Name
- ... Get New Vault File Number
- ... Copy Local File
- ... Get Multiple Vault Files (Searched)



Setup Your Inventor iLogic Environment

iLogic Vault | Download Options

- [ReadMe](#)



- [Download Library](#)

- iLogic-Vault Library
- Code Snippets
- Sample Rules

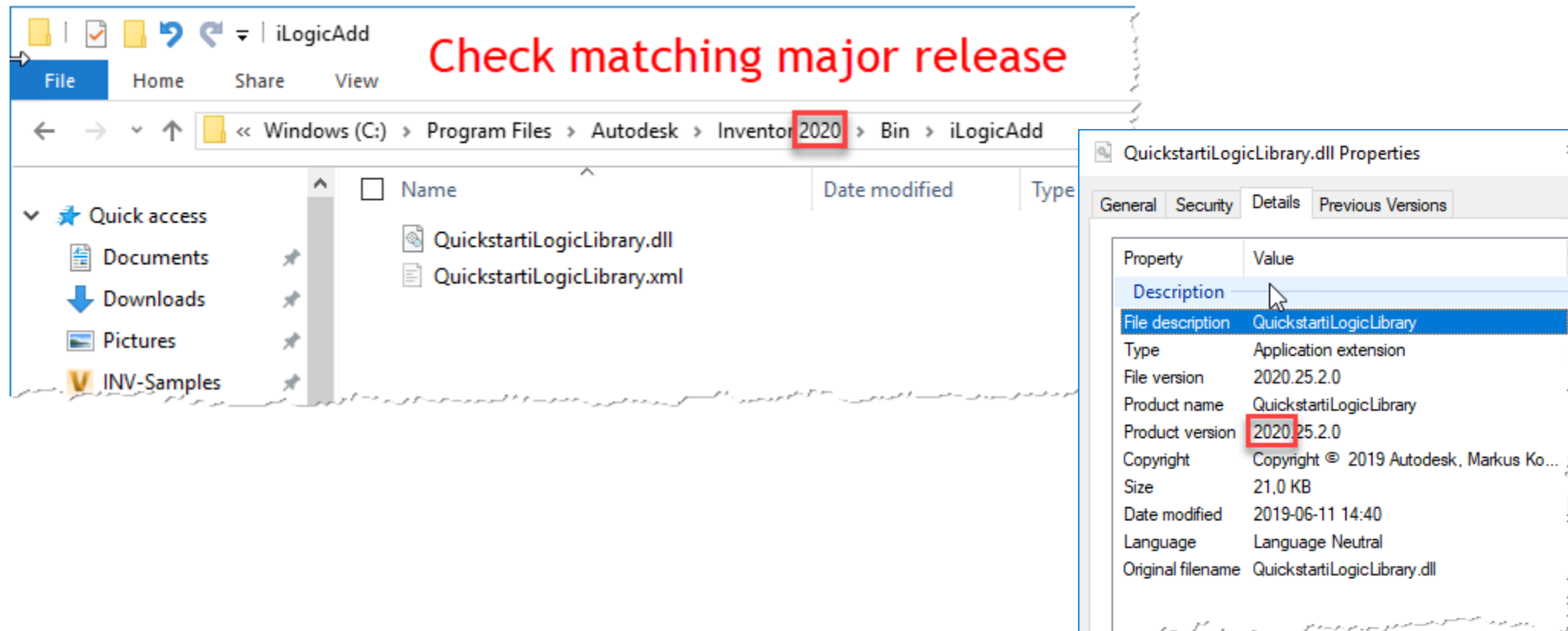


iLogic-Vault Quickstart Library.zip

- [Download Development Project and Sources – GitHub](#)

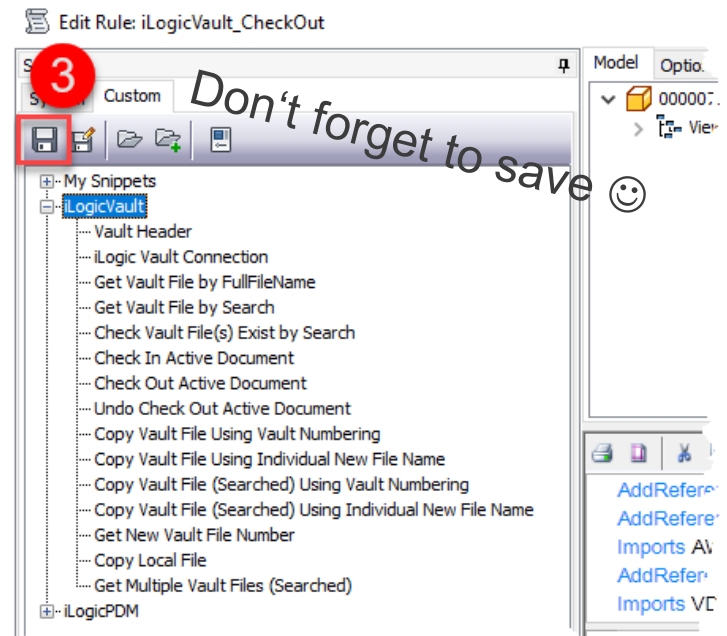
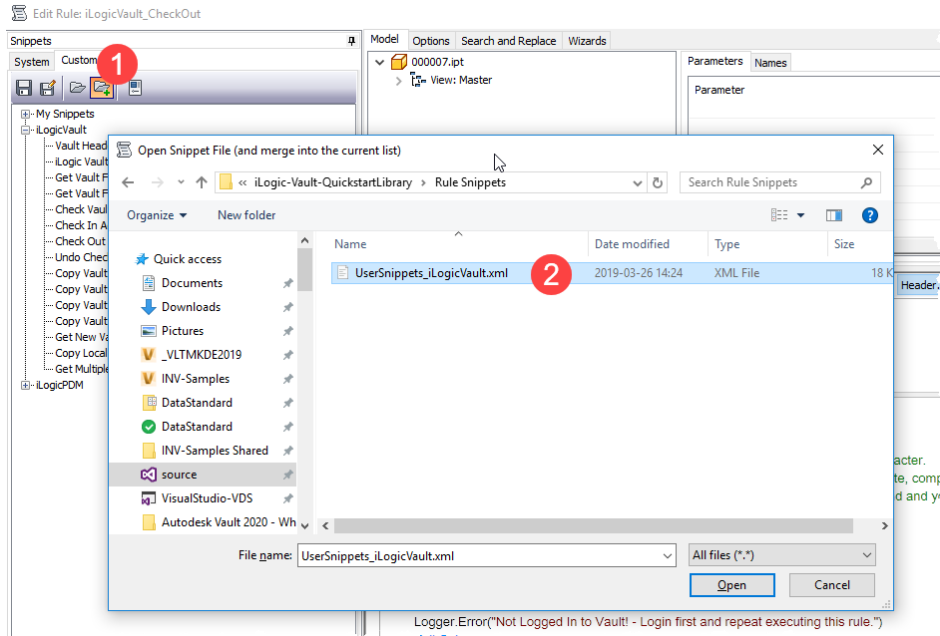
Add Library Extension

- Copy QuickstartiLogicLibrary.* to iLogic default extension folder



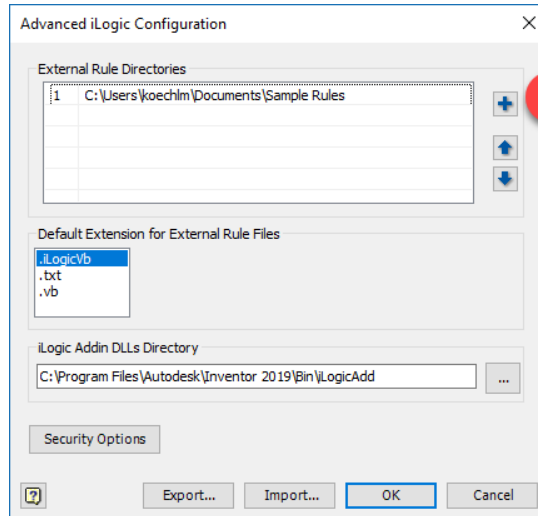
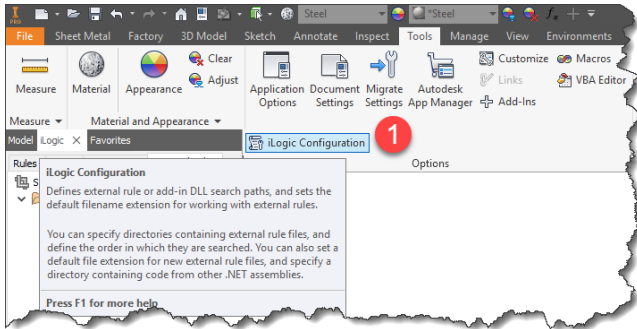
Add iLogic-Vault Snippet Library

- Add/Merge snippets into your existing library

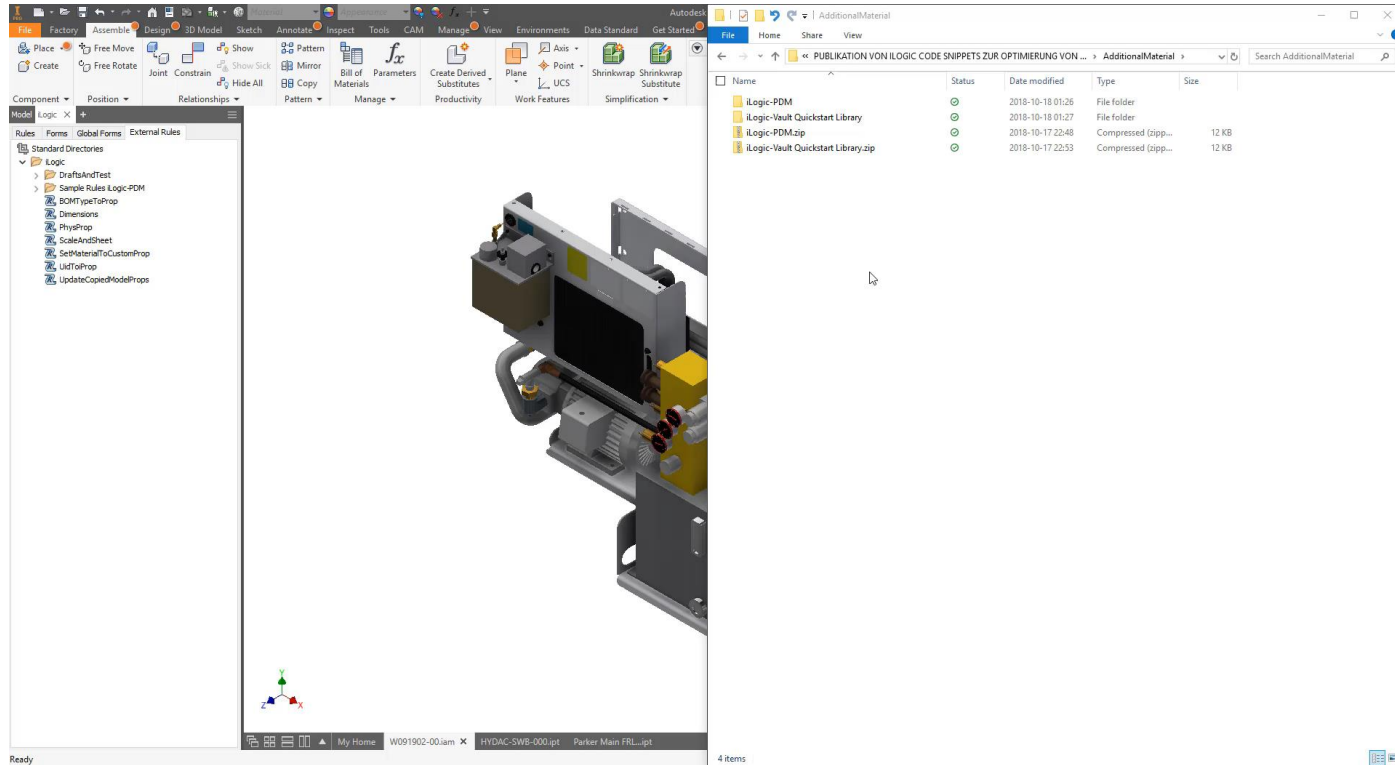


Add Samples

- Configure External Rules directory



iLogic-Vault Quickstart Library | Installation

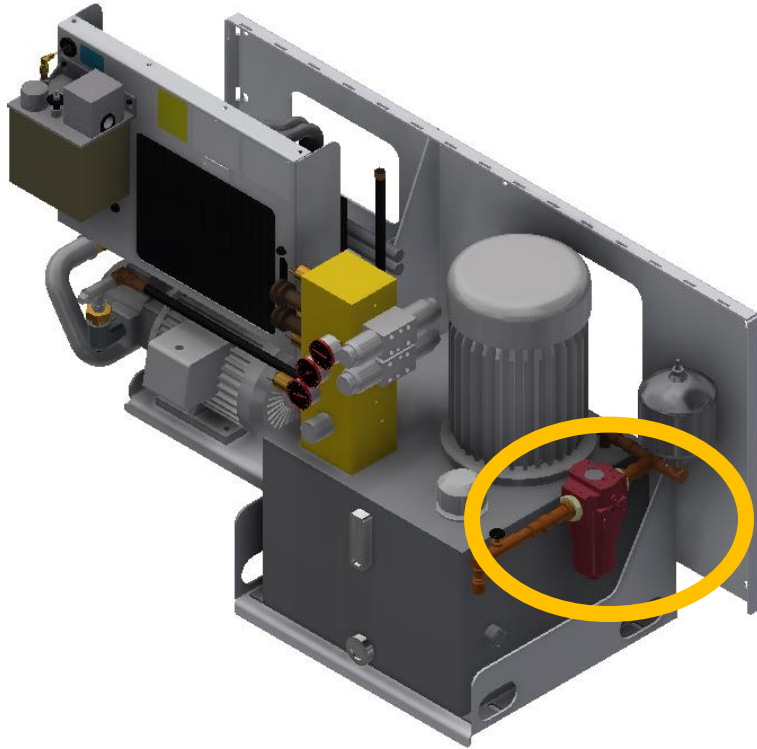




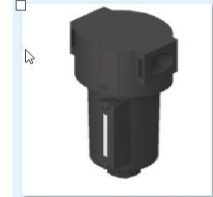
Application Sample | Hydro Power Supply

iLogic | Application Sample

Filter-Types / Variants



Bimbe AP20-C4A1DGF.png



Bimbe AP20-FO4A0D.png



HYDAC-DF_30_TB.png



HYDAC-DFN_40.png



HYDAC-LFN_LFN_40_IB.png



HYDAC-SWB-000.png



Parker Main FRL Unit.png

Workflow iLogic – No Vault Interaction

Static Selection List of Filters

Parameters					
	Parameter Name	Consumed by	Unit/Type	Equation	Nominal Va
+	Model Parameters				
-	User Parameters				
▶	FilterType		Text	HYDAC-DFN_40	
				HYDAC-LFN_LFN_40_IB	
				Parker Main FRL Unit	
				HYDAC-SWB-000	
				HYDAC-DFN_40	
				HYDAC-DF_DFF_500_TF	
				HYDAC-DF_30_TB	
				Bimba AP20-FO4A0D	
				Bimba AP20-C4A1DGF	

Workflow iLogic – No Vault Interaction

Static Selection
List of Filters

Select Filter

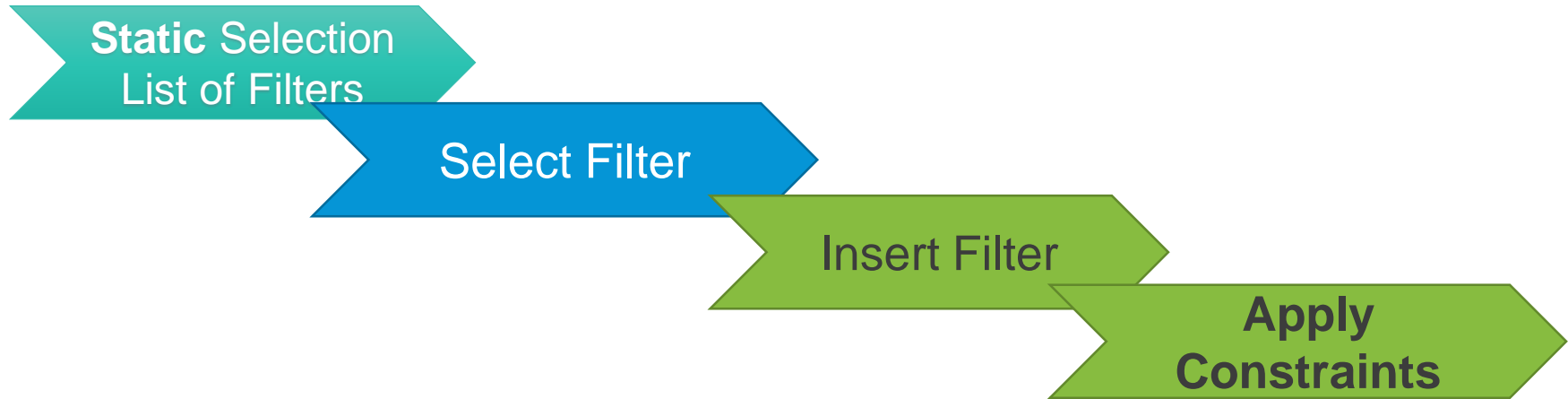


Workflow iLogic – No Vault Interaction



```
ThisAssembly.BeginManage("Group Filter")  
Components.Add("Filter", FullFileName)  
ThisAssembly.EndManage("Group Filter") I
```

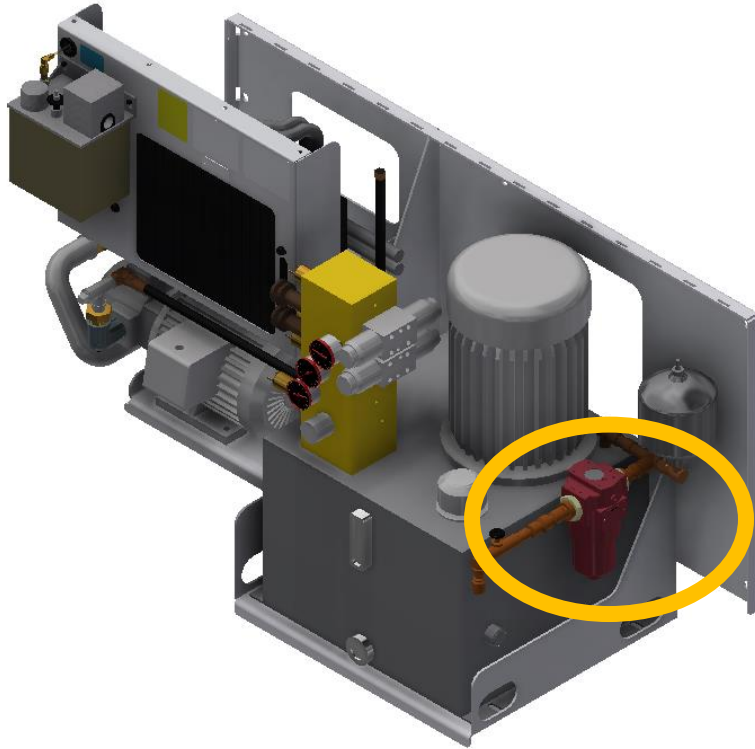
Workflow iLogic – No Vault Interaction



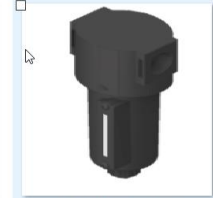
```
Constraints.AddInsert("Insert1", "W0000133-03-I:1", "In", "Filter", "Filter_In",  
axesOpposed := True, distance := 0.0, lockRotation := False, biasPoint1 := Nothing, biasPoint2 := Nothing)  
Constraints.AddInsert("Insert2", "W0000133-03-O:1", "Out", "Filter", "Filter_Out",  
axesOpposed := True, distance := 0.0, lockRotation := False, biasPoint1 := Nothing, biasPoint2 := Nothing)
```

iLogic-Vault | Application Sample

Filter-Types / Variants



Bimbe AP20-C4A1DGF.png



Bimbe AP20-FO4A0D.png



HYDAC-DF_30_TB.png



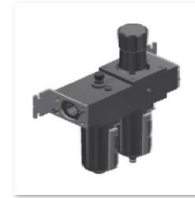
HYDAC-DFN_40.png



HYDAC-LFN_LFN_40_IB.png



HYDAC-SWB-000.png



Parker Main FRL Unit.png

Workflow iLogic – Using Vault Interaction

Current
Selection List

Parameters					
	Parameter Name	Consumed by	Unit/Type	Equation	Nominal v
+	Model Parameters				
-	User Parameters				
▶	FilterType		Text	HYDAC-DFN_40	
				HYDAC-DFN_40	
				HYDAC-SWB-000	
				Parker Main FRL Unit	

Workflow iLogic – Using Vault Interaction



'Build one to many name/value pairs of Property/Value as search criteria;

```
Dim mSearchParams As New System.Collections.Generic.Dictionary(Of String, String) 'add UDP.DisplayName, Value Pairs
```

```
mSearchParams.Add("Part Family", "FAM-00000") 'applies to all filters
```

```
Dim mVaultFiles As String()
```

```
mVaultFiles = iLogicVault.mCheckFilesExistBySearchCriteria(mVltCon, mSearchParams, False) _
```

Workflow iLogic – Using Vault Interaction

Current
Selection List

Update Selection
List by Filters
Available in Vault

Select Filter



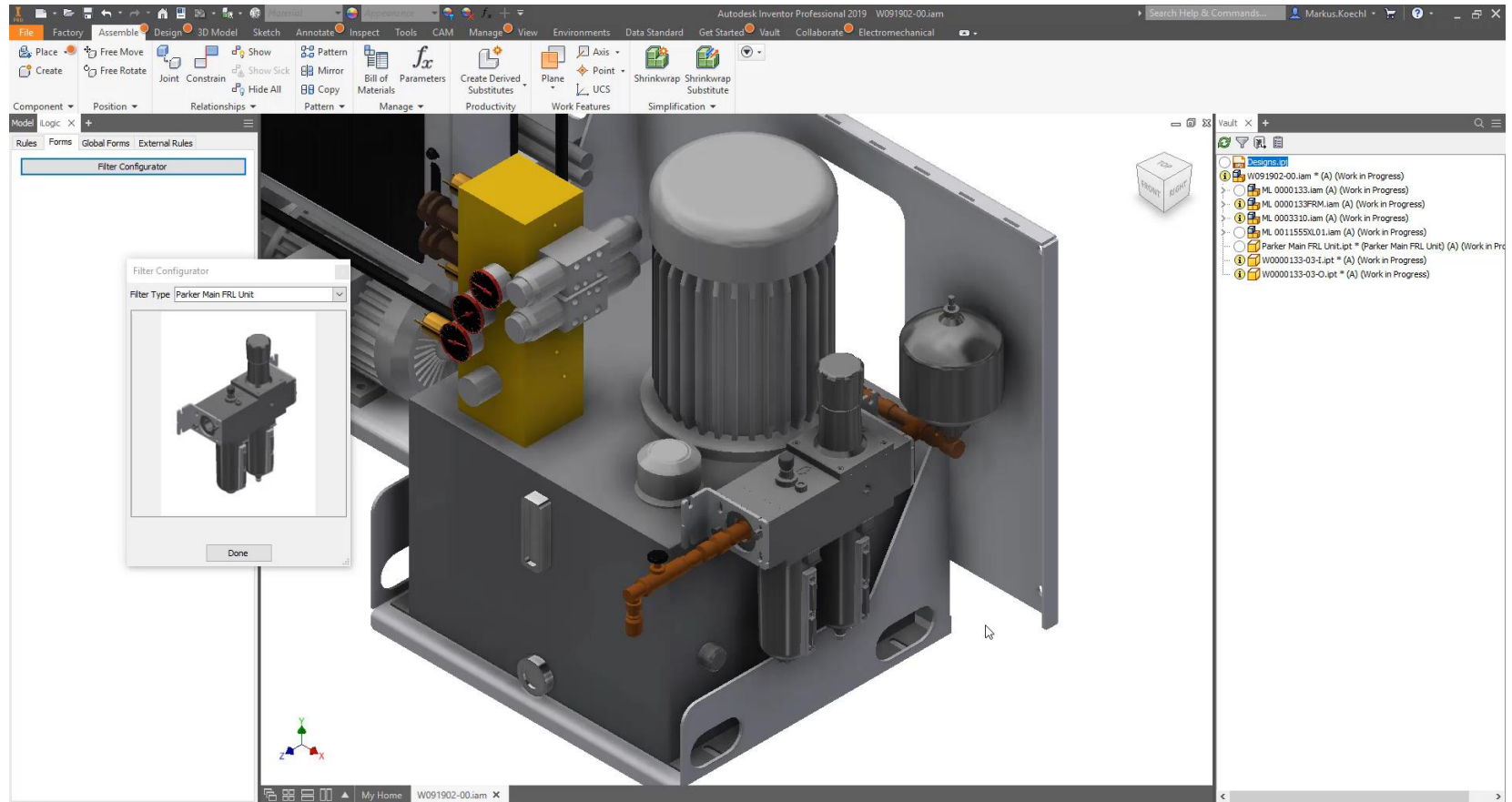
Workflow iLogic – Using Vault Interaction




'Build one to many name/value pairs of Property/Value as search criteria
mSearchParams = New System.Collections.Generic.Dictionary(Of String, String)
mSearchParams.Add("Part Family", "FAM-00000") 'applies to all filters
mSearchParams.Add("Name", FilterType)
'...add as many as required to enable a unique search result

mVaultFile = iLogicVault.mGetFilebySearchCriteria(mVltCon, mSearchParams)

Workflow iLogic – Using Vault Interaction



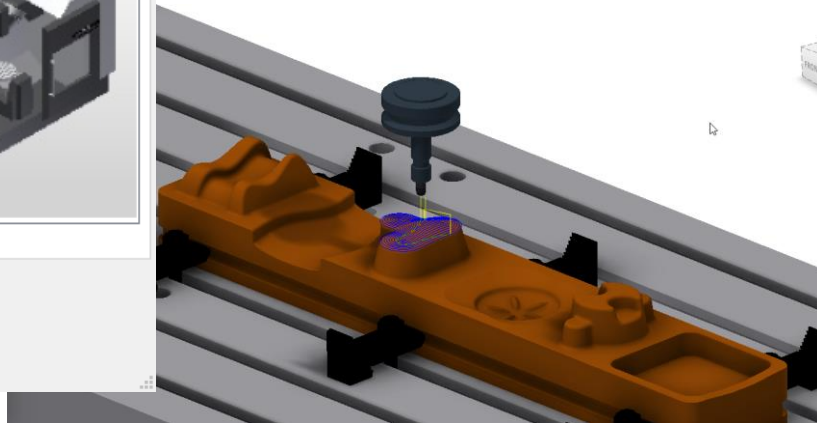
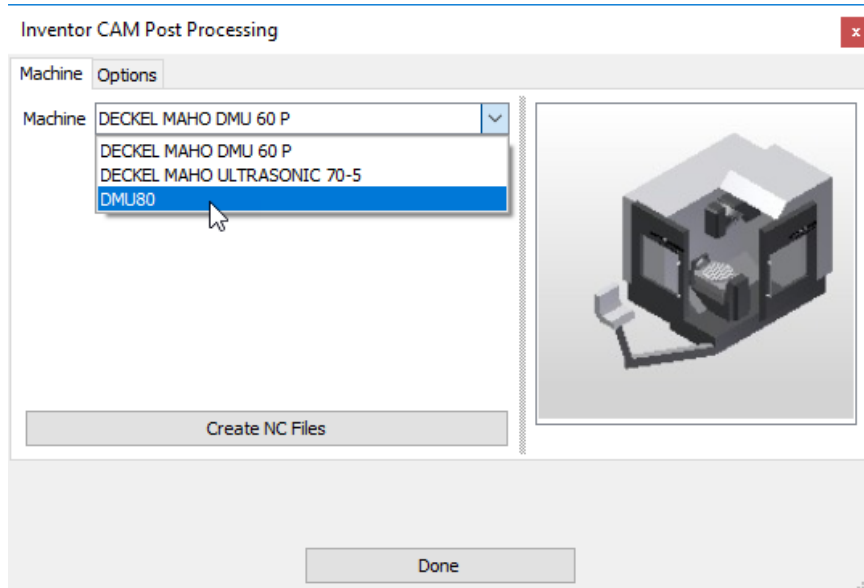


Application Sample – Inventor CAM - Vault

Inventor CAM – Vault – iLogic Design Automation

Automate NC Code Output and Vault File Management

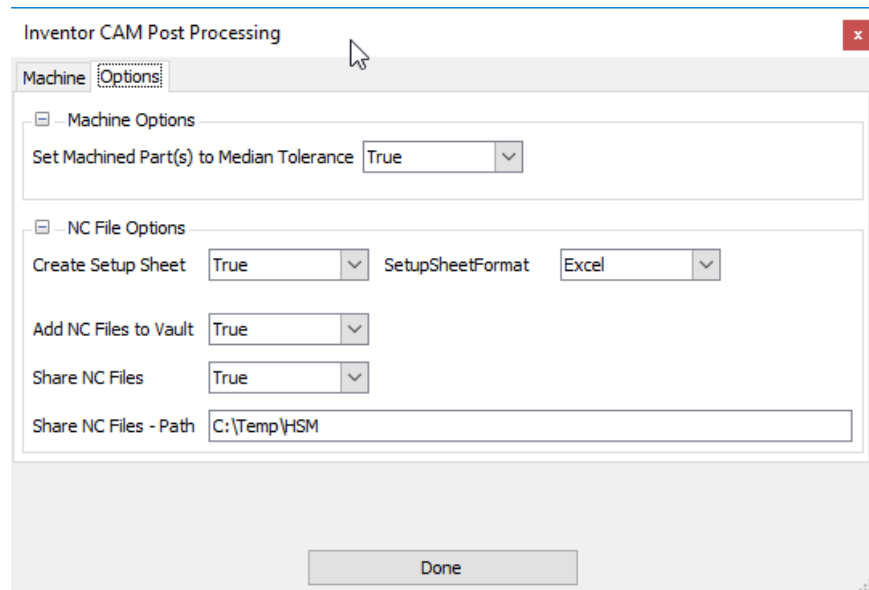
- Activate Inventor CAM-Setup Assembly
 - Select Machine
- Automation
 - Reads available Machines from Vault
 - Download post processor definition



Inventor CAM – Vault – iLogic Design Automation

Automate NC Code Output and Vault File Management

- Activate Inventor CAM-Setup Assembly
 - Select Options



Create NC Files

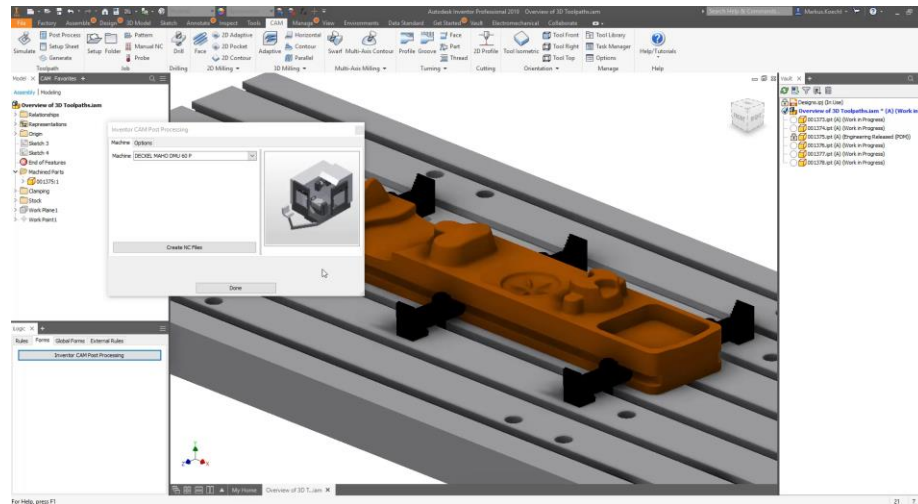


- Automation Machining - Tolerance
 - Iterates one to many work pieces activating median tolerance
- Automation NC-File
 - Create NC file for selected machine
 - Create Setup Sheet
 - Add Machine/NC Code to Vault
 - Copy NC Code/Setup to external share

Inventor CAM – Vault – iLogic Design Automation

Automate NC Code Output and Vault File Management

- Video
 - Create NC output for 1 to n machines
 - Check-in to Vault
 - Include output into Manufacturing Release process

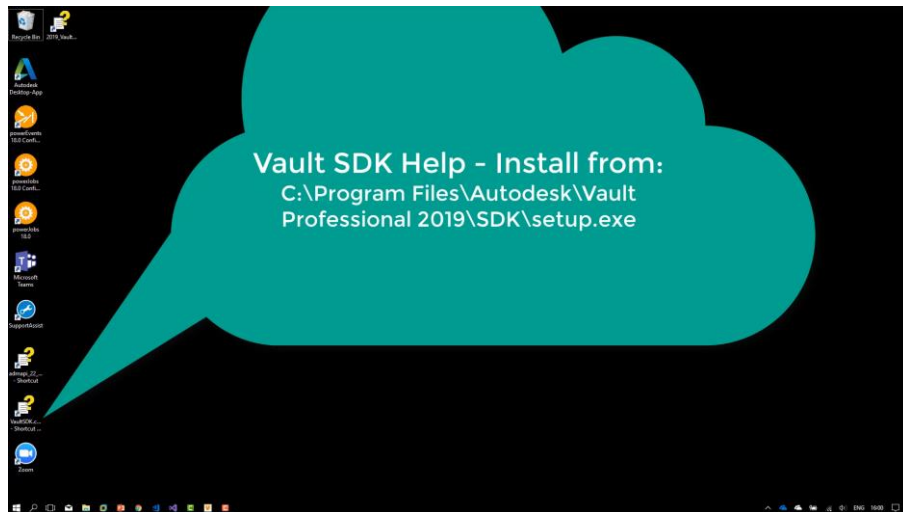
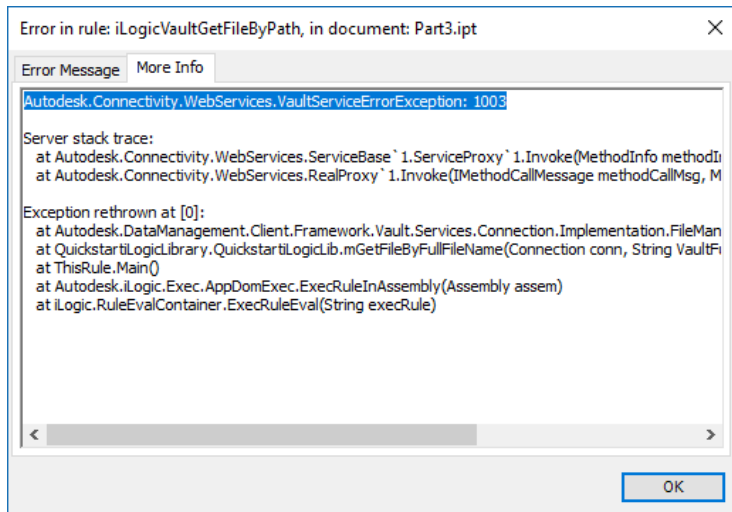


The background features a large, light blue, curved structure resembling a brush or a stylized letter 'C' on the left. To the right, there are several blue geometric shapes, including a large triangle and a smaller circle, set against a white background with faint, repeating blue lines. The overall aesthetic is clean and modern.

Tips & Tricks

Lookup Vault Error Codes

- What can you do if you encountered an error message from Vault?





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