PDM and PLM United

Vault Fusion Lifecycle Connector – a Zero-Code Connector

Christian Gessner

Technical Evangelist

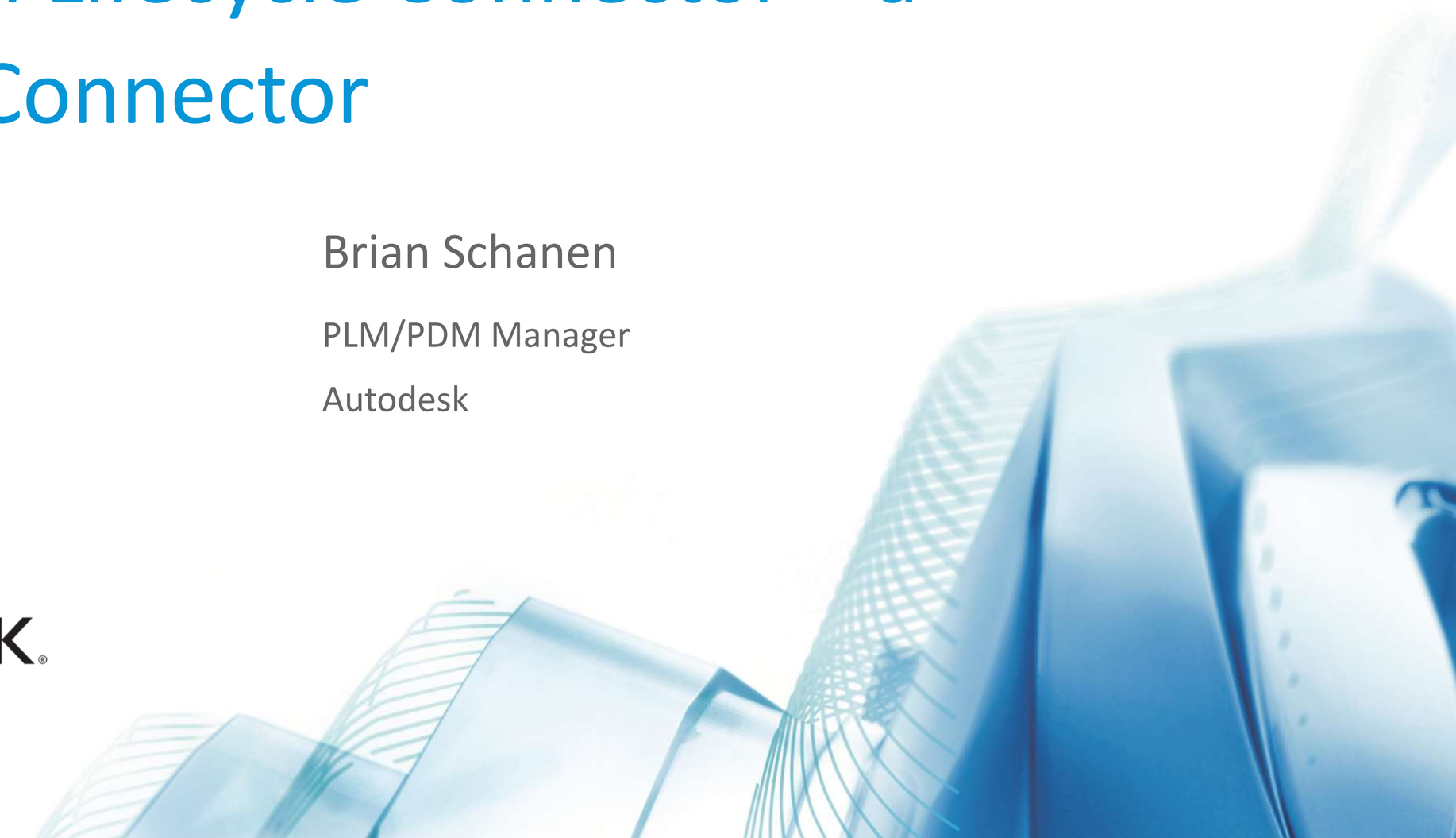
coolOrange

Brian Schanen

PLM/PDM Manager

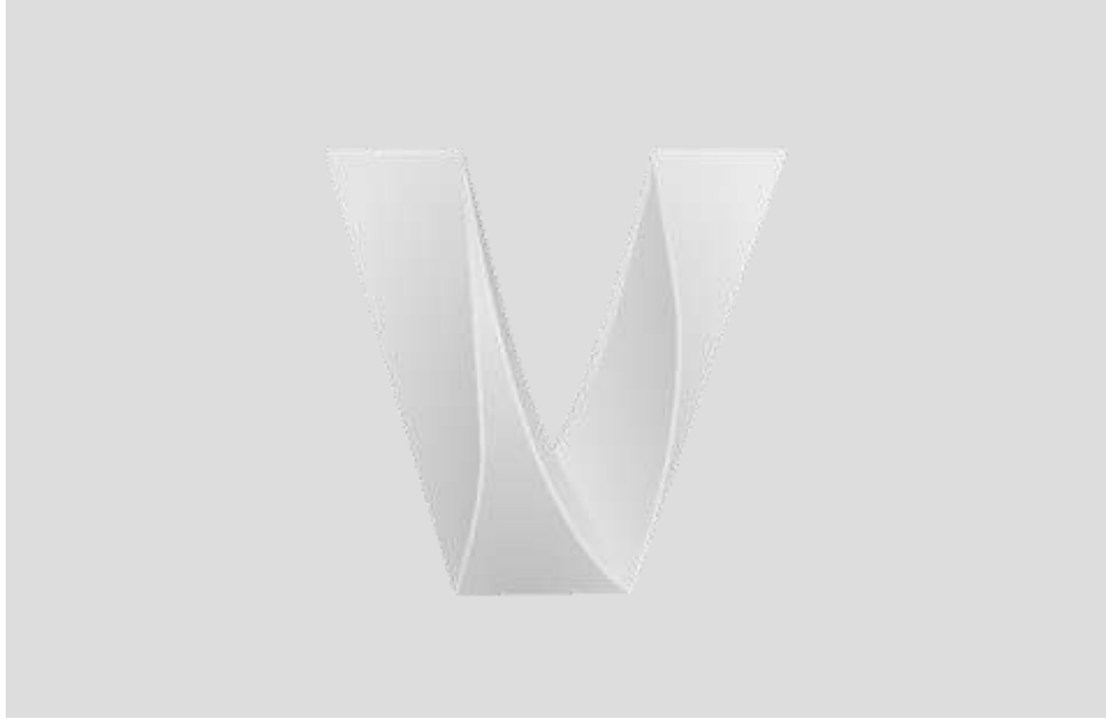
Autodesk

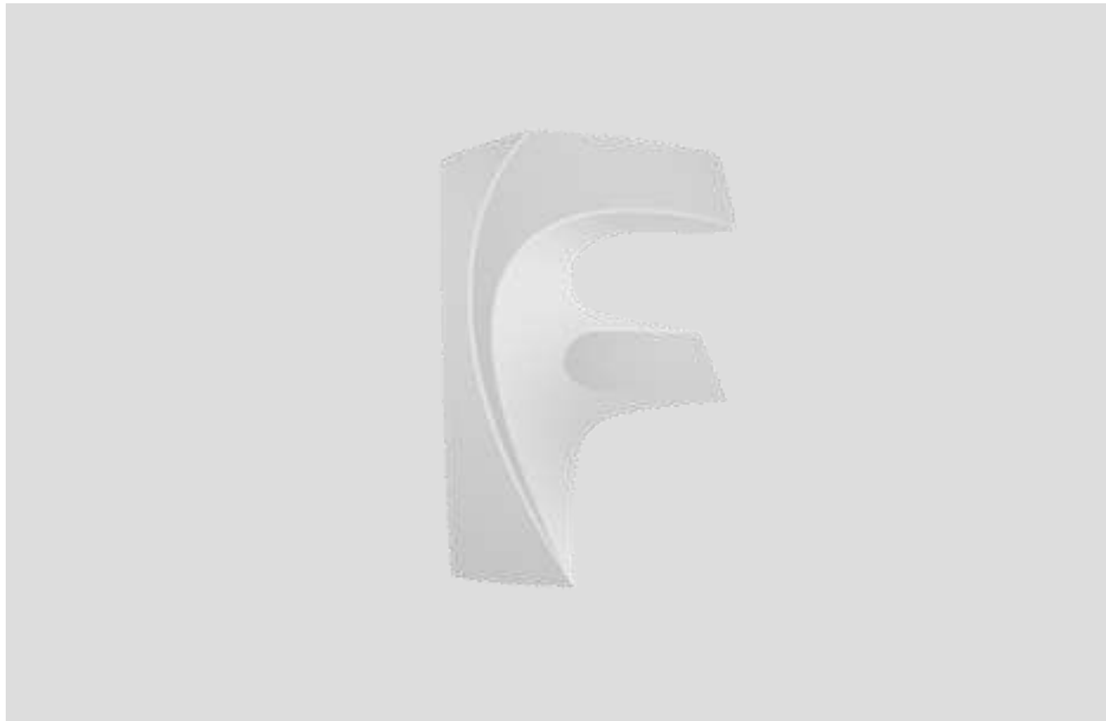
AUTODESK. UNIVERSITY



Agenda

- Advantages of connecting PDM and PLM
- Advantages of vaultFLC
- Configuration
- Workflows and Demos
- Technical Details
- Extensibility and Additional Software
- Help and Support





Advantages of connecting PDM and PLM

Models

Drawings

Libraries

Revision Control

Copy Design

Job Processor

New Product Introduction

Bill of Materials

Online Product Data

Supplier Collaboration

Change Management

Quality Management

DATA

Real time access to latest data online, changes are recorded in change log, revisions get approved and shared by change management

Details (1 von 5)

Nummer	PM0001
Bezeichnung	Feuchtigkeit dringt in die Konsole ein
Kategorie	Bauteilfehler
Problembeschreibung	Siehe beiliegende Aufnahmen
Priorität	Hoch
Auswirkung	Elektronik wird angegriffen
Lösungsvorschlag	Dichtungsringe austauschen
Zieltermin	31/01/2019
PRIO	1

Kontext (2 von 5)

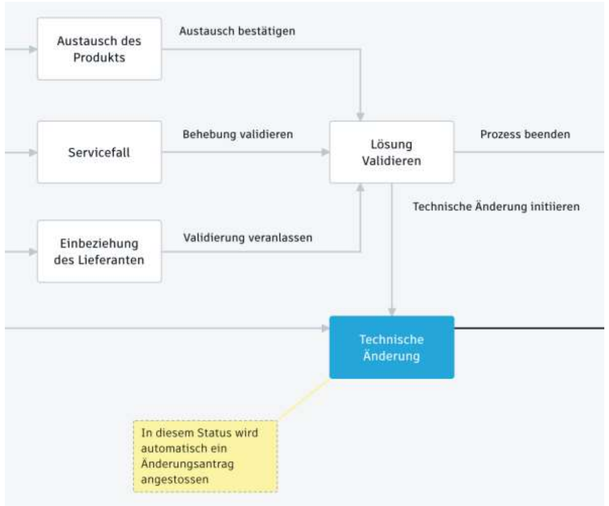
Kunde	Autodesk
Produkte	Monochromes Displaymodul
Artikel	CV-100-016 - IDLER - RETURN RUBBER DISC "C" - 5" DIA 54" B
Seriennummer	456-346993

Fotos / Skizzen (3 von 5)

Problemanalyse (4 von 5)

PROCESSES

Data is passed to responsible stakeholders by online process workflows which determine responsibilities, due tasks and decisions to be taken



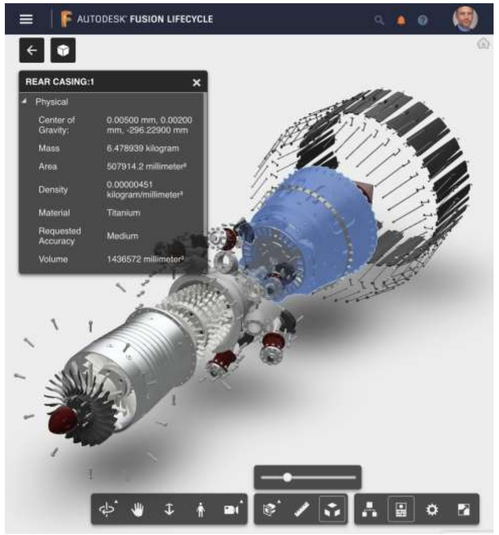
SCHEDULE

Manage tasks and assign them to team members; define target dates and trace timely delivery in real time; receive automatic reminders before delays occur

Aufgabe	Prio	Fortschritt	Verbleibende Tage
Glasdickenberechnung	■■■	80%	9
Konzept entwickeln	■■■	0%	1
Gebläse in CAD austauschen	■■■	0%	-45
Bearbeitung offen	■■■	0%	-50
Dokumentation aktualisieren	■■■	80%	-42
Bohrung anpassen	■■	10%	-51
Kostenkalkulation	?	0%	-16
Funktionale Spezifikation	?	0%	-36
Variante erstellen	?	0%	-43
Vault Aufgabe	?	0%	-43
Gehäuse an Platine angleichen	?	0%	-45

DESIGN

Drawings, Models and BOM data is published upon approval by engineering in Vault



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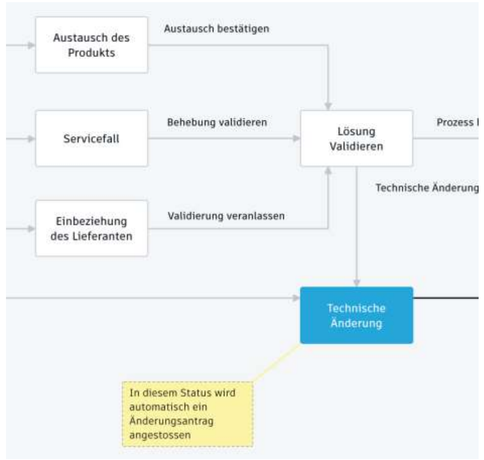

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Anfrage Spachtelschablonen	?	0%	9

ONLINE

Access data at any time from any where – in the office, on the road and while being onsite at your customer

EASY

Simplified and modern UI ensures low training efforts and high level of end user acceptance

APP STORE

Extend your environment at any time with free templates from the App Store and integrated configuration tools

CLOUD

No servers, client installation packages and updates required – everyone is using the latest and greatest software automatically

SALES | ENGINEERING | PREPRODUCTION | PRODUCTION | SERVICE

Product Data Management

Local storage provides best performance possible
Integrated in CAD user interface
Manages drawings, models, templates and libraries
Enables easy design copies
Job processer provides automation capabilities
Implementation driven by engineering methodology only

SALES	ENGINEERING	PREPRODUCTION	PRODUCTION	SERVICE

CRM

ERP

SALES	ENGINEERING	PREPRODUCTION	PRODUCTION	SERVICE

CRM

ERP

Schedule

Requirements

Concept

Task List

Design Review

Costing

BOM

Supplier Collaboration

Specification

Change Request

Change Request

Problem Report

PPAP

Claim

SALES	ENGINEERING	PREPRODUCTION	PRODUCTION	SERVICE

CRM

ERP

20 hours of non value add work per week

SALES	ENGINEERING	PREPRODUCTION	PRODUCTION	SERVICE

Projects
Tasks
Task Templates
Teams
Gate Reviews
Parent Projects

BOM (M/E/S)
Item Master
Item Documents
Revisions

Portfolio
Products
Documents

Data Packages
Deliverables
Change Requests
Design Data
Supplier Audits

Problem Reports
Change Requests
Change Orders
Distribution Lists
Service Activities

Non Conformance
CAPA
Claims

Smart solutions to address unique challenges

On-Premises
Engineering Data

Cloud
Metadata & Processes

Suppliers & Customers

Integrated in CAD User Interface
Local file storage for best performance
Best support for CAD possible
Software release to match CAD

+

Easily Accessible
Instant worldwide deployment
No software installation and maintenance
Flexible & automated business processes

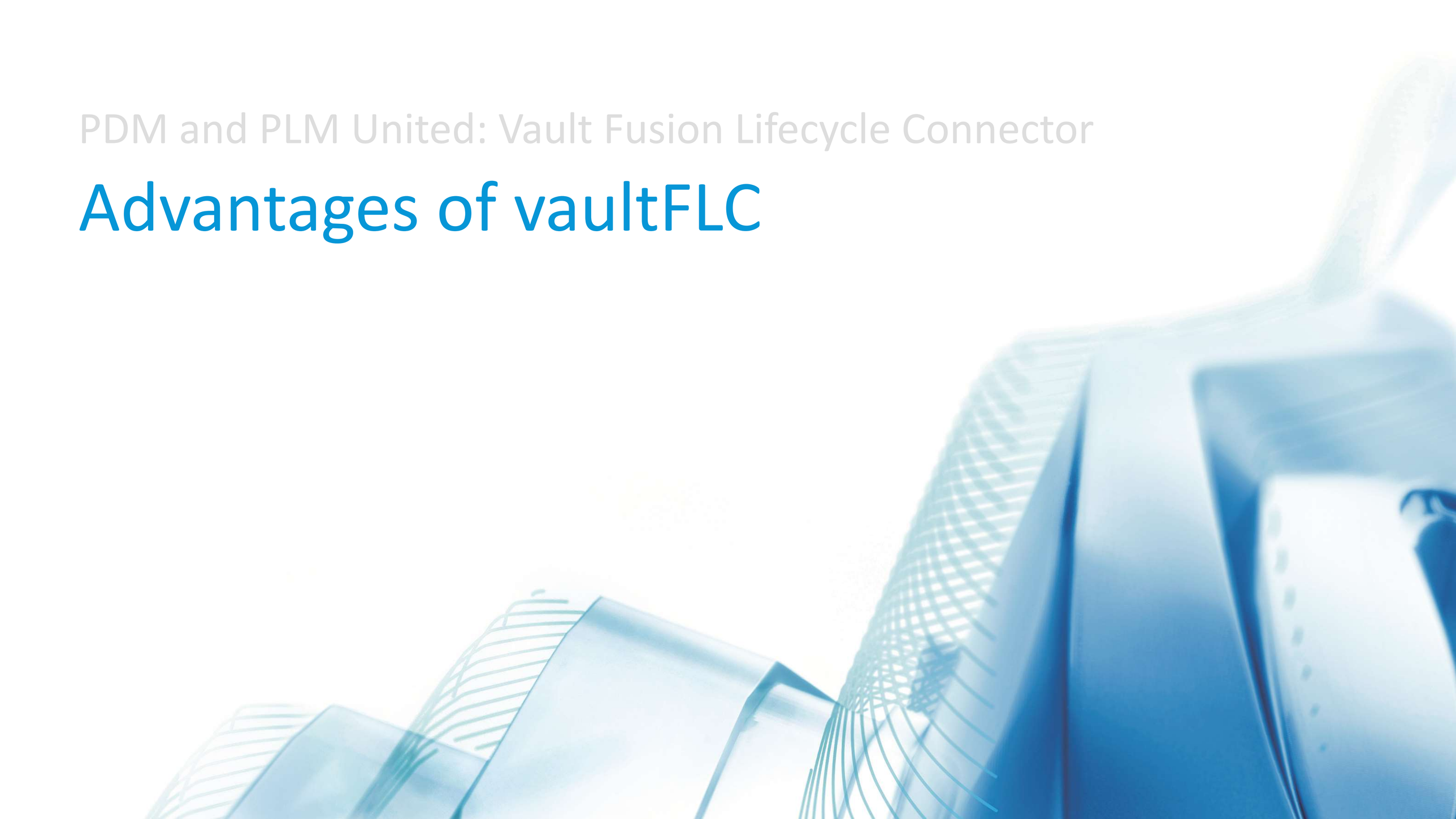
Files remain in Intranet

Global Process Efficiency

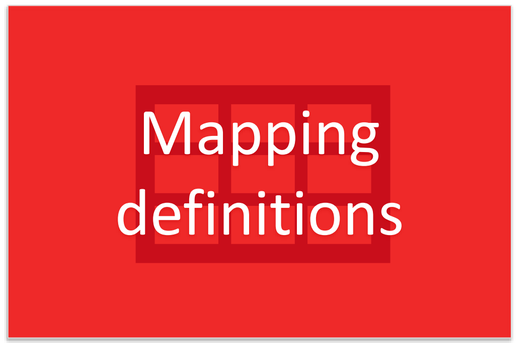
AUTODESK® FUSION LIFECYCLE

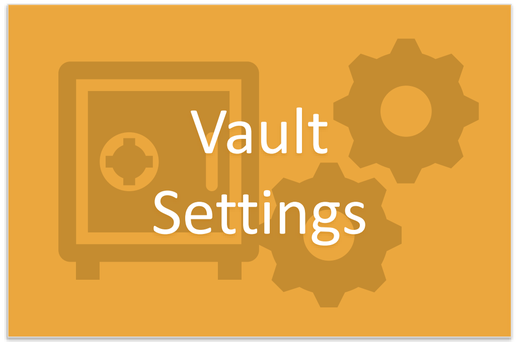
PDM and PLM United: Vault Fusion Lifecycle Connector

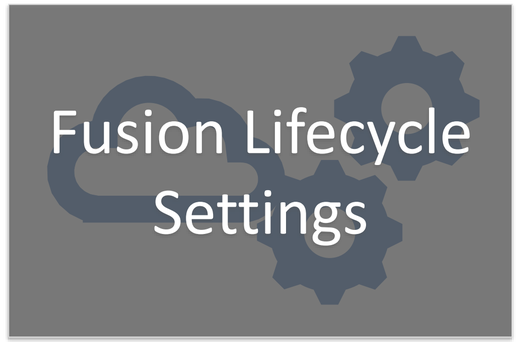
Advantages of vaultFLC

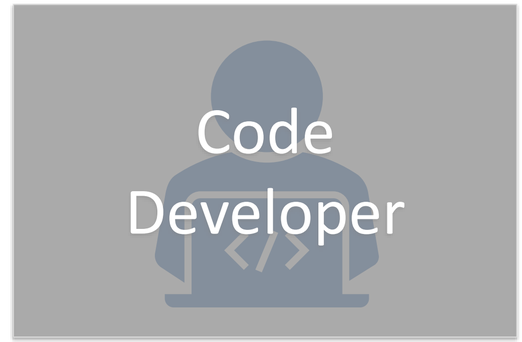


Developing an Interface by yourself?



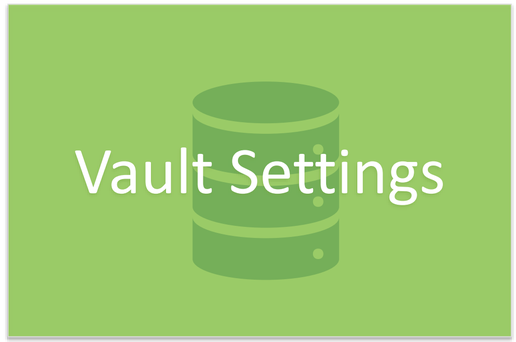






coolOrange

Vault Fusion Lifecycle Connector
vaultFLC

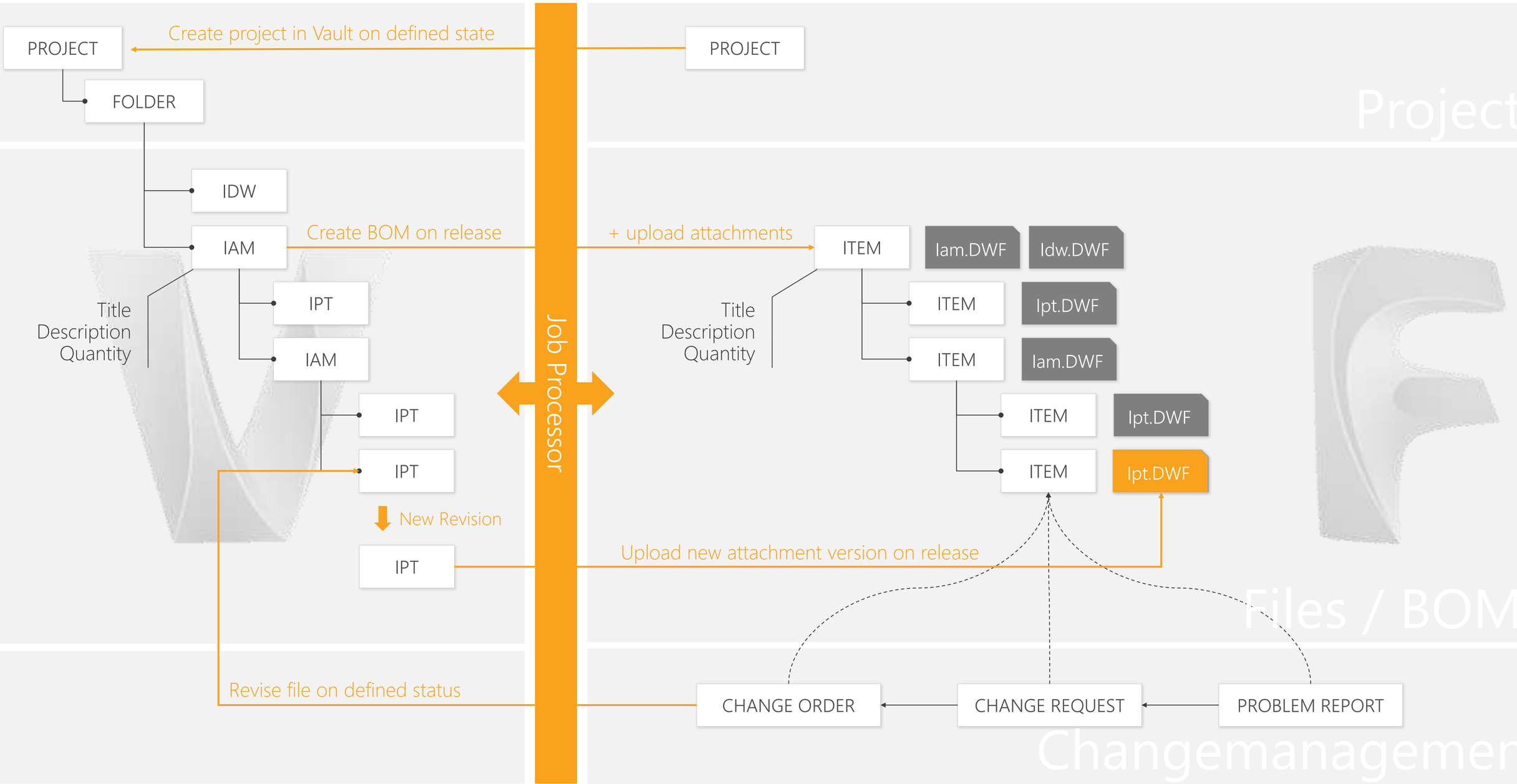


Vault Fusion Lifecycle Connector

=

vaultFLC

Predefined/Standard Workflows



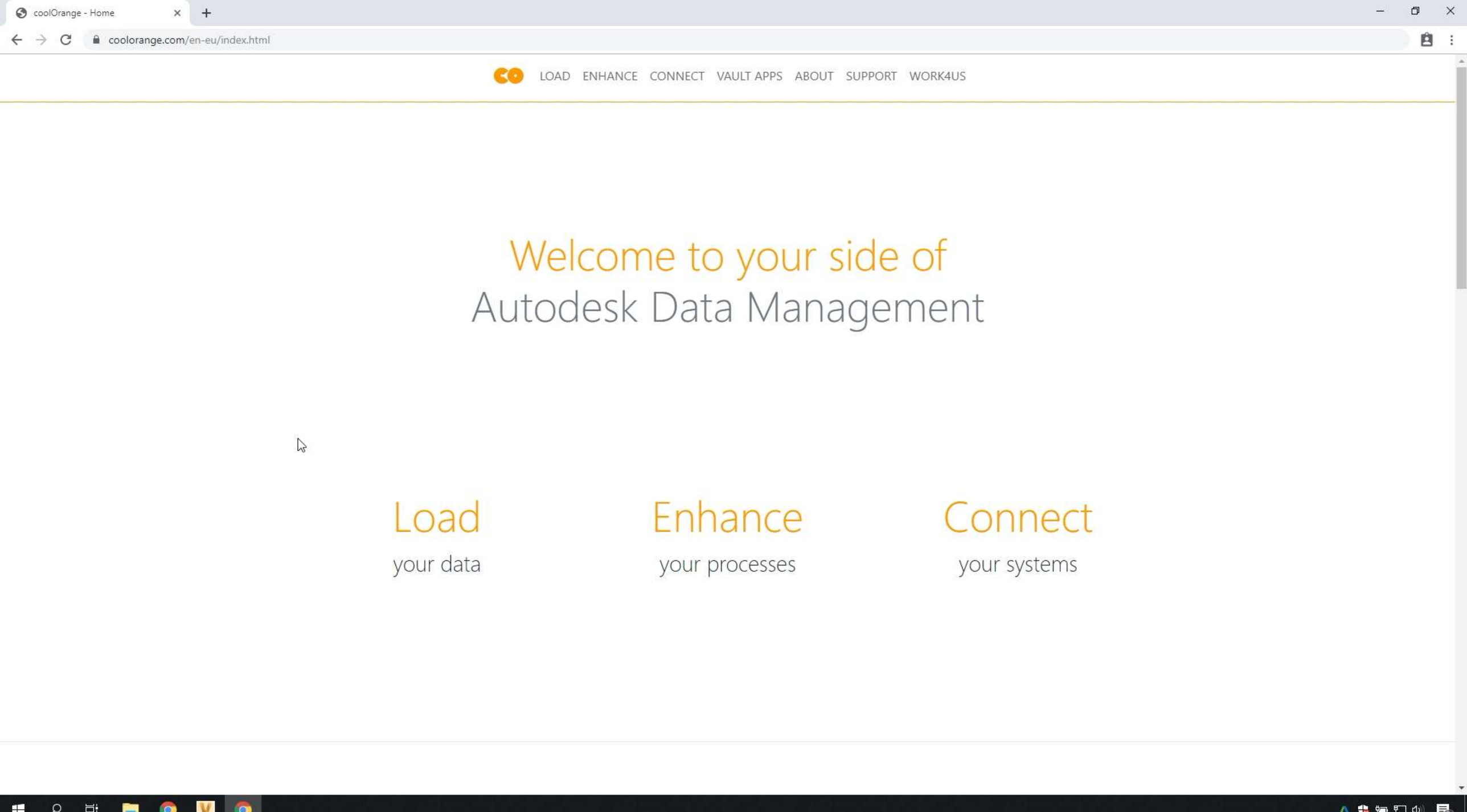
PDM and PLM United: Vault Fusion Lifecycle Connector

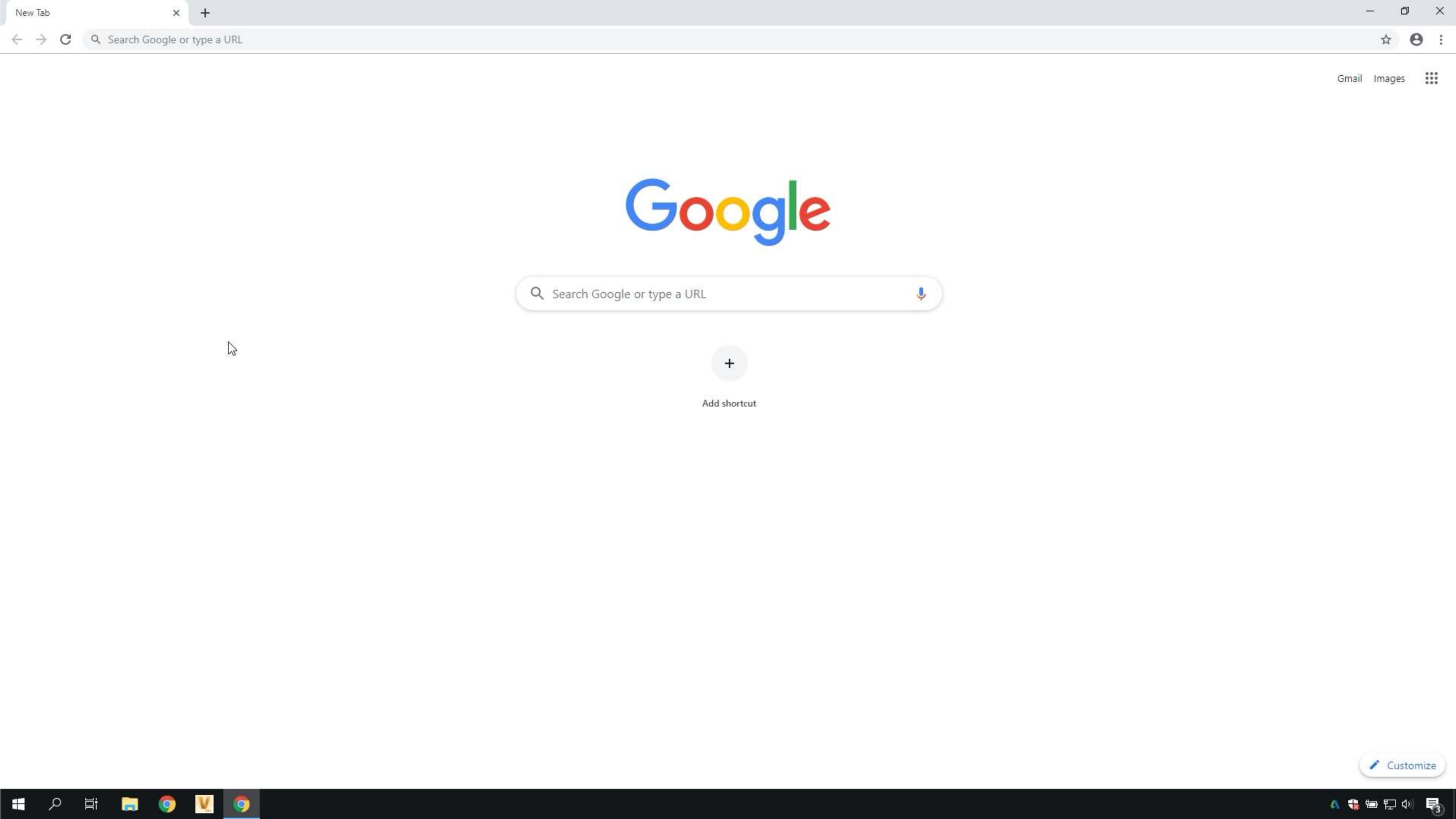
Easy? Easy!

What can you archive in less than 5 minutes?

Download and Install vaultFLC

Setup Communication between Vault and Fusion Lifecycle


coolOrange - Home
coolorange.com/en-eu/index.html
LOAD ENHANCE CONNECT VAULT APPS ABOUT SUPPORT WORK4US
Welcome to your side of
Autodesk Data Management
Load
your data
Enhance
your processes
Connect
your systems


New Tab
Search Google or type a URL
Gmail
Images
Google
Search Google or type a URL
Add shortcut
Customize

View App | Autodesk Forge

Fusion Lifecycle

forge.autodesk.com/myapps/AU%25202019%2520Vault%2520Fusion%2520Lifecycle%2520Connector/view

AUTODESK FORGE

Success Stories | Solutions | Getting Started | Documentation | Community | Support | Pricing

AU 2019 Vault Fus...

APIs

APIs this app will be able to access.

- BIM 360 API
- Data Management API
- Design Automation API
- Design Automation API V3 (Beta)
- Model Derivative API
- Reality Capture API
- Token Flex Usage Data API
- Webhooks API

App information (Created on 11 Oct 2019)

Basic information about your app.

Client ID: HBsY4bGTWXm5sJdF1gZJiu3QSvBL5vJE

Client Secret: ●●●●●●●●●●●●●● REGENERATE

App Name: AU 2019 Vault Fusion Lifecycle Connector

Autodesk Vault Professional 2020

File Edit View Go Tools Actions Help

ToolBarsList Details... New Standard File ... Edit File Datasheet ... Job Dialog Create PDF Share View Download from Cloud Drive

Worklist Pane Quick Sync... Workspace Sync... View Properties Grid Change Category... Change State... Change Revision...

Home

MFG319298 - Administrator

My Worklist

ECO-000002 (31.07.2018)

My Shortcuts

Blower

Fusion Lifecycle Projects

Add new group

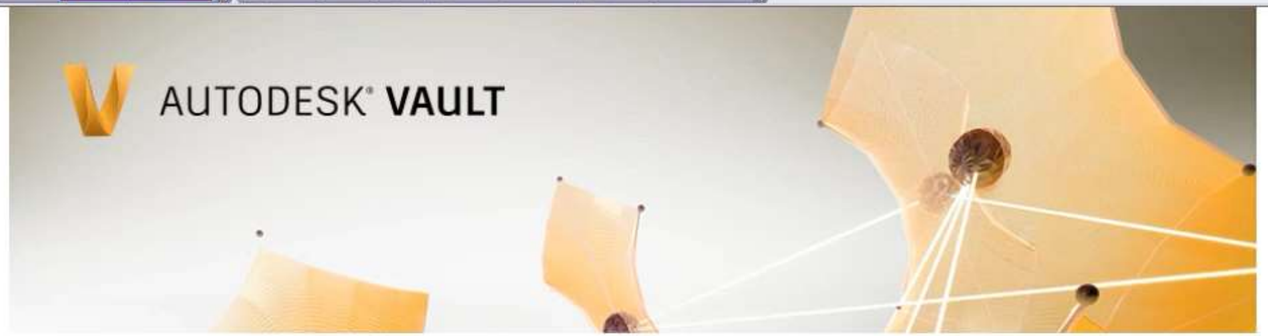
Home

Project Explorer

Classes

Factory Asset

Factory Layout

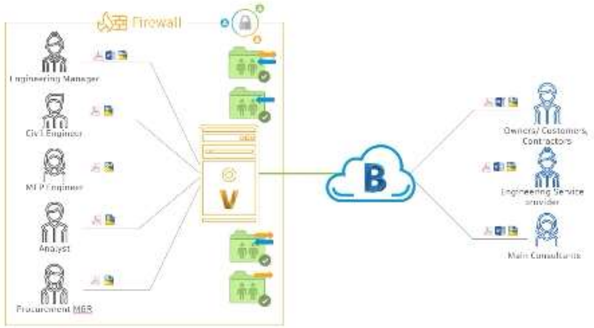


Vault 2020 Family of Products

Autodesk® Vault is purpose-built to help you more efficiently manage your engineering data, improve collaboration within your teams, and take control of your product development processes. Vault is tightly integrated with more than 30 Autodesk design applications and provides powerful revisioning and access control capabilities. With simplified installation and optional multi-site scalability, Vault is used by Autodesk customers worldwide to connect their people and processes so they can get more done, better, in less time.

Project Sync to BIM 360

Customers leveraging Vault as their enterprise solution across the globe and beyond the firewall will benefit from several improvements. Project Sync within Vault Professional 2020 has been extended to support Vault customers in the infrastructure and civil engineering market for streamlined collaboration with their extended project team by having a bi-directional connection with BIM 360.



Copy Design Enhancements

Vault 2020 enhanced user interface makes the copy design workflow easy to understand as well as adds powerful enhancements. Copy Design is now a modeless dialog, and you can go to the source as well as destination file location by selecting the file in the main grid. The copy design dialog can now remain open while you use the Vault client for other commands as well as add files to be copied.

Properties

vm-2020 MFG319298 Administrator

Install a Workspace from the Fusion Lifecycle App Store

Fusion Lifecycle

coolorangeintegration.autodeskplm360.net/admin#section=setuphome&tab=appstore

AUTODESK' FUSION LIFECYCLE

Christian Gessner | Dashboard | Help

Main Menu | Reports | Tools | Administration

Administration App Store

Welcome to the Fusion Lifecycle App Store

Quality Management

Quality Management Powered by Autodesk Fusion Lifecycle delivers the tools manufacturers need to collect and analyze quality data, define inspection standards, track and communicate non-

More information

Lean 5S Auditing

The Lean 5S Audit app, helps you to check that all the 5S processes have been carried out correctly. This app helps you to audit the processes for Sort, Straighten, Shine, Standardization and Sustain.

More information

Manufacturing Asset Management

Get the tools you need to collect and analyze data related to assets so you can keep them available and in good shape.

More information

Equipment calibration

Equipment calibration is a necessary part of any production line, calibration can be painless with proper planning and tracking. With Equipment calibration app you can add all of your calibration

More information

FMEA Analysis

Use the Failure mode and effect analysis (FMEA) app to review as your components, assemblies, and subsystems and record the results for each type for Functional, Design or Process FMEA analysis.

More information

Accident Reports

Avoid penalties and keep a complete record of work-related injuries with the Accident Report App powered by Autodesk Fusion Lifecycle.

More information

Design Review

Manage your design review requirements, issues, concerns, and discuss alternatives with the Design Review App powered by Autodesk Fusion Lifecycle.

More information

Field Failure Request

The Field Failure Request App powered by Autodesk Fusion Lifecycle enables your field technicians to communicate quality issues onsite on any device, and at any time.

More information

Return Merchandise Authorization

The Return Merchandise Authorization App powered by Autodesk Fusion Lifecycle provides a standardized and repeatable means to manage the RMA process.

More information

Document Control

The Document Control App powered by Autodesk Fusion Lifecycle provides an effective and secure means to distribute, enforce standards, and manage change of your documents.

More information

Customer Management

The Customer Management App powered by Autodesk Fusion Lifecycle can connect your customer data to all of your processes currently or soon to be managed by Autodesk Fusion Lifecycle.

More information

Marketing Asset Management

Marketing Asset Management app can be used for the management, control, tracking, and distribution of brand assets, marketing materials, sales tools and creative materials.

More information

CE Marking

Use the CE Marking App to manage your approval stages needed for the affixing of the CE marking on your product. Track when the EC Declaration Of

Supplier Quarterly Business Review (SQBR)

Supplier Quarterly Business Review (SQBR)helps everyone in the organization to visualize the Supplier Performance

Supplier Corrective Action Request (SCAR)

A supplier quality action report (SCAR) was derived from the need to issue suppliers a corrective action to a problem that occurred due to their product or

Octopart - Item & BOM

The Octopart - Item & BOM app allows you to create part items that link automatically to the Octopart search engine. Octopart develops search technology

AUTODESK.

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AUTODESK' FUSION LIFECYCLE

- **Problem Report** - Basic Workspace with workflow
- **Product Description Generator** - Basic Workspace
- **Products** - Basic Workspace with workflow
- **Project Task Template** - Basic Workspace
- **Return Merchandise Authorization** - Basic Workspace with workflow
- **SCAR Supplier Corrective Action Request** - Basic Workspace with workflow
- **SQBR Supplier Quarterly Business Review** - Basic Workspace with workflow
- **Suppliers** - Supplier Management with workflow
- **Tasks** - Basic Workspace with workflow
- **Training** - Basic Workspace with workflow

Vault Items and BOMs - Revision Controlled Workspace

Workspace Settings	The name, description, type of this workspace and other details
Item Details Tab	Configure fields and sections, customize layout and add validation in the Item Details tab
Descriptor	Specify the fields from Item Details tab that should be part of the workspace's descriptor
Grid Tab	Configure columns, customize layout and add validation in the Grid Tab
Managed Items Tab	Configure custom columns, customize layout and add validation in the Managed Items Tab.
Bill of Materials Tab	Configure custom columns, customize layout and add validation in the Bill of Materials Tab.
Sourcing Tab	Configure custom columns, customize layout and add validation in the Sourcing Tab.
Workspace Relationships	When adding items in the Bill of Materials, Relationships, and Managed Items Tabs configure which workspaces are available
Tab Names	Override the default tab names and change their order
Print Views	Configure print views of this workspace
Advanced Print Views	Configure advanced print views of this workspace
Behaviors	Configure behaviors of this workspace

Clone
Purge
Delete
Re-index
Refresh derived fields

Workspace and Mapping Configuration

Autodesk Vault Professional 2020

File Edit View Go Tools Actions Help

ToolBarsList | Details... | New Standard File ... | Edit File Datasheet ... | Job Dialog | Create PDF | Share View | Download from Cloud Drive

Worklist Pane | Quick Sync... | Workspace Sync... | View Properties Grid | Change Category... | Change State... | Change Revision...

Home

- MFG319298 - Administrator
  - Change Order List
  - Item Master
  - Project Explorer ($)
  - Classes
  - Factory Asset
  - Factory Layout
  - Groups
  - Main Groups
  - Organisations
  - Persons
  - Segments
  - Sub Groups
  - Tasks
  - Terms
  - My Search Folders

My Worklist

ECO-000002 (31.07.2018)

My Shortcuts

- Blower
- Fusion Lifecycle Projects

Add new group

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Project Explorer
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Factory Asset
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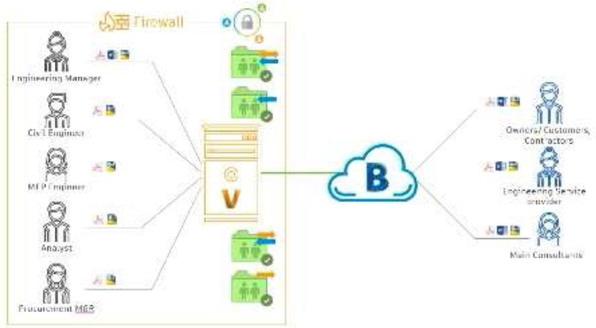

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Properties

10 Object(s) (0 selected)

vm-2020 | MFG319298 | Administrator

Autodesk Vault Professional 2020

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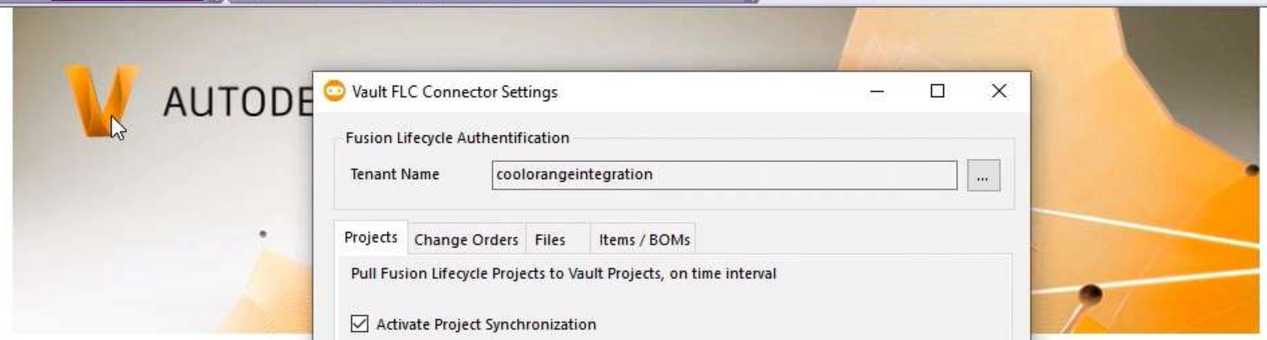

Vault 2020 Family of F

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Project Sync to BIM 3

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Vault FLC Connector Settings

Fusion Lifecycle Authentification

Tenant Name: coolorangeintegration ...

Projects | Change Orders | Files | Items / BOMs

Pull Fusion Lifecycle Projects to Vault Projects, on time interval

☑ Activate Project Synchronization

Fusion Lifecycle

Workspace: Products

Project Name: Number

Valid States: Development, Production ...

Vault

Target Folder: $/Designs/Fusion Lifecycle Projects ...

Folder Category: Project

☑ Copy Folder Structure from Template Folder when new Folders are created in Vault

Folder Structure Template Folder: $/Templates/Fusion Lifecycle ...

Property Mapping

Fusion Lifecycle	Vault
Description	Description
Number	Project Number

New | Delete

Scheduled Job

Interval: 10 Minutes Priority: 100

Save | Cancel

Properties

10 Object(s) (0 selected)

vm-2020 | MFG319298 | Administrator

Autodesk Vault Professional 2020

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  - Sub Groups
  - Tasks
  - Terms
  - My Search Folders

My Worklist

ECO-000002 (31.07.2018)

My Shortcuts

- Blower
- Fusion Lifecycle Projects

Add new group

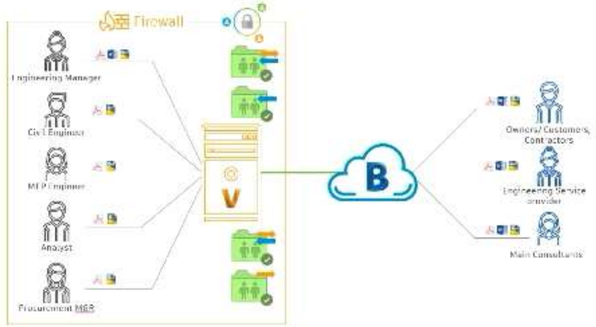
Home
Project Explorer
Classes
Factory Asset
Factory Layout

Vault 2020 Family of Products

Autodesk® Vault is purpose-built to help you more efficiently manage your engineering data, improve collaboration within your teams, and take control of your product development processes. Vault is tightly integrated with more than 30 Autodesk design applications and provides powerful revisioning and access control capabilities. With simplified installation and optional multi-site scalability, Vault is used by Autodesk customers worldwide to connect their people and processes so they can get more done, better, in less time.

Project Sync to BIM 360

Customers leveraging Vault as their enterprise solution across the globe and beyond the firewall will benefit from several improvements. Project Sync within Vault Professional 2020 has been extended to support Vault customers in the infrastructure and civil engineering market for streamlined collaboration with their extended project team by having a bi-directional connection with BIM 360.



Copy Design Enhancements

Vault 2020 enhanced user interface makes the copy design workflow easy to understand as well as adds powerful enhancements. Copy Design is now a modeless dialog, and you can go to the source as well as destination file location by selecting the file in the main grid. The copy design dialog can now remain open while you use the Vault client for other commands as well as add files to be copied.

Properties

10 Object(s) (0 selected)

vm-2020 MFG319298 Administrator

PDM and PLM United: Vault Fusion Lifecycle Connector

vaultFLC in Action

Autodesk Vault Professional 2020

Sign In

File Edit View Go Tools Actions Help

ToolBarsList Details... Labels... New Standard File ... Edit File Datasheet ... Job Dialog Create PDF Share View Download from Cloud Drive

Default View Quick Sync... Workspace Sync... View Properties Grid Change Category... Change State... Change Revision...

Project Explorer

- Project Explorer ($)
  - Content Center Files
  - Designs
  - ItemBOMs
  - Libraries
  - Plot Sets
  - Sync BIM 360
  - Sync F Team
  - Templates
  - xDMS
  - My Search Folders

My Shortcuts

- Blower
- Suspension Fork
- Fusion Lifecycle Projects

Add new group

Home

Project Explorer

Classes

Factory Asset

Factory Layout

Designs

Search Designs

Name	State	Revision	Part Number	Description	Project Number
Folder					
CAD Admins ONLY				Accessible to 'Configuration Administrators' group members ...	
DXF					
Factory Asset Library				Replacement for system library	
Factory Asset Library Source				Repository for source files of published asset library compone...	
FDU Tutorial				Data Set of FDU Tutorial Download	
Fusion Lifecycle Projects					
Imported Data				Predefined Import Folder	
Inventor Sample Data				Public available sample data	
P-00000	Order			FDU Demo FY20	
P-00001	Bid			Laminating Plant	
P-00003	Order			Piping Suspension Trolley	
P-00014	Order			Taylored Airblow Device 40kW	

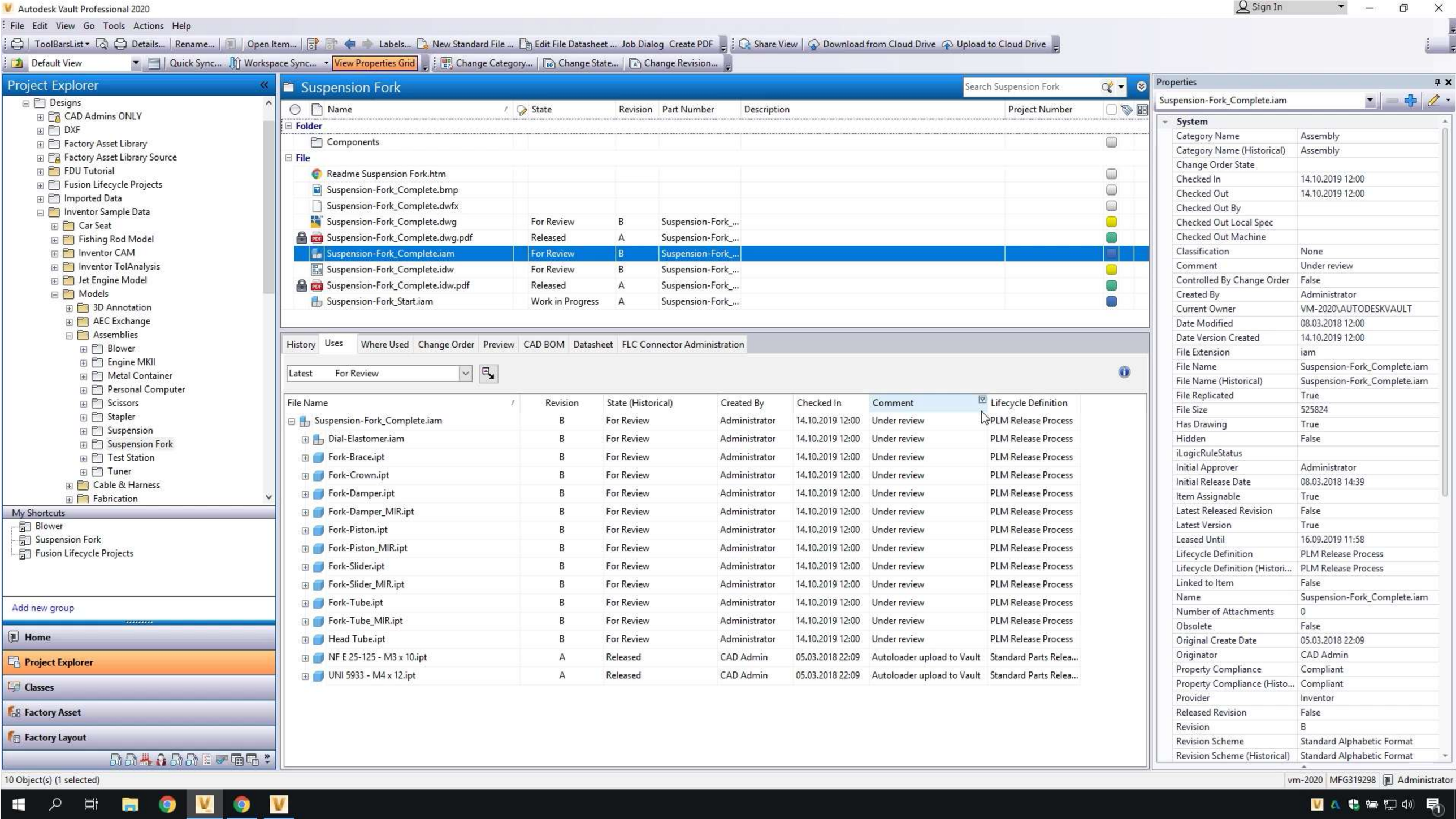
Properties

Designs

System	
Category Name	Folder
Create Date	05.03.2018 16:54
Created By	CAD Admin
Current Owner	VM-2020\AUTODESKVAULT
Folder Path	$/Designs
Leased Until	16.09.2019 11:58
Lifecycle Definition	
Name	Designs
Obsolete	False
Property Compliance	Compliant
State	
User Defined	
Description	Inventor Workspace, recommend...
Title	Design and Engineering

25 Object(s) (0 selected)

vm-2020 MFG319298 Administrator


Autodesk Vault Professional 2020
Sign In
File Edit View Go Tools Actions Help
ToolBarsList Details... Rename... Open Item... Labels... New Standard File ... Edit File Datasheet ... Job Dialog Create PDF Share View Download from Cloud Drive Upload to Cloud Drive
Default View Quick Sync... Workspace Sync... View Properties Grid Change Category... Change State... Change Revision...
Project Explorer
Designs
CAD Admins ONLY
DXF
Factory Asset Library
Factory Asset Library Source
FDU Tutorial
Fusion Lifecycle Projects
Imported Data
Inventor Sample Data
Car Seat
Fishing Rod Model
Inventor CAM
Inventor TolAnalysis
Jet Engine Model
Models
3D Annotation
AEC Exchange
Assemblies
Blower
Engine MKII
Metal Container
Personal Computer
Scissors
Stapler
Suspension
Suspension Fork
Test Station
Tuner
Cable & Harness
Fabrication
My Shortcuts
Blower
Suspension Fork
Fusion Lifecycle Projects
Add new group
Home
Project Explorer
Classes
Factory Asset
Factory Layout
Suspension Fork
Search Suspension Fork
Name State Revision Part Number Description Project Number
Folder
Components
File
Readme Suspension Fork.htm
Suspension-Fork_Complete.bmp
Suspension-Fork_Complete.dwfx
Suspension-Fork_Complete.dwg For Review B Suspension-Fork_...
Suspension-Fork_Complete.dwg.pdf Released A Suspension-Fork_...
Suspension-Fork_Complete.iam For Review B Suspension-Fork_...
Suspension-Fork_Complete.idw For Review B Suspension-Fork_...
Suspension-Fork_Complete.idw.pdf Released A Suspension-Fork_...
Suspension-Fork_Start.iam Work in Progress A Suspension-Fork_...
History Uses Where Used Change Order Preview CAD BOM Datasheet FLC Connector Administration
Latest For Review
File Name Revision State (Historical) Created By Checked In Comment Lifecycle Definition
Suspension-Fork_Complete.iam B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Dial-Elastomer.iam B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Fork-Brace.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Fork-Crown.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Fork-Damper.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Fork-Damper_MIR.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Fork-Piston.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Fork-Piston_MIR.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Fork-Slider.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Fork-Slider_MIR.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Fork-Tube.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Fork-Tube_MIR.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
Head Tube.ipt B For Review Administrator 14.10.2019 12:00 Under review PLM Release Process
NF E 25-125 - M3 x 10.ipt A Released CAD Admin 05.03.2018 22:09 Autoloader upload to Vault Standard Parts Relea...
UNI 5933 - M4 x 12.ipt A Released CAD Admin 05.03.2018 22:09 Autoloader upload to Vault Standard Parts Relea...
Properties
Suspension-Fork_Complete.iam
System
Category Name Assembly
Category Name (Historical) Assembly
Change Order State
Checked In 14.10.2019 12:00
Checked Out 14.10.2019 12:00
Checked Out By
Checked Out Local Spec
Checked Out Machine
Classification None
Comment Under review
Controlled By Change Order False
Created By Administrator
Current Owner VM-2020\AUTODESKVAULT
Date Modified 08.03.2018 12:00
Date Version Created 14.10.2019 12:00
File Extension iam
File Name Suspension-Fork_Complete.iam
File Name (Historical) Suspension-Fork_Complete.iam
File Replicated True
File Size 525824
Has Drawing True
Hidden False
iLogicRuleStatus
Initial Approver Administrator
Initial Release Date 08.03.2018 14:39
Item Assignable True
Latest Released Revision False
Latest Version True
Leased Until 16.09.2019 11:58
Lifecycle Definition PLM Release Process
Lifecycle Definition (Histori... PLM Release Process
Linked to Item False
Name Suspension-Fork_Complete.iam
Number of Attachments 0
Obsolete False
Original Create Date 05.03.2018 22:09
Originator CAD Admin
Property Compliance Compliant
Property Compliance (Histo... Compliant
Provider Inventor
Released Revision False
Revision B
Revision Scheme Standard Alphabetic Format
Revision Scheme (Historical) Standard Alphabetic Format
10 Object(s) (1 selected)
vm-2020 MFG319298 Administrator

File Edit View Go Tools Actions Help

ToolBarsList Details... Rename... Labels... Show Data Standard Log Window New Standard File ... Edit File Datasheet ... Share View Download from Cloud Drive Upload to Cloud Drive

Default View Quick Sync... Workspace Sync... View Properties Grid Change Category... Change State... Change Revision...

Home

- Content Center Files
- Designs
  - AutoCAD E Sample Dat
  - AutoCAD M Sample Da
  - CAD Admins ONLY
  - Factory Asset Library
  - Factory Asset Library Sa
  - FDU Tutorial
  - FLC Products
  - Imported Data
  - Inventor Sample Data
    - Boxermotor
    - Car Seat
    - Ember
    - Fishing Rod Model
    - Inventor CAM
    - Inventor TolAnalysi
    - Jet Engine Model
    - Models
    - RCCF
      - 00 standard con
      - 01 supplier com
      - Parts
      - Sub Assemblies
    - Trial Sample Data
  - P-00000
  - P-00001
  - P-00003
  - P-00014
  - P-00022
  - P-00023
  - P-00024
  - P-00025
  - P-00026
  - P-00027
  - SR-0001
  - SR-0002
  - SR-0003
  - SR-0004
  - SR-0005
  - SR-0006
  - Standard
- Libraries

My Shortcuts

2019-01-002-0002 Clutch Assembly.ia

Add new group

Sub Assemblies

Search Sub Assemblies

Name	Part Number	State	Revision	Visualization Attachment
File				
2019-01-002-0002 Clutch Assembly.iam	Clutch Assembly	Work in Progress	A	System
2019-01-002-0003 Clutch Housing.iam	Clutch Housing	Work in Progress	A	System
2019-01-002-0004 Clutch Internals.iam	Clutch Internals	Work in Progress	A	System
2019-01-003-0002 UPPER BEARING BLOCK.iam	UPPER BEARING BLOCK	Work in Progress	A	System
2019-01-003-0003 TROWEL WELDMENT.iam	CF101-TW1	Work in Progress	A	System
2019-01-003-0004 SPROCKET WELDMENT.iam	CF101-SPKT-W	Work in Progress	A	System
CF101-CARRIER.iam	CF101-CARRIER	Work in Progress	A	System
CF101-CVR.iam	CF101-CVR	Work in Progress	A	System
CF101-DCDC-WH.iam	CF101-DCDC-WH	Work in Progress	A	System
CF101-DRVSHAFT.iam	CF101-DRVSHAFT	Work in Progress	A	System
CF101-HRMTR.iam	CF101-HRMTR	Work in Progress	A	System
CF101-HS-322.iam	CF101-HS-322	Work in Progress	A	System
CF101-LATCH.iam	CF101-LATCH	Work in Progress	A	System
CF101-LBB-LH.iam	CF101-LBB-LH	Work in Progress	A	System
CF101-LBB-LH-WLD.iam	CF101-LBB-LH-WLD	Work in Progress	A	System
CF101-LBB-RH.iam	CF101-LBB-RH	Work in Progress	A	System
CF101-LBB-RH-WLD.iam	CF101-LBB-RH-WLD	Work in Progress	A	System
CF101-SA-L.iam	CF101-SA-L	Work in Progress	A	System
CF101-SA-R.iam	CF101-SA-R	Work in Progress	A	System

History Uses Where Used Preview CAD BOM Datasheet vaultFLC Administration

Latest Work in Progress

File Name	Part Number	Revision	State (Historical)	Created By	Checked In	Comment	Visualizatio
2019-01-002-0002 Clutch Assembly.iam	Clutch Assembly	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
0000116.ipt	BRONZE BEARING	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
2019-01-002-0003 Clutch Housing.iam	Clutch Housing	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
0000065.ipt	Clutch Housing	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
0000067.ipt	Clutch Bushing	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
2019-01-002-0004 Clutch Internals.iam	Clutch Internals	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
0000025.ipt	Spring Pin	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
0000062.ipt	Clutch Spring	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
0000063.ipt	Clutch Outer	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
0000064.ipt	Clutch Keeper	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
0000066.ipt	Clutch Center	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System
0000068.ipt	Clutch Block	A	Work in Progress	schanenb	7/30/2019 2:42 ...	Autoloader upload to...	System

Properties

2019-01-002-0002 Clutch Ass...

System	
Category Name	Assembly
Category Name (...	Assembly
Change Order State	
Checked In	7/30/2019 2:42 PM
Checked Out	
Checked Out By	
Checked Out Loc...	
Checked Out Mac...	
Classification	None
Comment	Autoloader upload to ...
Controlled By Cha...	False
Created By	schanenb
Current Owner	ECS-BF39FSC9\AUTO...
Date Modified	7/30/2019 2:33 PM
Date Version Crea...	7/30/2019 2:42 PM
File Extension	iam
File Name	2019-01-002-0002 Clut...
File Name (Histori...	2019-01-002-0002 Clut...
File Replicated	True
File Size	438784
Has Drawing	False
Hidden	False
iLogicRuleStatus	
Initial Approver	
Initial Release Date	
Item Assignable	True
Latest Released Re...	False
Latest Version	True
Leased Until	7/30/2019 2:42 PM
Lifecycle Definition	PLM Release Process
Lifecycle Definitio...	PLM Release Process
Linked to Item	False
Name	2019-01-002-0002 Clut...
Number of Attach...	0
Obsolete	False
Original Create Da...	7/30/2019 2:42 PM
Originator	schanenb
Property Compli...	Compliant
Property Compli...	Compliant
Provider	Inventor
Released Revision	False
Revision	A
Revision Scheme	Standard Alphabetic F...
Revision Scheme (...	Standard Alphabetic F...
State	Work in Progress
State (Historical)	Work in Progress
Version	1

Shared Views

By: Date created

_Car Seats.collaboration

Created on October 22, 2019
Expires in 15 days
2 comments

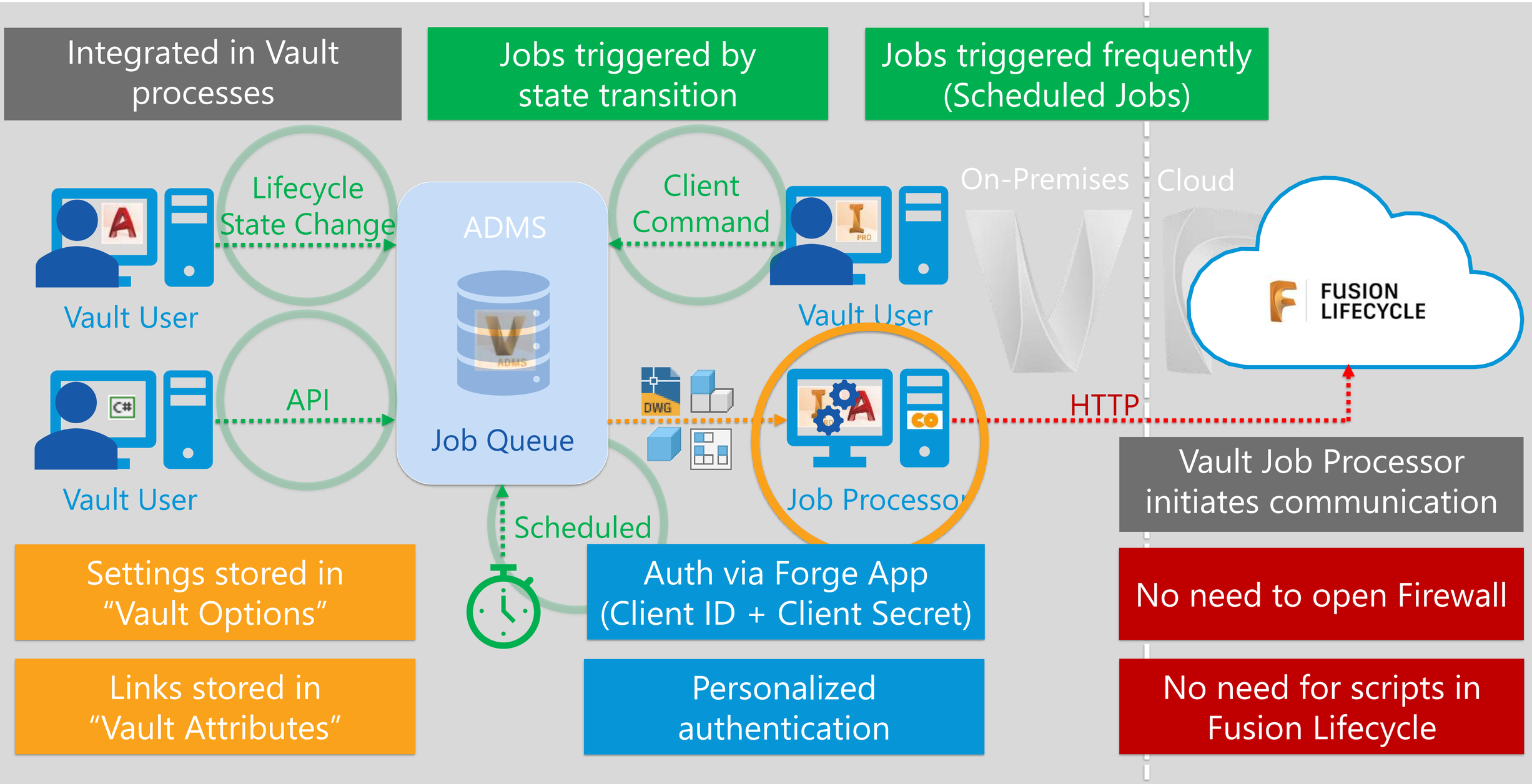
24 Object(s) (1 selected)

10.50.92.46 PDMC-Sample schanenb

PDM and PLM United: Vault Fusion Lifecycle Connector

Technical Details

vaultFLC Architecture



System Requirements

VAULT

Vault Professional 2020 or
Vault Professional 2019

JOB PROCESSOR

HTTP Connection

FORGE

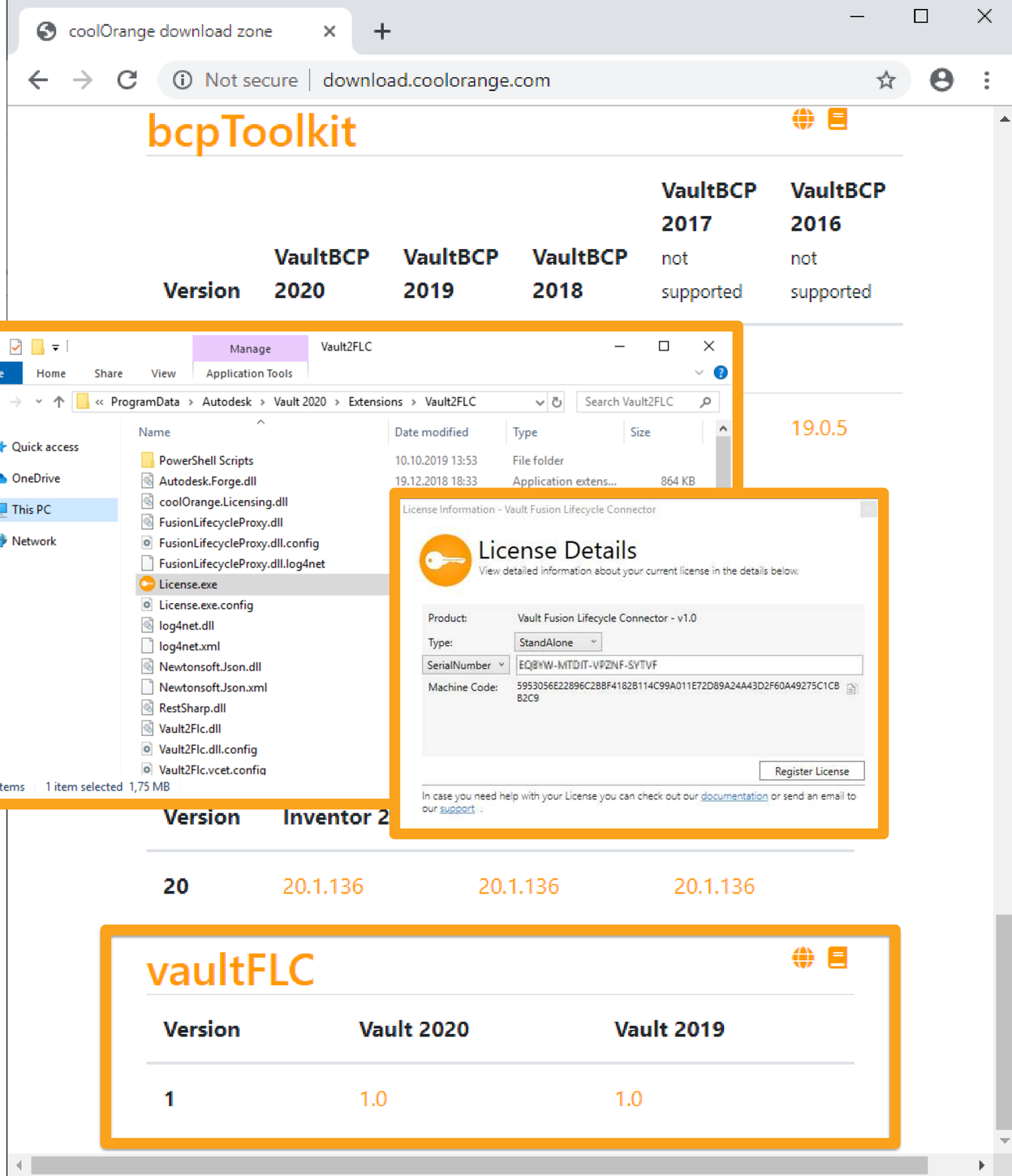
Forge App (free)

FUSION LIFECYCLE

Fusion Lifecycle Tenant

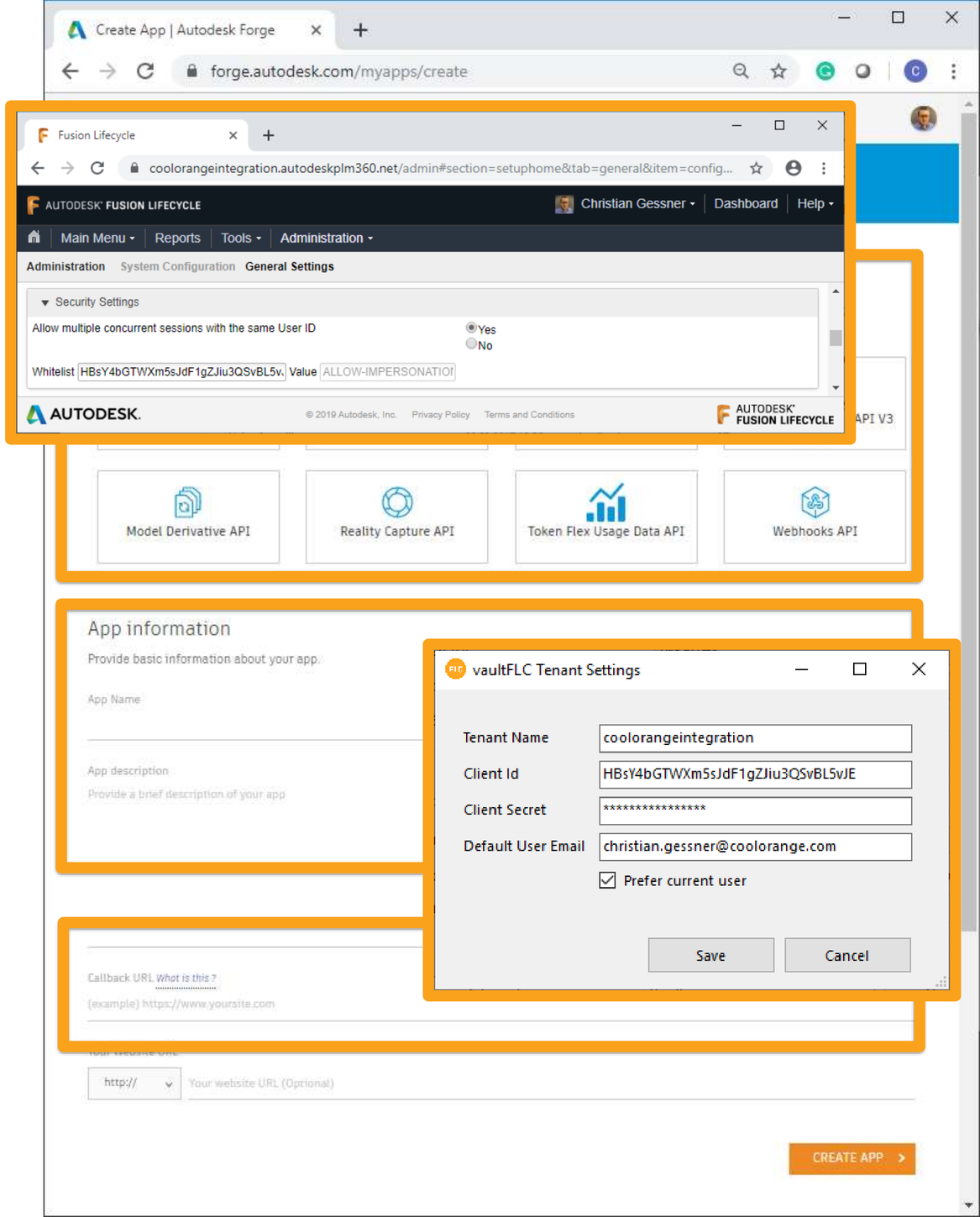
Installation + Activation

- Download
  - http://download.coolorange.com/
- Installation
  - Job Processor
  - Setup Wizard
- Registration / Activation
  - License.exe (Extensions directory)
  - License: sales@coolorange.com



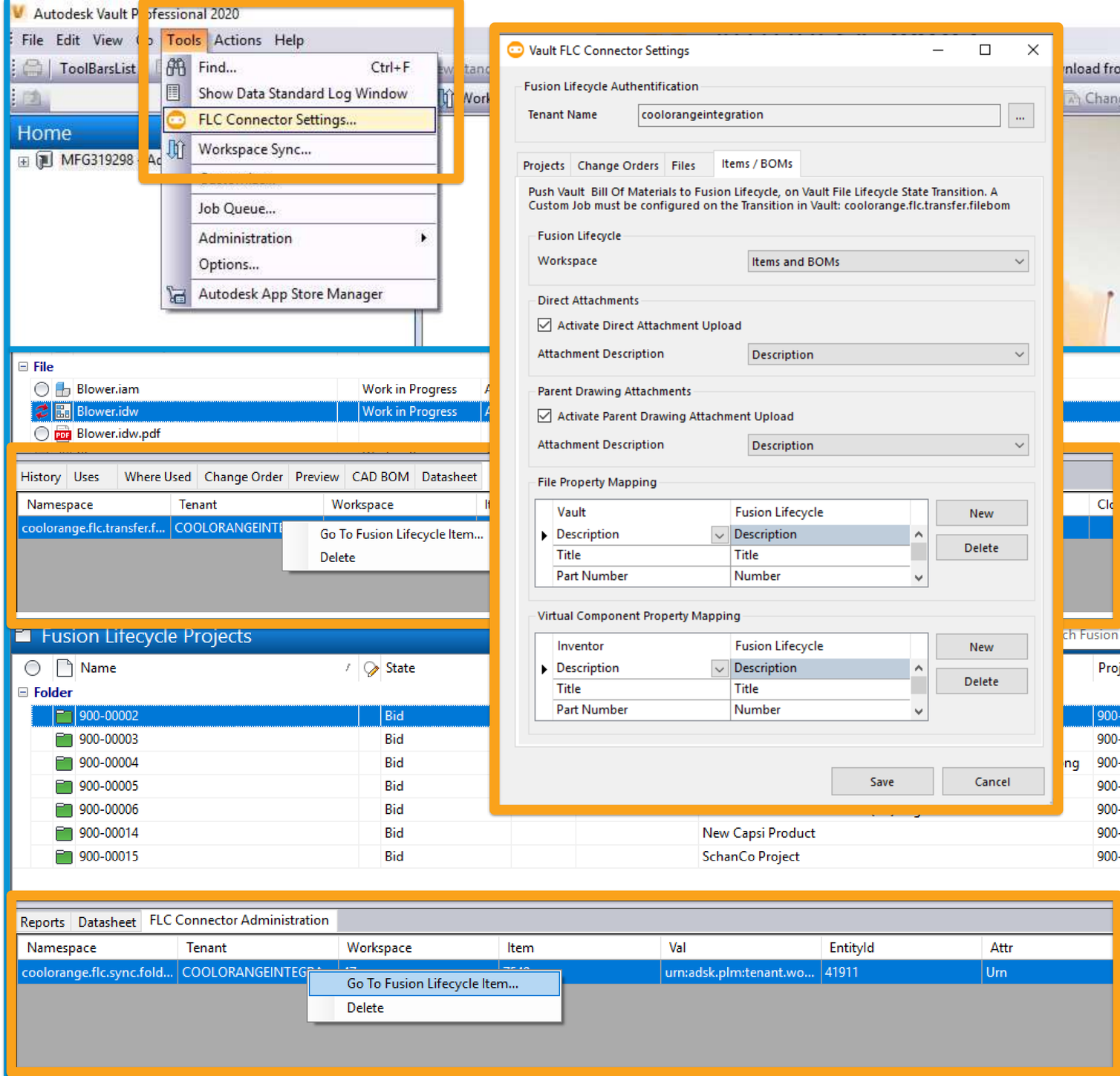
Connectivity

- Forge App
  - https://forge.autodesk.com/myapps/create
    - No Forge APIs required
    - Arbitrary App Name + Description
    - Arbitrary Callback URL (e.g. http://localhost)
    - Client ID to Fusion Lifecycle Whitelist
- Vault Fusion Lifecycle Connector
  - Tenant
  - Client ID + Client Secret
  - System-User

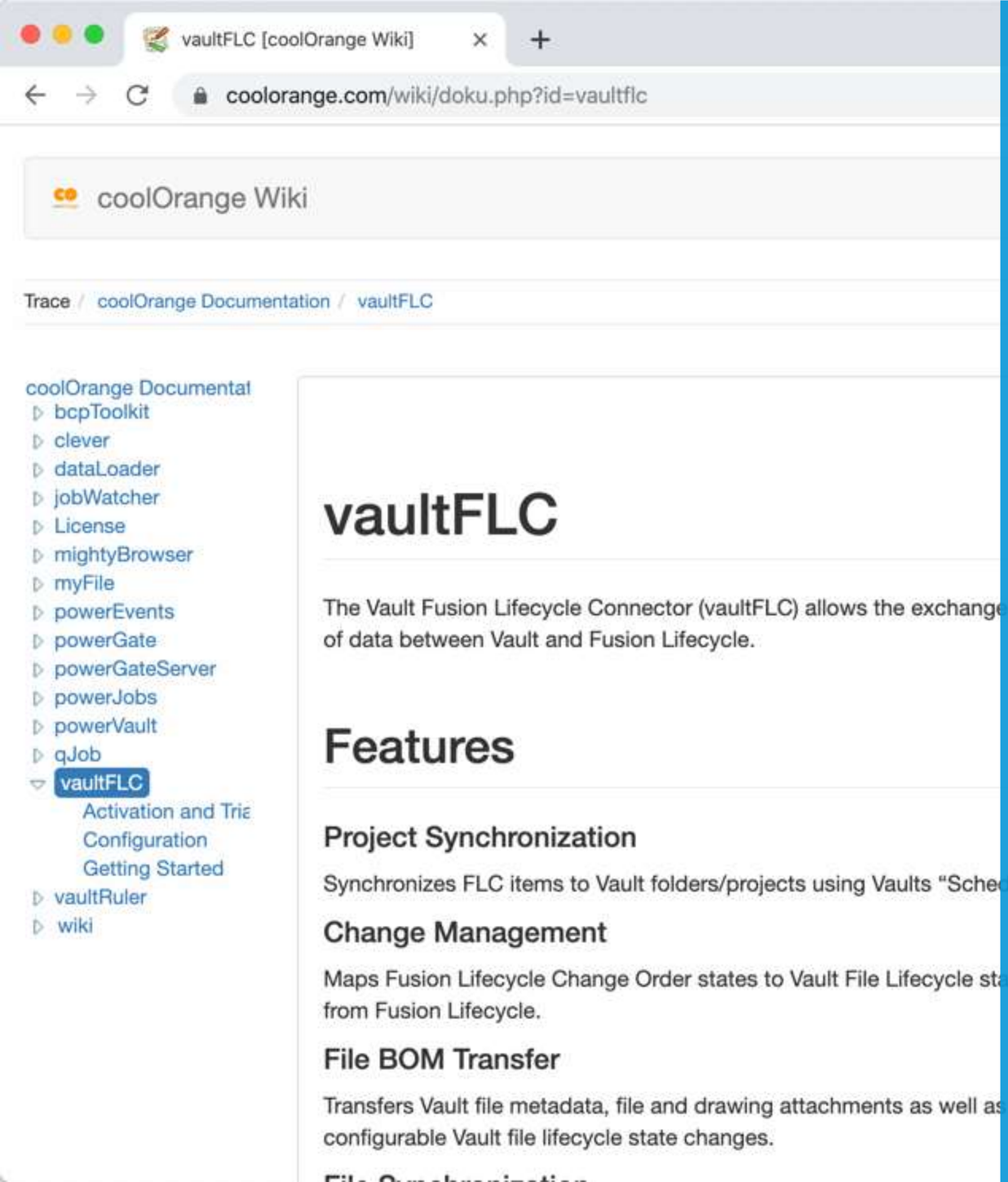


Vault Explorer

- Job Processor
- Settings Dialog
  - Workspaces
  - Mappings
- Additional Tabs
  - Files + Folders
    - Shows Vault-FLC Links
    - Go-To Command
    - Delete Command
- For administrative purposes



Documentation



https://www.coolorange.com/wiki/doku.php?id=vaultflc

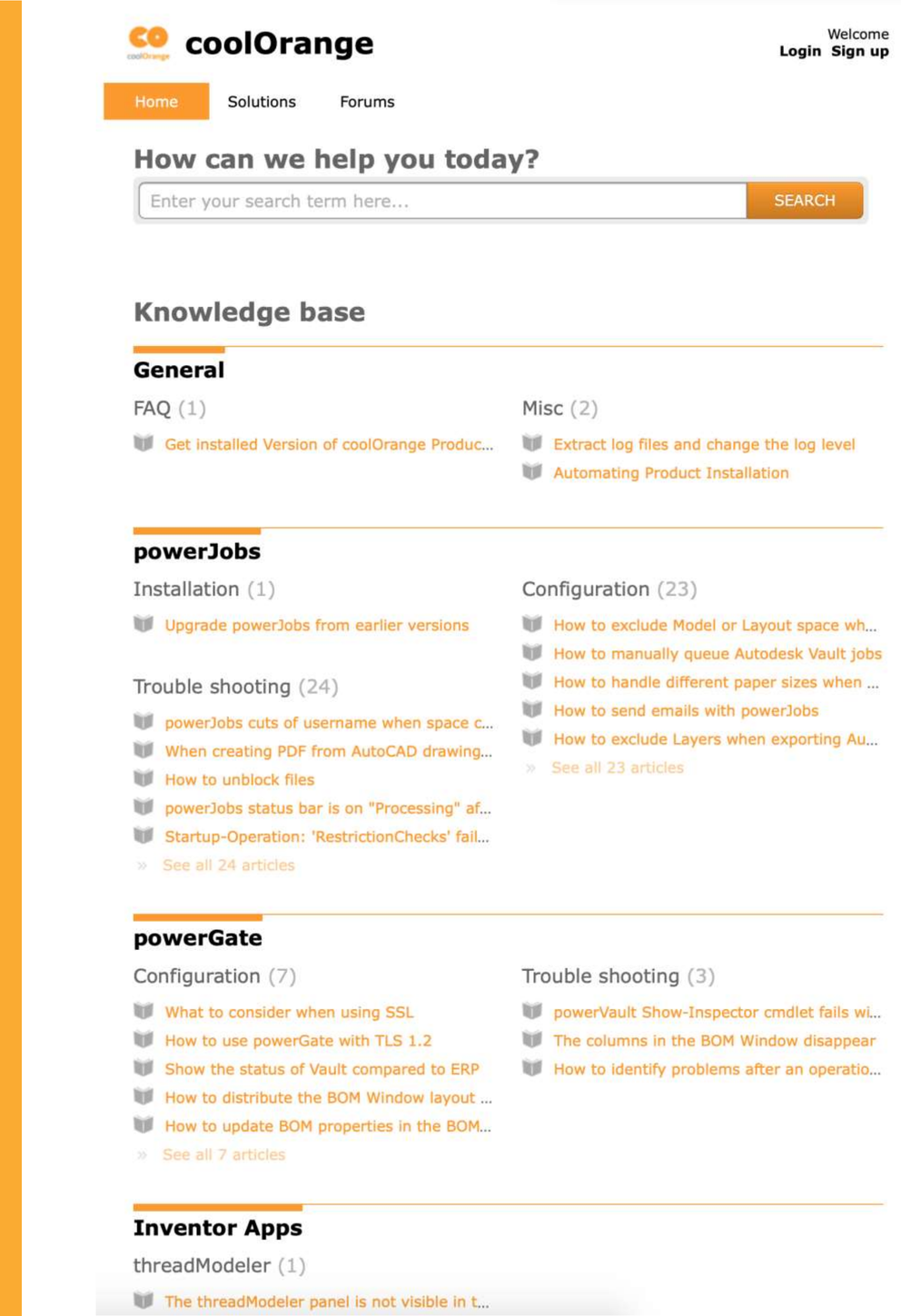
Where to buy?

www.coolorange.com
sales@coolorange.com

www.autodesk.com
Autodesk Price List

Help and Support

https://support.coolorange.com/support/discussions/forums/22000188646



PDM and PLM United: Vault Fusion Lifecycle Connector

Extensibility and Additional Software

Extensibility

Additional Software

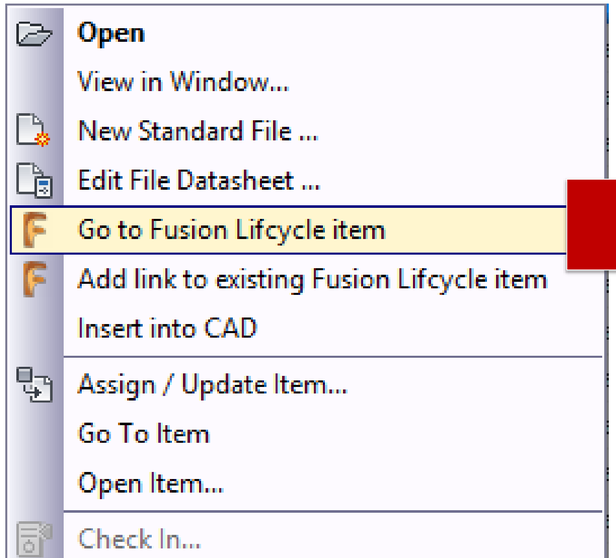
VAULT
Data Standard

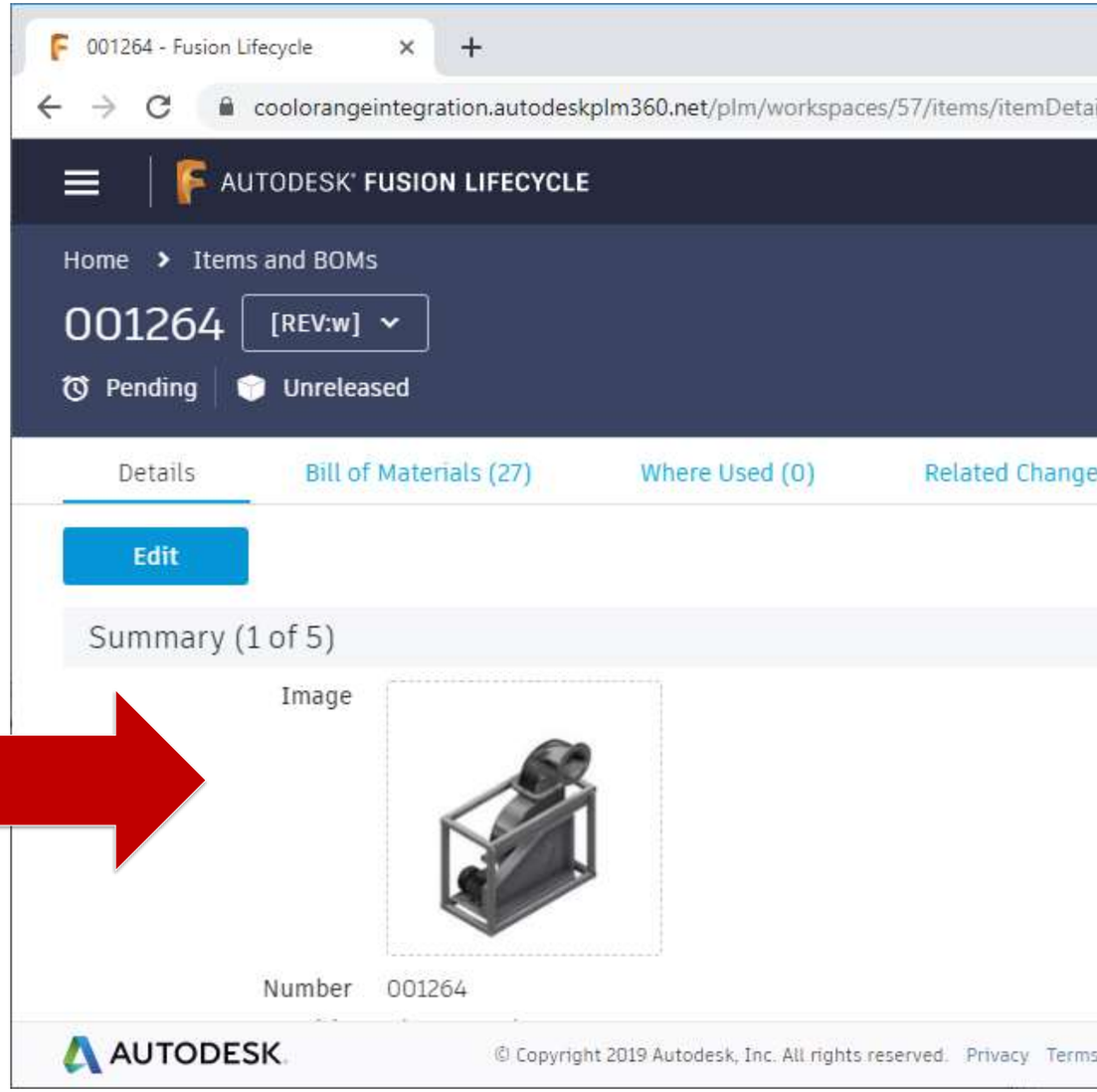
powerEvents

powerJobs

Using Data Standard to create new Commands

- Navigate from Vault to Fusion Lifecycle Item
- Connect existing Fusion Lifecycle Item with Vault File





Autodesk Vault Professional 2020

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File Edit View Go Tools Actions Help

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Default View Quick Sync... Workspace Sync... View Properties Grid Change Category... Change State... Change Revision...

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  - Designs
    - CAD Admins ONLY
    - DXF
    - Factory Asset Library
    - Factory Asset Library Source
    - FDU Tutorial
    - Fusion Lifecycle Projects
    - Imported Data
    - Inventor Sample Data
      - Car Seat
      - Fishing Rod Model
      - Inventor CAM
      - Inventor TolAnalysis
      - Jet Engine Model
      - Models
        - 3D Annotation
        - AEC Exchange
        - Assemblies
          - Blower
          - Engine MKII
          - Metal Container
          - Personal Computer
          - Scissors
          - Stapler
          - Suspension
          - Suspension Fork
          - Test Station
          - Tuner

My Shortcuts

- Blower
- Fusion Lifecycle Projects

Add new group

Home

Project Explorer

Classes

Factory Asset

Factory Layout

Models

Search Models

Name	State	Revision	Part Number	Description	Project Number
Folder					
3D Annotation					
AEC Exchange					
Assemblies					
Cable & Harness					
Fabrication					
Mold Design					
Parts					
Sheet Metal					
Translation					
Tube & Pipe					
Weldments					

Properties

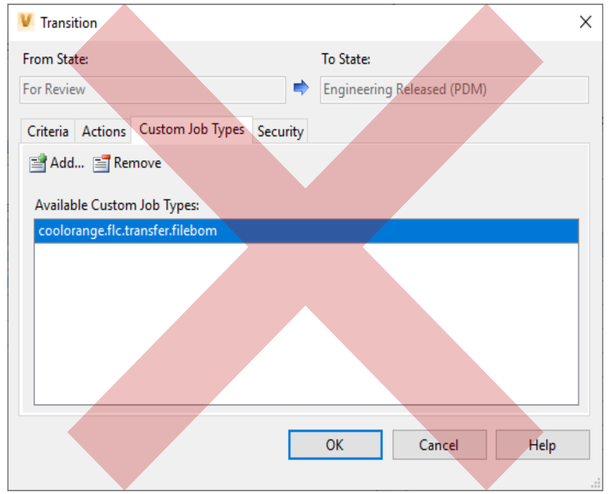
11 Object(s) (0 selected)

vm-2020 MFG319298 Administrator

Using powerEvents to smartly trigger Jobs

- Examples:
  - Create PDF prior to transfer it to FLC
  - Send files to different workspaces
    - Depending on file type
    - On Release transfer drawings to “Documents”
    - On Release transfer models to “Items / BOMs”

powerEvents



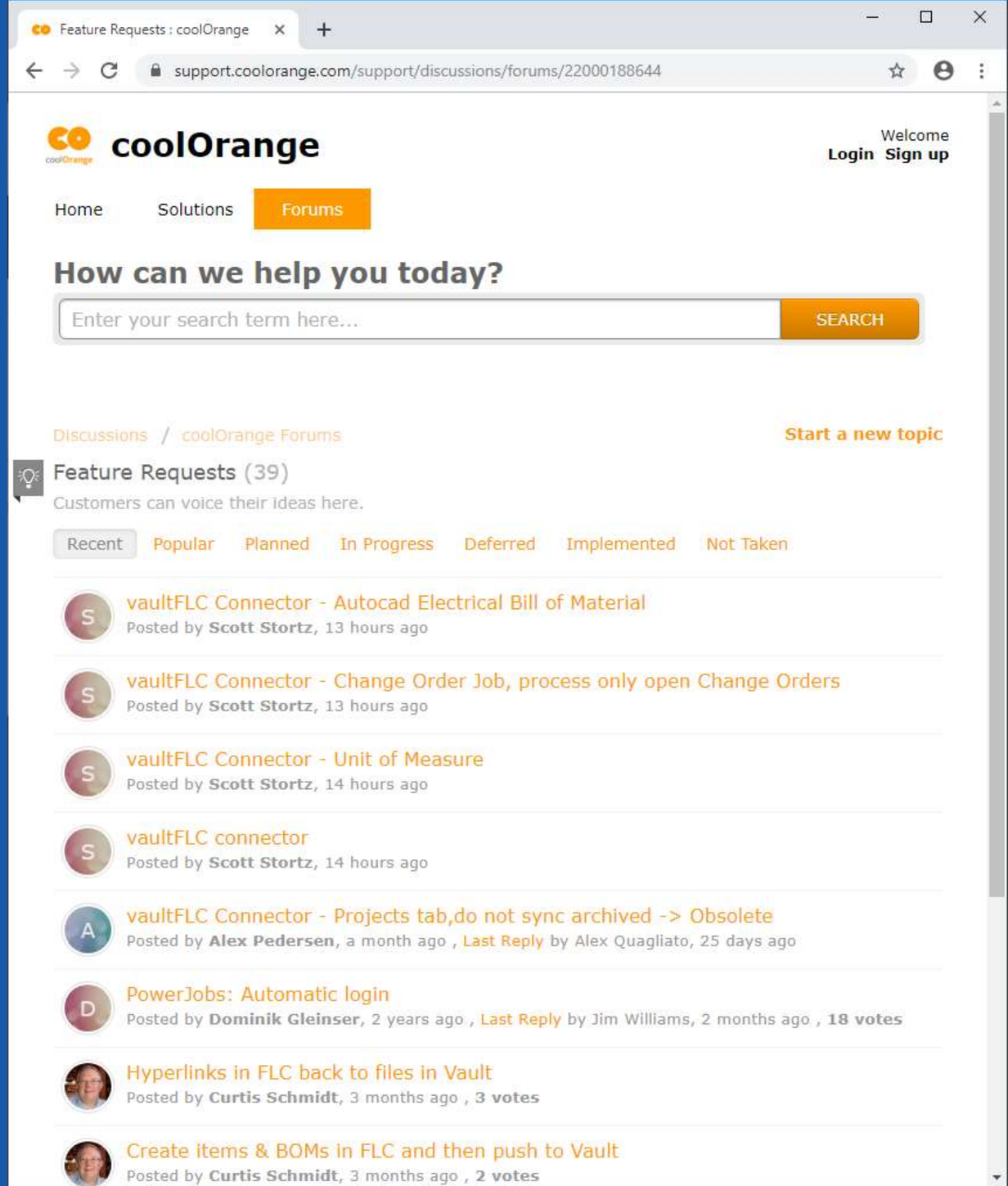
Using powerJobs to create own workflows

- API (PowerShell)
- Examples:
  - Transfer BOM from AutoCAD/SolidWorks/other formats (BOM Blobs)
  - Transfer BOMs based on Vault Items (Item Master)
  - Include Vault Thin/Thick-Client Links
  - Transfer native Files (e.g. DWG, Inventor or Office)
  - Synchronize Vault ECOs with Fusion Lifecycle Change Orders Items
  - Synchronize Vault Custom Objects with Fusion Lifecycle Items
  - etc.

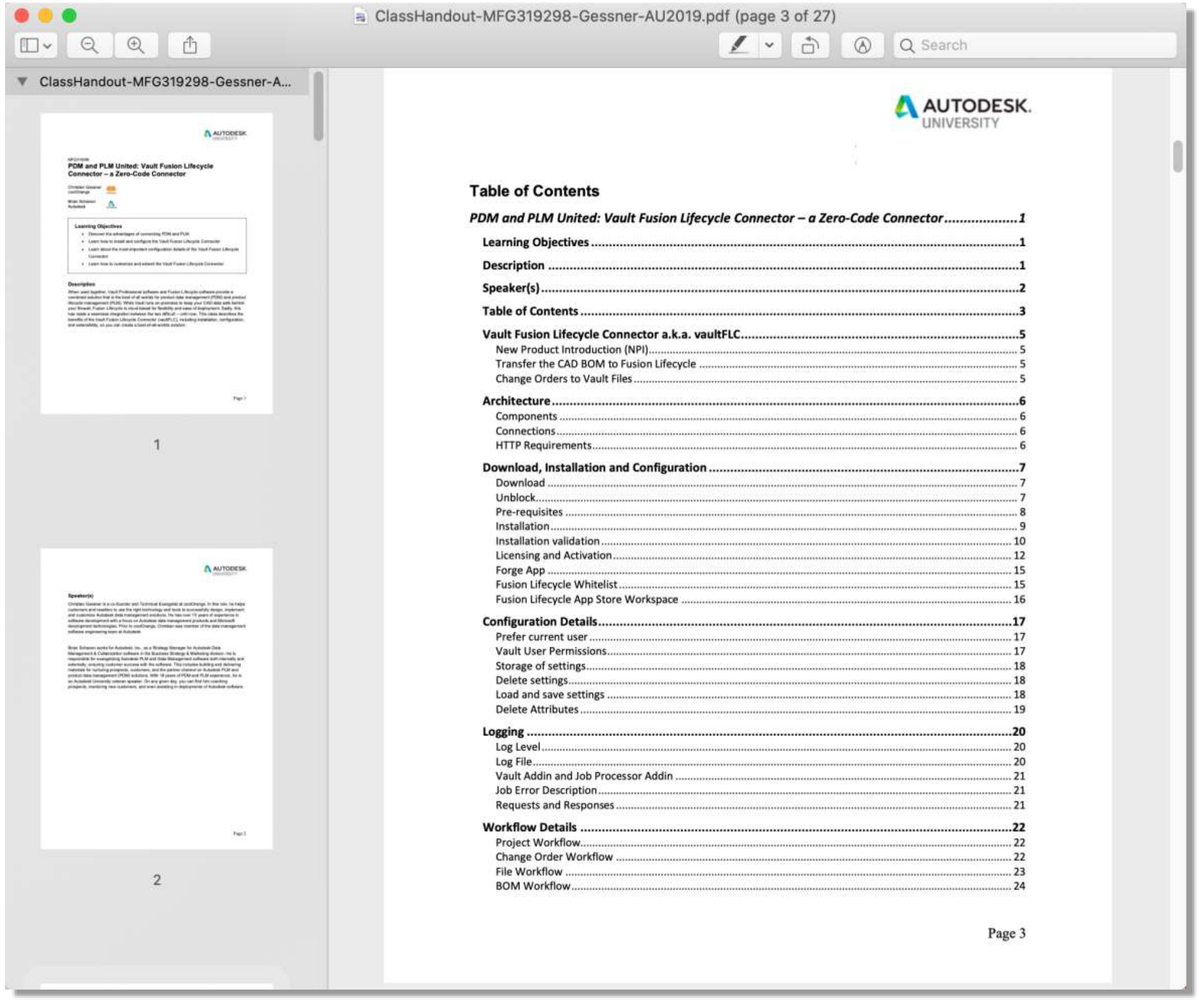
powerJobs

More Ideas?

https://support.coolorange.com/support/discussions/forums/22000188644



Handout and Additional Material



- Handout
  - Architecture
  - Installation
  - Configuration
  - Logging
  - Workflow Details
- Additional Material
  - Extensibility Examples (Scripts)

GitHub Repository

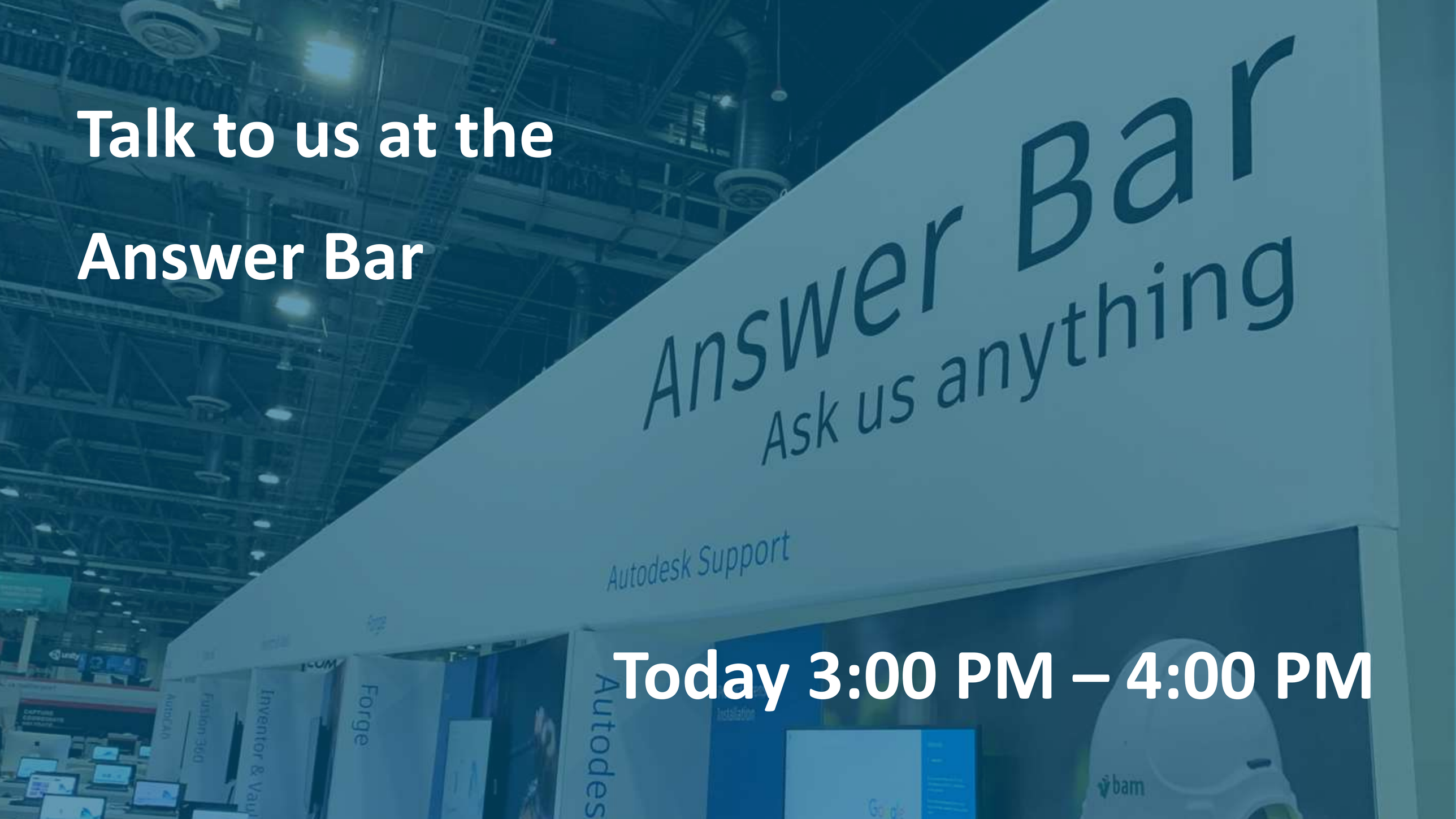
- **AU2019_MFG319298**

- Presentation
- Handout
  - Detailed Technical Information
  - Installation Guide
- Extensibility Examples

https://github.com/christiangessner/AU2019_MFG319298

Supplementary Classes

Tuesday, Nov. 19th	
8:00 AM - 09:30 AM	**IM323053** **Vault Data Standard Introduction** Marco Mirandola – coolOrange
4:30 PM - 05:30 PM	**MFG323806** **Mastering the Fusion Lifecycle App Store in 60 Minutes** Pete Markovic - IMAGINiT Technologies
Thursday, Nov. 21st	
9:15 AM - 10:15 AM	**MFG323018** **Fusion Lifecycle: The Future's So Bright We Gotta Wear Shades** Curtis Schmidt - Dynamic Attractions
2:45 PM - 03:45 PM	**IM319555** **Living the Lifestyle You Want — Utilizing Vault Lifecycles** Mike Thomas - Prairie Machine



Talk to us at the Answer Bar

Today 3:00 PM – 4:00 PM

Survey Questions

1. Would you recommend this class?
2. Rate your AU speakers
3. Rate the handout quality
4. Add any comments or feedback

Thank you!

AU 2019 Class Survey

Your feedback is important and will help craft the content for next year. Your submission will automatically enter you in a daily drawing for an AU 2020 Full Conference Pass. To opt out of the drawing, please contact customer service.

Title

Time

1. Would you recommend this class to your colleagues and peers? *

- (•) Yes
- ( ) No
- ( ) I don't have an opinion on this class

2. How would you rate the primary speaker of this class? 1 = Poor; 5 = Excellent *

Primary speaker rating

5 (Excellent)

3. Please rate the quality of class materials, including presentation slides, digital handouts, and data sets (where applicable)? 1 = Poor; 5 = Excellent *

Quality of class materials

5 (Excellent)

4. Please share any additional comments or feedback.

Please share any additional comments or feedback.

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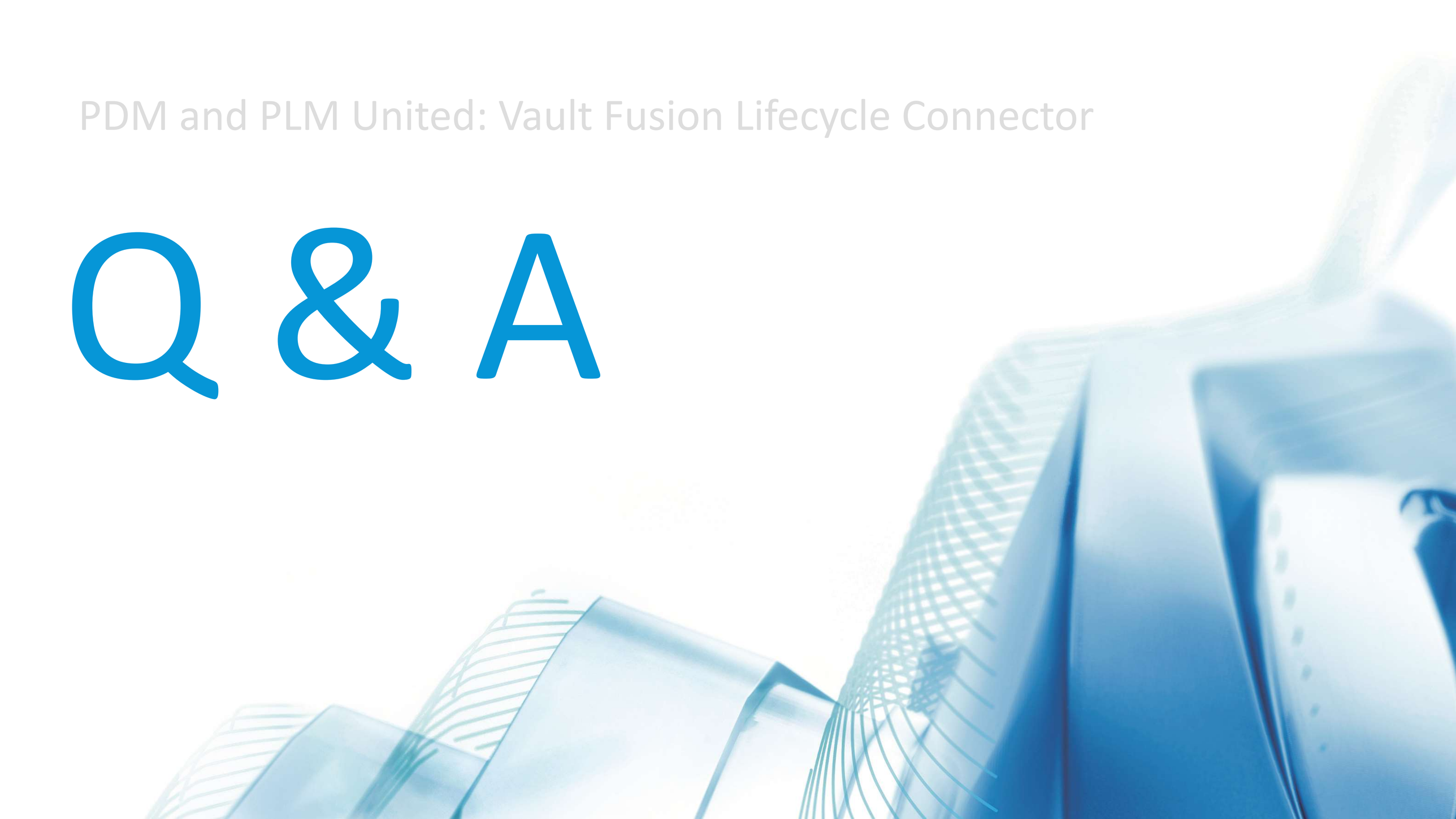
PDM and PLM United: Vault Fusion Lifecycle Connector

Q & A



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