# Advanced Enterprise RPA Process Template

A Database Configurable RPA Process Flow Template

# Contents

Introduction	3
The Configuration Database	3
Tenant	4
Process	5
Setting_Category	5
Setting_Type	6
Config	6
VW_Load_Config- The Public Interface View	7
Framework components to access the View	8
Connecting to the Configuration Database	9
Justifying the use of ODBC DSNs	9
To be fair, some flip sides to ODBC DSNs	10
Conclusion	
Setting up a Microsoft Access DSN on the Robot Machine	10
Locking the MS Access Database	11
Centralizing the MS Access Database File	11
Setting up a Remote Database DSN on the Robot Machine	14
The MasterConfig.xlsx Framework Configuration File	16

Importing Additional Database Libraries	18
Configuring a New RPA Process Flow in the Configuration Database	19
Configuring a New RPA Process Flow	23
Main.xaml	23
Init State Machine	24
Loading Configuration Settings – Most Significant Change	25
KillAllFolders.xaml - New Component to Drop Folders	26
Move_or_Delete_Directory.xaml	27
Move_or_Delete_File.xaml	27
InitAllApplications.xaml	27
Create_Directory.xaml - New Component to Create Folders	
KillAllProcesses.xaml	29
Utility Component - Identify_Processes_By_Name.xaml	29
Send_Email_Notification.xaml	
Validating the Project before Deployment	<mark>31</mark>
Test Results and End Note	

# Introduction

This User guide documents the set up and configuration of an Advanced Enterprise RPA Process Template. This framework template enables enterprises to configure settings for their RPA Processes in local or remote databases such as MS Access, SQL Server, MySQL, PostgreSQL or AWS RDS.

Configuring the framework in databases enables enterprises to better organize, secure and port their RPA processes across the enterprise.

This framework is built upon an already existing UiPath component published <u>here</u> at the UiPath Go! Marketplace. Consequently, this advanced enhancement retains the capability of the original to organize configurations in a local Excel file.

# The Configuration Database

In its current form an Excel file is used to configure settings of an RPA Process built using the *current framework*. While this is great for small scaled operations, managing individual Excel files becomes logistically difficult especially when there are several tens, if not hundreds of integrations involved. Besides, Excel files are documents and are prone to getting loosely dispersed across an enterprise via emails, messengers and shared drives. This may result in an outdated or wrongly configured file deployed to a production environment by accident.

The key advancement in this template is its ability to consume configuration settings from a local database (*such as Microsoft Access*) or a remote, full-featured enterprise SQL database such as Microsoft SQL Server, MySQL, AWS RDS, or PostgreSQL.

In order to make it easier to get started, a templated Microsoft Access Database is included as part of the framework template within the **\Data** folder. The schema from this database could be easily extracted and recreated on any common enterprise database if you choose to.



The database is very simple and consists of five tables as shown in the design schematic below:



## Tenant

The *Tenant* table maintains a logical record of the tenant(s) where an RPA process has been deployed. An enterprise deployment could consist of one or more Orchestrators that are either on-premise or remote, single or multi-tenant. Therefore, the Tenant is not a technical attribute of a given RPA process. Rather, it helps enterprises to better recognize and keep track of where their RPA processes are deployed to, especially if there many of them across several groups across the organization.

	Tenant ×						
	Tenant_ID	•	Tenant_Nm	- Tenant_Description	Ŧ	Active_Flg - Clic	ck to Add 🗵
		1	Thanos	The Client Services Tenant			
		2	Ultron	The Billing and Accounts Tenant			
*	(Ne	ew)					

The Active\_Flg indicates that the first tenant is currently active and in service.

#### NOTE

The Tenant could be further broken down to Tenant and Service. However, the config database and the template could be easily modified during implementation based on how an enterprise would prefer to organize their RPA processes. And for this reason, such depth is not covered in the current scope of this template.

## Process

Maintains a record of the names of the RPA Business processes deployed across the enterprise. Ideally, this would be the value that would be set for the *logF\_BusinessProcessName* key in the Config.xlsx document:

	А	
1	Name	Value
2	OrchestratorQueueName	Orch_Not_Applicable
3		
4	logF_BusinessProcessName	REF_DB_Accounts_DataExtractor
5		

In the Process table, a business process is recorded as follows:

	Process ×					
	Process_ID	Process_Name	Ŧ	Process_Description -	Active_Flg	- Click to Add -
		1 FRAMEWORK_DEFAULT_SETTINGS		[CONFIGURATION TEMPLATE AND NOT AN ACTUAL PROCESS] The Default, I		
		2 REF_DB_Accounts_DataExtractor		Extracts Work Items of type WI1 and description "Verify Account Position" f	$\square$	
*	(Nev	/)				

As before, the *Active\_Flg* indicates that a process is in active service.

#### NOTE

The Access database comes pre-loaded with a "shell process" named *FRAMEWORK\_DEFAULT\_SETTINGS*. This process will make it easier to configure actual business processes in the database as we will see in subsequent sections.

The shell is used to aid in the configuration setup of new RPA processes and is not a deployable process by itself. **Therefore, do not delete entries for this shell process from the Config table!** 

## Setting\_Category

The configuration broadly recognizes two categories of settings - SYSTEM\_DEFINED and USER\_DEFINED. As the names suggest, the system-defined settings are the 18 standard settings across the three tabs of the Config.xls configuration document.

The user-defined settings on the other hand are those that are specific to a given RPA process and are explicitly added by the users over and above the system-defined settings.

Organizing settings in this manner makes it easier to distinguish them for better maintenance.

*For Example:* Users would exercise caution before going in and changing any of the settings if they knew that they are SYSTEM\_DEFINED. Similarly, USER\_DEFINED settings would make it easier to copy configurations over to a new processes that resembles an existing one.

Each setting in the Config table (*described later below*) is associated with a setting category.

	Setting_Category ×				
	Setting_Category_	_ID 🚽	Setting_Category -	Setting_Category_Description -	Click to Add 👻
		1	SYSTEM_DEFINED	These settings are pre-populated in the configuration database table, but can be updated by the user	
		2	USER_DEFINED	These settings are added later by the User	
*		(New)	)		

## Setting\_Type

Easily defined, these are the names of the three worksheets from the traditional Config.xlsx configuration file. Each setting in the Config table is associated with a setting type.

The figure below shows the parallels between Config.xlsx and the setting types in the *Setting\_Type* table

28 29 Constants A	ssets
Setting_Type - Setting_Type -	Setting_Type_Desc
1 SETTING	Any setting that is not a Constant or an Asset is identified by this Setting type
2 CONSTANT	A setting that is of Constant value and will not change usually changed over the lifetime of the Application
3 ASSET	A setting that is usually stored in the UiPath Orchestrator Cloud under the "assets" section
ste e s	

## Config

This is the central configuration table that drives an RPA Process. An Advanced RPA Process flow built using this template consumes settings from the *Config* table via an interface view (*described in the next section*). The table has been named so to easily recognize the parallels between the configuration database and the traditional excel file named Config.xlsx

Each entry in the Config table is comprised of three columns:

**Setting\_Name** – counterpart to the "Name" column from the Config.xlsx

**Setting\_Value** – counterpart to the "Value" column from the Config.xlsx

**Setting\_Description**- the "Description" counterpart from the Config.xlsx

#### NOTE

Unlike the Config.xlsx the names of the columns have been changed because "Name" and "Value" are reserved keywords in some database platforms.

For Example: PostgreSQL does not support a column named "Name"

Figure below shows the parallels between the Config.xlsx document and the Config database table:



Each entry in the Config table is associated with the following attributes from the tables described earlier:

- 1. The Tenant ID from the Tenant table
- 2. The Process ID from the Process table
- 3. The Setting\_Category ID from the Setting\_Category table
- 4. The Setting\_Type ID from the Setting\_Type table

## VW\_Load\_Config- The Public Interface View

Regardless of the underlying structure of the configuration database, the RPA process will consume settings from a public interface view that must remain largely unchanged. The view must expose a set of mandatory columns to work seamlessly irrespective of where the database has been deployed to.

In line with UiPath's Security Best Practices, it's recommended to implement the following:

- 1. Tightly regulate edit permissions to the database and underlying tables
- 2. Expose just the view to the RPA application using a non-Admin database login
- 3. If the database is MS Access, then lock the database down using a complex password

The view must be visible to the RPA process in the format shown below. This template is by default designed to load settings as demonstrated by this example SQL:

```
SELECT Setting_Name, Setting_Value, Setting_Type_Nm
FROM VW_Load_Config
WHERE Tenant_Nm = 'Thanos'
AND Process_Nm = 'REF_DB_Accounts_DataExtractor';
```

Note that all the three columns in the SELECT statement are required. The template will load settings that are associated with a pre-defined Tenant and Process names organized in the Tenant and Process configuration tables respectively, as discussed in the previous sections.

Setting, Name         Setting, Value         Setting, Description         Setting, Category         Tenant, Mm         Process, Nm           logf: BusinessProcessName         Onchestator, Not Applicable         Onchestator Occurs, Nat         System, ZETING         System, ZETING         System, ZETING         System, ZETING         Thaos         REF_DB_Accounts, DataExtractor           MaxRetryNumber         2         Must be 01 working with CONSTANT         System, ZETING         System, ZETING         Thanos         REF_DB_Accounts, DataExtractor           TimeoutShort         5000         Timeout Short Value in nCONSTANT         System, ZETIND         Thanos         REF_DB_Accounts, DataExtractor           TimeoutMedium         30000         Timeout Indium value (CONSTANT         System, ZETIND         Thanos         REF_DB_Accounts, DataExtractor           DelayShort         1000         Delayshort value in mOLOSSTANT         System, ZETIND         Thanos         REF_DB_Accounts, DataExtractor           DelayMedium         15000         Delay medium value in CONSTANT         System, ZETIND         Thanos         REF_DB_Accounts, DataExtractor           AccuracyUow         0.6         Image accuracy mediur CONSTANT         System, ZETIND         Thanos         REF_DB_Accounts, DataExtractor           LogMessage_GetTransactionDataError         0.6         Image accuracy mediu	🚽 VW_Load_Config 🛛 👋				_			
Ordestraturodecentame         Ordestratur, Not Applicable         Derhestratur Queen Nage SETTING         SYSTEM_DEFINED         Thanos         REF_D8_Accounts_DataExtractor           MaxNetryNumber         2         Must be 01 working witCONSTANT         SYSTEM_DEFINED         Thanos         REF_D8_Accounts_DataExtractor           TimeoutMedium         30000         Timeout short value in nCONSTANT         SYSTEM_DEFINED         Thanos         REF_D8_Accounts_DataExtractor           TimeoutMedium         30000         Timeout short value in nCONSTANT         SYSTEM_DEFINED         Thanos         REF_D8_Accounts_DataExtractor           TimeoutMedium         120000         Timeout short value in nUI CONSTANT         SYSTEM_DEFINED         Thanos         REF_D8_Accounts_DataExtractor           DelayShort         1000         Delay short value in nUI CONSTANT         SYSTEM_DEFINED         Thanos         REF_D8_Accounts_DataExtractor           DelayMedium         15000         Delay medium value in rUI CONSTANT         SYSTEM_DEFINED         Thanos         REF_D8_Accounts_DataExtractor           AccuracyLeed         0.6         Image accuracy leav value in mUII CONSTANT         SYSTEM_DEFINED         Thanos         REF_D8_Accounts_DataExtractor           AccuracyLeed         0.6         Image accuracy leav value in mUII CONSTANT         SYSTEM_DEFINED         Thanos         REF_D8_Accounts_	Setting_Name -	Setting_Value -	Setting_Description 👻	Setting_Type_Nm	• Se	etting_Category	→ Tenant_Nm →	Process_Nm
logEBusinessProcessNameFramework DB Config VersionThis is logging field with SETINGSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorMaxRetryNumber2Must be 0 if working wit CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorTimeoutMedium30000Timeout nedium value (CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorTimeoutMedium10000Timeout nedium value (CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayShort1000Delay short value in nCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayShort1000Delay short value in nCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayMedium15000Delay short value in mill CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayMedium0.6Image accuracy low valuc (CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyLow0.6Image accuracy low valuCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyMedium0.8Image accuracy low valuCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionDataErrorProcessing Transaction NumbersStatic part of logging mcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionDataErrorTransaction or Action FailedStatic part of logging mcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtrac	OrchestratorQueueName	Orchestrator_Not_Applicable	Orchestrator Queue Na	SETTING	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
MaxBetryNumber2Must be 0 if working witCONSTANTSYSTEM_DEFINEDThanosRFE_DB_Accounts_DataExtractorTimeoutMedium30000Timeout short value in CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorTimeoutMedium30000Timeout short value in CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorTimeoutMedium120000Timeout short value in nCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayShort1000Delay short value in mill CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayMedium15000Delay medium value in rONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyLow0.6Image accuracy low value (CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyWedium0.8Image accuracy low valuCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionData0.9Image accuracy low valuCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_SuccessTransaction data for TranssStatic part of logging mcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_FailTransaction AccuracyIng in accuracy file gating mcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_SuccessTransaction Action FailedStatic part of logging mcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_FailTran	logF_BusinessProcessName	Framework DB Config Version	This is a logging field wh	SETTING	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
TimeoutShort5000Timeout short value in nCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorTimeoutIong120000Timeout short value in nCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorExScreenshotSFolderPathExceptions_ScreenshotSWhere to save exceptionCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayShort1000Delay short value in mICONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayMedium15000Delay nedium value in rCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayLong60000Delay nedium value in CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyLow0.6Image accuracy low val CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyLow0.8Image accuracy low val CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionDataProcessing Transaction Number:Static part of logging mcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionDataProcessing Transaction Number:Static part of logging mcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionDataExtractorError getting transaction data for Transastatic part of logging mcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_FailTransaction successful.Static part of logging mcCONSTANTSYSTEM_DEFINED	MaxRetryNumber	2	Must be 0 if working wit	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
TimeoutMedium30000Timeout medium value (CNSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorTimeout.ong120000Timeout short value in nCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayShort1000Delay short value in mill CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayChort15000Delay short value in mill CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayLong60000Delay long value in milli CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyLow0.6Image accuracy walk CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyMedium0.8Image accuracy walk CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionDataProcessing Transaction number:Static part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionDataProcessing Transaction data for Transator of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_SuccessTransaction or Action FailedStatic part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_FailTransaction or Action FailedStatic part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_SuisensRuleExceptionStatic part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_Data	TimeoutShort	5000	Timeout short value in r	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
Timeout.ong12000Timeout.short value in nCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorExScreenshotsFolderPathExceptions_ScreenshotsWhere to save exceptioICONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayShort1000Delay short value in mill CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayUng60000Delay une une mill:CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyLow0.6Image accuracy low value CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyLow0.8Image accuracy low value CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyLow0.9Image accuracy low value CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionDataProcessing Transaction Number:Static part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_SuccessTransaction or Action FailedStatic part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_ApplicationExceptionSystem exception.Static part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_ApplicationExceptionSystem exception.Static part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_ApplicationExceptionSystem exception.Static part of logging meCONSTANTSYST	TimeoutMedium	30000	Timeout medium value	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
ExScreenshotsFolderPathExceptions_ScreenshotsWhere to save exceptionCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayMedium1000Delay medium value in millCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorDelayMedium15000Delay medium value in CONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyOw0.6Image accuracy low valcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyMedium0.8Image accuracy low valcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorAccuracyMedium0.9Image accuracy low valcCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionDataProcessing Transaction data for Transatiatic part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_GetTransactionDataErrorError getting transaction data for Transatiatic part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_FailTransaction of Action FailedStatic part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_BusinessRuleExceptionBusiness rule exception.Static part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_BusinessRuleExceptionBusiness rule exception.Static part of logging meCONSTANTSYSTEM_DEFINEDThanosREF_DB_Accounts_DataExtractorLogMessage_BusinessRuleExceptionBu	TimeoutLong	120000	Timeout short value in r	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
Delayshort         1000         Delayshort value in mill CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Delay/Medium         15000         Delay mediuw value in CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           DelayLong         60000         Delay long value in milli CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           AccuracyLow         0.6         Image accuracy walu CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           AccuracyHigh         0.9         Image accuracy high val CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionData         Processing Transaction number:         Static part of logging mcCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionData         Frozessing Transaction data for Transatic part of logging mcCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_Success         Transaction or Action Failed         Static part of logging mcCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_Fail         Transaction or Action Failed         Static part of logging mcCONSTANT         SYST	ExScreenshotsFolderPath	Exceptions_Screenshots	Where to save exceptio	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
DelayMedium         15000         Delay medium value in rCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           DelayLong         6000         Delay long value in millicONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           AccuracyLow         0.6         Image accuracy low valc CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           AccuracyMedium         0.8         Image accuracy high val CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           AccuracyLigh         0.9         Image accuracy high val CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionData         Processing Transaction number:         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_Success         Transaction or Action Failed         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         Business rule exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         System exception.         Static part of logging meCONSTANT <td>DelayShort</td> <td>1000</td> <td>Delay short value in mill</td> <td>CONSTANT</td> <td>SYSTEM</td> <td>1_DEFINED</td> <td>Thanos</td> <td>REF_DB_Accounts_DataExtractor</td>	DelayShort	1000	Delay short value in mill	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
DelayLong         6000         Delay long value in milit CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Accuracy/low         0.6         Image accuracy low valk CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Accuracy/Medium         0.8         Image accuracy medium CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Accuracy/High         0.9         Image accuracy medium CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionDataError         Error getting transaction number:         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionDaterror         Error getting transaction failed         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_Success         Transaction or Action Failed         Static part of logging meCONSTANT         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_BusinessRuleException         Business rule exception.         Static part of logging meCONSTANT         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         Businessrule exc	DelayMedium	15000	Delay medium value in I	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
AccuracyLow         0.6         Image accuracy way (LONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           AccuracyMedium         0.8         Image accuracy wedium CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           AccuracyHigh         0.9         Image accuracy high val CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionData         Processing Transaction number:         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionDataError         Error getting transaction data for Transatic part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_Success         Transaction or Action Failed         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         Static part of logging meCONSTANT         SYSTEM_DEFINED         <	DelayLong	60000	Delay long value in milli	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
AccuracyMedium         0.8         Image accuracy medium CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           AccuracyHigh         0.9         Image accuracy high val CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionData         Processing Transaction Number:         Static part of logging mc CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionDataError         Error getting transaction Autors Static part of logging mc CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionDataError         Error getting transaction Static part of logging mc CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         Business rule exception.         Static part of logging mc CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         Business rule exception.         Static part of logging mc CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         Business rule exception.         Static part of logging mc CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Lo	AccuracyLow	0.6	Image accuracy low value	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
AccuracyHigh         0.9         Image accuracy high val CONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionNumber         Static part of logging mcCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionData         Processing Transaction data for Transaction of logging mcCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_Success         Transaction Successful.         Static part of logging mcCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_BusinessRuleException         Businessruleexception.         Static part of logging mcCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_BusinessRuleException         Static part of logging mcCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         System exception.         Static part of logging mcCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Credential_System1         Credential_System1         Credential_System1         Static part of logging mcCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System_Data_NPRE         KaccountS_DataExtr	AccuracyMedium	0.8	Image accuracy medium	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_GetTransactionData         Processing Transaction Number:         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thans         REF_DB_Accounts_DataExtractor           LogMessage_GetTransactionDataError         Error getting transaction data for TransaStatic part of logging meCONSTANT         SYSTEM_DEFINED         Thans         REF_DB_Accounts_DataExtractor           LogMessage_Success         Transaction or Action Failed         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thans         REF_DB_Accounts_DataExtractor           LogMessage_Fail         Transaction or Action Failed         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thans         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         Sustem exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thans         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         System exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thans         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         System exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thans         REF_DB_Accounts_DataExtractor           System_URL         Credential_System1         SETTING         USER_DEFINED         Thans         REF_DB_Accounts_DataExtractor           System_Dat	AccuracyHigh	0.9	Image accuracy high val	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_GetTransactionDataError         Error getting transaction data for TransaStatic part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_Success         Transaction successful.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_Success         Transaction or Action Failed         Static part of logging meCONSTANT         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_BusinessRuleException         Business rule exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         System exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_URL         https://acme-test.uipath.com         Static part of logging meCONSTANT         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Credential_System1         Credential_System1         Static part of logging meCONSTANT         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_LogMest         whore         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         <	LogMessage_GetTransactionData	Processing Transaction Number:	Static part of logging me	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_Success         Transaction successful.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_Success         Transaction or Action Failed         Static part of logging meCONSTANT         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_BusinessRuleException         Businessrule exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         System exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Credential_System1         Credential_System1         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Process_Names_List         chrome         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Filter         Type='WIY AND Status = 'Open' AND De         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING <td< td=""><td>LogMessage_GetTransactionDataError</td><td>Error getting transaction data for Transa</td><td>Static part of logging me</td><td>CONSTANT</td><td>SYSTEM</td><td>1_DEFINED</td><td>Thanos</td><td>REF_DB_Accounts_DataExtractor</td></td<>	LogMessage_GetTransactionDataError	Error getting transaction data for Transa	Static part of logging me	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_Fail         Transaction or Action Failed         Static part of logging meCONSTANT         USER_DEFINED         Thans         REF_DB_Accounts_DataExtractor           LogMessage_BuilessRuleException         Business rule exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System         LURL         https://acme-test.uipath.com         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Process_Names_List         chrome         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Object         work-items         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thano	LogMessage_Success	Transaction Successful.	Static part of logging me	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_BusinessRuleException         Business rule exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           LogMessage_ApplicationException         System exception.         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_URL         https://carce-test.uipath.com         Static part of logging meCONSTANT         SYSTEM_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Credential_System1         Credential_System1         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Process_Names_List         chrome         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Object         work-tems         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         trype='W11' AND Status = 'Open' AND De         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder/stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder/stage         SETTING         USER_DEFINED         Thanos </td <td>LogMessage_Fail</td> <td>Transaction or Action Failed</td> <td>Static part of logging me</td> <td>CONSTANT</td> <td>USER_0</td> <td>DEFINED</td> <td>Thanos</td> <td>REF_DB_Accounts_DataExtractor</td>	LogMessage_Fail	Transaction or Action Failed	Static part of logging me	CONSTANT	USER_0	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_ApplicationException         System exception.         Static part of logging mc CONSTANT         SYSTEM_DEFINED         Thans         REF_DB_Accounts_DataExtractor           System1_URL         https://acme-test.uipath.com         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Credential_System1         Credential_System1         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Process_Names_List         chrome         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Filter         Type="W11" AND Status = 'Open' AND be         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder_List         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder_List         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_Dat	LogMessage_BusinessRuleException	Business rule exception.	Static part of logging me	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_URL         https://acme-test.uipath.com         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Credential_System1         Credential_System1         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Process_Names_List         chrome         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Object         work-items         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Diject         work-items         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder_Ists         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder_Ists	LogMessage_ApplicationException	System exception.	Static part of logging me	CONSTANT	SYSTEM	1_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
Credential_System1         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           Process, Names_List         chrome         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Dipict         work:tems         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Filter         Type='W11' AND Status = 'Open' AND De         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder/stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_folder/stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C:\UiPath_Asset_folder/stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C:\UiPath_Asset_folder/stage,C:\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C:\UiPath_Asset_folder/stage,C:\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_RREFIX </td <td>System1_URL</td> <td>https://acme-test.uipath.com</td> <td></td> <td>SETTING</td> <td>USER_0</td> <td>DEFINED</td> <td>Thanos</td> <td>REF_DB_Accounts_DataExtractor</td>	System1_URL	https://acme-test.uipath.com		SETTING	USER_0	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
Process, Names_List         chrome         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Filter         Type=*W1* AND Status = 'Open' AND De         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Filter         Type=*W1* AND Status = 'Open' AND De         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Filter         Type=*W1* AND Status = 'Open' AND De         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C:\UiPath_Asset_Folder\stage.C:\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C:\UiPath_Asset_Folder\stage.C:\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C:\UiPath_Asset_Folder\stage.C:\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_PREFIX         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_D	Credential_System1	Credential_System1		SETTING	USER_I	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_Data_Object         work-items         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Filter         Type='W11' AND Status = 'Open' AND De         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Jata_Archive_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C:\UiPath_Asset_Folder\stage,C:\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_PREFIX         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_PREFIX         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor	Process_Names_List	chrome		SETTING	USER_0	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_Data_Filter         Type='W11' AND Status = 'Open' AND De         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_In_Folder         C:\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C:\UiPath_Asset_Folder\stage,C:\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C:\UiPath_Asset_Folder\stage,C:\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_RREFIX         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_RREFIX         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor	System1_Data_Object	work-items		SETTING	USER_I	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_Data_In_Folder         C.\UiPath_Asset_Folder\stage         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Data_Archive_Folder_List         C.\UiPath_Asset_Folder\stage.C.\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C.\UiPath_Asset_Folder\stage.C.\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_PREFIX         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_PREFIX         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C.\UiPath_Asset_Folder\stage.C.\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor	System1_Data_Filter	Type='WI1' AND Status = 'Open' AND De		SETTING	USER_I	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_Data_Archive_Folder         C:\UiPath_Asset_Folder\archive         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           System1_Folder_List         C:\UiPath_Asset_Folder\stage,C:\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_PREFIX         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_FAULT_REFIX         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor	System1_Data_In_Folder	C:\UiPath_Asset_Folder\stage		SETTING	USER_0	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_Folder_List         C:\UiPath_Asset_Folder\stage,C:\UiPath         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_PREFix         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor           RPA_ENVIRONMENT_PREFix         Thanos-DEV         SETTING         USER_DEFINED         Thanos         REF_DB_Accounts_DataExtractor	System1_Data_Archive_Folder	C:\UiPath_Asset_Folder\archive		SETTING	USER_0	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
RPA_ENVIRONMENT_PREFIX Thanos-DEV SETTING USER_DEFINED Thanos REF_DB_Accounts_DataExtractor	System1_Folder_List	C:\UiPath_Asset_Folder\stage,C:\UiPath		SETTING	USER_I	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
EMAIL SUBJECT FAILURE PREFIX FAILED SETTING USER DEFINED Thans REF DB Accounts DataExtractor	RPA_ENVIRONMENT_PREFIX	Thanos-DEV		SETTING	USER_I	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
SETTING OSER DELINE MELTING MELEDINE MELTING OSER DELINED	EMAIL_SUBJECT_FAILURE_PREFIX	FAILED!		SETTING	USER_I	DEFINED	Thanos	REF_DB_Accounts_DataExtractor

#### NOTE

The steps to point the template to the Configuration database will be described in the later sections of this document.

## Framework components to access the View

The advanced framework comes with a couple of additional sequence components to access the view and load the configuration settings. These components have been added to the **Framework** folder and will not require any modifications unless you plan to customize access to the database.



#### NOTE

Although identical, the components to access a Local and Remote databases have been provided separately to consider the possibility of how you might want to set up access to the Configuration database.

For Example: You may opt to configure a process to originally load settings from a local MS Access database via a System DSN set up on the Robot machine. However, when you migrate the configurations to a Remote database, you may opt to connect to that database via an OLE DB driver. this In you have rewrite the component case may to InitAllSettings From RemoteDB DSN.xaml to build an OLEDB connection string in memory before connecting to the configuration database.

# Connecting to the Configuration Database

In the interest of reducing complexity and risks of managing connection strings, ODBC Data Source Names (DSNs) will be the default and preferred method to gain access to the configuration database from the Robot machines.

## Justifying the use of ODBC DSNs

DSN connection strings are source agnostic – the client will need to know only the DSN name without having any knowledge about the actual database.

DSNs minimize or eliminate the need to manage passwords and lengthy connection strings – a connection string will expose details such as server names, database names and usernames to the connecting clients

If passwords are stored as *SecureString* in an Orchestrator credential asset, there is no easy way to decrypt the *SecureString* password at runtime and integrate it into a connection string – not all connection providers have an easy way to do so.

The other option is to store passwords using standard encryption methods – however, a decryption routine can most likely expose a password in plaintext format when the code is being tested in a debugger. Besides, if encryption standards change, then this code will require to be updated!

In most enterprise environments, system administrators or DBAs will own the responsibility of managing DSNs and therefore absolving developers from directly having knowledge of any username or passwords to access a production database server.

Finally, a DSN will abstract the RPA process from an outright change in the underlying database technology – for example, if the configuration database is moved from SQL Server to Oracle, the

process will have no idea that this change occurred as long as the DSN name and the interface view structure remain unchanged.

## To be fair, some flip sides to ODBC DSNs

ODBC DSN set up is natively integrated into the Windows platform – other platforms have no concept of setting up a DSN in the same manner as it's set up on a Windows machine.

Most commercial setups use JDBC drivers to connect to databases. This is as easy as copying a JDBC library file into their applications without having to perform a formal driver installation on the Robot machine.

DSNs will need formal installation of ODBC drivers suited to the target database platform – *For example*, the MySQL ODBC driver or the PostgreSQL ODBC driver will need to be installed on each Robot machine based on the target database this machine is going to connect to. If there are several Robot machines, all of them will be forced to go through this tedious installation process!

## Conclusion

If other attributes of the enterprise architecture (*database products, servers etc.*) remain largely constant over a span of time, the positives of DSNs will outweigh the negatives and therefore this template will use the DSN approach to set up access to the configuration databases.

## Setting up a Microsoft Access DSN on the Robot Machine

This template comes with a 2016 version of a Microsoft Access Database. The file name has the extension **.accdb** unlike previous versions that have the **.mdb** file extension.

Depending on which version (*32 or 64 bit*) of Office you have installed, you may have to download and run *AccessDatabaseEngine.exe* or *AccessDatabaseEngine\_X64.exe* on the Robot machine. You can install only one of them on a host machine!

#### NOTE

If you have both versions of office installed, then the 32-bit version will not allow you to connect to Access because the 64-bit office is installed, and vice-versa. This is a catch-22 situation and the easiest workaround would be to save the MS Access database as a **.mdb** file and use the default MS Access driver that is provided in the 32-bit ODBC Manager in Windows.

	System DSN	File DSN	Drivers	Tracing	Connection Poo	oling	About	
lser Data	a Sources:							
Name		Platform	Driver					Add
dBASE Excel Fi	Files	32-bit 32-bit	Microsoft / Microsoft /	Access dB Excel Drive	ASE Driver (*.dbf er (*.xls, *.xlsx, *.x	f, *.nd: dsm. *	k,*.m xlsb)	Remove
MS Acc	ess Database	32-bit	Microsoft /	Access Dri	ver (*.mdb, *acc	db)		
								Configure
							>	
<								
<		er data eou		information	a shout how to c	opper	t to the	indicated data provider
<	An ODBC Us User data so	ser data sou surce is only	irce stores visible to y	information you and ca	n about how to c an only be used o	onneo on this	t to the compute	indicated data provider. A

## Locking the MS Access Database

The MS Access database in this template is by default locked with a password. The password is:

#### ChangeYourPassword!

It's recommended that you open the database in <u>Exclusive Mode, remove this password and</u> lock the database with a new one before configuring the DSN.

## Centralizing the MS Access Database File

The DSN for MS Access points directly to the location of the database file. Therefore, it isn't a good idea to keep the database under the **Data** folder of the RPA Process. Keeping the Access database under the **Data** folder will mean that you will need to have a separate DSN for each application. This could soon become as painful as managing a separate Config.xlsx file for each RPA process!

A better solution would be to save the database file to a central location on the Robot machine before configuring the DSN.

#### This has two advantages:

- 1. Several RPA processes can make use of a single, centrally managed database
- 2. The file location will remain constant, and only one DSN can be used by multiple processes to load their configuration settings

Configuring the DSN is a pretty simple process – make sure that you point to the database, and then configure the Username as **Admin** (default) and the password you used to lockdown the database with. Give the DSN a meaningful name for ease of use in the next steps.

Follow steps **1 through 9** to set up the DSN as shown below. Note down the name of the DSN as we will be needing it in when setting up the *Master configuration* file later during the framework configuration.

ODBC Data Source Adr	ninistrato	or (32-bit)	)					×
User DSN System DSN	T. File DSN	Drivers	Tracing	Connection	Pooling	About		
System Data Sources:							2.	
Name	Platform	Driver					Add	
RPA_ConfigDB RPA_ConfigDB32	64-bit 32-bit	MySQL MySQL	ODBC 8.0 ODBC 8.0	) ANSI Driver ) ANSI Driver			Remo	ve
RPA_ConfigDB32_Local	32-bit	Microso	ft Access	Driver (*.mdb	,*.accdb	)	Configu	ire
An ODBC System data source stores information about how to connect to the indicated data provider. A System data source is visible to all users of this computer, including NT services.								
				ОК	Cano	cel	Apply	Help

Create New Data Source	×
<u>.</u> 3.	Select a driver for which you want to set up a data source.          Name       \^         Microsoft Access dBASE Driver (*.dbf, *.ndx, *.mdx)       1         Microsoft Access Driver (*.mdb)       1         Microsoft Access Driver (*.mdb)       1         Microsoft Access Text Driver (*.txt, *.csv)       1         Microsoft dBase Driver (*.dbf)       1
	< Back Finish Cancel

ODBC Microsoft A	ccess Setup	?	$\times$
5. Data Source Name:	RPA_ConfigDB32_Local	ОК	
Description:	ODBC DSN to Local MS Access RPA Configuration	Cance	ł
Database: C:\\o	config\ConfigDB.accdb 6.	Help	
Select	Create Repair Compact	Advance	ed
System Database			
None			
O Database:			
	System Database	Options	>>

Set Advanced Options		×
Default Authorization 8. Login name: Admin Password:	••••	9. OK Cancel Help
Options Type	Value	
DefaultDir Driver ExtendedAnsiSQL FIL ImplicitCommitSync	0 MS Access; 2049	<b>~</b>
Value of DefaultDir		

## Setting up a Remote Database DSN on the Robot Machine

We refer to this as a Remote Database DSN in general because the database might be any commercial, enterprise grade SQL server such as MySQL or SQL Server, just to name a few. In this example, I will be using the MySQL v8.0.x Community Edition. Note that it's easier to install the ODBC drivers whilst installing the Server as it will be made available automatically in the ODBC Manager after the install.

	Connection Name	
MySQL Server	Host: Socket: Port: Version: Compiled For: Configuration File: Running Since:	MySQL 3306 8.0.17 (MySQL Community Server - GPL) Win64 (x86_64) C:\ProgramData \MySQL\MySQL Server 8.0\my.ini Sun Aug 18 17:30:01 2019 (5 days 23:59) Refresh

ODBC Data Source Administrator (32-bit)		×
User DSN System DSN File DSN Drivers Traci	ng Connection Po	ooling About
ODBC Drivers that are installed on your system:		
Name	Version	Company ^
Microsoft Paradox-Treiber (*.db.)	10.00.18362.01	Microsoft Corporation
Microsoft Text Driver (*.txt; *.csv)	10.00.18362.01	Microsoft Corporation
Microsoft Text-Treiber (*.txt; *.csv)	10.00.18362.01	Microsoft Corporation
MySQL ODBC 8.0 ANSI Driver	8.00.17.00	Oracle Corporation
MySQL ODBC 8.0 Unicode Driver	8.00.17.00	Oracle Corporation
PostgreSQL ODBC Driver(ANSI)	11.01.00.00	PostgreSQL Global Development Grou
PostgreSQL ODBC Driver(UNICODE)	11.01.00.00	PostgreSQL Global Development Grou
SQL Server	10.00.18362.01	Microsoft Corporation
		~
<		>
An ODBC driver allows ODBC-enabled pro new drivers, use the driver's setup program	ograms to get infom m.	nation from ODBC data sources. To install
	ОК	Cancel Apply Help

Configuring the DSN for a remote DSN is similar to the previous series of steps, except that it has to be done in an ODBC connector box that's slightly different depending on which database you're connecting to. Make sure that you test the connection using the **Test** button. As usual is the case, note down the DSN name for use in the next steps.

MySQL Connector/ODBC	Data Source Configuration X
MysqL Connector/ODB	c 💿
Connection Parameter	s
Data Source <u>N</u> ame:	RPA_ConfigDB32 1.
Description:	ODBC DSN (32-bit) to the MySQL RPA Meta
TCP/IP <u>S</u> erver:	localhost 2. Port: 3306 3. Test Result ×
O Named Pipe:	8.
<u>U</u> ser:	4.
Pass <u>w</u> ord:	••••••••••••••••••••••••••••••••••••••
Data <u>b</u> ase:	rpa_metabase 6. V Test 7.
Details >>	10. OK <u>C</u> ancel <u>H</u> elp

#### CAUTION

Do not use the default root user account for Production deployments!

## The MasterConfig.xlsx Framework Configuration File

A new addition to this Advanced Template is the Master Configuration file **MasterConfig.xlsx** file under the **Data** folder.

Name ^
<ul> <li>Config</li> <li>ConfigDB</li> <li>MasterConfig</li> </ul>

Note that, this file is a mandatory addition and not a replacement for Config.xlsx.

This file will need to be configured for each RPA Process, and the settings are few and simple. Here below is a typical master configuration set up if your Configuration database is a remote SQL database:

#### © Andy Menon

	А	В		
1	Name	Value		
2	logF_BusinessProcessName	Framework DB Configuration Version		
3	Tenant_Name	Thanos		
4	Process_Name	REF_DB_Accounts_DataExtractor		
5	Configuration_Source	REMOTE_DB		
6	Configuration_DSN_Name	Dsn=RPA_ConfigDB32 Remote Config Database Master		
7	Configuration_DB_File	Not Applicable Configuration		
8				

Master Configuration Key	Description	
logF_BusinessProcessName	Legacy   Set to the value of Process_Name	
Tenant_Name	The Tenant name from the <i>Tenant</i> database table	
Process_Name	The RPA Process from the <i>Process</i> database table deployed to the above tenant	
Configuration_Source	<b>REMOTE_DB</b> if configuration database is a remote SQL database	
	<b>LOCAL_DB</b> if configuration is a local MS Access database	
	<b>CONFIG_FILE</b> if using Config.xlsx configuration file	
Configuration_DSN_Name	Required only if you're configuring settings in a database. Otherwise, leave blank!	
	This is the name of the DSN configured in the previous section. The format of the connection string must be:	
	Dsn=Name_Of_Your_DSN	
	No quotes or blank spaces!	
Configuration_DB_File	Required if you're using a Local MS Access Database or the Config.xlsx file . Blank otherwise.	
Enable_DB_Configuration	Defaults to No (N). By default the configuration reads from the Config.xlsx file. You must explicitly enable the template to read from a database once the connection has been set up and tested.	

Here's how the Master configuration is set up if you're using a configuration database:

Enable_DB_Configuration	Υ

Here's how the Master configuration is set up if you're using a Local MS Access Database:

Configuration_Source	LOCAL_DB	
Configuration_DSN_Name	Dsn=RPA_ConfigDB32_Local	
Configuration_DB_File	Data\ConfigDB.accdb	

And this is how the Master configuration will change if you're using the traditional Config.xlsx file:

Enable DB Configuration	Ν
Configuration_Source	CONFIG_FILE
Configuration_DSN_Name	
Configuration DB File	Data\ConfigDB.xlsx

In this case you will need to add all your settings to the Config.xlsx just as in the traditional Framework, and not in the configuration database. Also, the **Enable\_DB\_Configuration** attribute must be set to N.

#### NOTE

If you are not using Config.xlsx, keep it empty but do not remove it from the Data folder!

## Importing Additional Database Libraries

In case you are not going to use a DSN to configure a connection to the database, then you may need to import additional dependencies into your RPA Process based on which database you plan to connect to.

Here's an example of importing the SQL Client libraries for the MySQL database into the RPA Process.



The approach here is to connect to the MySQL database by using the SQL Client library and a connection string. In this case, you will have to rewrite the **InitAllSettings\_From\_RemoteDB\_DSN.xaml** component to connect to MySQL using the SQL Client library (*as shown below*). Or, replace this component with your own.

InitAllSettings_From_RemoteDB_DSN * ×	
	Connect
	Configure Connection
	Edit Connection Settings ? ×
	New Database Connection Connection Wizard
	in_Connection_String
	MySql.Data.MySqlClient 🗸
	ОК

The *in\_Connection\_String* parameter in this case will change from a simple DSN name to a fully formed connection string.

# Configuring a New RPA Process Flow in the Configuration Database

The following steps are applicable to the local MS Access database or the remote database. If you have the data tables configured identically, these steps should work without undue problems. The following example queries are modelled after the MySQL database. You will have to change them accordingly to suit your setup.

#### Create a Tenant Entry in the Tenant Table

```
/*-----*/
/* Make RPA Tenat Entry in the Tenant table if not already existing */
/* Set active_flg to True to activate Tenant
/*-----*/
insert into rpa_metabase.tenant
(tenant_nm,tenant_description, active_flg)
```

values

('Thanos', 'The Default Thanos Win10 SOHO Tenant', 1);

#### **Create an RPA Process Entry in the Process Table**

/\*-----\*/
/\* Make RPA Process Entry for Application # 1 \*/
/\* Activate Process by setting Active\_Flg to True \*/
/\*-----\*/
insert into process(Process\_Name, Process\_Description, active\_flg)
values
('REF\_DB\_Accounts\_DataExtractor',
'Extracts Work Items of type WI1 and description "Verify Account Position"
from ACME System1 into an Excel File',

1);

#### Copy Standard Configuration Settings into the Config Table

```
/*_____*/
/* Copy Standard System-defined settings to your process
                                                         */
/* Update settings as applicable to the current RPA Process
/*_____*/
insert into config(
   Setting_Name, Setting_Value, Setting_Description,
   Tenant_ID, Setting_Type, Setting_Category_ID,
   active_flg, Process_ID
)
select
Setting_Name, Setting_Value, Setting_Description,
Tenant_ID, Setting_Type, Setting_Category_ID,
active_flg,
(select ID from Process where Process_Name = 'REF_DB_Accounts_DataExtractor')
Process ID
```

from config where

```
/* settings from default/standard project */
Process_ID = (select ID from Process where Process_Name =
'FRAMEWORK DEFAULT SETTINGS')
/* deployed to your tenant */
and
Tenant_ID = (select Tenant_ID from tenant where Tenant_Nm = 'Thanos')
/* All system defined standard settings */
and
Setting_Category_ID = (select Setting_Category_ID from setting_category where
Setting_Category='SYSTEM_DEFINED')
order by ID
;
/* Update Application Name */
update config
set Setting_Value = 'REF_DB_Accounts_DataExtractor'
where Setting Name = 'logF BusinessProcessName'
and Tenant ID = (select Tenant ID from tenant where Tenant Nm = 'Thanos')
;
/* If Orchestrator is not applicable, update entry to indicate so */
update config
set Setting_Value = 'Orch_Not_Applicable'
where Setting_Name = 'OrchestratorQueueName'
and Tenant_ID = (select Tenant_ID from tenant where Tenant_Nm = 'Thanos')
and Setting_Value = 'KibanaDemoQueue'
and Process_Id = (select ID from Process where Process_Name =
'REF_DB_Accounts_DataExtractor')
/* If no Orchestrator, set MaxRetryNumber to a Non-zero value */
update config
```

set Setting\_Value = '2'
where Setting\_Name = 'MaxRetryNumber'
and Tenant\_ID = (select Tenant\_ID from tenant where Tenant\_Nm = 'Thanos')
and Process\_Id = (select ID from Process where Process\_Name =
'REF\_DB\_Accounts\_DataExtractor')
and Setting\_Value = '0';

#### Insert Process-specific Settings applicable to the Current Process

This section depends on the process you're trying to build. An example would be an application URL that the Robot must navigate to:

```
insert into config(
    Setting Name, Setting Value, Setting Description,
    Tenant_ID, Setting_Type, Setting_Category_ID,
    active_flg, Process_ID )
select
'System1_URL' Setting_Name,
'https://acme-test.uipath.com' Setting_Value,
'The System URL that is the target of the RPA Process' as
Setting_Description,
(select Tenant_ID from tenant where Tenant_Nm = 'Thanos') as Tenant_ID,
(select Setting Type ID from setting type where Setting Type Nm = 'SETTING')
AS Setting_Type,
(select Setting_Category_ID from setting_category where
Setting_Category='USER_DEFINED') Setting_Category_ID,
1 AS active_flg,
(select ID from Process where Process_Name = 'REF_DB_Accounts_DataExtractor')
```

Configure as many settings your RPA Process will need to complete the Database configuration step.

#### Finally, Test the Interface View

AS Process ID;

```
SELECT * FROM VW_Load_Config
WHERE Tenant_Nm = 'Thanos' AND Process_Nm = 'REF_DB_Accounts_DataExtractor';
```

🔁 VW_Load_Config 🛛 👋				_			
Setting_Name -	Setting_Value -	Setting_Description 👻	Setting_Type_Nm	- S	etting_Category	<ul> <li>Tenant_Nm</li> </ul>	Process_Nm -
OrchestratorQueueName	Orchestrator_Not_Applicable	Orchestrator Queue Na	SETTING	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
logF_BusinessProcessName	Framework DB Config Version	This is a logging field wh	SETTING	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
MaxRetryNumber	2	Must be 0 if working wit	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
TimeoutShort	5000	Timeout short value in r	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
TimeoutMedium	30000	Timeout medium value	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
TimeoutLong	120000	Timeout short value in r	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
ExScreenshotsFolderPath	Exceptions_Screenshots	Where to save exceptio	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
DelayShort	1000	Delay short value in mill	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
DelayMedium	15000	Delay medium value in I	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
DelayLong	60000	Delay long value in milli	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
AccuracyLow	0.6	Image accuracy low value	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
AccuracyMedium	0.8	Image accuracy medium	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
AccuracyHigh	0.9	Image accuracy high val	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_GetTransactionData	Processing Transaction Number:	Static part of logging me	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_GetTransactionDataError	Error getting transaction data for Transa	Static part of logging me	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_Success	Transaction Successful.	Static part of logging me	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_Fail	Transaction or Action Failed	Static part of logging me	CONSTANT	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_BusinessRuleException	Business rule exception.	Static part of logging me	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
LogMessage_ApplicationException	System exception.	Static part of logging me	CONSTANT	SYSTEM	M_DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_URL	https://acme-test.uipath.com		SETTING	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
Credential_System1	Credential_System1		SETTING	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
Process_Names_List	chrome		SETTING	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_Data_Object	work-items		SETTING	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_Data_Filter	Type='WI1' AND Status = 'Open' AND De		SETTING	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_Data_In_Folder	C:\UiPath_Asset_Folder\stage		SETTING	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_Data_Archive_Folder	C:\UiPath_Asset_Folder\archive		SETTING	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
System1_Folder_List	C:\UiPath_Asset_Folder\stage,C:\UiPath		SETTING	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
RPA_ENVIRONMENT_PREFIX	Thanos-DEV		SETTING	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
EMAIL_SUBJECT_FAILURE_PREFIX	FAILED!		SETTING	USER_	DEFINED	Thanos	REF_DB_Accounts_DataExtractor
Record: I4 4 1 of 33 + H > T No Filter Sear	ch						

<u>All the system-defined settings and user-defined settings for the specified Tenant and Process</u> <u>names must be visible in the view</u>. If you don't see all of them make sure that the active\_flg is set to true in the Config, Process and the Tenant table. Also make sure that the Tenant and Process IDs are correctly associated with each of the entries in the Config table.

On a similar note, if you want to prevent a setting from loading up, set the active\_flag to false in the config table for that Tenant and Process.

# Configuring a New RPA Process Flow

Before you proceed, you will need to complete the Database set up and create all the entries for the process settings in the database as described in the previous sections. You will need to be familiar with the original <u>UiPath component</u> to continue. The UiPath training and documentation covers the configuration of the original template in detail. Therefore, this document covers only the key differences and changes in how this Advanced Template is different from the original. in order to proceed further.

### Main.xaml

Visually, there isn't much change. However, there is one additional variable added to this component.

Master_Config	Dictionary <string,object></string,object>	General Business Pr Er
Create Variable		
Variables Arguments Imports		

The configurations from the MasterConfig.xlsx will be loaded into the **Master\_Config** dictionary collection in the **Init** state machine.

## Init State Machine

The Init State machine invokes the **Framework\Init\_Master\_Settings.xaml** sequence to load the configurations from the MasterConfig.xlsx and returns the Master\_Config dictionary collection.

♀ Init Read ● Entr	Config, Init Applicatio y Catch intialization exce	ns		*		
Try	<ul> <li>Init State</li> <li>Invoke Work</li> <li>"Framework\Ini</li> <li>Import Argume</li> </ul>	flow File t_Master_Settings.xaml" <b>&lt;</b> ents 3 Open Workflo	۲ \ «			
Invoked workflow's argume	nts				?	×
			_			× ↑ ¥
Name	Direction	Туре		Value		
in_MasterConfigFile	In String			"Data\MasterConfig.xlsx"		
in_MasterConfigSheet	t In String			"Settings"		
out_MasterConfig	MasterConfig Out Dictionary <string,object> Master_Config</string,object>			Master_Config		<b>•</b>
					ОК	Cancel

No changes required here other than to make sure that the arguments are being passed in correctly to this workflow.

## Loading Configuration Settings – Most Significant Change

The sequence shown below has been extensively modified to load configuration settings based on how the MasterConfig.xlsx has been configured. The following screen shots show the extent of the modification.

ी Is Database Configuration Enabled?	*	
Condition		
Master_Config("Enable_DB_Configuration") .ToStr	ring.ToUpper = "N"	
Then Else		
A*B Default to Config File         Configuration_Sou         =         "CONFIG_FILE"	A*B Set to the Local or Remote DB         Configuration_Sou         =         Master_Config("Co	

#### NOTE

The InitAllSettings\_From\_RemoteDB\_DSN.xaml and InitAllSettings\_From\_LocalDB\_DSN.xaml will be invoked only if the master setting Enable\_DB\_Configuration is enabled and if a DSN has been successfully configured to connect to a local or remote database from the Robot machine.

Configuration_Source	= "REMOTE_DB"	
	Then	
Invoke InitAllSetti	ngs (Remote DB) vers	sion workflow
Invoke InitAllSetti "Framework\InitAl	ngs (Remote DB) vers	sion workflow teDB_DSN.xaml"

ស៊ីធ្លូ If	*
Condition Configuration_Source = "LOCAL_DB"	
Then	Else
	Invoke InitAllSettings workflow
► Invoke InitAllSettings (Local DB) version workflow   "Framework\InitAllSettings_From_LocalDB_DSN.xaml"	This loads configuration from the default ConfigDB Excel.
Import Arguments 5 Open Workflow	"Framework\InitAllSettings.xaml"
	Import Arguments 3 Open Workflow

Note that the new components **InitAllSettings\_From\_RemoteDB\_DSN.xaml** and **InitAllSettings\_From\_LocalDB\_DSN.xaml** take the *DSN Name*, the *Tenant Name* and *Process Name* from the *Master\_Config* Dictionary object as input arguments and return the standard Config dictionary as the output after loading their configurations settings from the database.

Invoked workflow's arguments	;		? ×
Name	Direction	Туре	Value
out_Config	Out	Dictionary <string,object></string,object>	Config
in_Tenant_Nm	In	String	Master_Config("Tenant_Name").toString
in_Connection_String	In	String	Master_Config("Configuration_DSN_Name").toString
in_Process_Nm	In	String	Master_Config("Process_Name").toString
Create Argument			
			OK Cancel

## KillAllFolders.xaml - New Component to Drop Folders

Optionally, you can configure the framework to drop folders related to the process during the restart sequence.

*For Example*: In this process, a setting named *System1\_Folder\_List* has been configured as a Userdefined setting. The value of this setting would be a comma-delimited list of folders that need to be dropped when the robot restarts like so:

#### C:\UiPath\_Asset\_Folder\stage,C:\UiPath\_Asset\_Folder\archive

You can configure this variable accordingly based on how you name it. It takes the value of the *System1\_Folder\_List* parameter and deletes all the folders. Note that this part of the code will run only if the setting is found in the Config dictionary!

Do Folders have to be Dropped?				
CONFIGURE: Change the name of the Key to what's been defined in the then this code will not be called.				
Condition				
Config.ContainsKey("System1_Folder_List")= True				
Then				
Seq: Kill Folders				
A*B Get Folders List         listFolders         =         Config("System1_F				
► Invoke Workflow File				
"Framework\KillAllFolders.xaml"				
Import Arguments 1 Open Workflow				

## Move\_or\_Delete\_Directory.xaml

This new addition in the Common folder is invoked by *KillAllFolders.xaml* to move or drop the folders. If a folder contains files, all files are deleted before the folder can be dropped or moved.

The sequence contains documentation on how to use the component.

## Move\_or\_Delete\_File.xaml

This is a component like the *Move\_or\_Delete\_Directory.xaml* except that it moves or drops files. Documentation for this component is elaborated in the sequence.

## InitAllApplications.xaml

This standard component has been modified to create folders during the Robot startup. Again, this code runs only if a suitable parameter has been configured for the application.

## Create\_Directory.xaml - New Component to Create Folders

This component is integrated into the InitAllApplications.xaml to create folders during robot start up. Just like the KillAllFolders.xaml. this component takes the list of comma-delimited folder paths and creates the folders.

ondition	
FolderStatus = False	
Then	Else
"Common\Create_Directory.xaml"        Import Arguments     2     Open Workflow	Drop activity here

Applic	
	Create Folders?
	CONFIGURE: Change the name of the Key to what's been defined in the configuration. If you don't have any folders to create, then this code will not be called.
	in_Config.ContainsKey("System1_Folder_List") = True
	🔹 Seq: Create Folders
	A+B       Get Folders List         listFolders       =         in_Config("System")
	► For Each: Folder Path in list       For Each:     f       in     listFolders       Body
	🖏 Body 😞
	<ul> <li>Path Exists </li> <li>Path Type Folder ▼</li> </ul>

## KillAllProcesses.xaml

This component has been modified to take one parameter. Just as the *KillAllFolders.xaml*, a parameter named *Process\_Names\_List* has been configured as a user-defined setting. It contains a comma-delimited list of all the processes that need to be killed during start up.

*Example:* If your RPA Process needs to kill Internet Explorer and Chrome, then the value of this argument would be

#### iexplore, chrome

If only one process needs to be killed, then only one process name can be configured without the delimiting comma.

	Invoke KillAllProcesses workflow			*	
	"Framework\KillAllProcesses.xaml"				
	Import A	rguments 1	Open Workflow		
Invoked workflow's argume	ents				? ×
					$\times$ $\uparrow$ $\vee$
Name	Direction	Туре		Value	
in_Process_Names_List	In	String	2	Config("Pr	ocess_Names_List").ToString
Create Argument			Ĺ		
					OK Cancel

## Utility Component - Identify\_Processes\_By\_Name.xaml

To help generate a list of process names to kill, a new utility component has been added to the *Common* folder.

To generate the list of processes, follow these steps:

- 1. Open this component in Studio
- 2. Disable sequence named like "Seq 2:" if not already done
- 3. Enable sequence named like "Seq 1:" if not already enabled
- 4. Change the name of the machine to match your robot machine
- 5. Run the Sequence independently
- 6. Copy the names of the processes you want to kill from the Output tab

#### NOTE

The machine name can be obtained by going to *My Computer > Properties* on the windows machine.

The *System.Diagnostics* object does not support remote computer names- therefore do not use the "Full computer name", if the name of the computer is like *computername.domain.com*!

Arth. Set Your Machine Name	
Robot_Machine_Nr = "Your_Machine_Na	
Expression Editor	? ×
Value (InArgument)	
"Your_Machine_Name"	
	-
ОК	Cancel
Window Title of Process is:	
<ul> <li>Window Title of Process is:</li> <li>Process Name is &gt;&gt;&gt; : MicrosoftEdgeSH</li> </ul>	
<ul> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : MicrosoftEdgeSH</li> <li>Window Title of Process is:</li> </ul>	
<ul> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : MicrosoftEdgeSH</li> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : RuntimeBroker</li> </ul>	
<ul> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : MicrosoftEdgeSH</li> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : RuntimeBroker</li> <li>Window Title of Process is:</li> </ul>	
<ul> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : MicrosoftEdgeSH</li> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : RuntimeBroker</li> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : chrome</li> </ul>	
<ul> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : MicrosoftEdgeSH</li> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : RuntimeBroker</li> <li>Window Title of Process is: Process Name is &gt;&gt;&gt; : chrome</li> <li>Window Title of Process is:</li> </ul>	

Configure the process names as a CSV list for the parameter *Process\_Names\_List* in the configuration database or the Config.xlsx file. From the above screen shot, this would be:

#### MicrosoftEdgeSH, chrome

#### NOTE

The processes you want to kill must be already running before running this utility - they will not show up on the process list otherwise.

## Send\_Email\_Notification.xaml

This component has been modified to take several parameters for the purposes of sending emails notifications. These parameters are configured as user-defined settings in the configuration.

RPA_ENVIRONMENT_PREFIX	Thanos-DEV	USER_DEFINED
EMAIL_SUBJECT_FAILURE_PREFIX	FAILED!	USER_DEFINED
EMAIL_SUBJECT_SUCCESS_PREFIX	Success!	USER_DEFINED
Email_From		USER_DEFINED
Email_To		USER_DEFINED

The settings above will feature in an email such as the failure notification I receive each time there is a login failure:

FAILED! Thanos-DEV: System1 Login Error! >>
to me 💌
Environment: Thanos-DEV There was an error logging into System1 using credentials named Credential_System1
← Reply → Forward

The purpose of these settings is to provide quick hints in the email subject and body to help recipients to better respond to such notifications.

UiPath foundation training already covers the subject of configuring email activities in detail.

## Validating the Project before Deployment

Before deploying the process to the Orchestrator, make sure to validate the project completely to make sure that the deployment does not fail.

You will most likely encounter this error.

A variable named *Conn\_MySqlDB* of type *MySqlConnection* will cause a validation failure in the **InitAllSettings\_From\_RemoteDB\_DSN.xaml** component. That is because, it has reference to the MySql Connection library that was removed before this Template was published to the UiPath Go! Marketplace.

**Solution:** Open the XAML file **InitAllSettings\_From\_RemoteDB\_DSN.xaml** and click the "Remove Unused variables" from the Menu bar. This will remove the orphaned variables.

## Test Results and End Note

The Advanced Enterprise RPA Process Template has been tested by building a fully functional RPA Process. The configuration settings for this process were deployed to a locally centralized MS Access database, a Remote MySQL database and the traditional Config.xlsx database. The process was then tested by switching the options in the MasterConfig.xlsx file to consume settings from the local database, the remote database and the Excel config.

The screen shot below displays the version information for each of the tests:

Package Versions for REF_DB_Accounts_DataExtractor	
Author: AndyMenon Published: 4 minutes ago Status: Active	<u>+</u>
Configuration switched to Config.xlsx file	
Version: 1.0.3	
Author: AndyMenon	
Published: 17 minutes ago	<b>•</b>
Status: Inactive	
Same as previous version. Settings sourced from Remote MySql Config Databas	se 🗸
Version: 1.0.2	
Author: AndyMenon	_
Published: 25 minutes ago	<b>±</b>
Status: Inactive	
Same as last version, but excessive Debug Writelines disabled.	
Version: 1.0.1	
Author: AndvMenon	_
Published: 43 minutes ago	<b>₩</b>
Status: Inactive	
Configuration deployed to locally centralized MS Access database	
	CLOSE

And the following screen shots indicate the fact that the settings were loaded from a different configuration source during each of the three tests.

#### Local MS Access Configuration:

TIME ~ LEVEL \$	PROCESS	MESSAGE
08/25/2019 5:3 Info	REF_DB_Accounts	Killing processes (chrome)
08/25/2019 5:3 Info	REF_DB_Accounts	Connected to Configuration Dsn=RPA_ConfigDB32_Local . Total Count of settings is: 33

#### **Remote MySQL Database Configuration:**

REF_DB_Accounts	Connected to Configuration Dsn=RPA_ConfigDB32 . Total	Count of settings is: 33
REF_DB_Accounts	REF_DB_Accounts_DataExtractor_Thanos Environment exe	ecution started

#### Traditional Config.xlsx Configuration:

Obviously, the log output for this configuration has no visible hints because the original component that loads the settings from the Excel has not been modified in any way.

08/25/2019 5:5 Info	REF_DB_Accounts	Killed processchrome
08/25/2019 5:5 Info	REF_DB_Accounts	Killing processes (chrome)
08/25/2019 5:5 Info	REF_DB_Accounts	REF_DB_Accounts_DataExtractor_Thanos Environment execution started

The process ran end-to-end without any incident when executed from the Orchestrator when switched between each of the three configurations .

End

## Change Log

09.21.2019	9.21.2019 Minor edits and typos corrected.		
	New section titled Validating the Project before Deployment added		
08.30.2019	Document renamed to:	Andy Menon	
	Advanced Enterprise RPA Process Template - User Guide.docx		
	Major Content changes:		
	All references to the terms 'Robotic Enterprise Framework' and 'REFramework' removed! Any references to these terms are done via web links that will direct the user to the subject of this reference.		
	New section titled Importing Additional Database Libraries added		
	Instructions revised further for section titled:		
	Utility Component - Identify_Processes_By_Name.xaml		
	Section titled The MasterConfig.xlsx Framework Configuration File updated		
	Section titled Loading Configuration Settings – Most Significant Change updated		
	Table of Contents updated		
	This change log section added		
08.26.2019	Minor typos corrected	Andy Menon	
	Instructions revised for section titled:		
	Utility Component - Identify_Processes_By_Name.xaml		
08.25.2019	Original	Andy Menon	

© Andy Menon