



Autodesk Vault 2025 SDK .NET Compatibility

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Agenda

Autodesk Vault 2025 SDK - .NET Compatibility

- Background
- Challenge
- Solution Approach
- Resources

Sample Application & Demo

- RestrictOperations WebService Extension Sample
- Editing Vault Data Standard Configurations



Background

Understanding the situation

- Autodesk CAD applications AutoCAD 2025, Inventor 2025, and Revit 2025 leverage the latest .NET Core platform
 - .NET8 only APIs
 - CAD Add-ins need to migrate from .NET Framework 4.8 to .NET Core 8
- Autodesk Vault Client and Server 2025 intended to join this move but are restricted
 - .NET Core does not provide all needed functionality for Vault
- Vault 2025 supports .NET FW and .NET Core applications, providing two separate SDKs for each target platform



Challenge

Selecting the appropriate .NET target platform

- CAD Add-ins require to target the .NET Core platform and to consume the libraries of ...Autodesk Vault 2025 SDK\bin\x64\core*
- Vault Explorer Client extensions continue to load .NET 4.8-based extensions only
- Extensions targeting multiple clients, e.g., a Web Services event handler must target .NET 4.8 as a minimum
 - Vault Explorer will be able to load them and handle events fired by itself
 - Vault CAD Add-ins **may** be able to load them, dependent on compatibility of other dependencies
 - Vault CAD Add-ins may require compiling a copy of the event handler extension targeting .NET Core and resolving other dependencies



Solution Approach

Options of flexibly or explicitly targeting

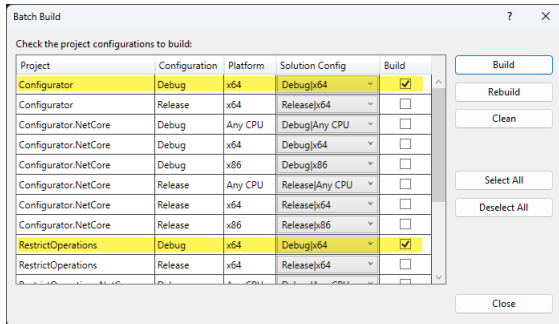
- Vault 2025 introduced an application property, “DotNameRuntime”, allowing to target...
 - “Any” – Your extension has no specific dependency on one of the two platforms; this option is the default if the property is not present
 - “Framework” – Your extension requires functionality and references available in .NET Framework only
 - “Core” – Your add-in/extension requires functionality and references available in .NET Core only
- Best Practice
 - If possible, continue consuming the .NET Framework. Compile and test everything; your project may compile but fail to load or break during runtime
 - Consume Vault SDK .NET Core libraries for Inventor or AutoCAD Add-ins connecting to Vault
 - Compile for both targets if CAD and Vault Extensions need to re-use common parts



Samples

SDK Sample RestrictOperations 1/2

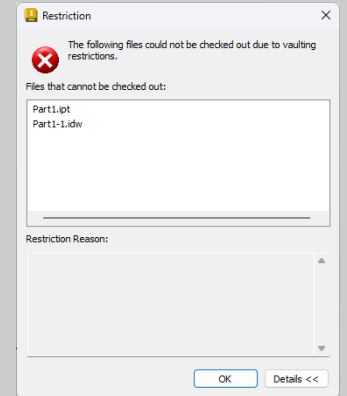
- The sample solution doubled each project, targeting “Any” and “Core”
- Compile and install the **Framework version**



- Configure to restrict “Check-out” and perform a check-out command in
 - Inventor
 - Vault Explorer

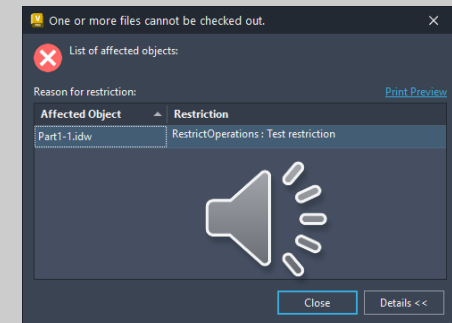
Results

- Inventor Vault
 - Check-out is restricted
 - Inventor Vault successfully loaded the extension



- Vault Explorer

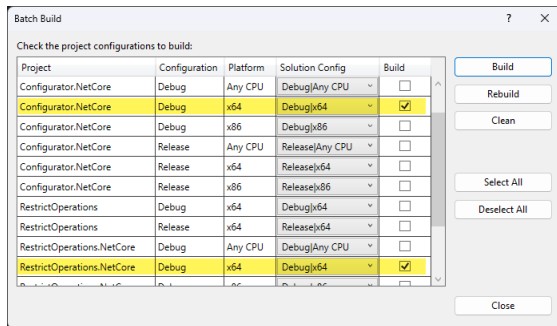
- Check-out is restricted



Samples

SDK Sample RestrictOperations 2/2

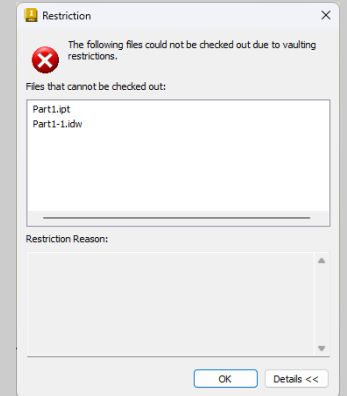
- The sample solution doubled each project, targeting “Any” and “Core”
- Compile and install the “**Core**” version



- Configure to restrict “Check-out” and perform a check-out command in
 - Inventor
 - Vault Explorer

Results

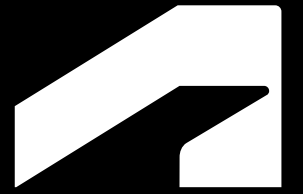
- Inventor Vault
 - Check-out is restricted



- Vault Explorer
 - Check-out is unrestricted

- Reason: the extension is **not loaded** in VE





Let's see a demo



Document Outline

There are no items to show for the selected document.

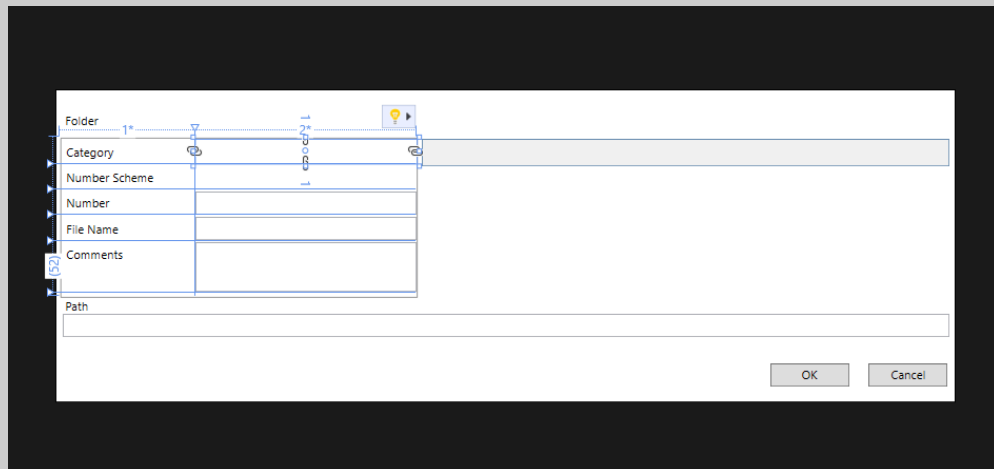
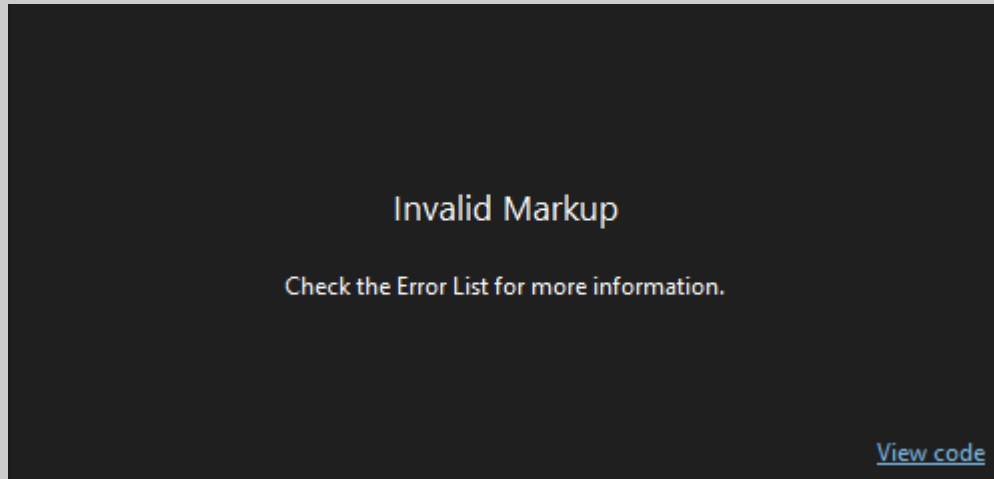
Solution Explorer

Search Solution Explorer (Ctrl+U)

Solution 'RestrictOperations' (4 of 4 projects)

- Configurator
 - Properties
 - References
 - app.config
 - Form1.cs
 - Program.cs
- Configurator.NetCore
 - Dependencies
 - Properties
 - app.config
 - Form1.cs
 - Program.cs
- RestrictOperations
 - Properties
 - References
 - AdskLicensingSDK_8.dll
 - EventHandlers.cs
 - Key.snk
 - RestrictOperations.vcet.config
 - RestrictSettings.cs
- RestrictOperations.NetCore
 - Dependencies
 - Properties
 - AdskLicensingSDK_8.dll
 - EventHandlers.cs
 - Key.snk
 - RestrictOperations.NetCore.vcet.config
 - RestrictSettings.cs



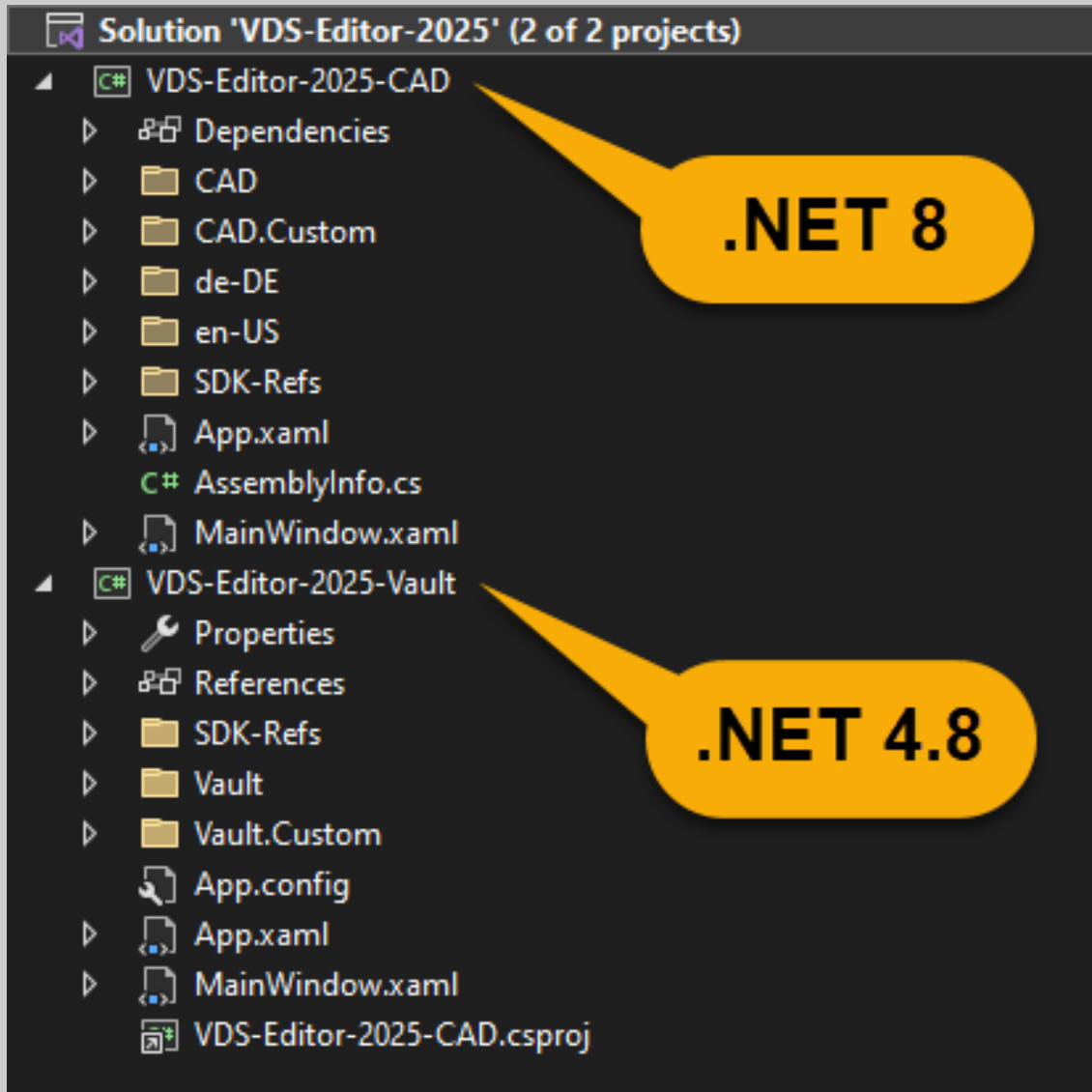


Vault Data Standard

Editing VDS 2025 Configurations

- VDS-Inventor and VDS-AutoCAD 2025 Add-Ins are built on .NET Core 8
 - XAML files for CAD require a .NET8 WPF application project to render the preview in Visual Studio
- VDS-Vault extension consumes .NET Framework 4.8
 - XAML files for Vault require a .NET Framework WPF Application to render the preview in Visual Studio



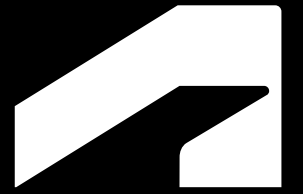
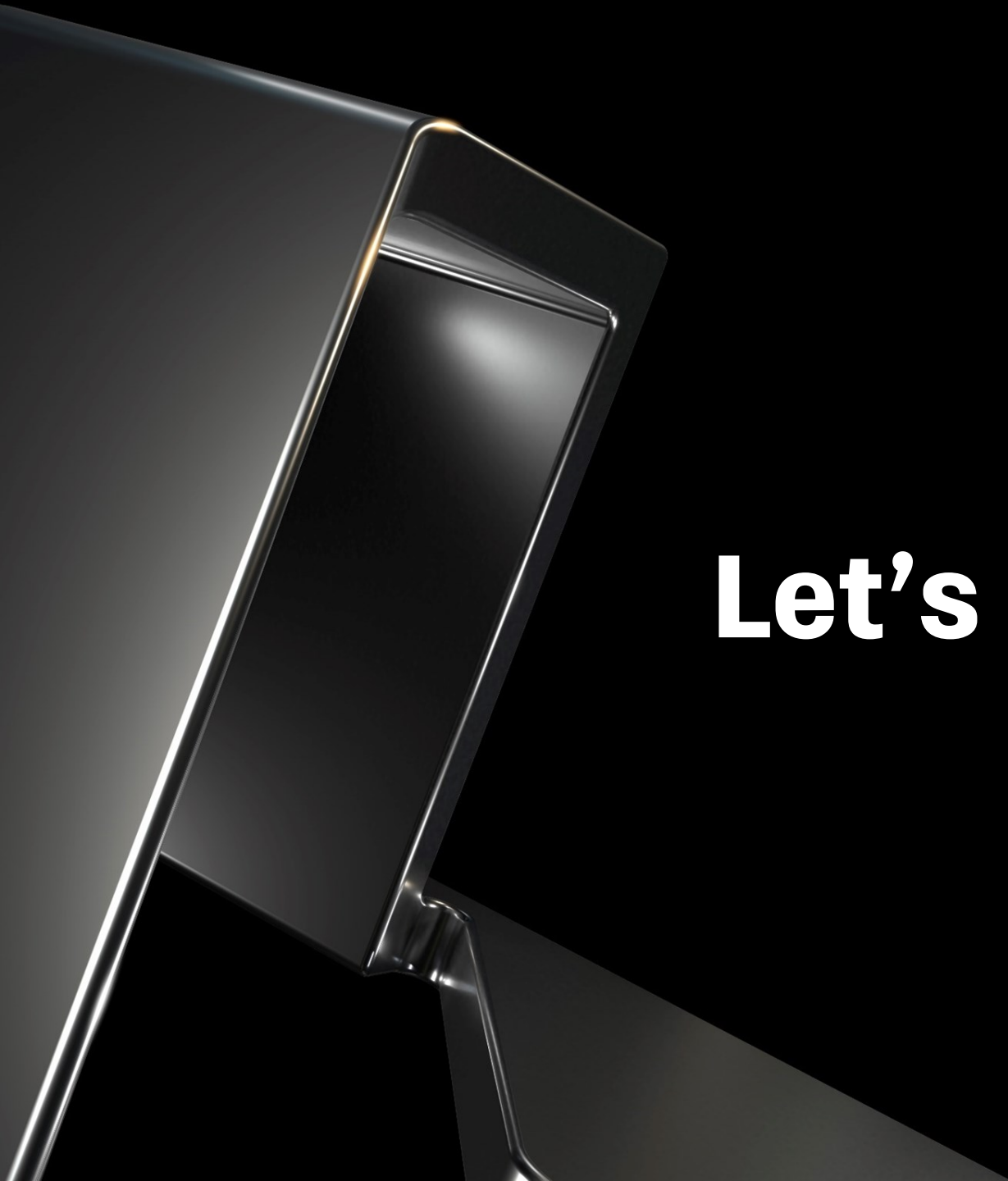


Vault Data Standard

Visual Studio Project Configuration

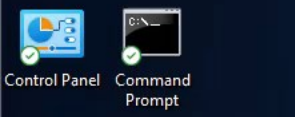
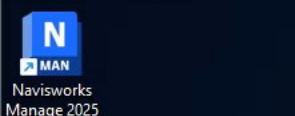
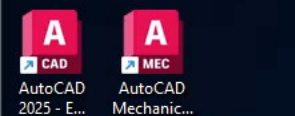
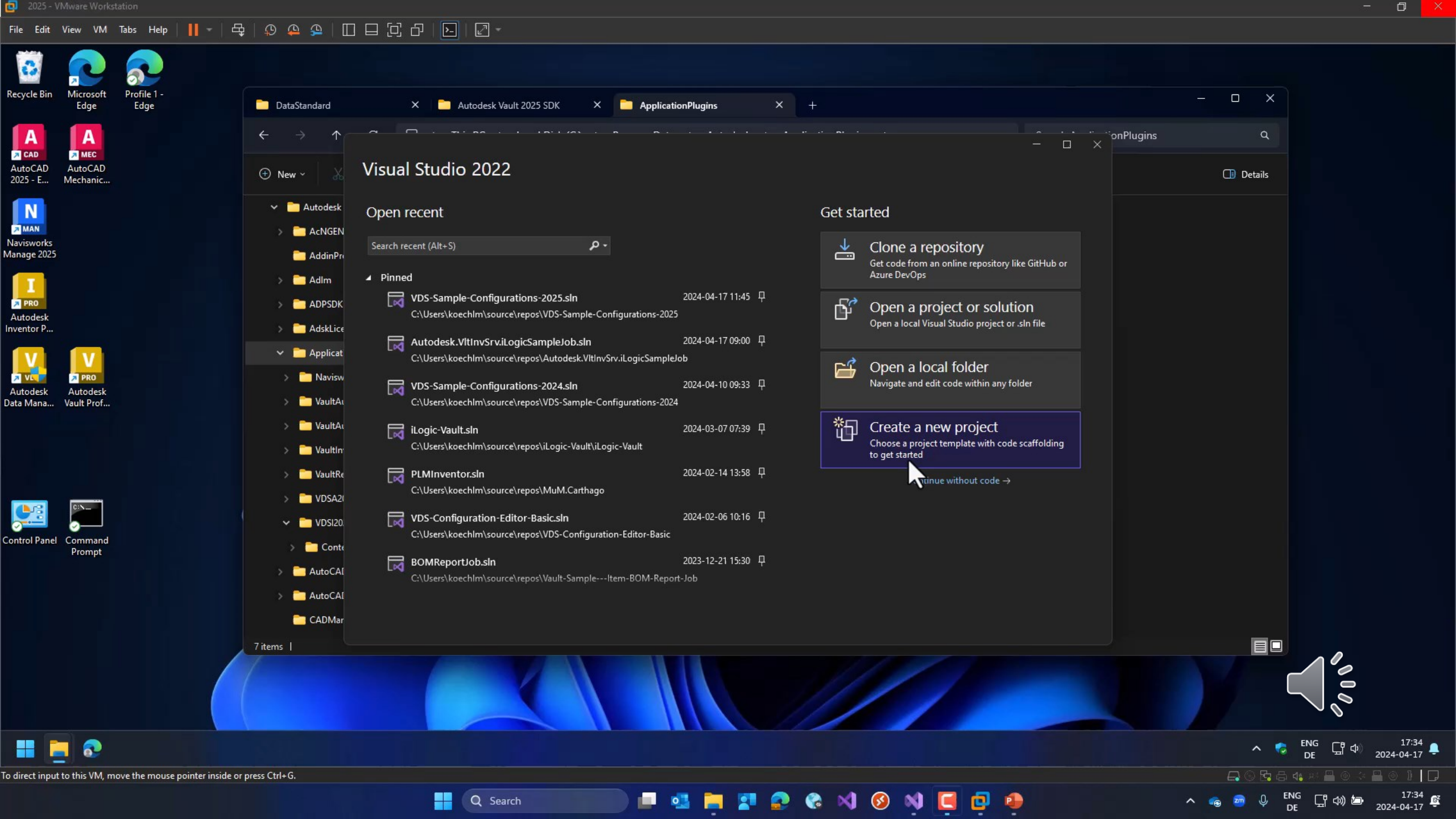
- Split the Editor solution project
 - Creating a .NET Core WPF Application with references for CAD
 - dataStandard.UI.dll 2025
 - Log4net.dll 2025
 - 2025 SDK....x64\Core*.dlls
 - Creating a .NET Framework WPF Application with references for Vault
 - common.dll, CreateObject.dll, log4net.dll versions 2025
 - 2025 SDK....x64*.dlls
 - Copy all VDS configuration folders/files into the .NET 8 project
 - Keep a single consistent structure to copy/paste to the Vault client
 - .NET 8 projects don't longer allow to link files
 - .NET 48 allows to link folders and files
 - Link the Vault and Vault.Custom Folders/Files





Let's see a demo





DataStandard x Autodesk Vault 2025 SDK x ApplicationPlugins x

Visual Studio 2022

Open recent

Search recent (Alt+S)

Pinned

- VDS-Sample-Configurations-2025.sln 2024-04-17 11:45
- Autodesk.VltInvSrv.iLogicSampleJob.sln 2024-04-17 09:00
- VDS-Sample-Configurations-2024.sln 2024-04-10 09:33
- iLogic-Vault.sln 2024-03-07 07:39
- PLMInventor.sln 2024-02-14 13:58
- VDS-Configuration-Editor-Basic.sln 2024-02-06 10:16
- BOMReportJob.sln 2023-12-21 15:30

Get started

- Clone a repository
- Open a project or solution
- Open a local folder
- Create a new project

7 items |

Resources

- Autodesk Desktop API Updates: .NET Core Migration Webcast
 - [Recording](#)
 - [Slide Deck](#)
- Microsoft Compatibility Pack
 - [Use the Windows Compatibility Pack to port code - .NET Core | Microsoft Learn](#)
- .NET Upgrade Planner
 - [Beta](#)
- .NET Upgrade Assistant
 - [Download](#)



