Generate Yearly Report

Contents

1. Overview

For this exercise, we will use the producer-consumer model. This means we will build two projects:

- A Dispatcher – using the REF without Queue Items design.
- A Performer – using the REF with Queue Items design.

We encourage you to use the two checklists and to identify reusable components.

2. The Dispatcher process

2.1. Prerequisites

We will adapt the template to work as a REF project without Queue Items. Each transaction will represent extracting a page on the Work Items Section in System 1, filtering the data for items of type WI4, and adding resulting Datatable rows to an Orchestrator Queue.

2.2. Configuration in UiPath Studio

2.2.1. Create a new project

1. Create new project using the Robotic Enterprise Framework template.
2. Set a proper name for the project.
3. Provide a proper description.

2.2.2. Whiteboard your workflows

Module Name	Description	Pre-condition	Post-action	Arguments
System1_Login	Login into Acme with the desired account	N/A	Browser opened to the required URL Logged in with the credentials provided	in_System1URL - String in_System1Credential – String
System1_Close	Close browser	Browser open to ACME page	Browser is closed	N/A
System1_NavigateTo_WI	Navigate to the WI URL	Be logged into the ACME website	Navigated successfully to the desired URL	in_URL - String
System1_ScrapeDataTable	Extract data from the work items datatable	Data exists and be on the work items page	All data table data is extracted	out_DataTable - Datatable
System1_FilterWIDatatable	Filters the input Datatable	Datatable exists	The filtered datatable is passed to the	in_Type – String in_Datatable – DataTable

Module Name	Description	Pre-condition	Post-action	Arguments
	for rows with the desired Work Item		PopulateQueue workflow.	out_FilteredDatatable – DataTable in_Status - String

2.2.3. Develop your workflows

Create a new folder in the Project panel. Name it System1. Inside the folder, develop sequence-based workflows for each entry in the whiteboard.

2.2.4. Edit the Configuration file

In the Settings sheet of Config.xlsx, store the important settings for your project:

- The target Queue name
- The URL for ACME System1
- The System1 credentials stored in Orchestrator or Windows Credential Manager
- The URL for the Work Items page in ACME System1
- The Business Process Name

In the Constants sheet, set the MaxRetryNumber to 2.

2.3. Applications Used: open/close/kill

2.3.1. Edit the InitiAllApplications.xaml workflow

Invoke the workflow used to log into System1. Pass the URLs and credential values to the workflows.

2.3.2. Edit the Framework/CloseAllApplication.xaml workflow

Invoke the workflow used to close System1.

2.3.3. Edit the Framework/KillAllProcesses.xaml workflow

Use a Kill Process activity here to indicate the browser you want to force-close.

2.4. Business Process: Transaction Data and Process

2.4.1. Edit GetTransactionData.xaml workflow

Delete the Retry Get Transaction Item activity. Use an Element Exists activity to determine if there is a page number UI element on the Work Items page equivalent to the current TransactionNumber value. Make sure If so, assign the TransactionNumber value to out_TransactionItem. Else, assign 0 to out_TransactionItem.

For the following IF activity, set the condition to out_TransactionItem > 0.

2.4.2. Edit Process.xaml workflow

Determine if the browser is on the Work Items page indicated by the TransactionItem. If so, scrape the data, filter it by type and add the corresponding Queue Items.

3. The Performer process

3.1. Prerequisites

Make sure the queue indicated in the previous section is available in Orchestrator. Set the Retry value to 2.

3.2. Configuration in UiPath Studio

3.2.1. Create a new project

1. Create new project using the Robotic Enterprise Framework template.
2. Set a proper name for the project.
3. Provide a proper description.

3.2.2. Whiteboard your workflows

Module Name	Description	Pre-condition	Post-action	Arguments
System1_Login	same as in Dispatcher			
System1_Close	same as in Dispatcher			
System1_NavigateTo	same as System1_NavigateTo_WI in Dispatcher			
System1_GetClientDetails	Get the client information: tax id	Logged in and on the work item WIID page	Got all the client information : taxID	out_TaxID - String
System1_DownloadMonthlyReports	Enter tax ID, enter year and for each month download report if exists (treat exceptions)	Logged in and on the download monthly report page, report directory exists	Downloaded all available reports for a given TaxID and a given year into a given location	in_TaxID - String in_Year - String in_ReportDirPath - String
System1_MergeMonthlyReports	Merge the downloaded csv from a given TaxID and a year, located into a certain folder, into one excel file - yearly report	Monthly reports exist into a certain folder	Constructed the merged excel file and save it with name format "Yearly-Report-year-taxid.xlsx"	in_TaxID - String in_Year - String in_ReportDirPath - String out_YearlyReportPath - String

Module Name	Description	Pre-condition	Post-action	Arguments
System1_UploadYearlyReport	Upload a given yearly report to the upload yearle report page for a given tax id and a given year	Yearly report excel file exists into the specified folder and we are on the upload yearly report page Post Report uploaded successfully and retrieved confirmation id	Report uploaded successfully and retrieved confirmation id	in_TaxID - String in_Year - String in_YearlyReportPath - String out_Confimation - String
System1_UpdateWorkItems	Add hash into comment section and change status to "Completed"	Be on the update work item page	Hash added to the comment section and status changed to "Completed", popup closed	in_Comment - String in_Status - String

3.2.3. Develop your workflows

Create a new folder in the Project panel. Name it System1 and use it to organize the new workflows.

3.2.4. Edit the Configuration file

In the Settings sheet of Config.xlsx, store the important settings for your project:

- The Orchestrator Queue name.
- The Business Process name.
- The Directory used to save the Report.
- The System1 credentials stored in Orchestrator or Windows Credential Manager.
- The URL for ACME System 1.
- The URL for the ACME Work Items page.
- The URL for the ACME Download Monthly Reports page.
- The URL for the Upload Yearly Report page.
- The URL for updating ACME Work Items.
- An entry for Status with the value Completed.

In the Constants sheet, make sure the MaxRetryNumber to 0.

3.3. Applications Used: open/close/kill

3.3.1. Edit the InitiAllApplications.xaml workflow

Invoke the workflow used to log into System1. Pass the URLs and credential values to the workflows.

3.3.2. Edit the Framework/CloseAllApplication.xaml workflow

Invoke the workflow used to close System1.

3.3.3. Edit the Framework/KillAllProcesses.xaml workflow

Use a Kill Process activity here to indicate the browser you want to force-close.

3.4. Business Process: Transaction Data and Process

3.4.1. Edit the GetTransactionData.xaml workflow

No changes are needed in this workflow.

3.4.2. Edit the Process.xaml workflow

Here, you can invoke the NavigateTo workflow several times with different values for the in arguments to navigate to all pages of the process: Work Items, Download Monthly Reports, Upload Yearly Report and Update Work Item. In between, invoke the workflows which perform the processing steps: GetClientDetails, DownloadMonthlyReports, MergeMonthlyReports, UploadYearlyReport and UpdateWorkItems. Pay special attention to the target app states throughout the execution of the Process workflow.