

Desktop Platform 20.10

Product Enablement Session

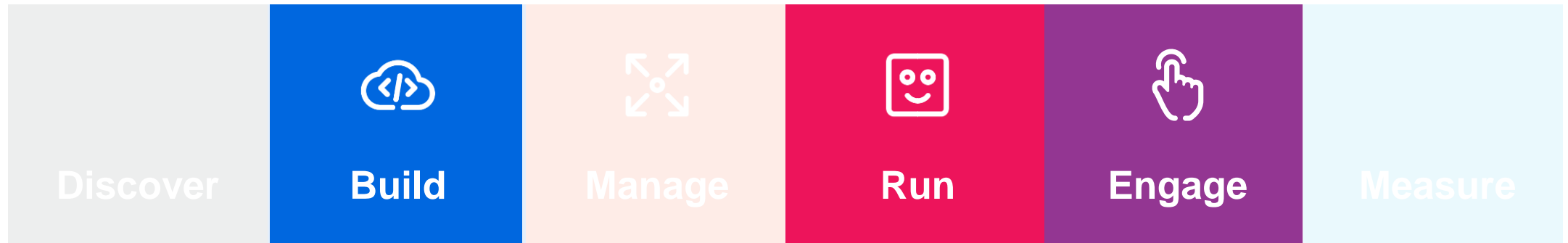


Disclaimer

The following information is meant only for UiPath internal & UiPath Business Partners.

The UiPath Platform: Built for end-to-end automation

Wealth of new capabilities planned for the 2020 LTS release



Studio

- Performance improvements
- Developer productivity
- C# support
- Enhanced governance

StudioX

- PowerPoint activities
- Excel improvements
- SAP support

System

UI Automation

Computer Vision

Robots

- Picture in Picture Support
- Improved trigger-based automation

Assistant

- Log In support
- Input parameter support
- Large console view
- Search and group
- Notification view

Agenda

01

Build

Studio / StudioPro / StudioX

Driver, UIAutomation, Computer Vision

02

Run & Engage

Robot

UiPath Assistant

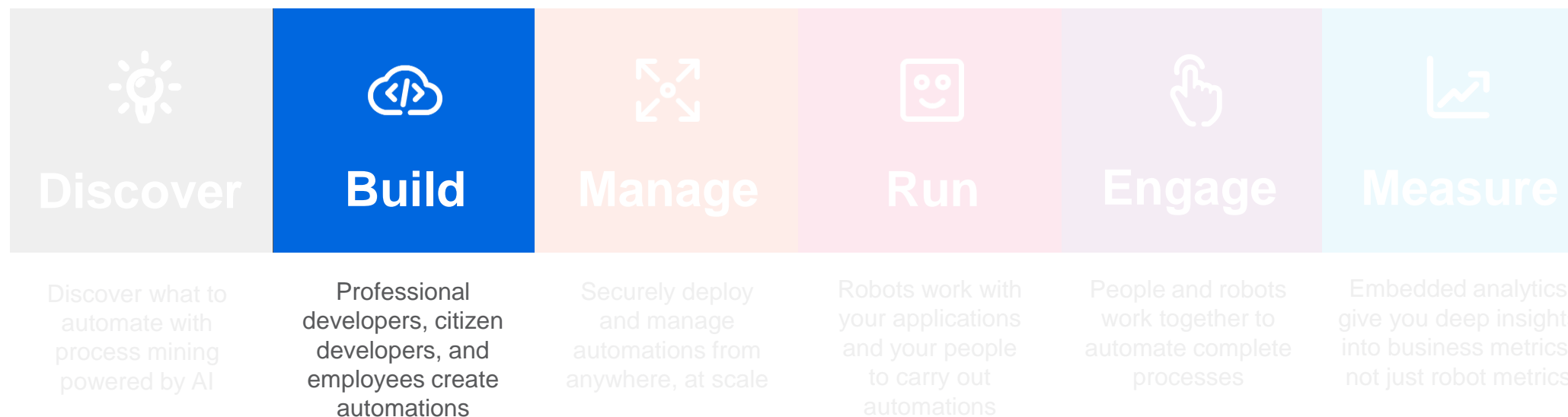
03

Additional Resources

04

Q&A

You're hyperautomation-ready with the **UiPath Platform**



What's new?

StudioX 20.10 Hero Features

- PowerPoint activities
- Gmail and Exchange365 support
- Excel improvements
- Many more new features and activities

Studio 20.10 Hero Features

- Modern experience (former UIA Next)
- Object Repository
- C# Support (only for StudioPro)
- Multiple Entry Points
- Find References
- Resources Panel: Drag and Drop
- Sign In and First Run Experience
- Share Project Templates
- Desktop Triggers
- Inter Process Communication
- Picture in Picture
- Inject .NET Code activity
- SAP enhancements
- Computer Vision improvements
- General Improvements

StudioX

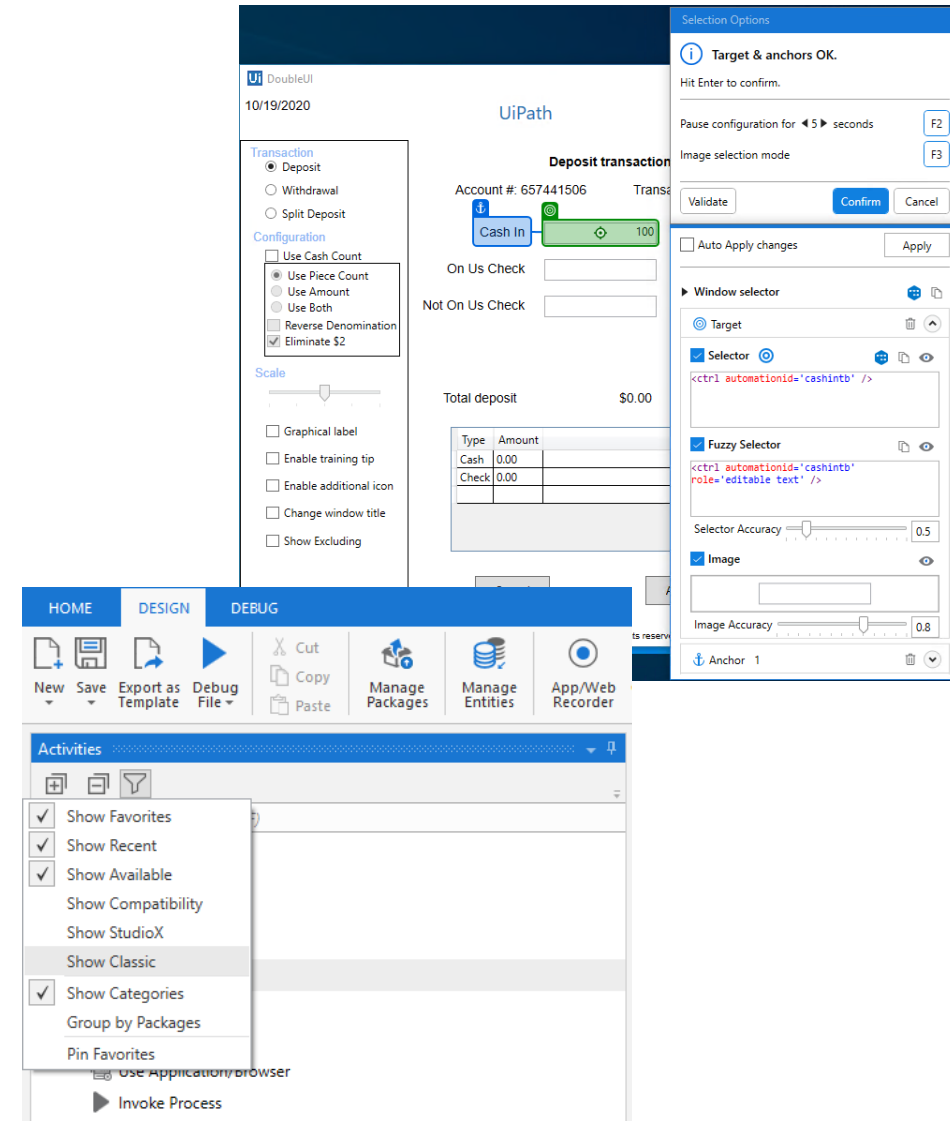
20.10 Highlights

Modern Experience

The modern user experience introduced in StudioX is now available to Studio and StudioPro profiles, as well.

Good to know

- UIAutomation Next activities are now merged into UIAutomation.
- The Modern activities are using Unified Target, instead of Selectors, to find the target element.
- A new recorder, agnostic of the target application, if available in the modern experience, replacing all dedicated recorders from the classic experience.
- All modern and classic activities are included in UIAutomation package, but, depending on the Modern switch value, only one category is shown in the Activities panel.
- We can use the View Options from the Activities panel to show the modern ones in classic experience, or the classic ones in modern experience.
- Targeting methods configuration by technology is available in Project Settings.
- UIElement can be interchanged between Use App/Browser card and the classic application / browser scopes and between modern and classic UI Automation activities.
- Relative To easier to use



Object Repository

What is it?

Object Repository enables reusability of UI Elements and easy update of processes when applications upgrade and UI changes.

The feature was introduced as experimental back in 20.4 as UI Reusability, now it is production ready.

Who Needs It?

Skilled RPA Developers.

Organizations that are scaling their RPA operations.

Organizations who want to better support upgrading applications that are being automated.

Customer Benefits

Don't reinvent the (UI) wheel / Reuse

Diminished cost of upgrade, having easier migration and upgrade of systems

Aids to speed of development

Aids to the RPA learning curve by having senior developers build UI Descriptors that can be used by the entire team

How does it work? (Demo)

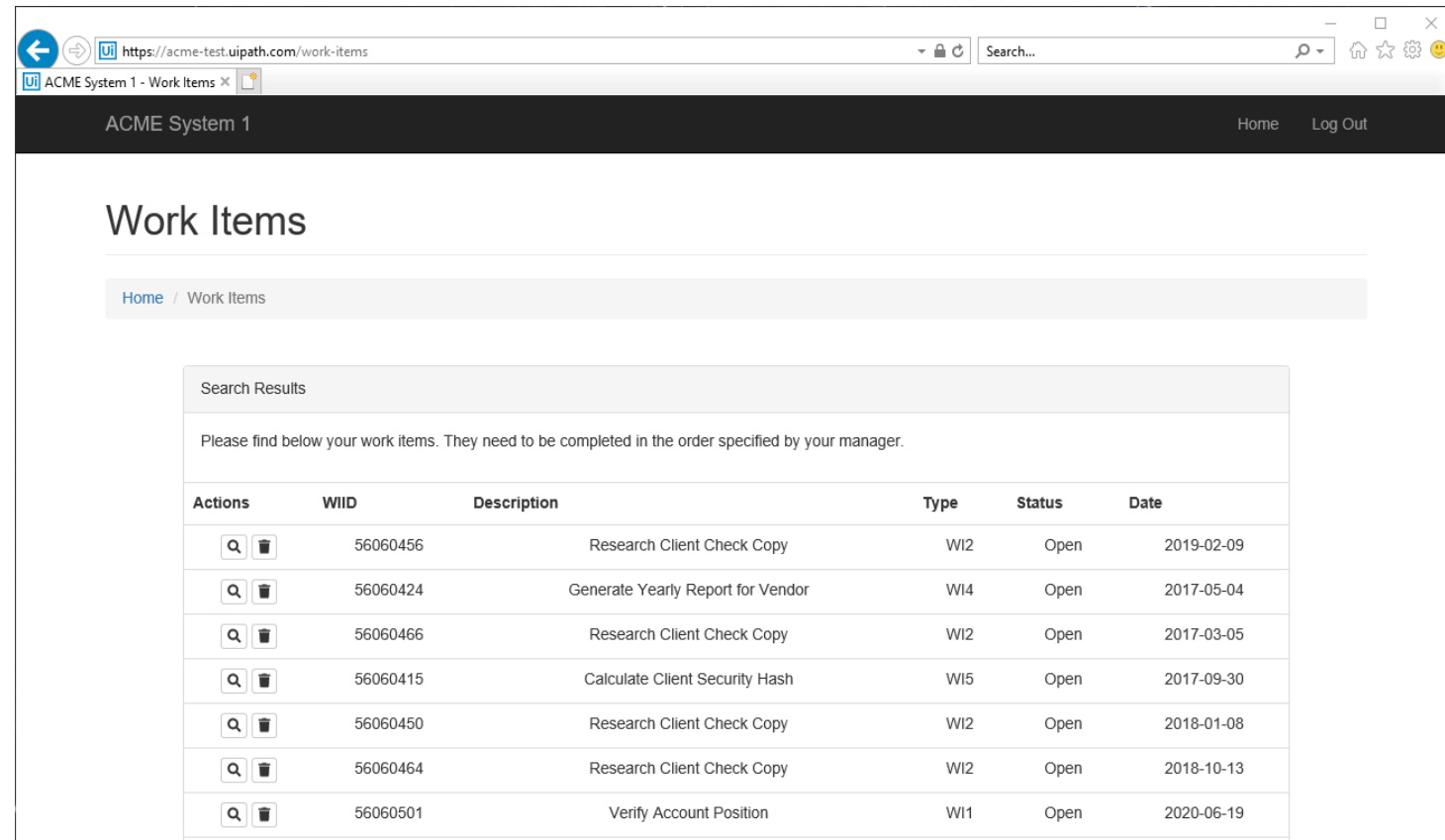
Use-case:

After upgrading an application, I want to update the selectors in all automation projects where that application is used.

Our organization has many processes using ACME System 1 application and the automations were implemented using best practices in terms of reusability of UI elements. A library was created for the UI elements in ACME System 1, targeting Internet Explorer, the browser allowed by our IT policy.

Now, the IT policy changed, and Internet Explorer was replaced with Edge. We need to update all automations to comply with the new policy.

Luckily, because we used the Object Repository feature, we only have to update the UI Library for ACME System 1 and then to use it in all automations.

















ACME System 1

Work Items

Home / Work Items

Search Results

Please find below your work items. They need to be completed in the order specified by your manager.

Actions	WIID	Description	Type	Status	Date
 	56060456	Research Client Check Copy	WI2	Open	2019-02-09
 	56060424	Generate Yearly Report for Vendor	WI4	Open	2017-05-04
 	56060466	Research Client Check Copy	WI2	Open	2017-03-05
 	56060415	Calculate Client Security Hash	WI5	Open	2017-09-30
 	56060450	Research Client Check Copy	WI2	Open	2018-01-08
 	56060464	Research Client Check Copy	WI2	Open	2018-10-13
 	56060501	Verify Account Position	WI1	Open	2020-06-19

C# Support

Allow RPA developers to create StudioPro projects using C# as expression language instead of VB.

Good to know

- The feature is only available for the StudioPro profile.
- The use of both VB and C# expressions in the same project is not supported.
- The use of VB expressions in C# workflows and vice versa is not supported.
- When you copy and paste activities from other projects, invoke or import workflows, make sure they use the same language as your project.
- You can install C# libraries as dependencies in VB projects and vice versa.
- When runtime performance is essential, we recommend using VB instead of C#.
- Please check the list of known limitations -

<https://docs.uipath.com/studio/v2020.10/docs/about-automation-projects#c-limitations>

UiPath New Blank Process

New Blank Process
Start with a blank project to design a new automation process.

Name

Location

Description

Language ☐ VB ☒ C#

Create

Multiple Entry Points

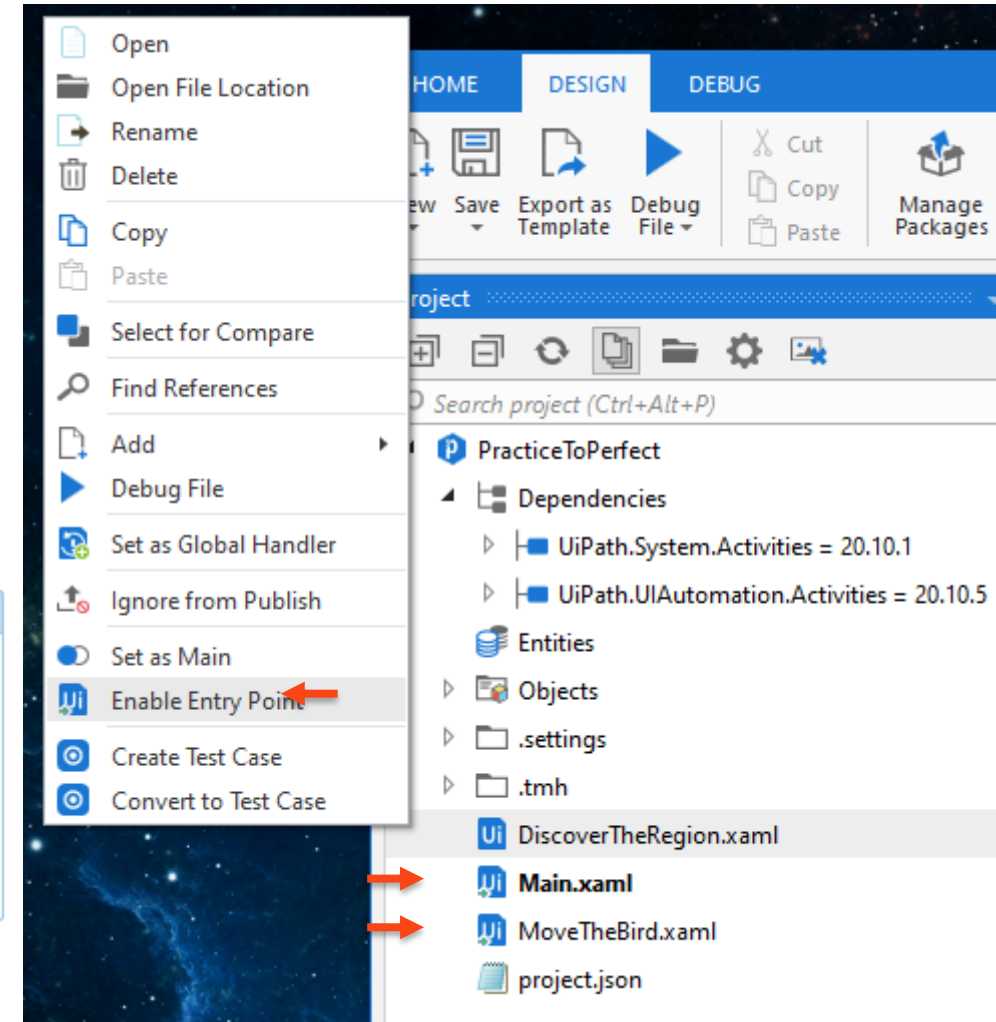
Enables developers to mark workflows which are entry points to the current process. That means the process can have more than just one "Main" workflow.

Good to know

- By default, only Main is set as entry point.
- The entry points workflows are marked with a small green arrow.
- It is possible to select multiple files and Enable/Disable Entry Point for all at once.
- When using "Set as main" the workflow is also set as entry point.
- Supported by Invoke Process and Run Parallel Process activities.

Invoke Process
Process Name
"PracticeToPerfect" ...
Entry point (optional)
"MoveTheBird.xaml" ...
Edit Arguments

Run Parallel Process
Process Name
"PracticeToPerfect" ...
Entry point (optional)
"MoveTheBird.xaml" ...
Edit Arguments

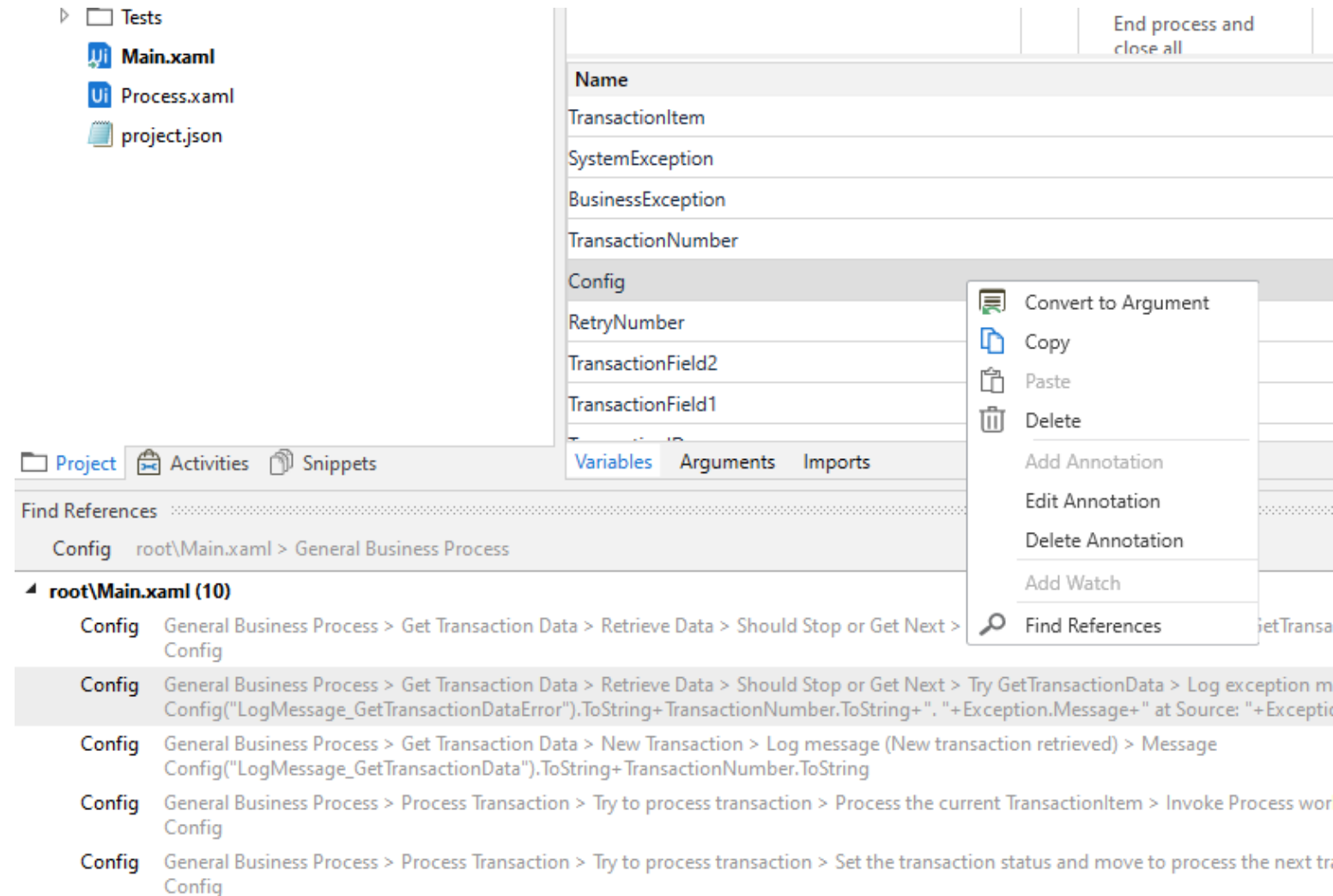


Find References

Easy to find where specific variables, arguments, workflows, activities or UI Descriptor are used.

Good to know

- The results are displayed in the Find References window.
- The results are grouped by workflow file.
- We can double click on a found reference and the workflow is opened and focus set to that activity.



Drag and Drop experience

Users can drag and drop any of the objects from the Resources Panel on the canvas and a wizard will appear asking which of the resource specific activity should be created in place.

Supported by

- Assets – drop from Resources panel to Get/Set an Asset or Credential.
- Queues – option to create activities Add Queue Item / Add Transaction Item / Bulk Add Queue Item / etc.
- Processes – options to Start Job / Invoke Process / Run Parallel Process
- UI Descriptors from Object Repository panel - create new activity or add descriptor to existing activity
- Workflows – drop from Project panel to add an Invoke Workflow File activity.
- Entities - You can drop from Resources Panel to import or drop from Project Panel to use.

Sign In and First Run Experience

What is it?

Unified Sign in and onboarding experience for all UiPath Desktop Products.

You no longer need to login or license each component independently. From this first interaction, you are logged in to Orchestrator, Robot and Studio and can connect automatically, providing unique information on number of users and licenses for the company.

Who Needs It?

First time user of Community edition installing and configuring desktop products.

First time Citizen developer connecting to Orchestrator and other UiPath Platform elements.

Customer Benefits

Single sign on to multiple UiPath products.

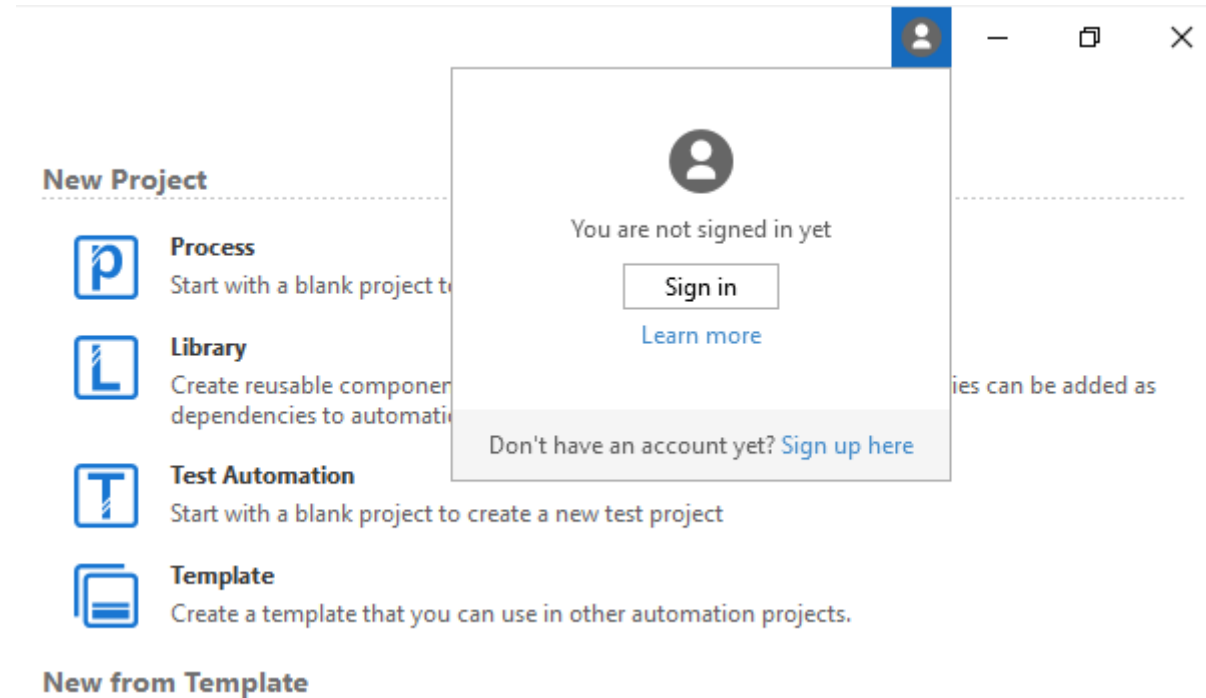
Easy licensing and connection to Orchestrator.

Seamless integration with cloud UiPath components.

Sign In and First Run Experience

Good to know

- We need to have Modern Folders enabled in Orchestrator; does not work for Classic Folders.
- If the Robot is installed in Service Mode, we need first to connect using the machine key and then we can Sign In.
- The recommendation for enterprise customers is to install Studio/StudioX/Assistant in User Mode for development or attended robots and in Service Mode for unattended robots.



Share Project Templates

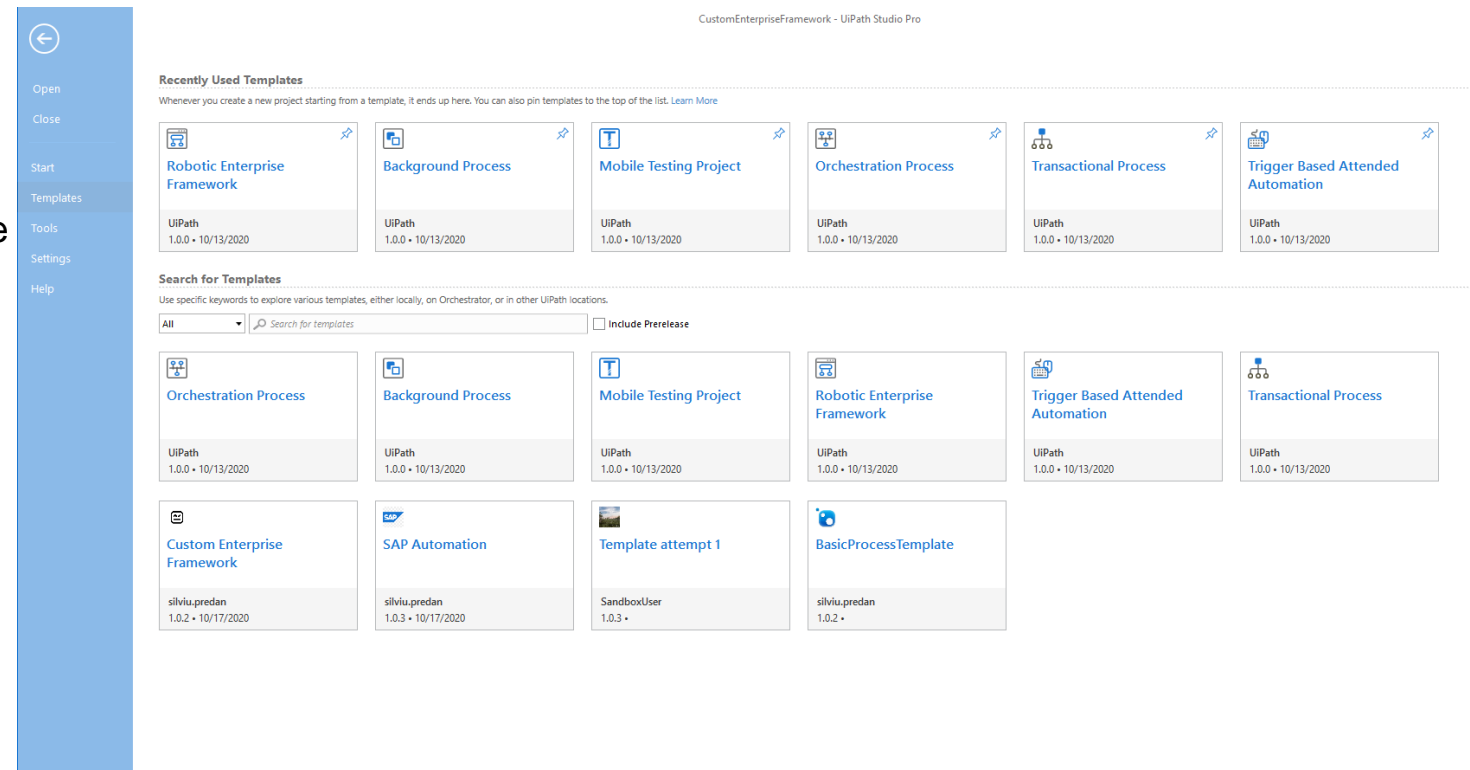
What is it?

Creating project templates was introduced in a previous version, but now we can easily share them across the team.

We can publish to the Orchestrator feed, sharable at tenant level.

The New from Template list, from the Start menu, can now be customized.

New Templates menu in Studio where we can filter and search for templates.



Desktop Triggers

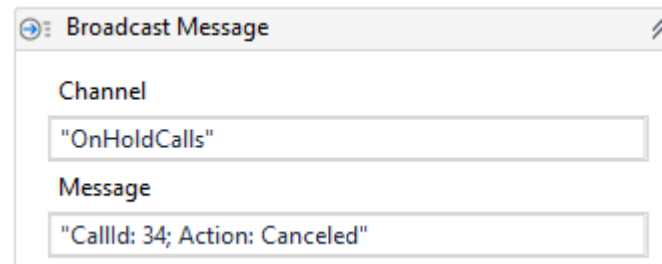
Inter Process Communication

What is it?

A simple communication mechanism, publish-subscribe, that enables background processes in parallel attended execution to transmit simple messages each other.

It consist of two activities:

- Broadcast Message
- Message Receiver Trigger



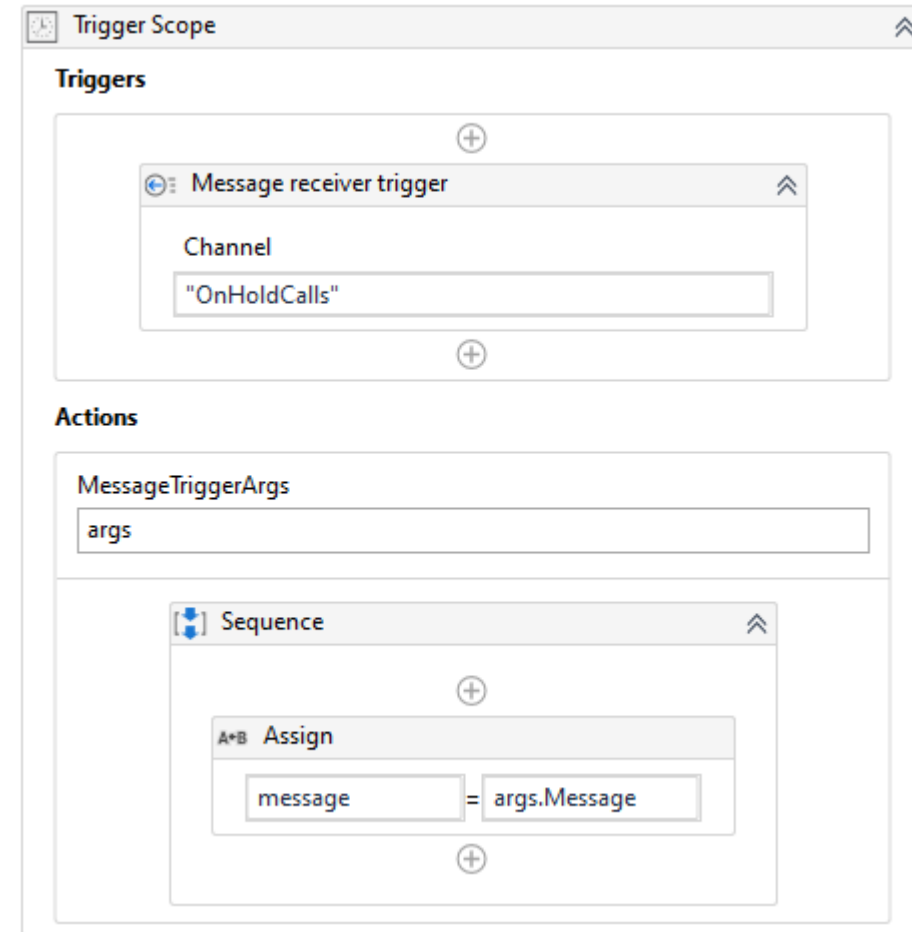
Broadcast Message

Channel
"OnHoldCalls"

Message
"CallId: 34; Action: Canceled"

Good to know

- Works only for processes that runs on the **same robot**.
- Uses the new Triggers framework
- Delivered as a separate package UiPath.IPC.Activities



Trigger Scope

Triggers

Message receiver trigger

Channel
"OnHoldCalls"

Actions

MessageTriggerArgs
args

Sequence

A*B Assign

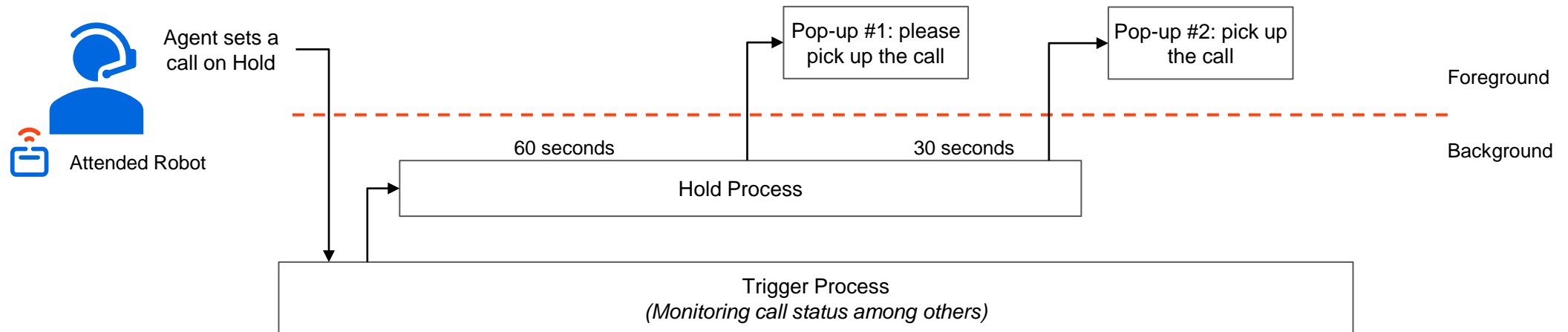
message = args.Message

Inter Process Communication

Call on hold use case (demo)

Context: when an agent sets a call on Hold, the process should monitor for how long it's on that status. If it's been on hold for more than 60 seconds, the background process should trigger a foreground that displays a pop-up asking the agent to pick up the call or wait for another 30 seconds. If after 30 seconds the call is still on-hold, the background process should trigger another pop-up asking the agent to pick up the call.

The only way of detecting call status is monitoring a selector from one of the agent applications.



Issue 1: if the call drops in the middle of the process, the pop-up should be closed, but there is no way from the Trigger process to notify that.

Issue 2: if the agent picks up the call while one of the pop-ups is open, that pop-up should be closed, but there is no way to do that.

Picture in Picture

What is it?

Attended robots can now run in Picture in Picture mode providing a dual desktop experience to allow employees to work independently while their robot works in the background on a copy of the desktop.

Who Needs It?

Attended automation users, either by running the entire automation in another Windows session, in Picture in Picture, or by starting the main process in in user's session and then trigger another process in PiP window.

Customer Benefits

Multitask while robots work in the background: employees work undisturbed on their desktops while robots work on a copy of their desktops.

Step in to help robots when needed: employees can quickly step in when a robot needs help to handle an exception or make a decision.

Deploy with no extra infrastructure costs: no need for virtual machine, additional Windows licenses, etc.

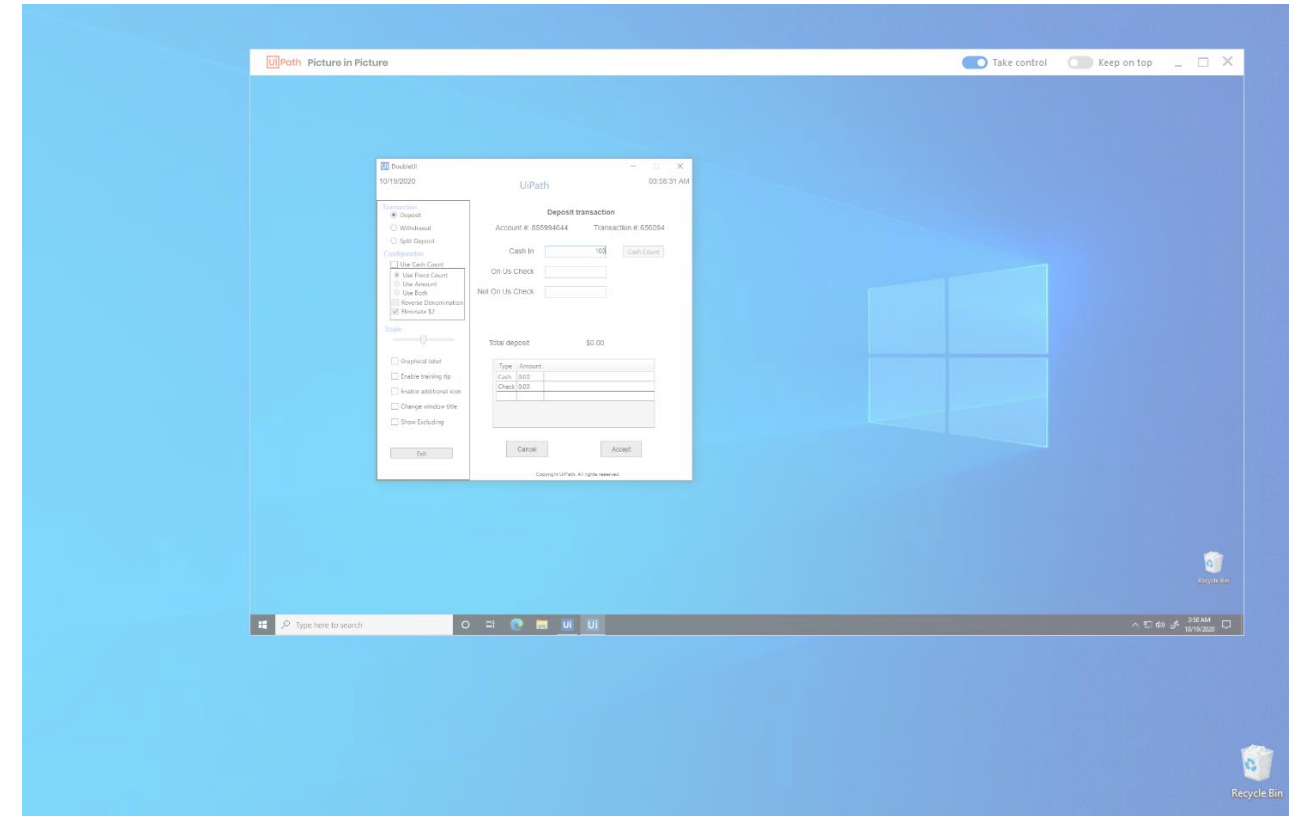
Competition

UiPath is the only automation provider that enables users to run automations on demand on a copy of their desktops. Picture in Picture works with any application and automated process. Users can control the whole process and interact with the robot when needed.

Picture in Picture

Good to know

- Invoke Process, Invoke Workflow and Run Parallel Process have the option to choose where to start the new process.
- Only Isolated workflows can be started in a different session than the parent.
- Outlook application and other Microsoft Office files must be closed in the main session if used in the automation.
- Browsers can run with a different account (data folder) in PiP mode.



Inject .NET Code activity

What is it?

The activity is a low-level tool that injects and invokes .NET code in another running application which do not offer reliable support for automation then via UI Automation activities. It is recommended (but not limited to) for WPF and WinForms Windows applications.

Similar to the Inject Js Script activity for web applications.

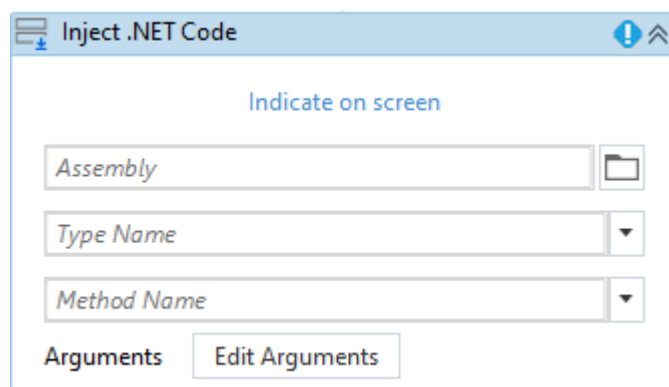
Who Needs It?

RPA Developers proficient in .NET development who can build custom assemblies to interact with the target application.

Customer Benefits

Reliable automations for .NET UI applications that do not expose traditional automation technologies or when regular UIAutomation activities cannot achieve the desired automation result due to application limitations.

Able to run a .NET assembly in the context of the target application.



Computer Vision

20.10 Updates

SAP Support Enhancements

What is it?

- Completely new algorithm of generating selectors for SAP Fiori
- The new selectors are based on Fiori UI5 framework
- Applies to the UI Automation activities
- Previously, the selectors were using standard web attributes

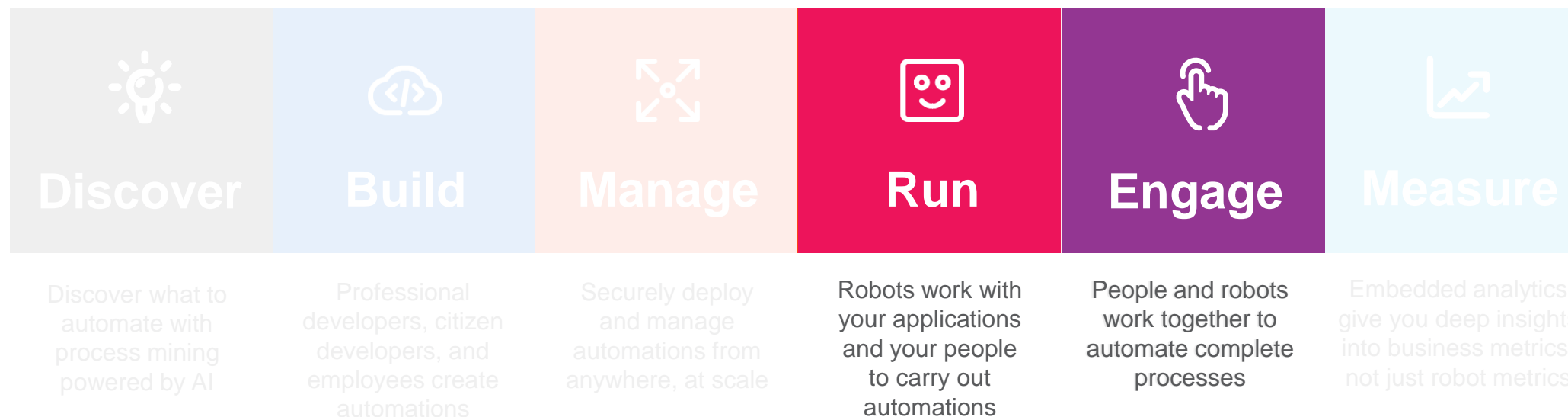
Customer Benefits

Reliable automations regardless of the SAP Fiori UI version: the selectors are going to remain the same no matter if the SAP UI changes.

General Improvements

- New Workflow Analyzer rules:
 - Persistence activities ST-DBP-[024-028]
 - Insecure password use UX-DBP-029
 - Forbidden variables usage in selectors UI-DBP-030
- Filter activities in Command Palette according to scope
- SelectorNotFound error is suggesting possible fixes
- Take Screenshot – output to File / Image / Clipboard
- Check App State activity
- Change signature / credentials for GIT / SVN
- UI Activities panel in Object Repository
- Search in all properties including closed files
- Ignore from Publish / Set as Publishable for project files
- Manage Packages search by description
- Manage Packages filter by package type

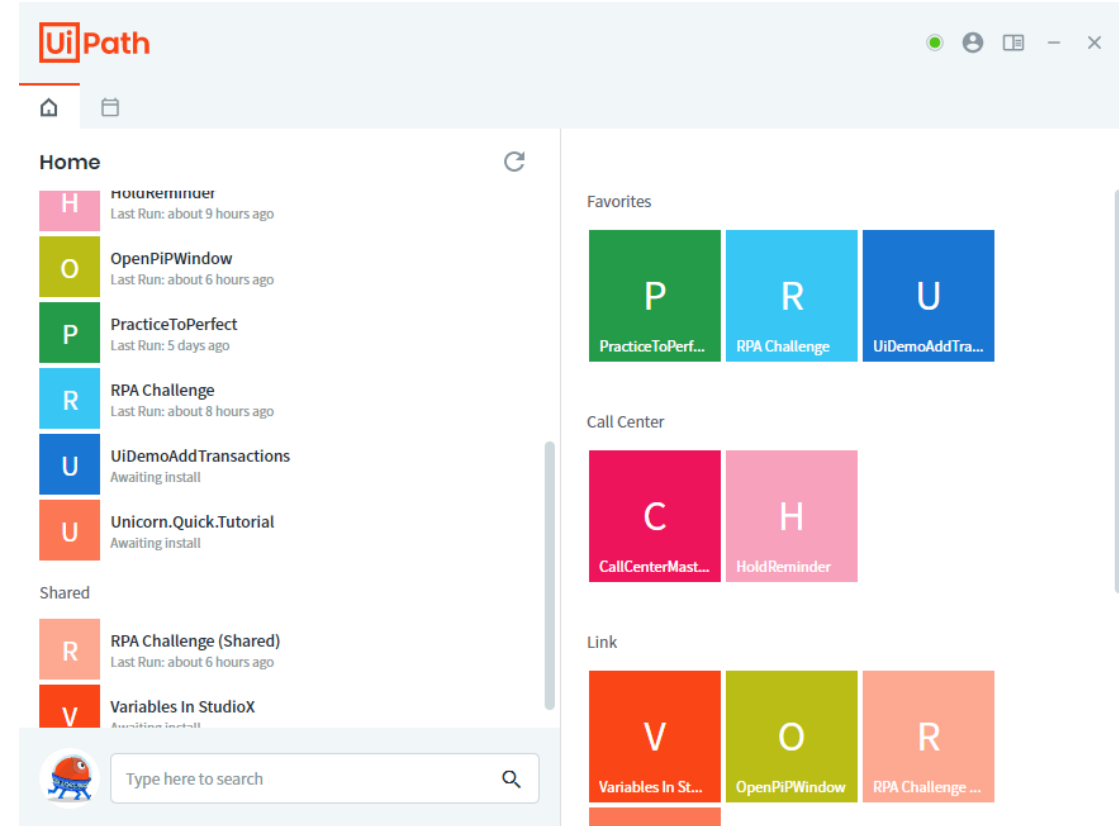
You're hyperautomation-ready with the **UiPath Platform**



What's new?

Robot & UiPath Assistant 20.10 Hero Features

- Log In and First Run Experience
- Always Running Processes
- Picture in Picture
- Launchpad in Assistant
- Group and organize automations
- Customized run
- Delete personal process
- Link Orchestrator to Robot Status



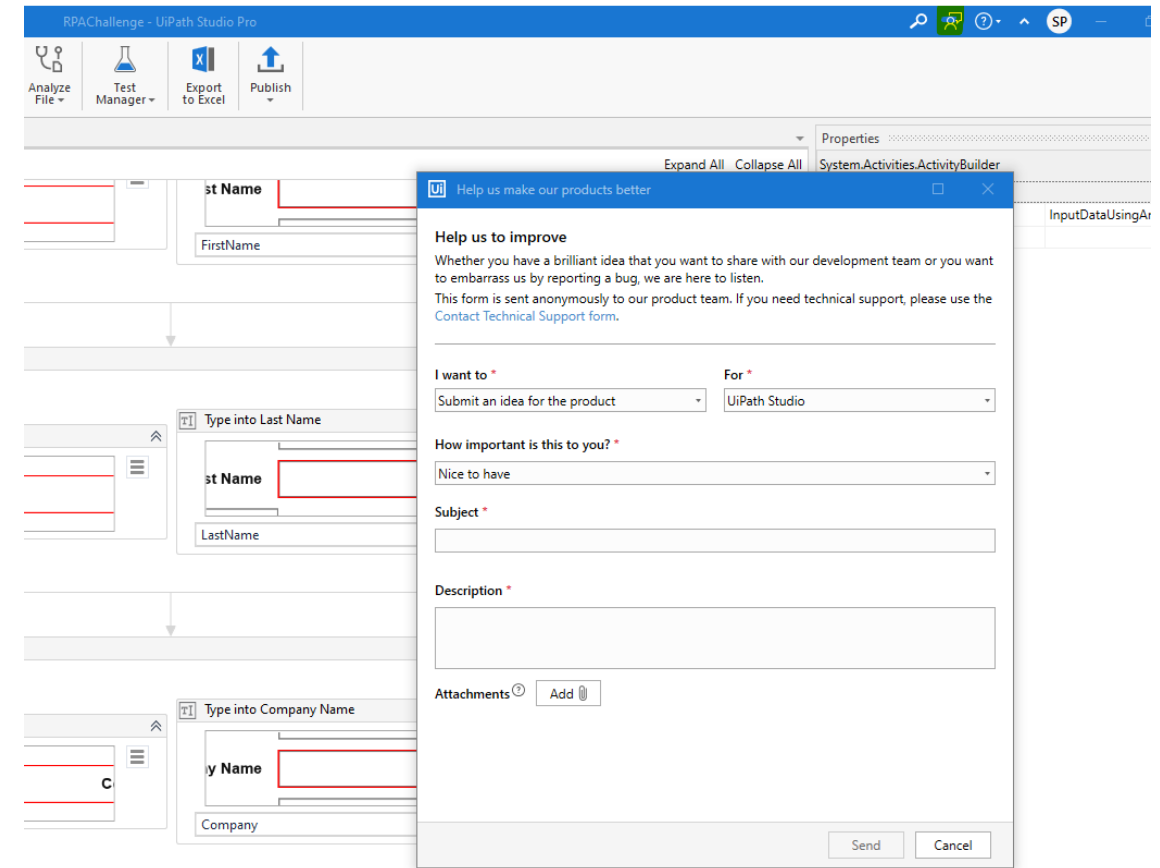
UiPath Assistant

How does it work? (demo)

Additional Resources

- [Release Notes](#)
- **Documentation** - docs.uipath.com
 - [Studio](#)
 - [StudioX](#)
 - [Robot & UiPath Assistant](#)
 - [System Activities](#)
 - [UIAutomation Activities](#)
- **Learn more** about our products on [Academy](#)
- **Download** links
 - [Community Edition, Preview](#)
 - [Community Edition, Stable](#)
 - [Enterprise Edition 20.10.2](#)

- [Product feedback](#)



The screenshot shows the UiPath Studio Pro interface with a feedback dialog box titled "Help us make our products better". The dialog box contains the following fields and options:

- I want to ***: Submit an idea for the product
- For ***: UiPath Studio
- How important is this to you? ***: Nice to have
- Subject ***: (Empty text field)
- Description ***: (Empty text area)
- Attachments**: (Add button)
- Buttons**: Send, Cancel

The background shows the UiPath Studio Pro interface with a workflow diagram and a properties panel.

Q&A

StudioX / Studio / UIA / CV /
System / Robots / Assistant



Computer Vision 20.10

Product Enablement Session



What is Computer Vision?

- AI Computer Vision is machine learning targeting system which provides UiPath Robot the ability to see and understand the screen.
- It visually identify all the elements, rather than relying on their hidden properties, IDs, and other metadata.
- It empowers automation in VDI environments such as Citrix, VMWare and Windows Remote Desktop & unsupported frameworks (Flash, Silverlight, PDFs, images) and unsupported platforms (OSX, Linux, iOS, Android)

New Features in Computer Vision 20.10

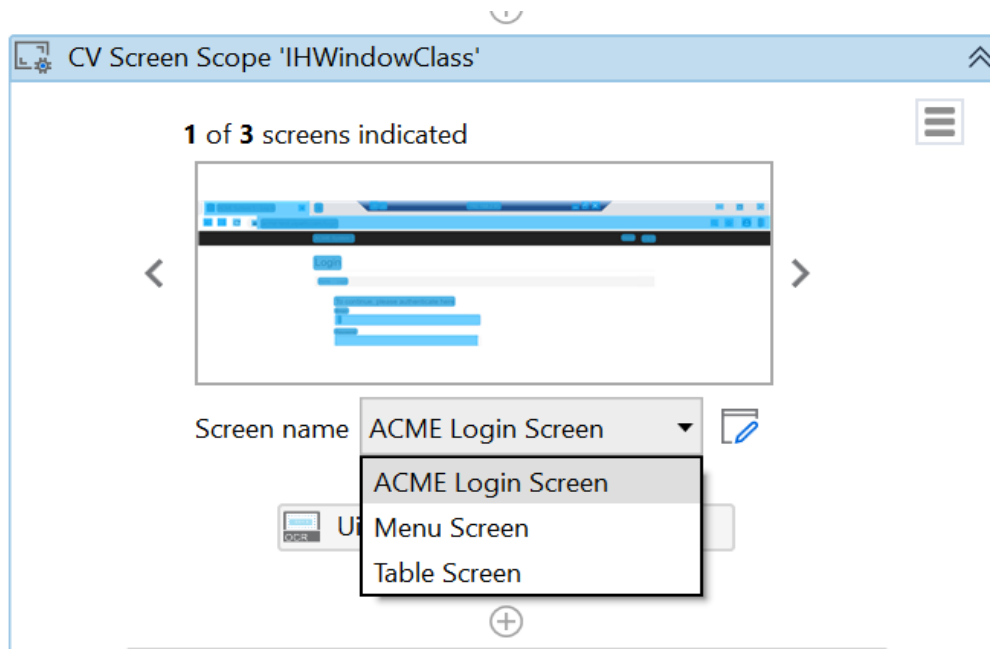
Caching Concept

Table Extraction

Local CV Server

Caching Concept

- CV activities rely on applications states (screenshots) for designing automations. This feature allows to have all application states (screenshots) inside the CV Screen Scope and have the possibility to switch between preferred screens in the Selection wizard.
- CV Refresh activity is no longer used in 20.10 but, it is available in the package and can be used with older version of CV Screen Scope.



Input	
Descriptor	"Target: Cell (738, ...
Method	OCR
TimeoutMS	Specifies the amou ...
Misc	
Private	<input type="checkbox"/>
Options	
RefreshBefore	True <input checked="" type="checkbox"/>
Output	
Result	Result of the capti ...
Reusable Region	
InputRegion	Use the result of a ...
OutputRegion	Outputs a region i ...

Table Extraction

- The functionality will allow you to automatically detect table in remote desktops environment.
- It will also detect column headers and remove empty rows from the table.

Local CV Server

- Need to install UiPath.ComputerVision.LocalServer package and mark “Use Local Server” as True under “Server” properties.
- This can be used in places where we require CV capabilities only for few actions where there is no reliable selectors while automating.

The screenshot shows the configuration window for the 'UiPath.CV.Activities.CVScope' activity. It is divided into several sections: 'Common', 'Input', 'Misc', and 'Server (synced)'. The 'Common' section includes 'ContinueOnError' (set to 'Specifies to co'), 'DelayBefore' (set to 'Enter a VB express'), and 'DisplayName' (set to 'CV Screen Scope 'AVL_'). The 'Input' section has a 'Target' property. The 'Misc' section has a 'Private' checkbox. The 'Server (synced)' section includes 'ApiKey' (set to 'API Key used for s'), 'URL' (set to 'URL of the server i'), and 'UseLocalServer' (set to 'True' with a checked checkbox).

UiPath.CV.Activities.CVScope	
Common	
ContinueOnError	Specifies to co <input type="checkbox"/> ...
DelayBefore	Enter a VB express ...
DisplayName	CV Screen Scope 'AVL_
Input	
Target	Target
Misc	
Private	<input type="checkbox"/>
Server (synced)	
ApiKey	API Key used for s ...
URL	URL of the server i ...
UseLocalServer	True <input checked="" type="checkbox"/> ...

Difference between Cloud and Local server

Cloud Server	Local Server
Tables can be extracted	Tables cannot be extracted
Faster retrieval and high efficiency	Slower than cloud
Accuracy is 98%	Accuracy is 95%



THANK YOU

A woman with blonde hair and bangs, wearing a blue and white striped shirt, is gesturing with both hands raised in a meeting. A man with dark hair and a beard, wearing a grey button-down shirt, is looking at her. The background is a blurred office setting.

StudioX 20.10

Product Enablement Session

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Release Highlights

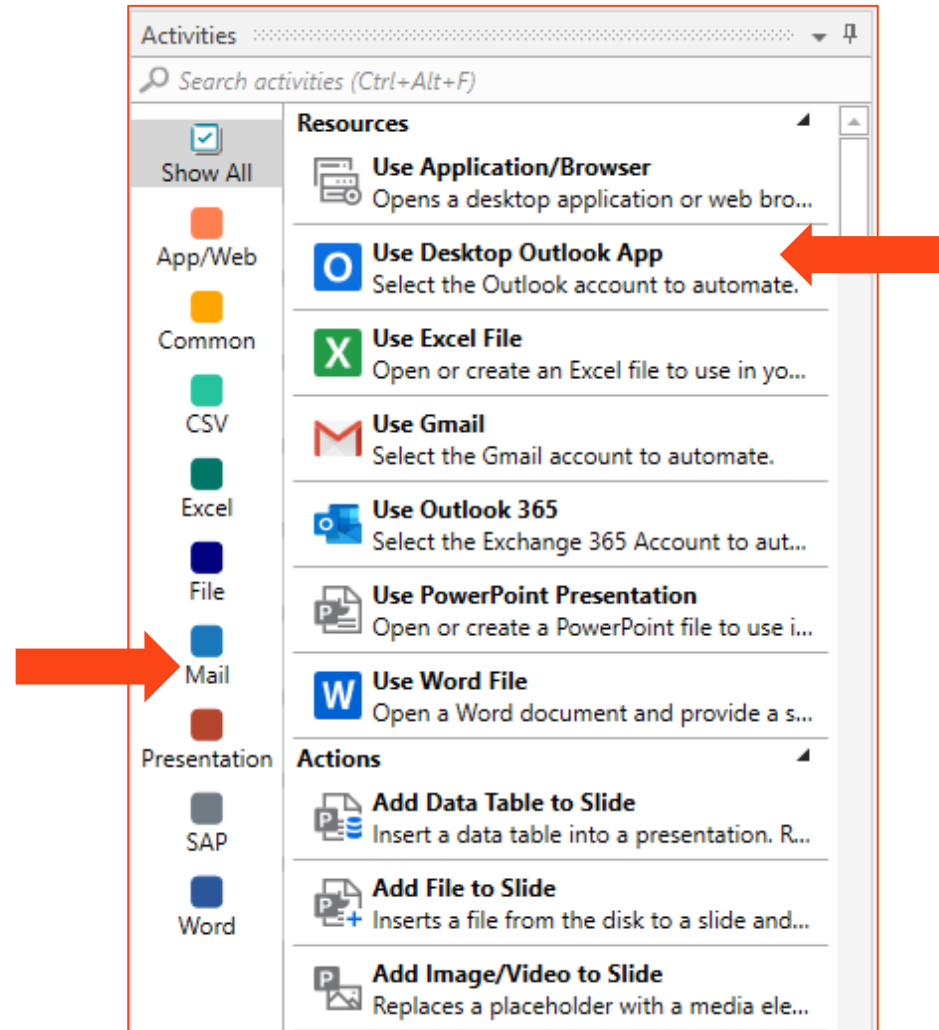
- New Excel activities
- PowerPoint
- Gmail
- Outlook 365
- Input Dialog
- Save for later
- Numeric calculations
- SAP
- Using variables in UI Automation Selectors

Highlights Demo

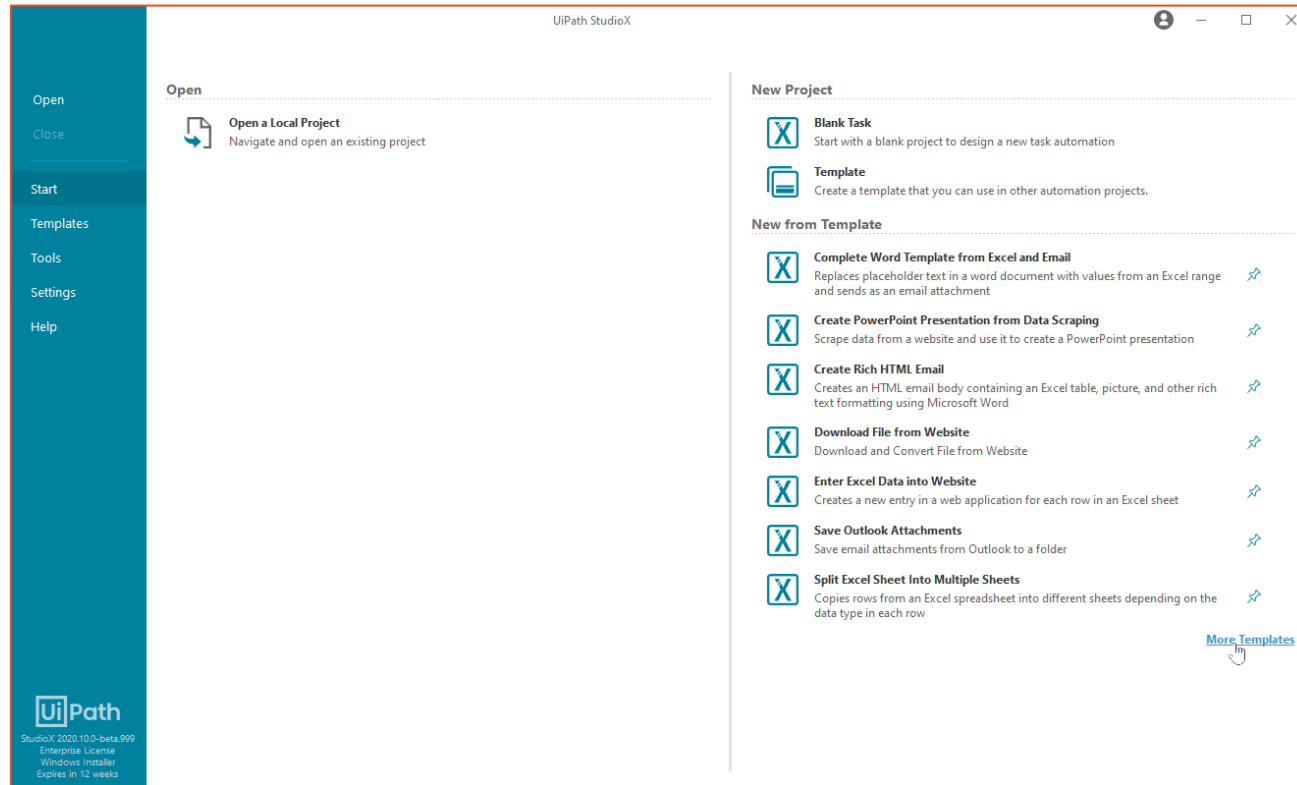


Tools

Improvements | Renaming Categories & Activities



Improvements | Templates



Business users heavily rely on **templates** to get them started performing minimal modifications.

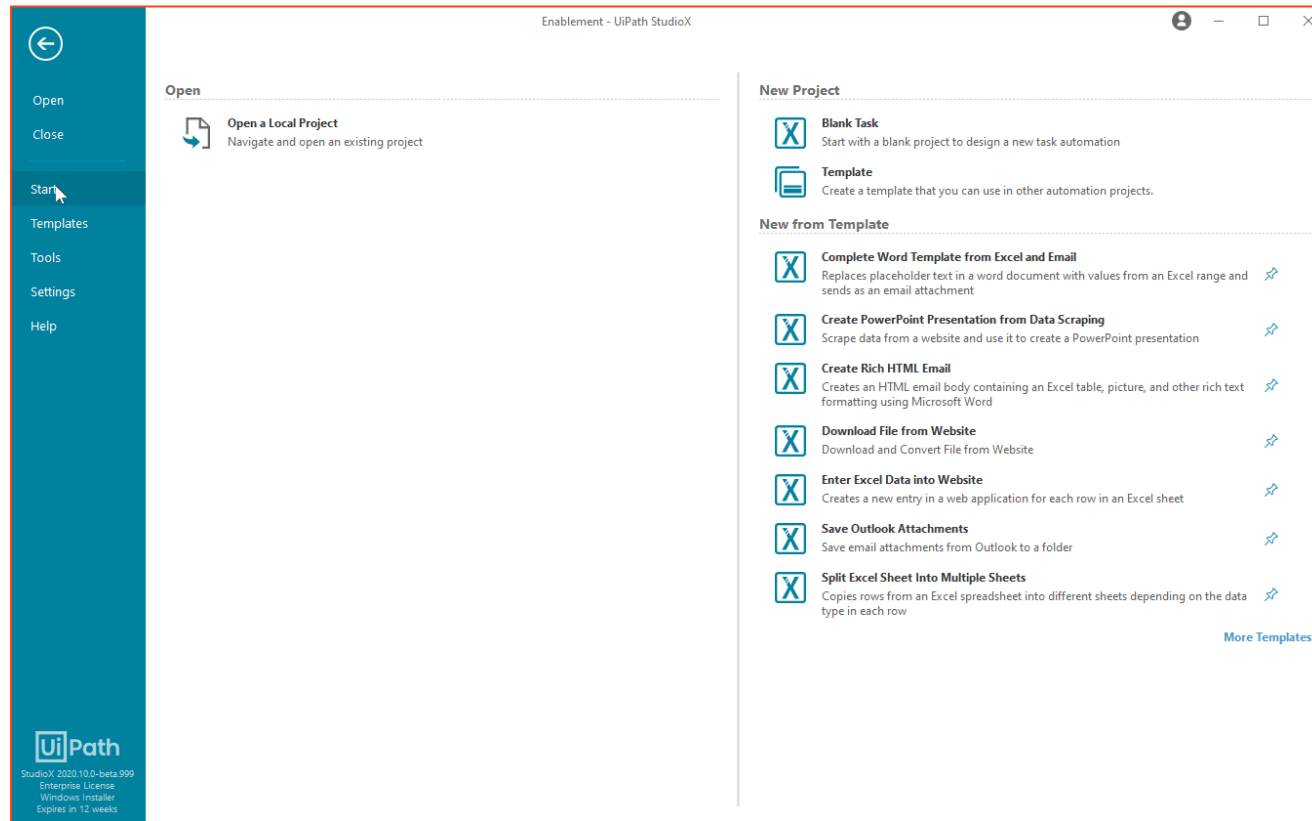
You can now **author** and **share** templates for StudioX users using the “Template” project type. Templates published to a shared template feed can then be accessed and used by any StudioX user connected to the same feed.

☐ **New templates**

☐ **Dedicated menu**

☐ **Search bar**

What's new | Repair Tool



Microsoft Office can have installation **issues** which result in errors when trying to build automations with Office (especially Excel) using StudioX.



Repair Tool will attempt to repair common issues which prevent use with StudioX.

The repair tool has **two** modes:

- Run repair actions
- Create .REG file



Project organization

Improvements | Numbered activities

The screenshot displays a UiPath workflow with the following components:

- Activity 1: Use Excel File** (labeled 'X 1 Use Excel File'). It is configured with:
 - Excel file: test1.xlsx
 - Reference as: Excel
 - Save changes: ☒
 - Create if not exists: ☒
 - Template file: ☐
- Activity 1.1: If** (labeled '1.1 If'). It contains two branches:
 - Then branch:** Contains **Activity 1.1.1: Write Line** (labeled '1.1.1 Write Line') with the text 'Cell is empty'.
 - Else branch:** Contains **Activity 1.1.2: Write Line** (labeled '1.1.2 Write Line') with the text 'Cell is not empty'.

Red arrows highlight the numbered activities: 'X 1 Use Excel File', '1.1 If', '1.1.1 Write Line', and '1.1.2 Write Line'.

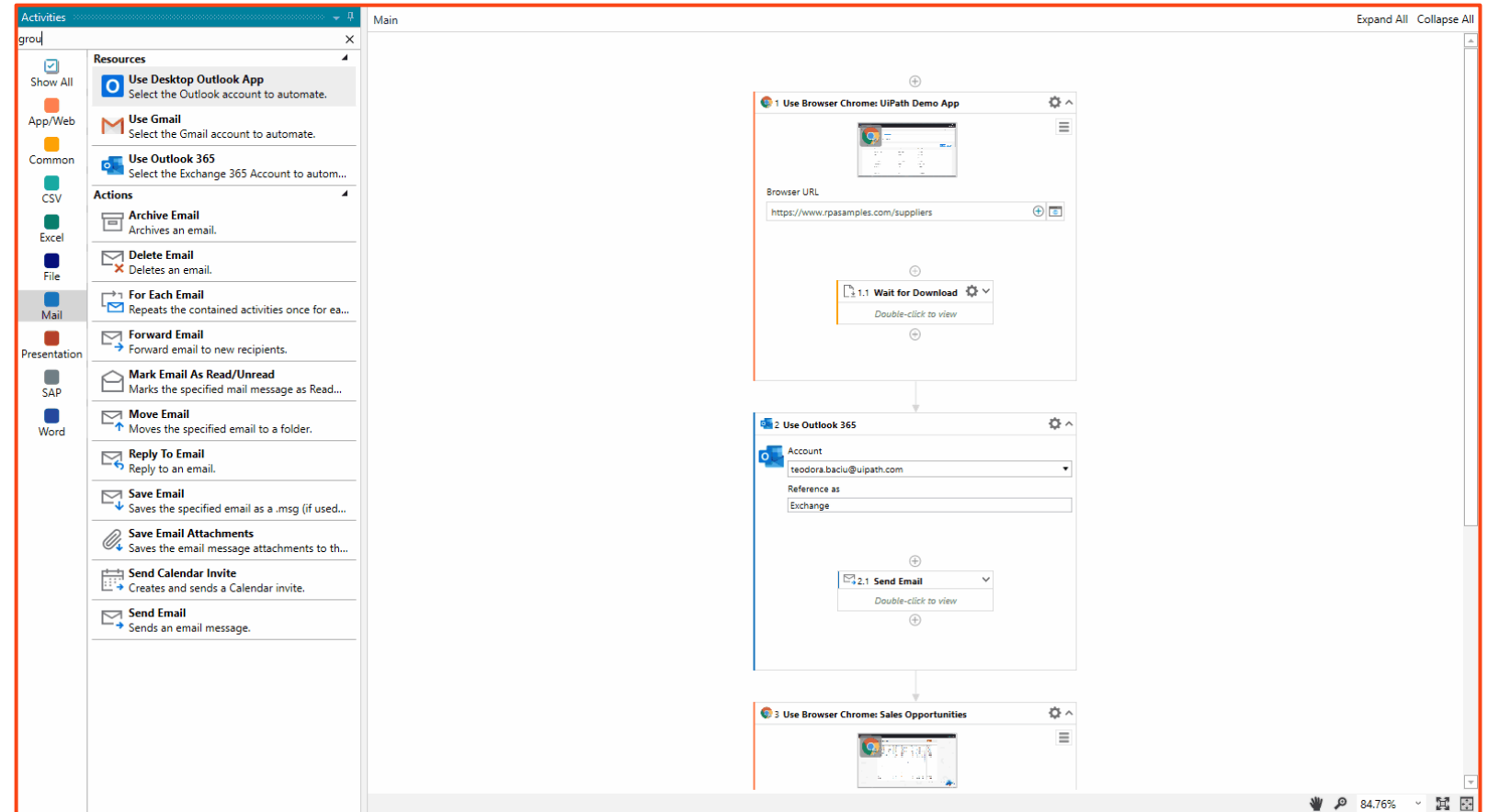
What's new | Grouping



Group and collapse logically related activities.



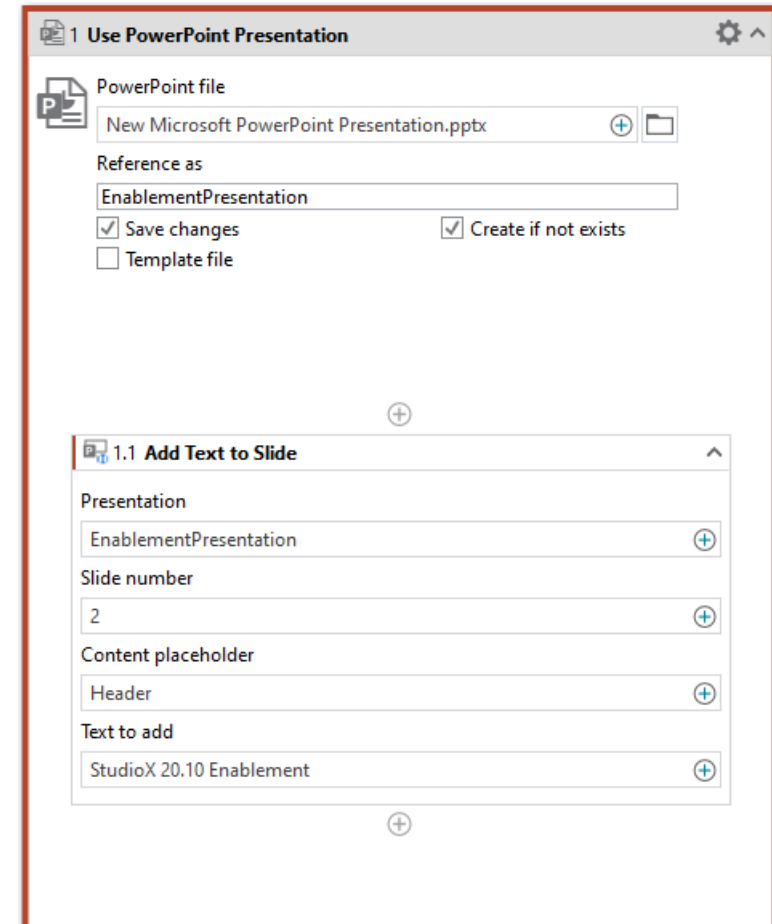
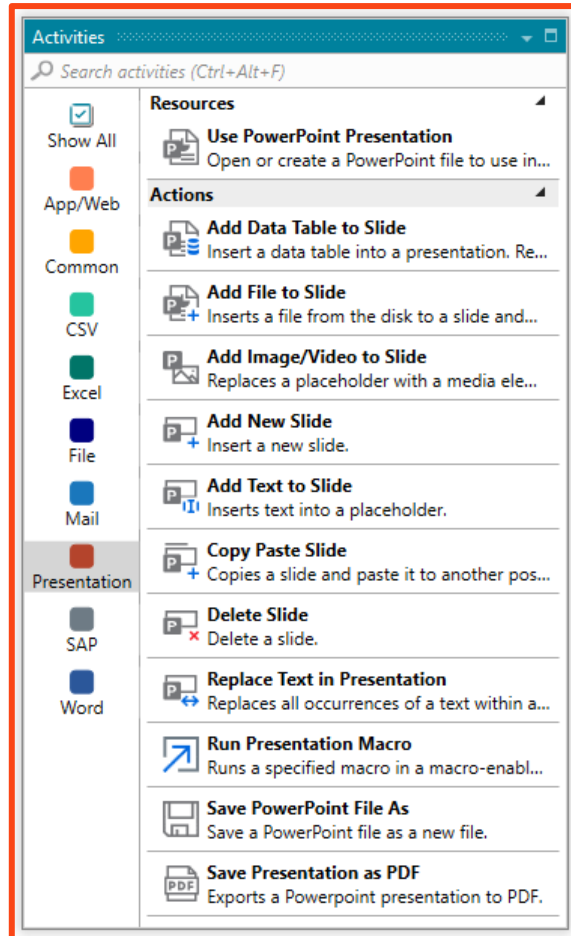
Enables **collapsing and expanding** activities for easier editing and better project organization.





PowerPoint

What's new | Presentation Activities





Highly requested

| Input Dialog

- ✓ Similar to **Input Dialog** in Studio.
- ✓ **Get Input** from the user and **store it** or **use it later**.

| Get Orchestrator Asset

- ✓ **Get Orchestrator Asset** and **store it** or **use it later**.

| Save for later

- ✓ Similar to **Assign To** in Studio.
- ✓ **Create, store, manipulate** any value.

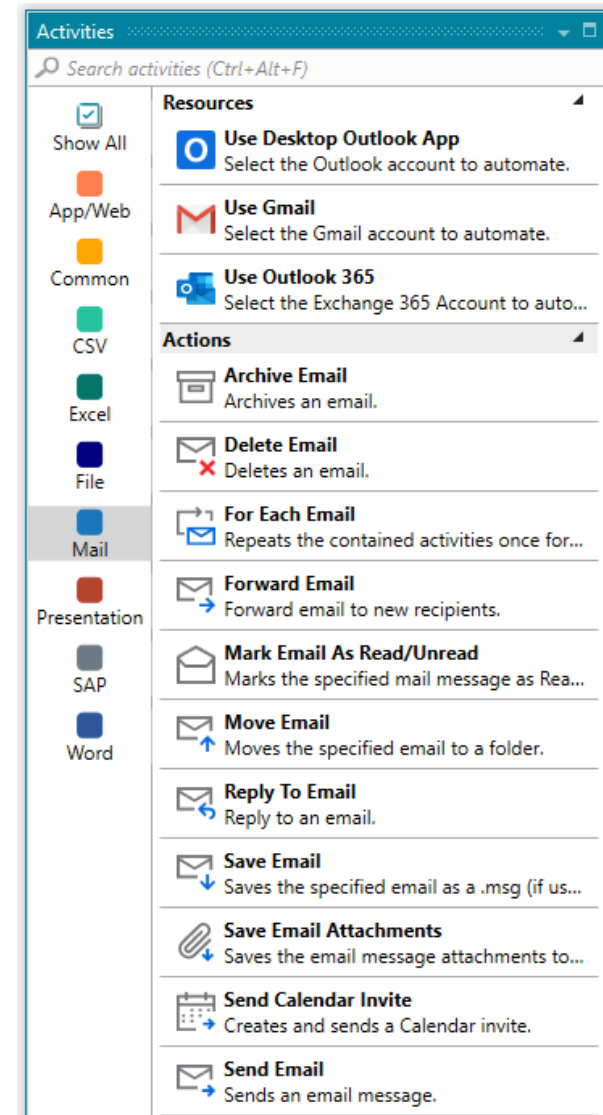


Email

| The email activities can work on other email applications

 **Gmail**

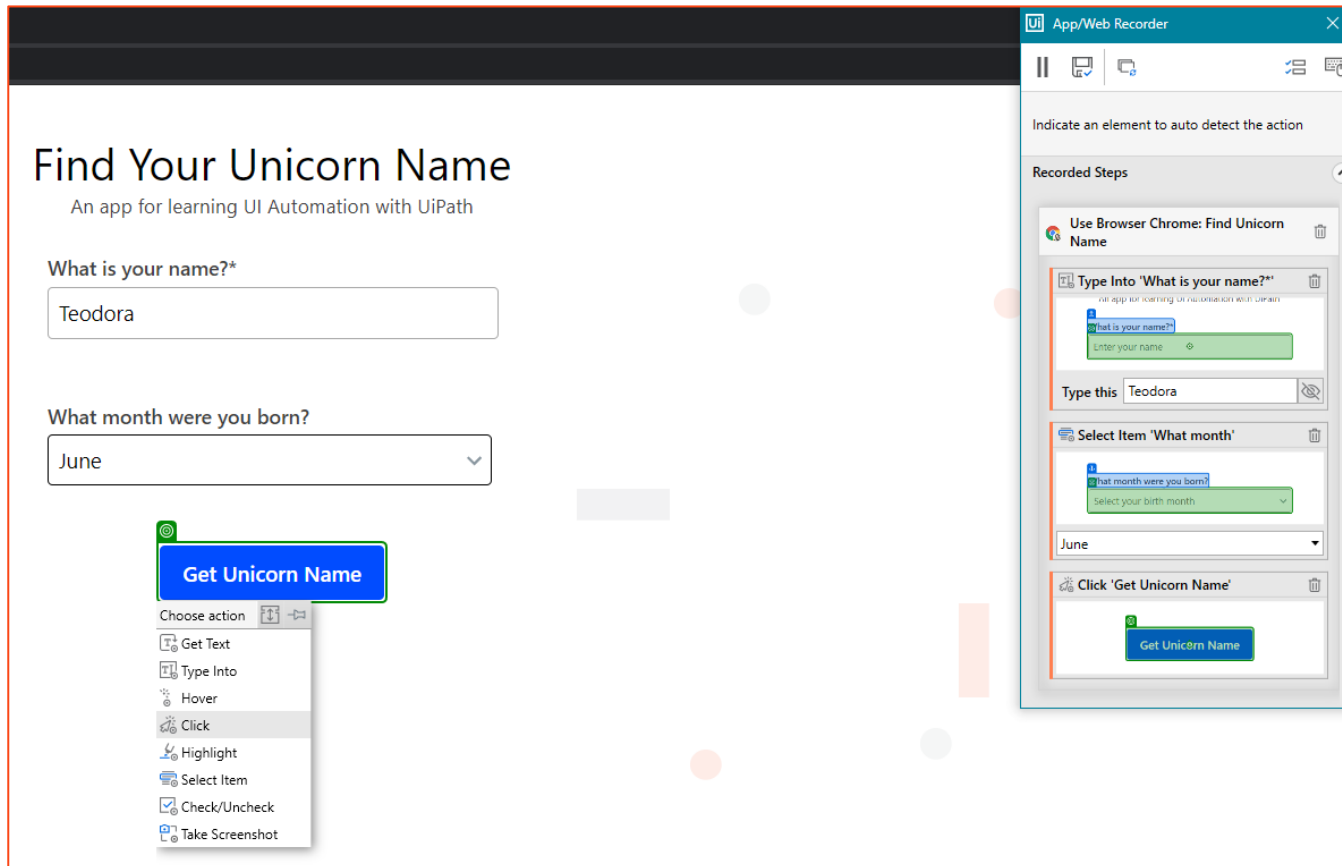
 **Outlook 365**





UI Automation

Improvements | Recorder

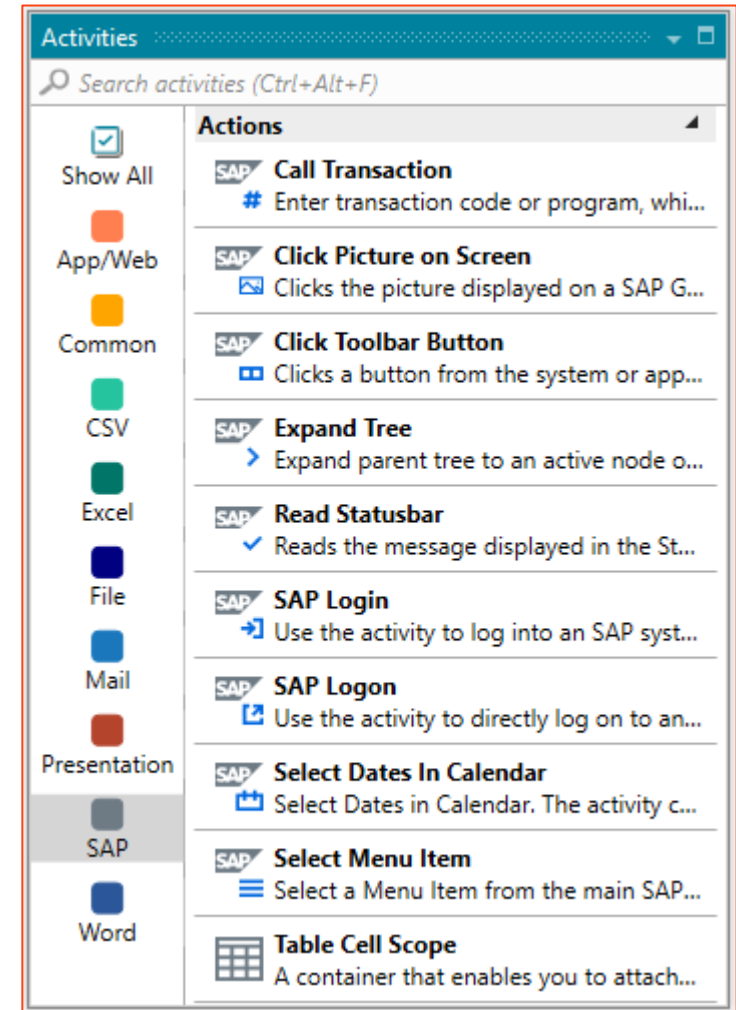
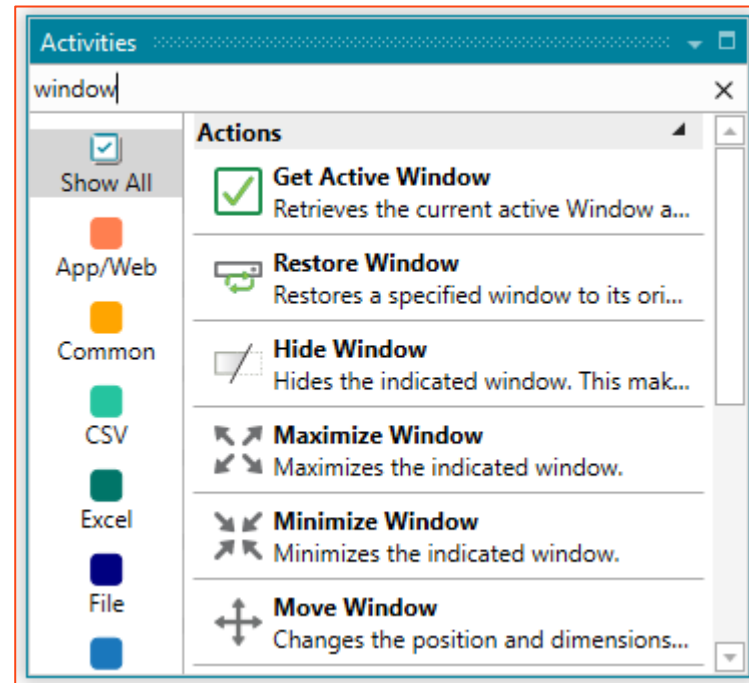


- ⚙️ Hover over element to **Choose Action**
- ⚙️ Enable full configuration of the targets and saved values.
- ⚙️ Choose the **Input Method**.
- ⚙️ **Secure Type**.
- ⚙️ Keyboard shortcuts recording.

Recorder Demo

| SAP UIAutomation Activities

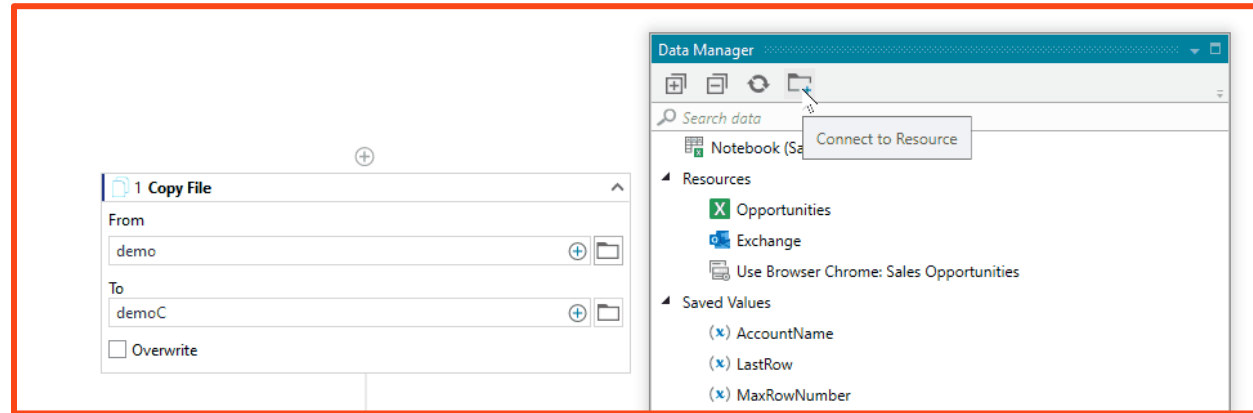
| Window activities



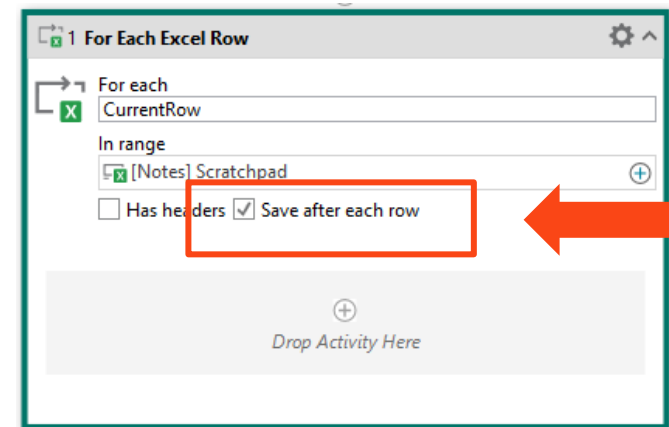
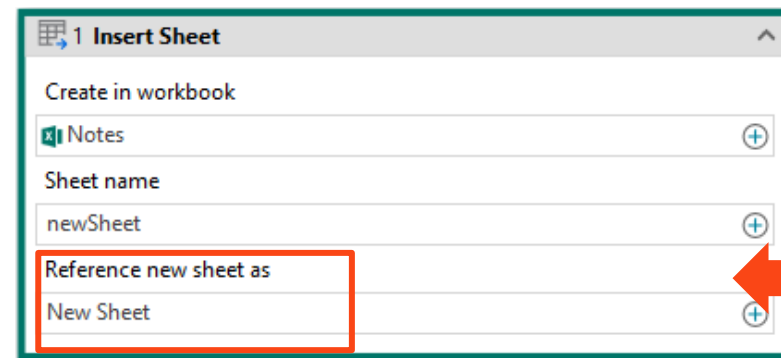


Excel

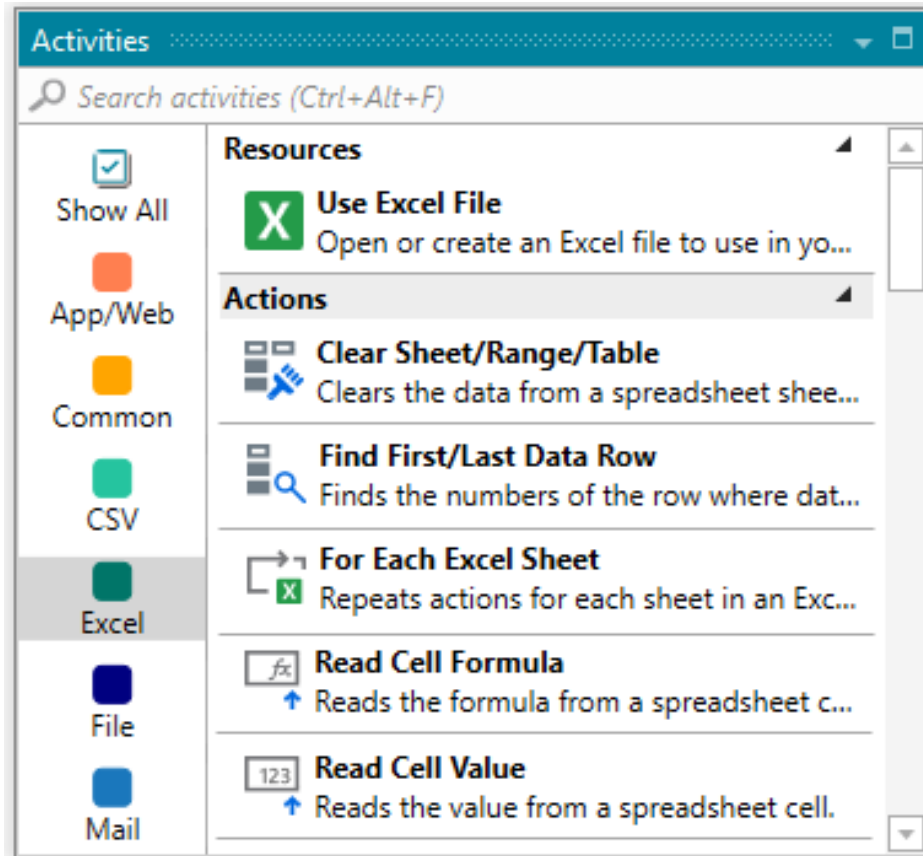
| Data Manager



| Sheets



What's new | Activities

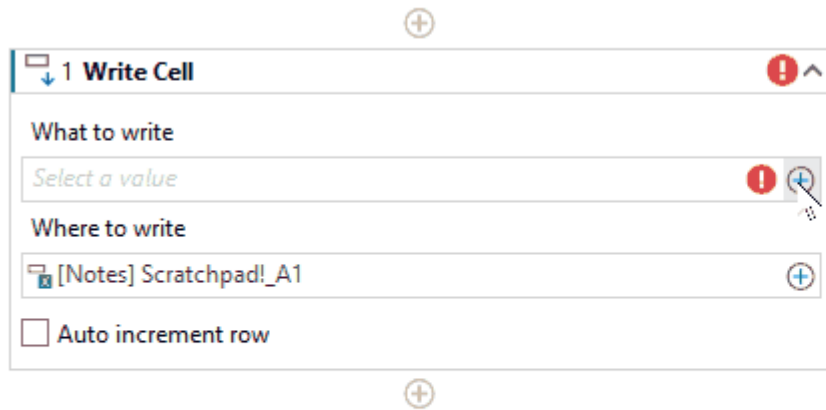


- ❑ Work with already formatted spreadsheets and only **clear** the values to use others and keep the formatting.
- ❑ **Find First or Last Data Row** for dynamic spreadsheets.
- ❑ Navigate through **each** Sheet and repeat actions.
- ❑ Read the **Formula** inside a cell.
- ❑ Read the actual or formatted value of a cell.






Data Manipulation

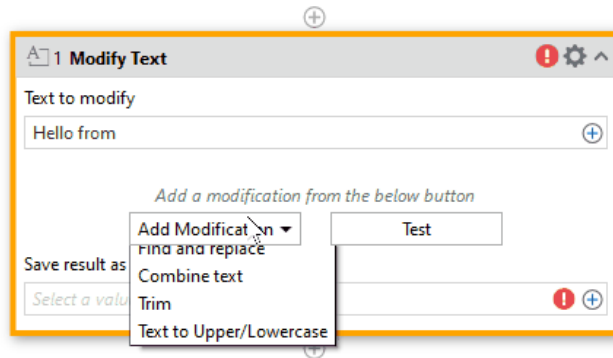
Improvements | Numerical Calculation



The screenshot shows the 'Write Cell' step configuration window. It has a title bar '1 Write Cell' with a red exclamation mark icon. The 'What to write' field contains the placeholder text 'Select a value' and has a red exclamation mark icon. The 'Where to write' field contains the value '[Notes] Scratchpad!_A1' and has a blue plus icon. There is an 'Auto increment row' checkbox which is currently unchecked. The window is flanked by plus icons on the top and bottom.

-  Perform **basic mathematical operations** without using the Notebook.
-  Pull in numerical values from other sources such as other data columns, other sheets and values from Excel
-  **Parse** formulas

What's new | Modify Text



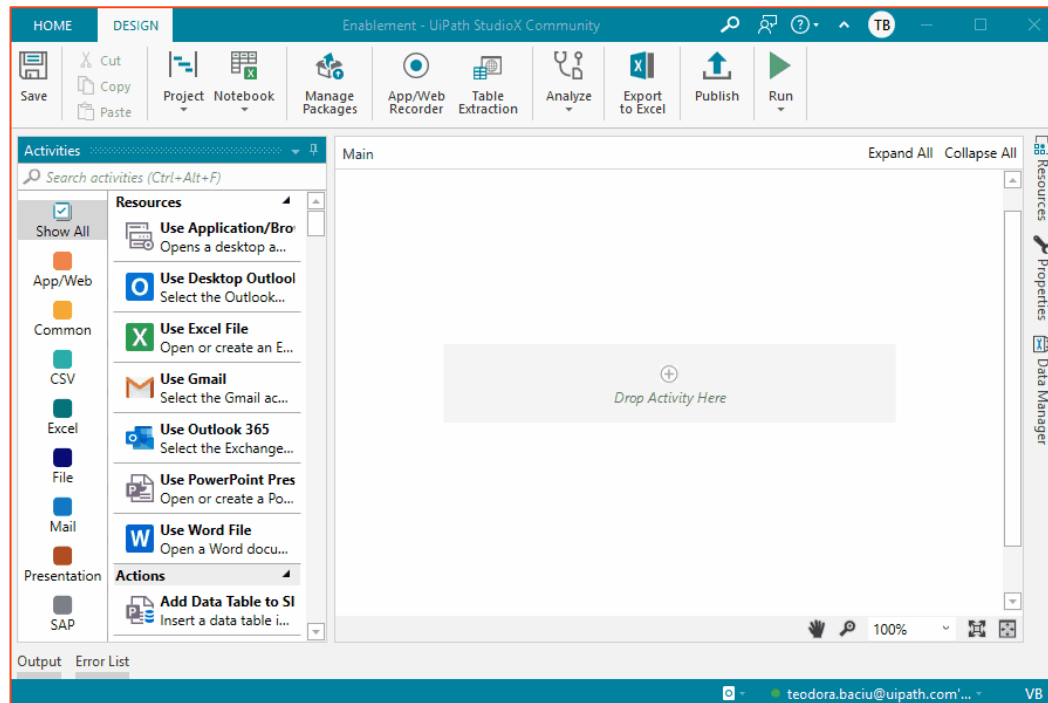
- ⚙️ Perform **basic text manipulation** without using the Notebook.
- ⚙️ Perform **multiple modifications** in one activity
- ⚙️ **Test** modifications inside the activity
- ⚙️ **Store** and **use** the result later.



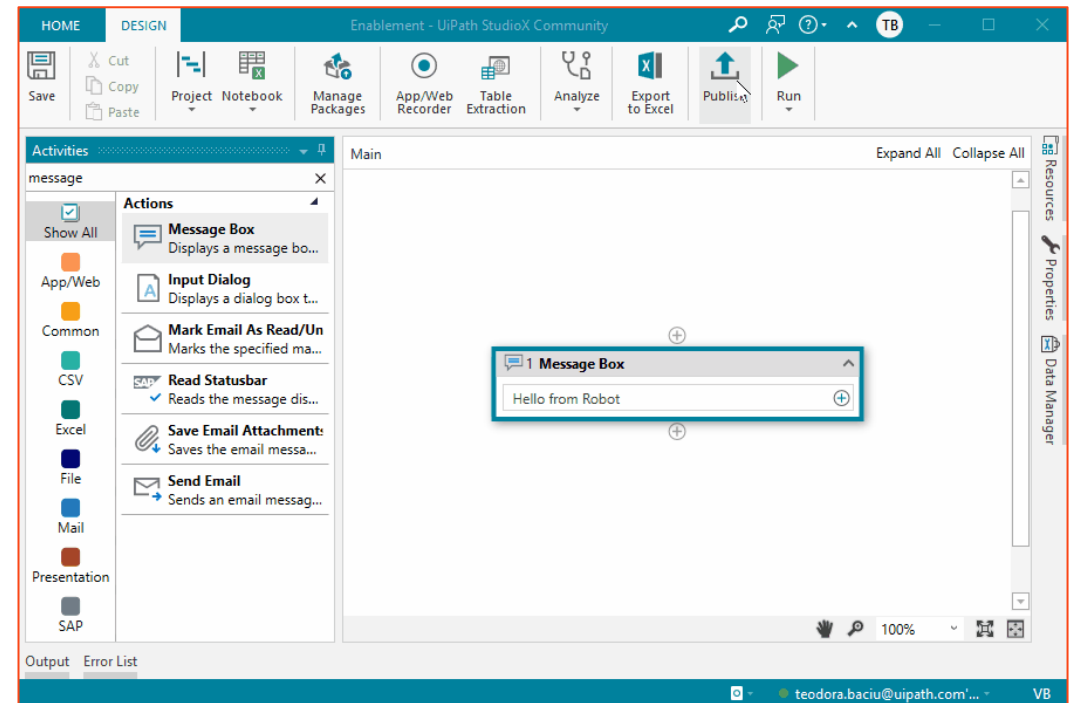
Manage

What's new | Personal Workspace

| Connect

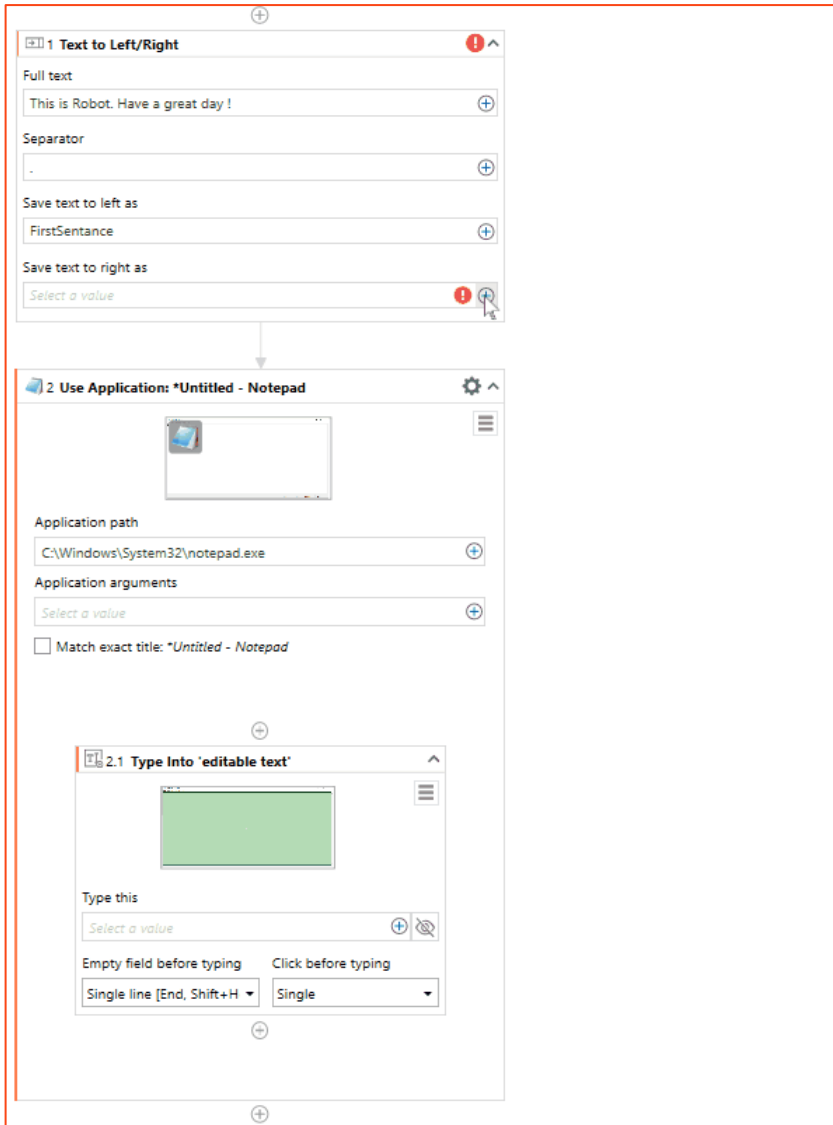


| Publish





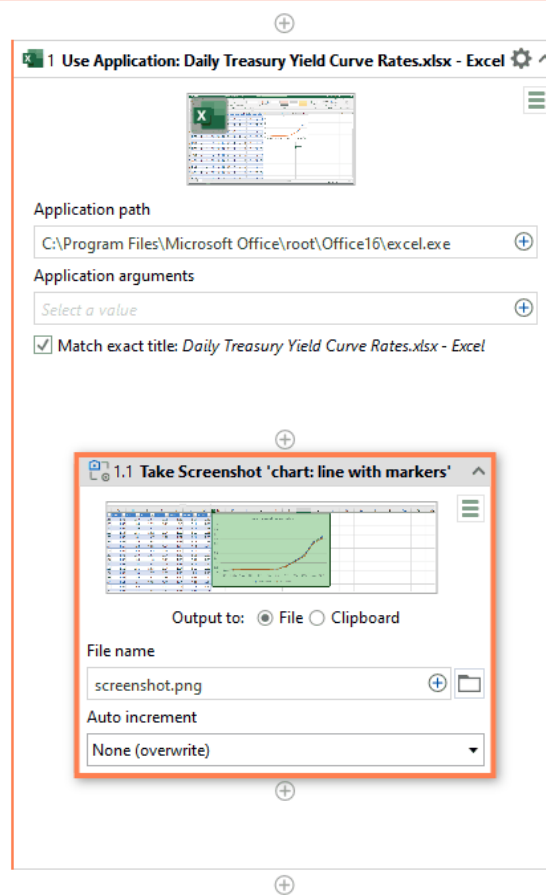
Additional Activities



❑ Copy to /Paste from Clipboard

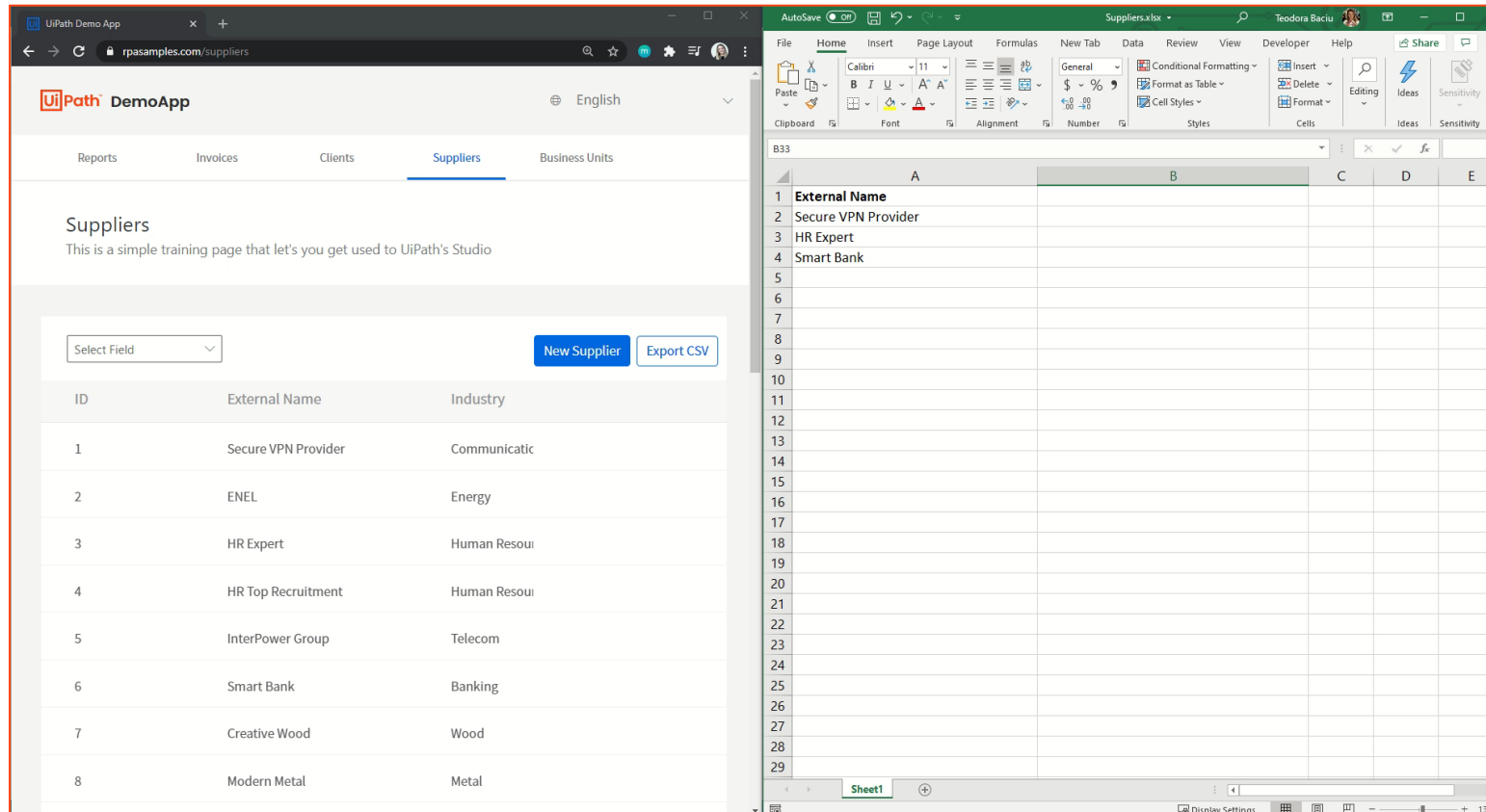
❑ Text to Left/Right

❑ Extract/Unzip Files & Compress/Zip Files



- Takes a Screenshot of an UIElement
- You can **Save** the Screenshot and **Use it later**

Improvements | Variables in Selectors



The image shows two side-by-side windows. The left window is a web browser displaying the 'UiPath Demo App' at 'rpasamples.com/suppliers'. It features a navigation bar with 'Reports', 'Invoices', 'Clients', 'Suppliers' (selected), and 'Business Units'. Below the navigation bar, there's a 'Suppliers' section with a description: 'This is a simple training page that let's you get used to UiPath's Studio'. There's a 'Select Field' dropdown menu and two buttons: 'New Supplier' and 'Export CSV'. Below this is a table with 8 rows of supplier data.

ID	External Name	Industry
1	Secure VPN Provider	Communicatic
2	ENEL	Energy
3	HR Expert	Human Resoui
4	HR Top Recruitment	Human Resoui
5	InterPower Group	Telecom
6	Smart Bank	Banking
7	Creative Wood	Wood
8	Modern Metal	Metal

The right window is an Excel spreadsheet titled 'Suppliers.xlsx'. It shows a table with 8 rows and 5 columns (A-E). The first column (A) is labeled 'External Name' and contains the same data as the 'Suppliers' table in the web app.

External Name				
Secure VPN Provider				
HR Expert				
Smart Bank				

- Activities that can contain other activities (e.g. Use Application/Browser, For Each Excel Row, Group, etc.) have a **"Settings"** icon on the top right.
- Choose **Value mappings**
- Choose a **variable name** on the left side and pick the **value you want to target** in the App/Web activity (e.g. Highlight).
- In the target activity **indicate an element**, hover over it, and **click the "Settings"** icon.
- In the selector editor any place you see the text you indicated (e.g. "Secure VPN Provider") replace it with `"{{variable_name}}"`
- Uncheck "Image"

Q&A

StudioX 20.10

Desktop Triggers 20.10

Product Enablement Session



Triggers

- Triggers, by definition, it means it sets off or fire off an action.
- Triggers enables Human-Robot collaboration, enable the robots to actively monitor the events happening on the desktop and automatically start processes based on actions of that occurrence.
- In 20.10, a new and standardized trigger framework is introduced which allows CoEs to seamlessly develop and deploy triggers.
- This framework replaced the old UIA MonitorEvents activity.
- It is now included in System Package.

Desktop Trigger Framework

**Trigger Activity
Scope**

UIA Triggers

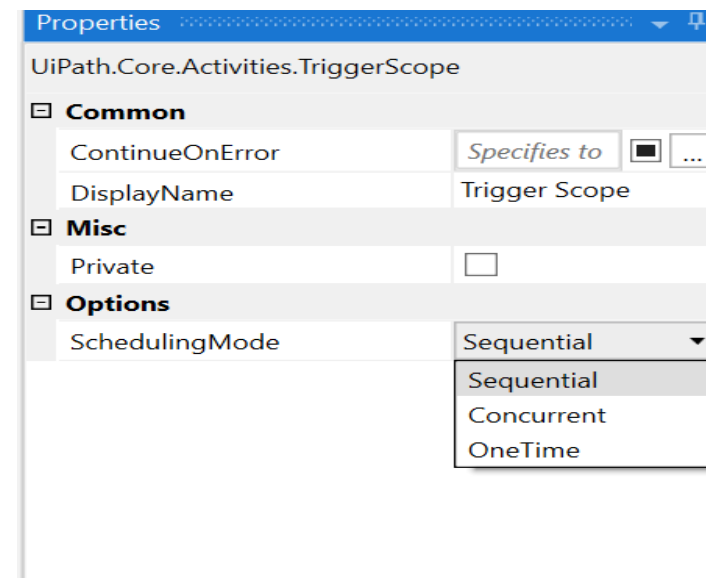
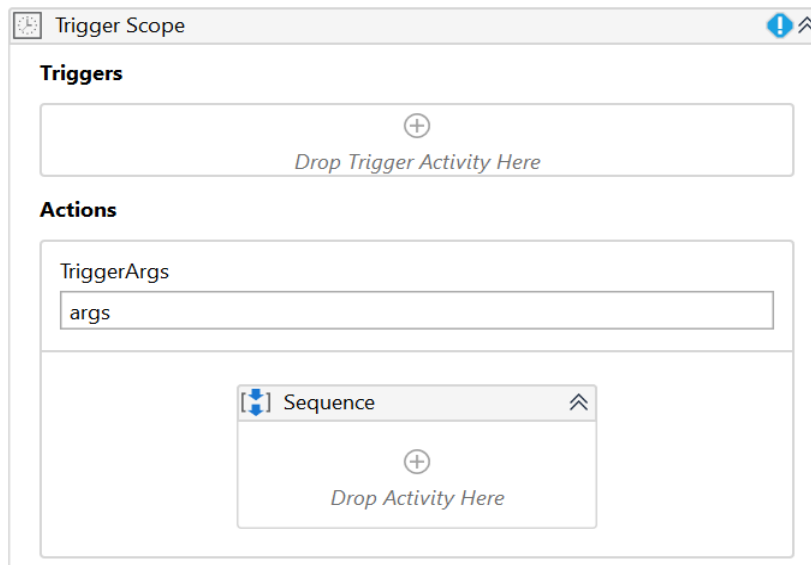
System Triggers

Custom Triggers

Triggers SDK

Trigger Scope Activity

- Trigger scope consist of 2 blocks : Triggers and Actions
- Under Triggers block, we can add any type of triggers from Activities Panel.
- In Actions block, it offers the required arguments to work with the trigger which fired out of the box.
- It can treat the incoming events sequentially, concurrently or one time.



Features : Trigger Scope Activity

- Support for all kind of triggers (UIAutomation, System).
- New Element Triggers – Element Attribute Change Trigger, Element State change Trigger.
- Supports the break activity.
- SDK for custom trigger development - [custom trigger](#).
- Better runtime performance in processing multiple events at the same time.
- Improved User Interface.
- Monitoring Events support for Citrix desktops/apps and remote desktop.



THANK YOU
