

CS468152

Release Your Hands: Automate Your BIM360 Project Setup with Forge

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Senior developer advocate in Autodesk, more than 10 years software development experiences in CAD area, 5 years experiences in Forge technology advocating, consulting and supporting, currently mainly focus on AEC industry including BIM360, Revit Design Automation and all the generic Forge services.



<http://linkedin.com/in/johnonsoftware>



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Developer Technical Services
Autodesk

Mikako provides API technical support for AEC products, such as Revit and BIM 360. Her interest is in the areas of interactive techniques, optimization and layout synthesis. More on her [blog: https://fieldofviewblog.wordpress.com/](https://fieldofviewblog.wordpress.com/)

Safe Harbor

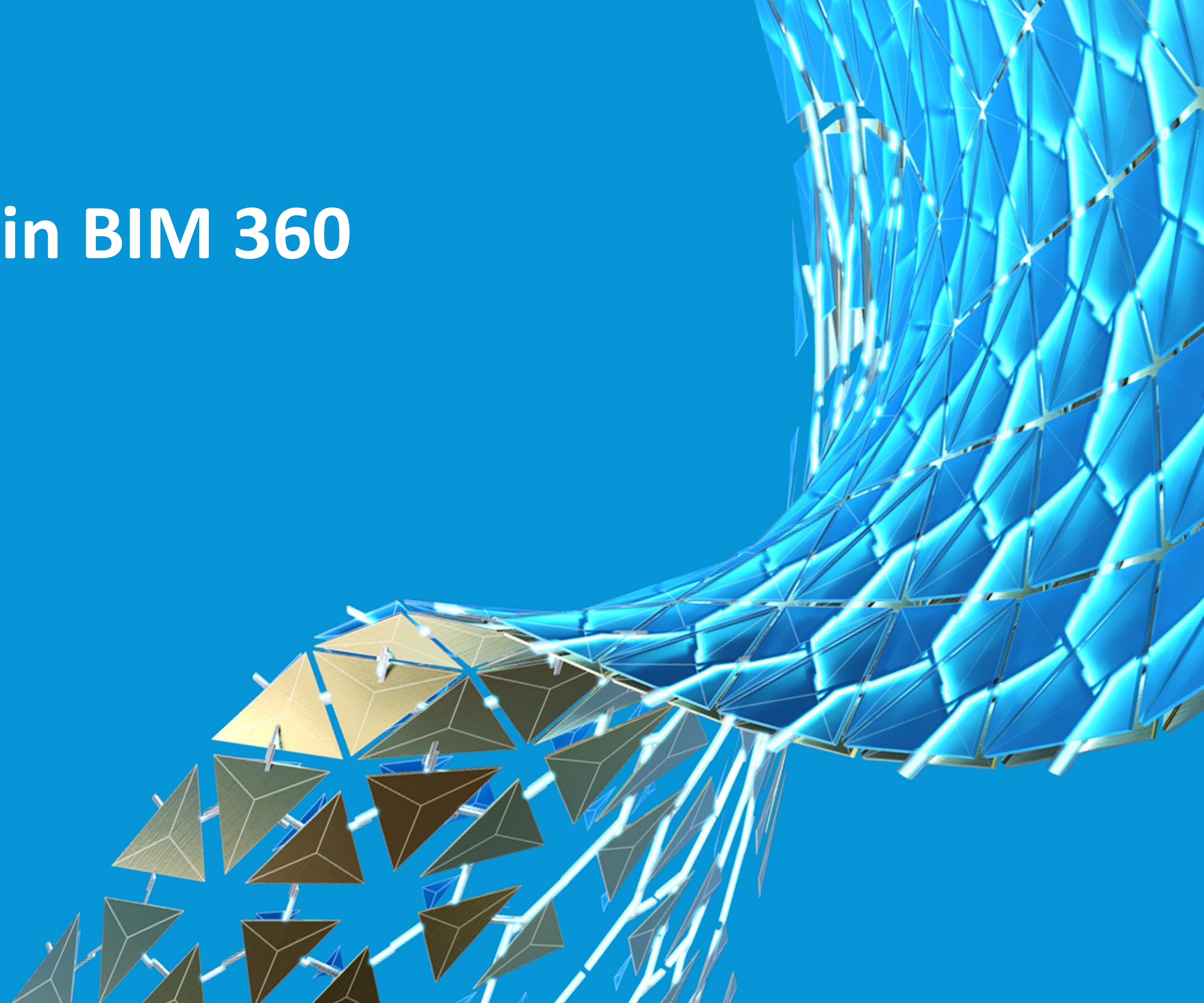
During the course of this presentation, we may make statements regarding future events and/or statements regarding planned or future development efforts for our existing or new products and services. We wish to caution you that such statements reflect our current expectations, estimates and assumptions based on factors currently known to us and that actual events or results could differ materially. Also, these statements are not intended to be a promise or guarantee of future delivery of products, services or features but merely reflect our current plans, which may change. Purchasing decisions should not be made based upon reliance on these statements. The statements made in this presentation are being made as of the time and date when this presentation was recorded. We do not assume any obligation to update any statements we make to reflect events that occur or circumstances that exist after the date of this presentation.

October 6, 2020

Agenda

- Introduction
- Project Setup Tool
 - Overview
 - How to Use - Step by Step
- Extending Features & Customization
- Future Work

Project Setup in BIM 360



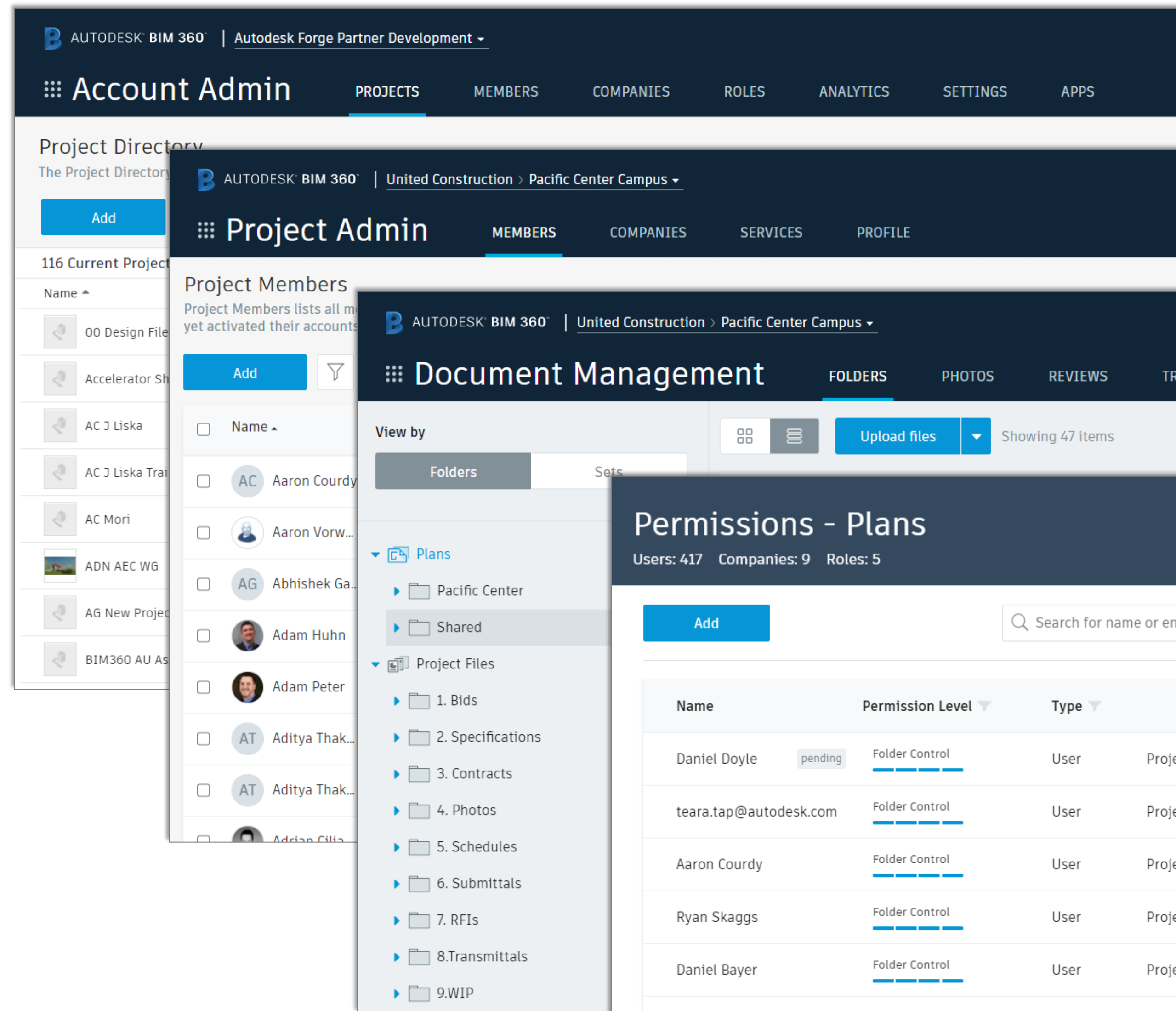
Project Setup in BIM 360

Product UI

- Easy to use
- Not scalable 😞

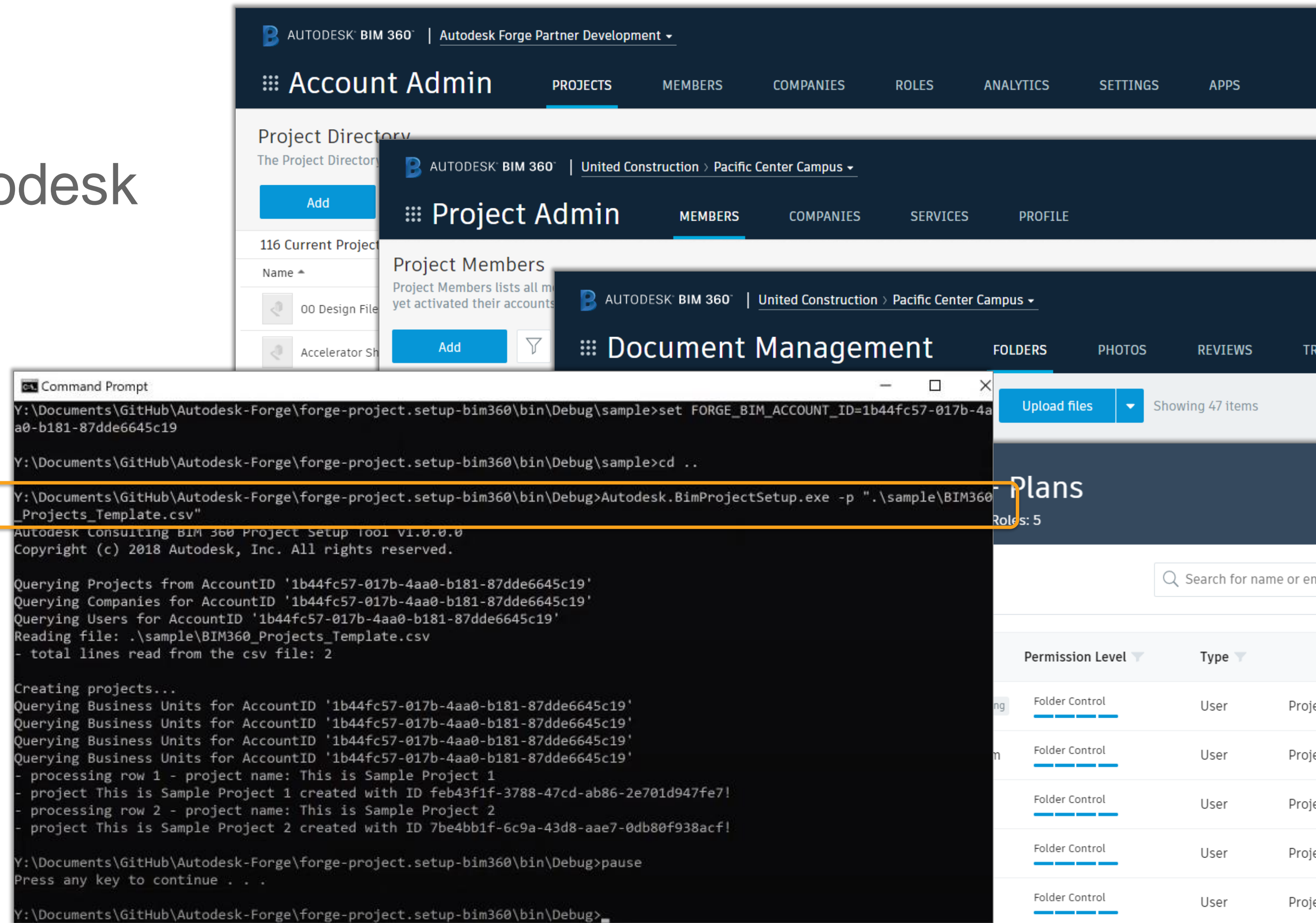
Customers want:

- Bulk import
- Template
- Migrate
- Integrate with ERP



Project Setup Tool

- Using public API
- Originally written by Autodesk Consulting team
- Command line tool
 - .NET
 - Desktop application
 - csv file as input
 - Open source on GitHub



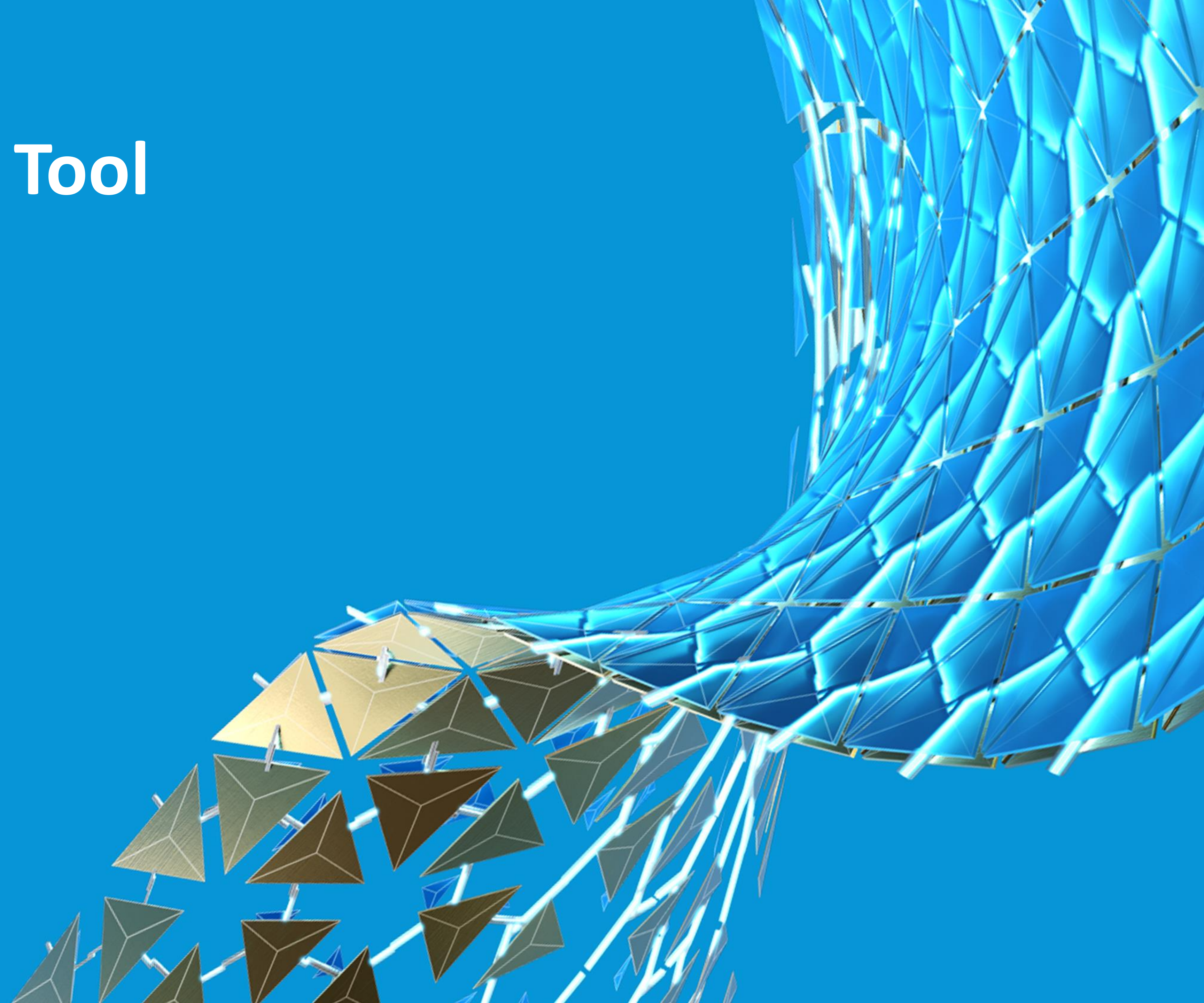
Project Setup Tool

Who is it for?

- Developers, IT and power users w/ .NET knowledge
 - Build the exe
 - Customize
 - Develop an integration
- Not directly intended for non-programmers to do above
- Once you have the exe, anybody can use

Project Setup Tool

Overview




🔗 master ▾

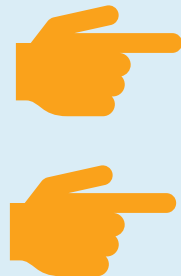
🔗 2 branches 🔖 1 tag

Go to file

Add file ▾

📄 Code ▾

	JohnOnSoftware remove unnecessary dependent modul CefSharp	018b7ca on Jul 10	🕒 28 commits
📁	BimProjectSetupCLI	update readme	5 months ago
📁	BimProjectSetupCommon	fix the null pointer issue	4 months ago
📁	ForgeBimApi	support assign role permission while copy folder structure from anoth...	5 months ago
📄	BIM360-ProjectSetupTool-UsageGu...	improve user guide	4 months ago
📄	BimProjectSetupTool.sln	Initial commit	6 months ago
📄	CHANGELOG.md	update change log	4 months ago
📄	LICENSE.md	Initial commit	6 months ago
📄	README.md	remove unnecessary dependent modul CefSharp	2 months ago
📄	UseCases.png	Initial commit	6 months ago
📄	thumbnail.gif	update readme	5 months ago



<https://github.com/Autodesk-Forge/forge-bim360.project.setup.tool>

Image caption goes here

forge_bim360_project_setup_tool

Basic Features

Create Projects
From Scratch

Create Projects
From Template

Project

Activate
Project Services

Service

Import
Project Users

Update
Project Users

User

Workflow

PREPARATION

Account & CSV file

- BIM 360 account
- Forge App
- Integrate Forge App with BIM 360 Account
- CSV file

PROJECTS

Create projects

- Create BIM 360 projects from scratch
- Create BIM 360 projects from template

SERVICES

Assign services

- Services are assigned to the project with admin

IMPORT USER

Import project users

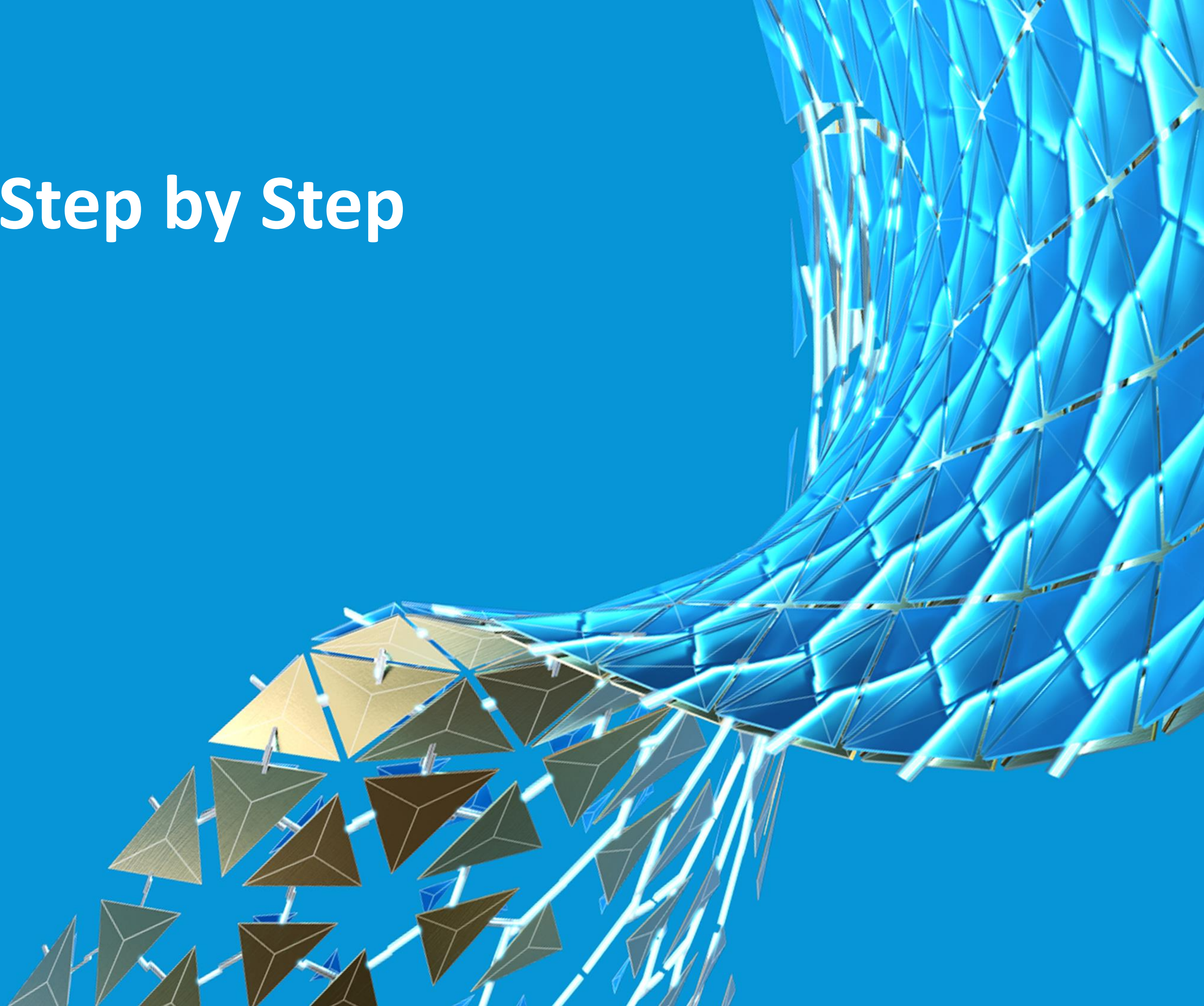
- Import project users
- Only document management and project administration supported
- Admin or normal user

UPDATE USER

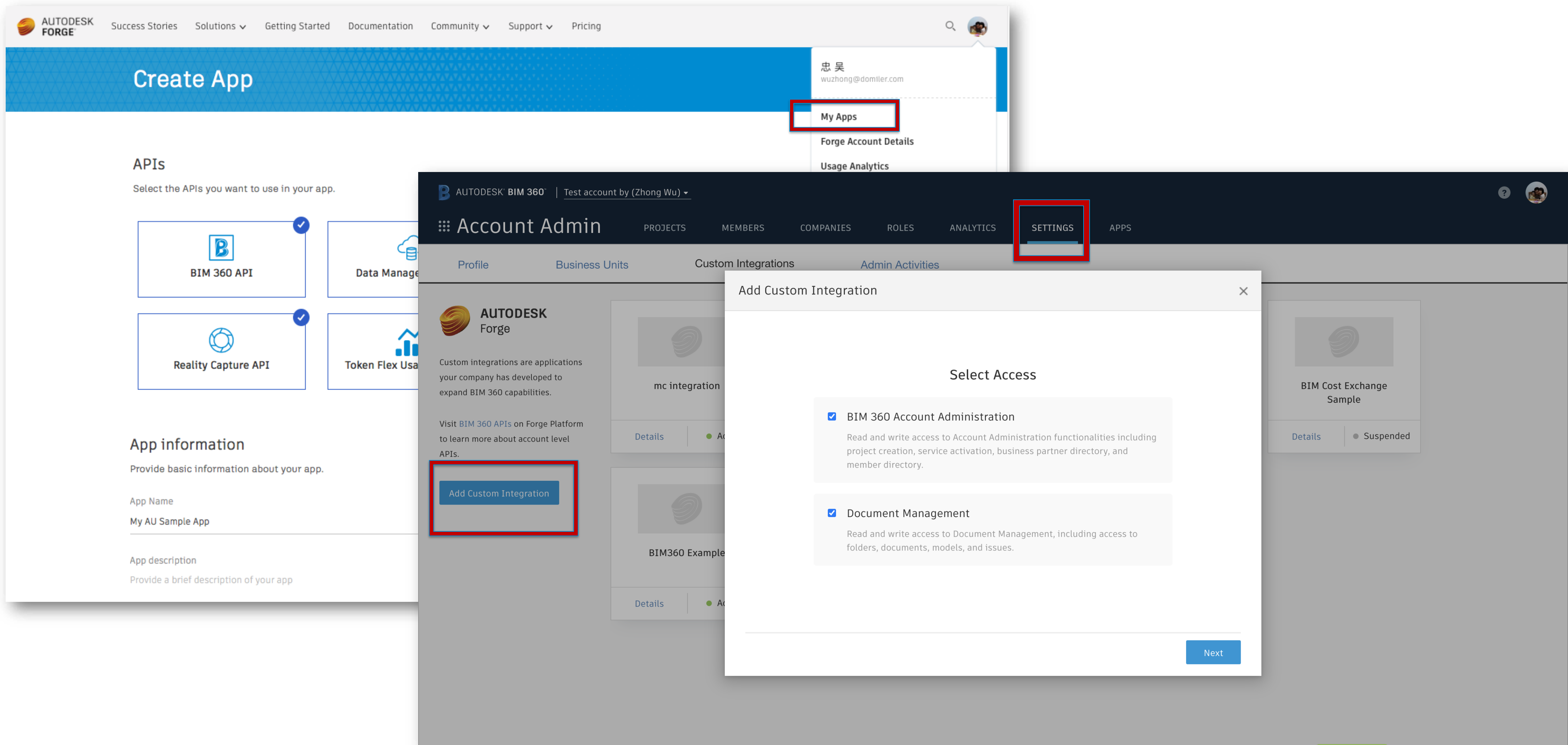
Update project users

- Update project users
- Support access, company, role

How to use – Step by Step



Step 0 : Preparation – Account



Step 0 : Preparation – CSV file

name	start_date	end_date	project_type	project_name	service_type	email	company	zone	language	construction_type	contract_type
AU Sample Project 01	05/21/2019	05/25/2020	Office	AU Sample Project 01	admin	wuzhong@domiler.com	Test account by (Zhong Wu)	New_York	en	New Construction	Design-Bid-Build
AU Sample Project 02	05/21/2019	05/25/2021	Office	AU Sample Project 01	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)	New_York	en	New Construction	Design-Bid-Build
AU Sample Project 03	05/21/2019	05/25/2022	Office	AU Sample Project 01	pm	wuzhong@domiler.com	Test account by (Zhong Wu)	New_York	en	New Construction	Design-Bid-Build
AU Sample Project 04	05/21/2019	05/25/2023	Office	AU Sample Project 02	admin	wuzhong@domiler.com	Test account by (Zhong Wu)	New_York	en	New Construction	Design-Bid-Build
AU Sample Project 05	05/21/2019	05/25/2024	Office	AU Sample Project 02	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)	New_York	en	New Construction	Design-Bid-Build
AU Sample Project 06	05/21/2019	05/25/2025	Office	AU Sample Project 02	pm	wuzhong@domiler.com	Test account by (Zhong Wu)	New_York	en	New Construction	Design-Bid-Build
AU Sample Project 07	05/21/2019	05/25/2026	Office	AU Sample Project 03	admin	wuzhong@domiler.com	Test account by (Zhong Wu)	New_York	en	New Construction	Design-Bid-Build
AU Sample Project 08	05/21/2019	05/25/2027	Office	AU Sample Project 03	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)	New_York	en	New Construction	Design-Bid-Build
AU Sample Project 09	05/21/2019	05/25/2028	Office	AU Sample Project 03	pm	wuzhong@domiler.com	Test account by (Zhong Wu)	New_York	en	New Construction	Design-Bid-Build
				AU Sample Project 04	admin	wuzhong@domiler.com	Test account by (Zhong Wu)				
				AU Sample Project 04	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)				

name	project_name	email	pm_access	docs_access	company_name	industry_roles	contract_type	folders_created_from
AU Sample Project 01	AU Sample Project 01	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer	Design-Bid-Build	Project Template
AU Sample Project 01 - Copy Folder	AU Sample Project 02	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer	Design-Bid-Build	Project Template
AU Sample Project 02	AU Sample Project 02	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
AU Sample Project 02 - Copy Folder	AU Sample Project 02	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 03	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 03	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 04	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 04	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 05	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 05	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 06	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 06	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 07	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 07	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 08	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 08	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 09	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 09	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 01 - Copy Folder	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 01 - Copy Folder	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 02 - Copy Folder	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		
	AU Sample Project 02 - Copy Folder	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer		

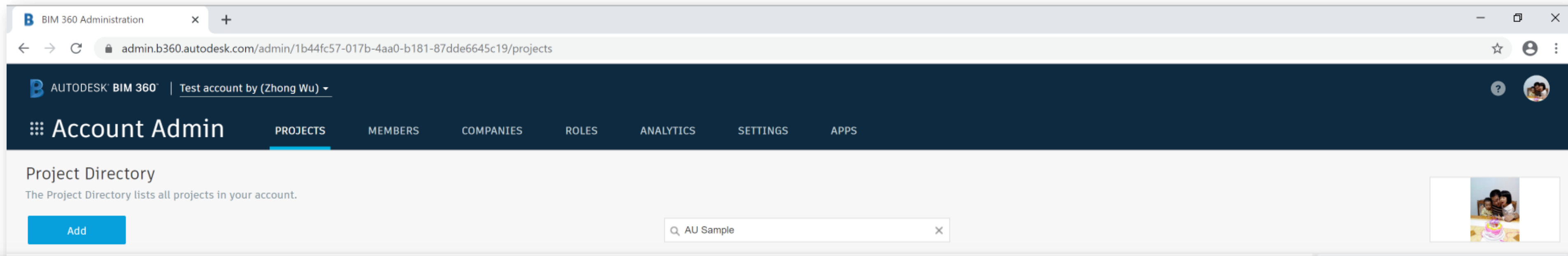

```
Administrator: Command Prompt
C:\BimProjectSetupTool\bin\Debug>Autodesk.BimProjectSetup.exe -p ".\sample\BIM360_Projects_Template.csv"
-c "z8fGD7s0z27dGsiG1g3df2nelkXchTAV" -s "7BxtA1m7Y3NAuhPv" -a "1b44fc57-017b-4aa0-b181-87dde6645c19"
```

Command Line Options

Autodesk.BimProjectSetup.exe -c -s -a [-p] [-x] [-u] [-b] [-t] [-z] [-e] [-d] [-r] [-h] [--CF] [--AR] [--EU] [--UP]

- **File path(at least one path to an input file is required)**
 - -p Path to CSV input file for project creation
 - --CF Copy folders
 - -x Path to CSV input file for service activation
 - -u Path to CSV input file with project user information
 - --UP Update project users
- **Account Info (Required)**
 - -c Forge client ID
 - -s Forge client secret
 - -a BIM 360 Account ID
- **CSV file related**
 - -t Separator character (default = ';')
 - -z Second Separator character (default = ',')
 - -e Encoding (default = UTF-8)
 - -d Date time format pattern (default = yyyy-MM-dd)
- **Others**
 - -r Trial run [true/false] (default = false)
 - -b BaseUrl (default= "<https://developer.api.autodesk.com>")
 - --AR Admin Industry Role
 - --EU Use the EU region account
 - --h BIM 360 Account admin Email address, required for importing users and

Step 1: Create Projects (from scratch)



name	start_date	end_date	project_type	value	currency	job_number	address_line_1	address_line_2	city	state_or_province	postal_code	country	business_unit_id	timezone	language	construction_type	contract_type
AU Sample Project 01	05/21/2019	05/25/2020	Office	800000.00	USD							United States		America/New_York	en	New Construction	Design-Bid-Build
AU Sample Project 02	05/21/2019	05/25/2021	Office	800000.00	USD							United States		America/New_York	en	New Construction	Design-Bid-Build
AU Sample Project 03	05/21/2019	05/25/2022	Office	800000.00	USD							United States		America/New_York	en	New Construction	Design-Bid-Build
AU Sample Project 04	05/21/2019	05/25/2023	Office	800000.00	USD							United States		America/New_York	en	New Construction	Design-Bid-Build
AU Sample Project 05	05/21/2019	05/25/2024	Office	800000.00	USD							United States		America/New_York	en	New Construction	Design-Bid-Build
AU Sample Project 06	05/21/2019	05/25/2025	Office	800000.00	USD							United States		America/New_York	en	New Construction	Design-Bid-Build
AU Sample Project 07	05/21/2019	05/25/2026	Office	800000.00	USD							United States		America/New_York	en	New Construction	Design-Bid-Build
AU Sample Project 08	05/21/2019	05/25/2027	Office	800000.00	USD							United States		America/New_York	en	New Construction	Design-Bid-Build
AU Sample Project 09	05/21/2019	05/25/2028	Office	800000.00	USD							United States		America/New_York	en	New Construction	Design-Bid-Build

	AU Sample Project 05	0	1	Inactive
	AU Sample Project 07	0	1	Inactive
	AU Sample Project 08	0	1	Inactive
	AU Sample Project 09	0	1	Inactive

```

imProjectSetup.exe -p ".\sample\BIM360_Projects_Template.csv" -c "<YOUR-CLIENT-ID>" -s "<YOUR-CLIENT-SECRET>" -a

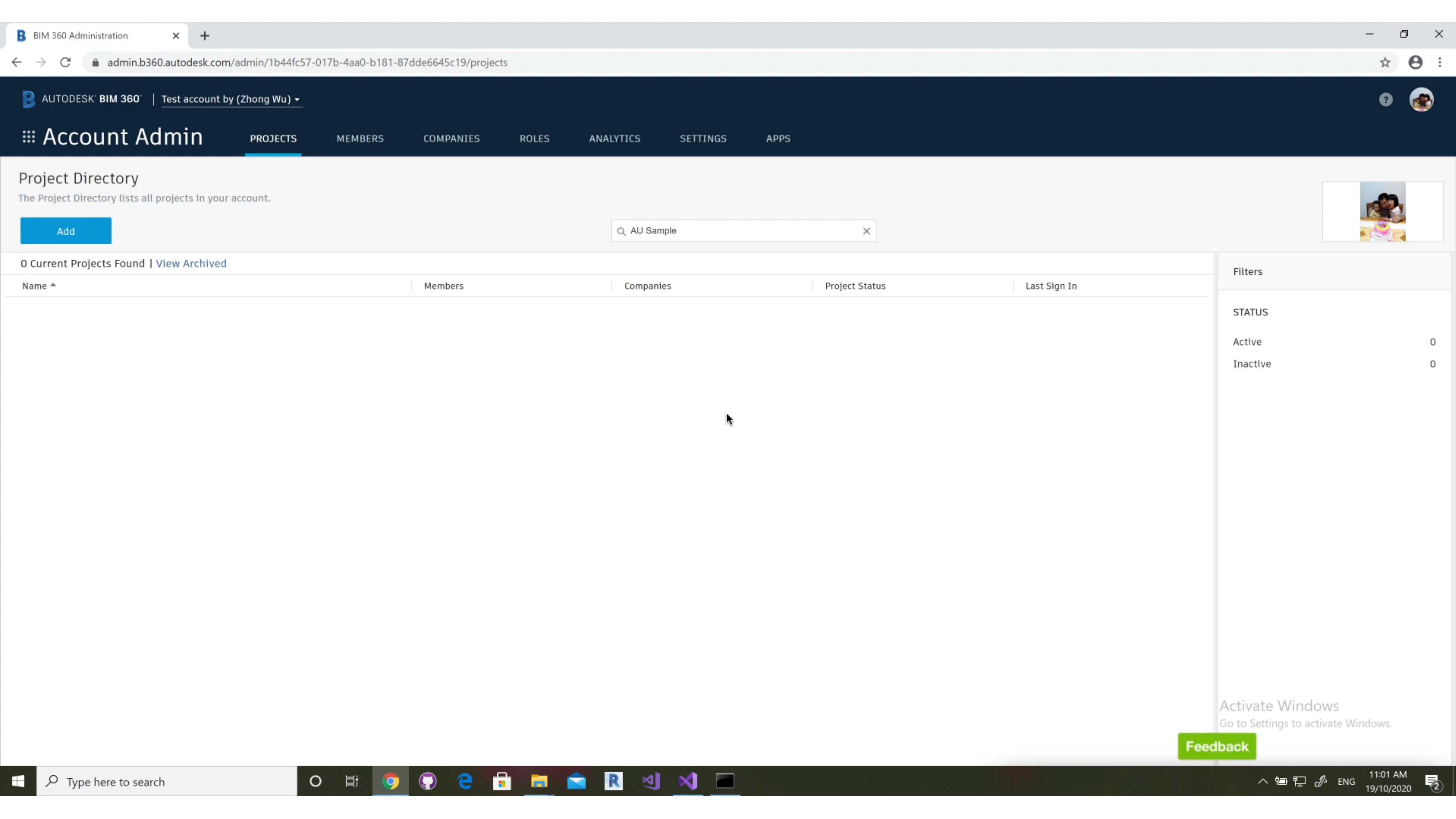
```

Command:

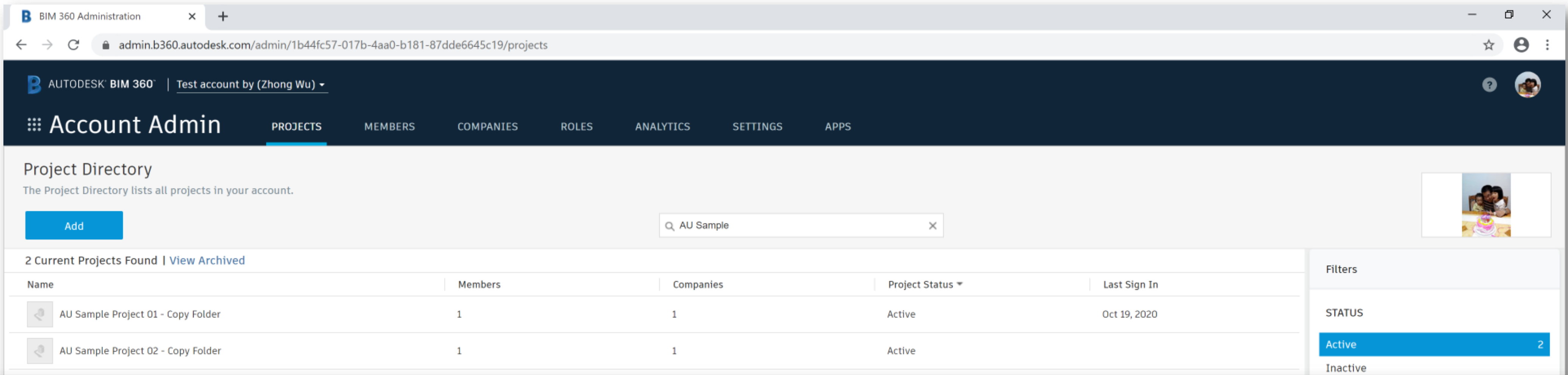
Autodesk.BimProjectSetup.exe -p ".\sample\BIM360_Projects_Template.csv" -c "<YOUR-CLIENT-ID>" -s "<YOUR-CLIENT-SECRET>" -a "<ACCOUNT-ID>"

API Used:

- POST: /accounts/:account_id/projects



Step 1: Create Projects (from template)



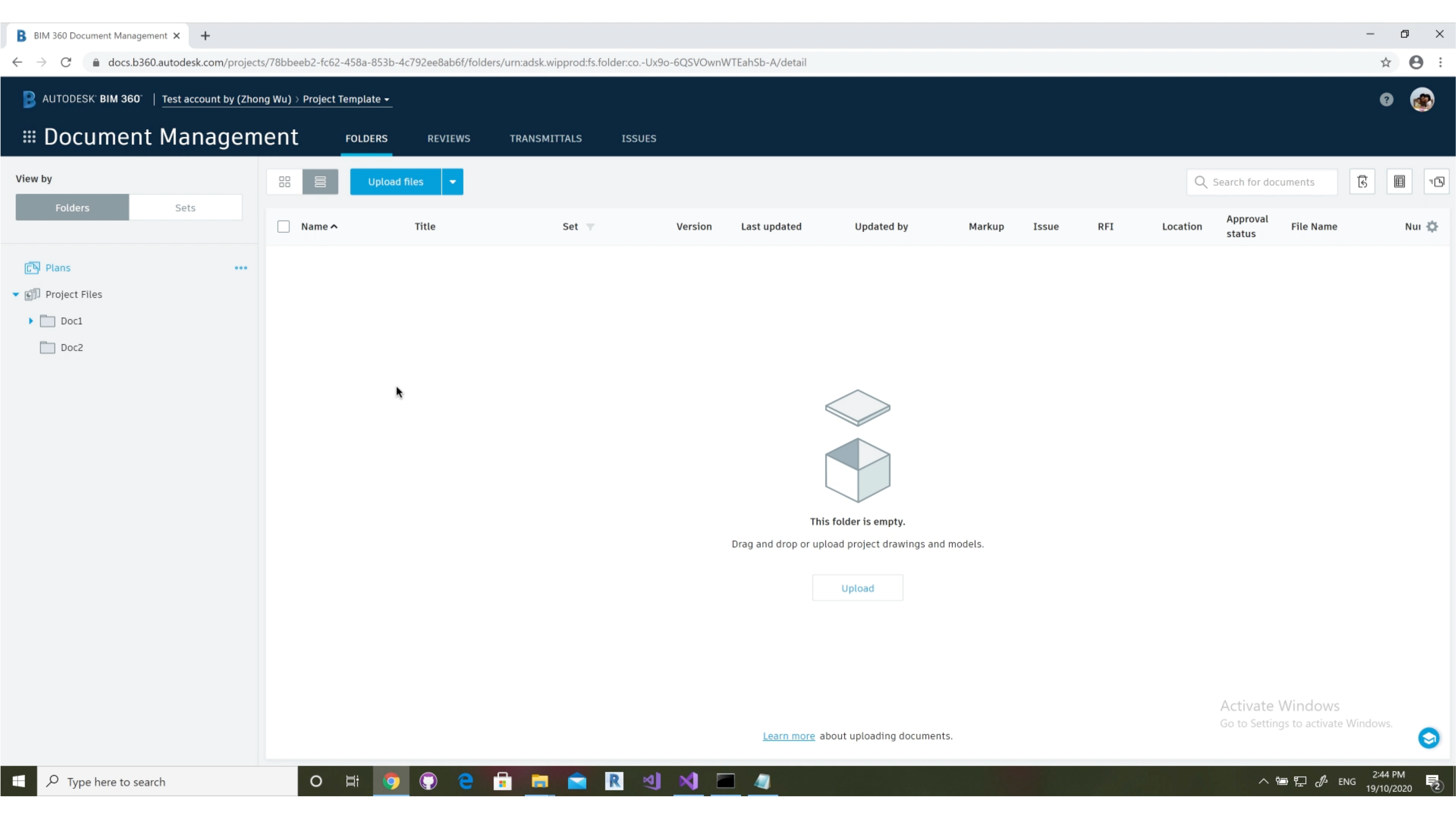
name	start_date	end_date	project_type	value	currency	job_number	address_line_1	address_line_2	city	state_or_province	postal_code	business_unit_id	country	timezone	language	construction_type	contract_type	folders_created_from
AU Sample Project 01 - Copy Folder	05/21/2019	05/25/2020	Office	800000	USD								United States	America/New_York	en	New Construction	Design-Bid-Build	Project Template
AU Sample Project 02 - Copy Folder	05/21/2019	05/25/2021	Office	800000	USD								United States	America/New_York	en	New Construction	Design-Bid-Build	Project Template

Command:

Autodesk.BimProjectSetup.exe -p ".\sample\BIM360_Projects_CF_Template.csv" -c "<YOUR-CLIENT-ID>" -s "<YOUR-CLIENT-SECRET>" -a "<ACCOUNT-ID>" -h "admin@company.com" --CF

API Used:

- POST: [/accounts/:account_id/projects](#) (create project)
- POST: [/data/v1/projects/:project_id/folders](#) (create folder)
- GET: [/bim360/docs/v1/projects/:project_id/folders/:folder_id/permissions](#) (get permission)
- POST: [/bim360/docs/v1/projects/:project_id/folders/:folder_id/permissions:batch-create](#) (create permission)



Step 2: Activate services

BIM 360 Administration

← → ↻ admin

AUTODESK BIM 360

Project A

Overview

Issues

Notifications

Document Management

Project Management

project_name	service_type	email	company
AU Sample Project 01	admin	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 01	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 01	pm	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 02	admin	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 02	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 02	pm	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 03	admin	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 03	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 03	pm	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 04	admin	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 04	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 04	pm	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 05	admin	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 05	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 05	pm	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 06	admin	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 06	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 06	pm	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 07	admin	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 07	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 07	pm	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 08	admin	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 08	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 08	pm	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 09	admin	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 09	doc_manager	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 09	pm	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 01 - Copy Folder	pm	wuzhong@domiler.com	Test account by (Zhong Wu)
AU Sample Project 02 - Copy Folder	pm	wuzhong@domiler.com	Test account by (Zhong Wu)

?

Command:

```
Autodesk.BimProjectSetup.exe -x ".\sample\BIM360_Service_Template.csv" -c "<YOUR-CLIENT-ID>" -s "<YOUR-CLIENT-SECRET>" -a "<ACCOUNT-ID>"
```

API Used:

- POST: /accounts/:account_id/projects/:project_id/users

Project Directory












The Project Directory lists all projects in your account.

Add

Q AU Sample

×

11 Current Projects Found | [View Archived](#)

Name	Members	Companies	Project Status ▾	Last Sign In
 AU Sample Project 01	0	1	Inactive	
 AU Sample Project 02	0	1	Inactive	
 AU Sample Project 04	0	1	Inactive	
 AU Sample Project 06	0	1	Inactive	
 AU Sample Project 03	0	1	Inactive	
 AU Sample Project 05	0	1	Inactive	
 AU Sample Project 07	0	1	Inactive	
 AU Sample Project 08	0	1	Inactive	
 AU Sample Project 09	0	1	Inactive	
 AU Sample Project 01 - Copy Folder	1	1	Active	Oct 19, 2020
 AU Sample Project 02 - Copy Folder	1	1	Active	

Filters

STATUS

Active

2

Inactive

9

Activate Windows

Go to Settings to activate Windows.

Feedback

Step 3: Import project users

project_name	email	pm_access	docs_access	company_name	industry_roles
AU Sample Project 01	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 01	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect
AU Sample Project 02	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 02	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect
AU Sample Project 03	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 03	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect
AU Sample Project 04	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 04	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect
AU Sample Project 05	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 05	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect
AU Sample Project 06	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 06	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect
AU Sample Project 07	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 07	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect
AU Sample Project 08	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 08	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect
AU Sample Project 09	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 09	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect
AU Sample Project 01 - Copy Folder	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 01 - Copy Folder	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect
AU Sample Project 02 - Copy Folder	user@company.com	user	user	Test account by (Zhong Wu)	Architect
AU Sample Project 02 - Copy Folder	admin@company.com	admin	admin	Test account by (Zhong Wu)	Architect

Command:

```
Autodesk.BimProjectSetup.exe -u ".\sample\BIM360_ProjectUser_Template.csv" -c "<YOUR-CLIENT-ID>" -s "<YOUR-CLIENT-SECRET>" -a "<ACCOUNT-ID>" -h "admin@company.com"
```












API Used:

- POST: /accounts/:account_id/projects/:project_id/users/import

APPS



11 Current Projects Found | [View Archived](#)

Name ▲	Members	Companies	Project Status	Last Sign In
 AU Sample Project 01	1	1	Active	
 AU Sample Project 01 - Copy Folder	1	1	Active	Oct 19, 2020
 AU Sample Project 02	1	1	Active	
 AU Sample Project 02 - Copy Folder	1	1	Active	
 AU Sample Project 03	1	1	Active	
 AU Sample Project 04	1	1	Active	
 AU Sample Project 05	1	1	Active	
 AU Sample Project 06	1	1	Active	
 AU Sample Project 07	1	1	Active	
 AU Sample Project 08	1	1	Active	
 AU Sample Project 09	1	1	Active	

Filters

STATUS

11

0

Activate Windows

Go to Settings to activate Windows.

Feedback

Step 4: Update project users

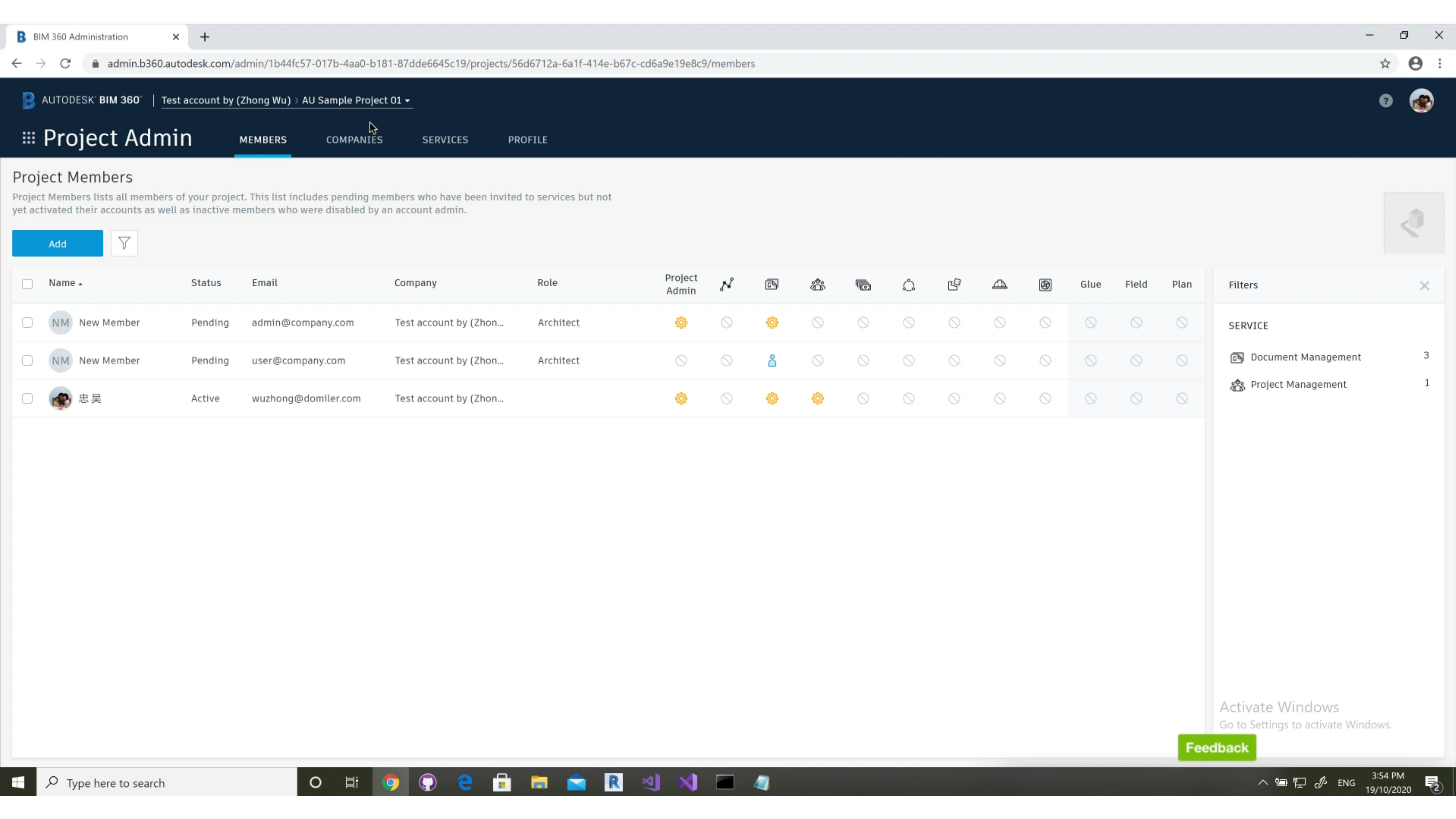
project_name	email	pm_access	docs_access	company_name	industry_roles
AU Sample Project 01	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 01	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 02	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 02	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 03	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 03	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 04	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 04	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 05	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 05	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 06	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 06	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 07	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 07	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 08	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 08	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 09	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 09	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 01 - Copy Folder	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 01 - Copy Folder	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 02 - Copy Folder	user@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer
AU Sample Project 02 - Copy Folder	admin@company.com	admin	admin	Test account by (Zhong Wu)	BIM Manager,Civil Engineer

Command:

```
Autodesk.BimProjectSetup.exe -u ".\sample\BIM360_ProjectUser_UP_Template.csv" -c "<YOUR-CLIENT-ID>" -s "<YOUR-CLIENT-SECRET>" -a "<ACCOUNT-ID>" -h "admin@company.com" --UP
```

API Used:

- PATCH: /hq/v2/accounts/:account_id/projects/:project_id/users/:user_id



Project Members

Project Members lists all members of your project. This list includes pending members who have been invited to services but not yet activated their accounts as well as inactive members who were disabled by an account admin.

Add

<input type="checkbox"/>	Name	Status	Email	Company	Role	Project Admin									Glue	Field	Plan
<input type="checkbox"/>	NM New Member	Pending	admin@company.com	Test account by (Zhon...	Architect												
<input type="checkbox"/>	NM New Member	Pending	user@company.com	Test account by (Zhon...	Architect												
<input type="checkbox"/>	忠吴	Active	wuzhong@domiler.com	Test account by (Zhon...													

Filters

SERVICE

Document Management3

Project Management1

Limitation & Tips

Limitation:

- Copy Folder only support Plans and Project Files folder.
- Copy folder support copy role permissions with this tool.
- Import project user only support Project Administrative and Document management module, due to the API limitation.
- API only supports English(en) and German(de) language.
- Activate Docs service currently not working. It's being fixed (ACSPA-1217).

Tips:

- set `FORGE_CLIENT_ID`, `FORGE_CLIENT_SECRET`, `FORGE_BIM_ACCOUNT_ID` without quotation marks.
- Add account admin email address of “-h” for creating project from template and Importing/Updating project users
- After creating a new project, wait for a couple of seconds before trying to access the contents of this new project(dev).

Extending Features & Customization



Setup project services
automatically

Advanced Features



Budget code template

Setup

(Cost Management)



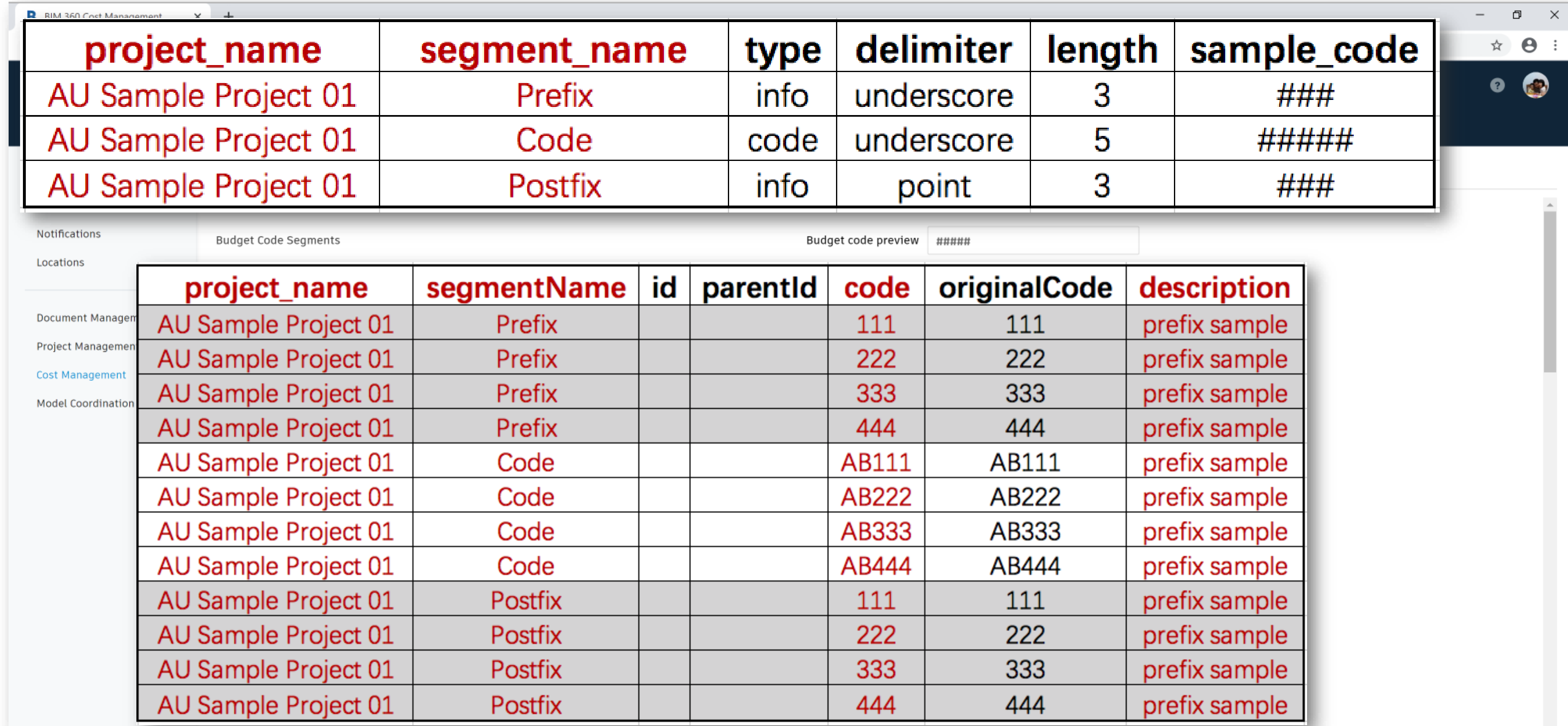
Model Sets

Setup

(Model Coordination)

<https://github.com/JohnOnSoftware/forge-bim360.project.setup.tool>

Budget code template setup



project_name	segment_name	type	delimiter	length	sample_code
AU Sample Project 01	Prefix	info	underscore	3	###
AU Sample Project 01	Code	code	underscore	5	#####
AU Sample Project 01	Postfix	info	point	3	###

project_name	segmentName	id	parentId	code	originalCode	description
AU Sample Project 01	Prefix			111	111	prefix sample
AU Sample Project 01	Prefix			222	222	prefix sample
AU Sample Project 01	Prefix			333	333	prefix sample
AU Sample Project 01	Prefix			444	444	prefix sample
AU Sample Project 01	Code			AB111	AB111	prefix sample
AU Sample Project 01	Code			AB222	AB222	prefix sample
AU Sample Project 01	Code			AB333	AB333	prefix sample
AU Sample Project 01	Code			AB444	AB444	prefix sample
AU Sample Project 01	Postfix			111	111	prefix sample
AU Sample Project 01	Postfix			222	222	prefix sample
AU Sample Project 01	Postfix			333	333	prefix sample
AU Sample Project 01	Postfix			444	444	prefix sample

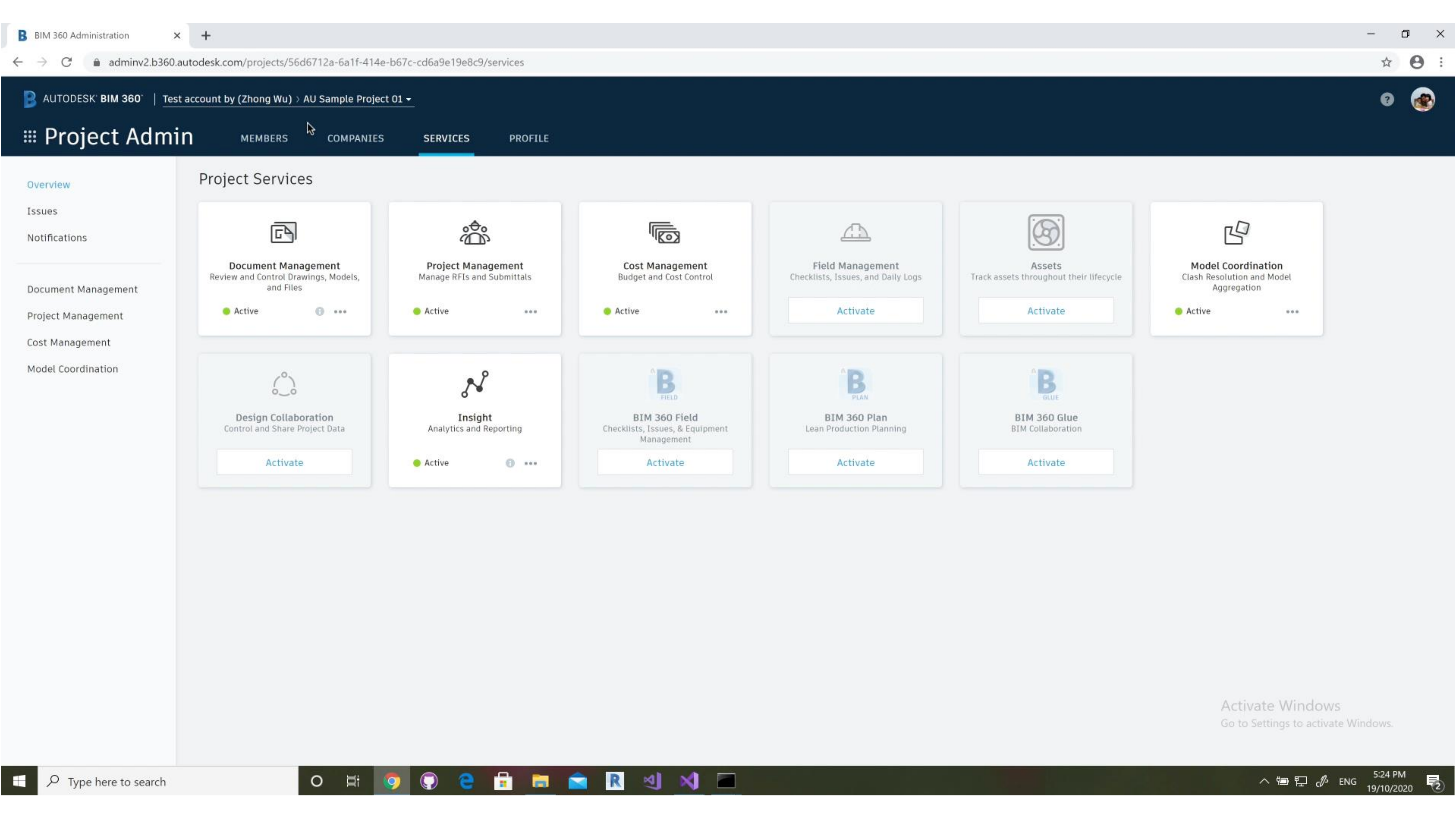
Command:

- Autodesk.BimProjectSetup.exe -pcs ".\sample\BIM360_CostSegments_Template.csv" -c "<YOUR-CLIENT-ID>" -s "<YOUR-CLIENT-SECRET>" -k "<FORGE-CALLBACK>" -a "<ACCOUNT-ID>"
- Autodesk.BimProjectSetup.exe -pcv ".\sample\BIM360_CostSegmentValues_Template.csv" -c "<YOUR-CLIENT-ID>" -s "<YOUR-CLIENT-SECRET>" -k "<FORGE-CALLBACK>" -a "<ACCOUNT-ID>"

API used:

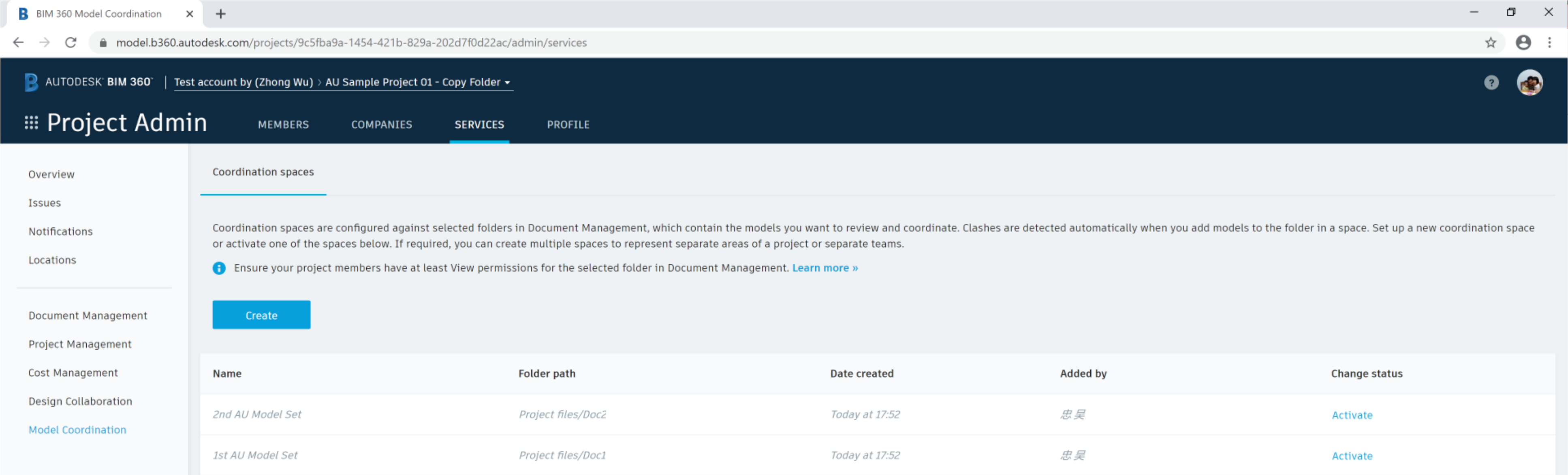
- POST: /cost/v1/containers/:containerId/templates/:templateId/segments
- POST: /cost/v1/containers/:containerId/segments/:segmentId/values:import







Model sets setup



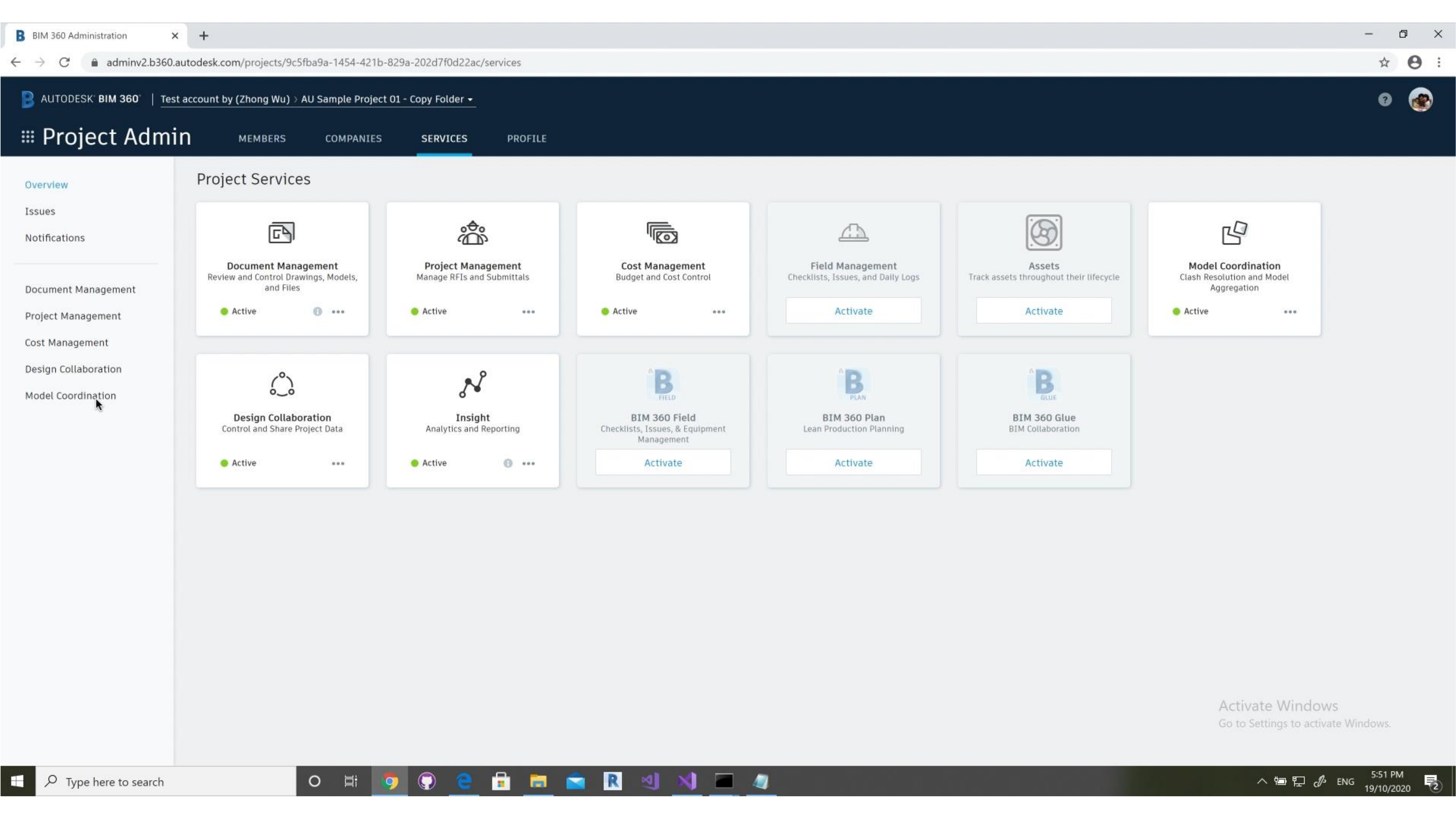
project_name	name	description	isDisabled	folder
AU Sample Project 01 - Copy Folder	1st Test Model Set 3	this is a model set	TRUE	Project Files/Doc1
AU Sample Project 01 - Copy Folder	2nd Test Model Set 3	this is a model set	TRUE	Project Files/Doc2

Command:

- Autodesk.BimProjectSetup.exe -pms ".\sample\BIM360_ModelCoordinationModelSets_Template.csv" -c "<YOUR-CLIENT-ID>" -s "<YOUR-CLIENT-SECRET>" -k "<FORGE-CALLBACK>" -a "<ACCOUNT-ID>"

API used:

- POST: /bim360/modelset/v3/containers/:containerId/modelsets



Tips for developers

HttpListener

3 legged token Support

```
public class ThreeLeggedWorkflow : BaseWorkflow
{
    private ThreeLeggedApi _threeLeggedApi = new ThreeLeggedApi();
    private string _threeLeggedToken = null;
    private static HttpListener _httpListener = null;
    private static readonly Scope[] _scope = new Scope[] { Scope.DataRead, Scope.DataWrite };

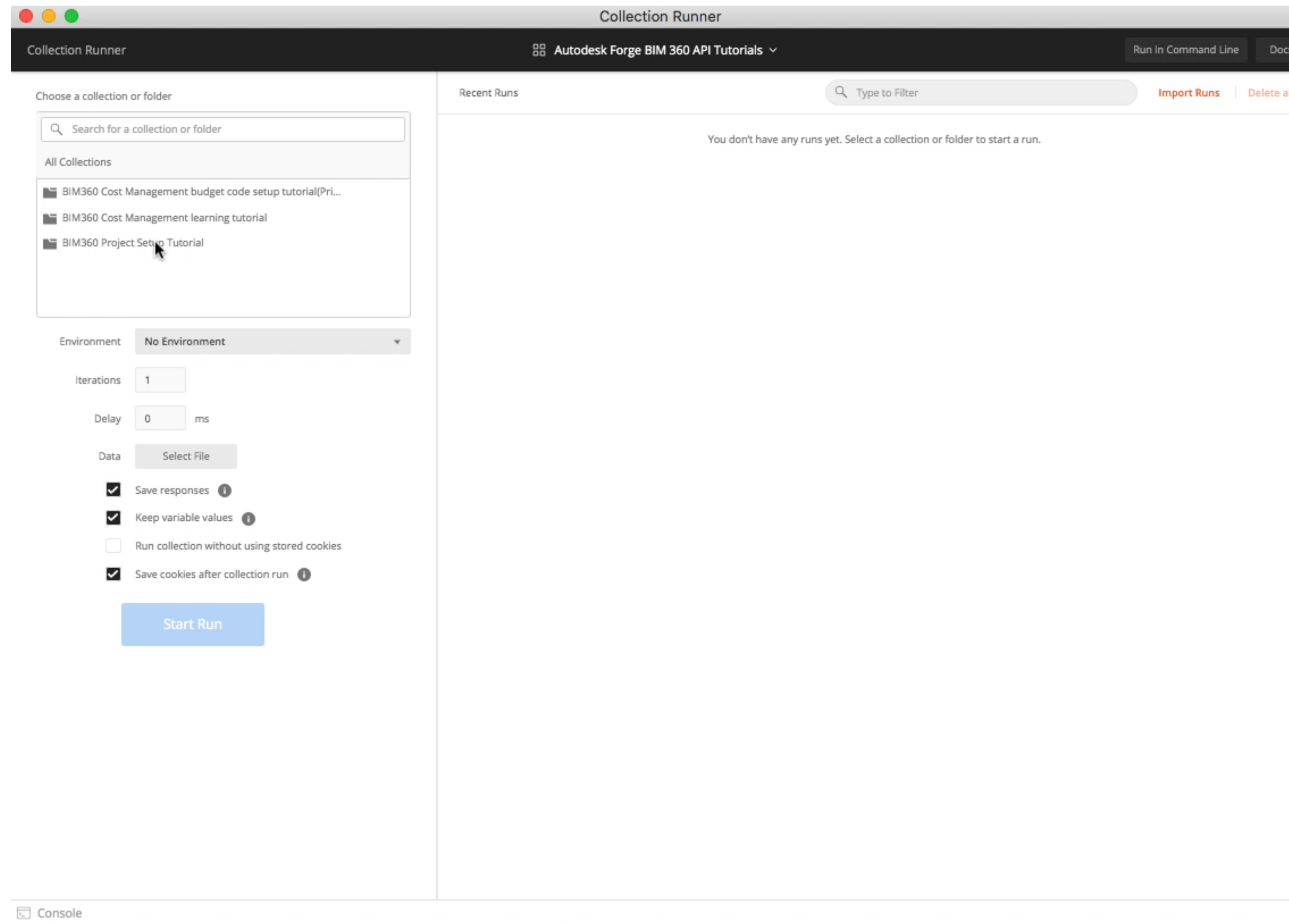
    public void initToken()
    {
        // Initialize our web listener
        _httpListener = new HttpListener();
        _httpListener.Prefixes.Add(_options.ForgeCallback.Replace("localhost", "+") + "/");
        _httpListener.Start();
        IAsyncResult result = _httpListener.BeginGetContext(_3leggedAsyncWaitForCode, null );

        // Generate a URL page that asks for permissions for the specified scopes, and call our default web browser.
        string oauthUrl = _threeLeggedApi.Authorize(_options.ForgeClientId, OAuthConstants.CODE, _options.ForgeCallback, _scope);
        System.Diagnostics.Process.Start(new System.Diagnostics.ProcessStartInfo(oauthUrl));
    }

    internal async void _3leggedAsyncWaitForCode(IAsyncResult ar)
    {
        //grab the code from the URL
        var context = _httpListener.EndGetContext(ar);
        string code = context.Request.QueryString[OAuthConstants.CODE];
        //request or final access_token
        ApiResponse<dynamic> bearer = await _threeLeggedApi.GettokenAsyncWithHttpInfo(_options.ForgeClientId, _options.ForgeClientSecret,
                                                                                      OAuthConstants.AUTHORIZATION_CODE, code, _options.ForgeCallback);
        _threeLeggedToken = bearer.Data.access_token;

        _httpListener.Stop();
    }
}
```


Tips: Postman Collection

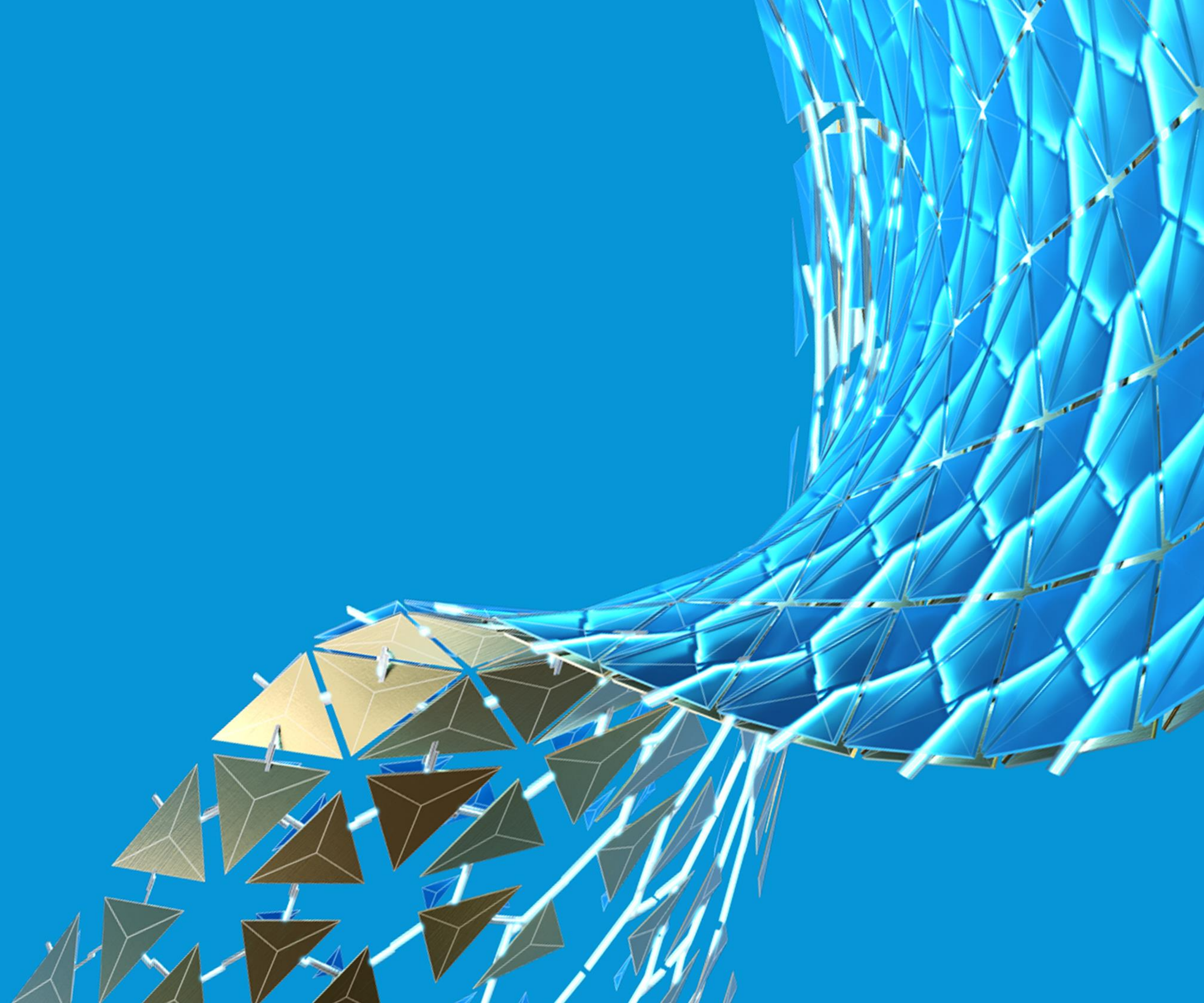


<https://github.com/JohnOnSoftware/forge-bim360.project.setup-postman.collection>

More about BIM 360 API

- Learn forge tutorial
 - <https://learnforge.autodesk.io>
- Official documentation
 - <http://developer.autodesk.com>
- Github sample
 - <https://github.com/Autodesk-Forge>
- AU topics:
 - ❑ SD468487 - BIM 360 API Updates and Beyond by Mikako Harada
 - ❑ SD463691 - Forge Roadmap by Jim Quanci & Cyrille Fauvel

Future Work



What's Next

Continue enhancing as new API becomes available.

- Admin API
 - Activating services for users
 - New version of API's (/admin/ instead of /hq/)
- Document Management
 - Custom attribute definition

Have ideas? Let us know!

Open Source - contribution welcome!

Summary

- Introduction
- Project Setup Tool
 - Overview
 - How to Use - Step by Step
- Extending Features & Customization
- Future Work

Questions?

Comment in the class page (CS468152)

Join us at **Forge Answer Bar**

Thank you!



@autodeskforge @johnnonsoftware @mikako_harada



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