Investigator - The Monitoring Tool (v2.0)

UiPath Product Support

UiPath Robotic Process Automation ®

Revision History

Date	Version	Author	Description
June, 25th , 2019	1	Vikash Kumar	This document contains illustrative guidelines to use UiPath Monitoring Tool and the features it offers.

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1. Introduction

Post supporting multiple global Customers every day and handling tickets ever since the launch of UiPath product, UiPath Product Support team identifies that there are certain set of events, configurations, logs which comprise the basic requirements for an UiPath Product Support Engineer to troubleshoot Customer issue.

In case of an issue, using this Monitoring Tool V2, all the basic information of the UiPath RPA setup is gathered at a common platform which is accessible to both UiPath Product Support Engineer and Customer.

2. Purpose of this Document

This document is intended for Customers and UiPath Product Support Engineers who are the potential users of the developed Investigator - Monitoring Tool V2. This document captures the features offered and the procedure to use the monitoring tool.

3. Problem Statement

The turnaround time to resolve a customer issue is more as Engineer needs to understand basic system information at customer site.

4. Developed Solution

In order to collect RPA environment setup spontaneously and instantly, UiPath Product Support has developed the "*Monitoring Tool V2*" where Customers can capture RPA environment details by running this tool that helps to identify and address the problem root cause.

5. Monitoring Tool Components

Monitoring Tool V2 has following two components

a) **UI(SmartSupport.exe) -** It can be run as a stand-alone application as well, if the monitoring needs to be done on the same server. However, if you want to monitor a different server from another machine then the second component i.e. Service should be running on the server which needs to be monitored.

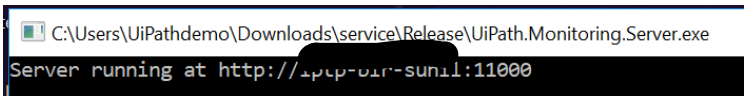
b) **Service (UiPath.Monitoring.Server) -** This is an exe (console application) and can be installed as service using NSSM.

Note: Admin access is required to access events, registry settings etc. In some cases, the tool might not run without admin privileges. It is recommended to use this tool with admin privileges.

6. Connecting Service with UI

The below steps will guide to establish service connection with User Interface :

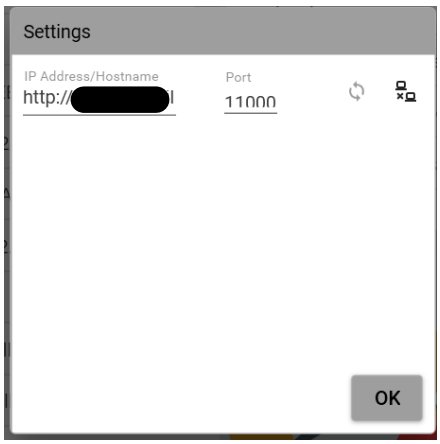
1. To connect UI with the Service, run the service in the remote robot machine. It will provide you URL and port number



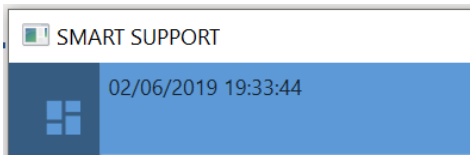
2. The port number is configurable. To change the port number, please open "UiPath.Monitoring.Server.exe.config" from the root folder of this tool and provide the desired port number to key "port".

```
<appSettings>
  <add key="port" value="11000" />
</appSettings>
```

3. Run the UI in any other machine in the same network.
4. Open Settings window
5. Provide URL and port. Click on connect button 



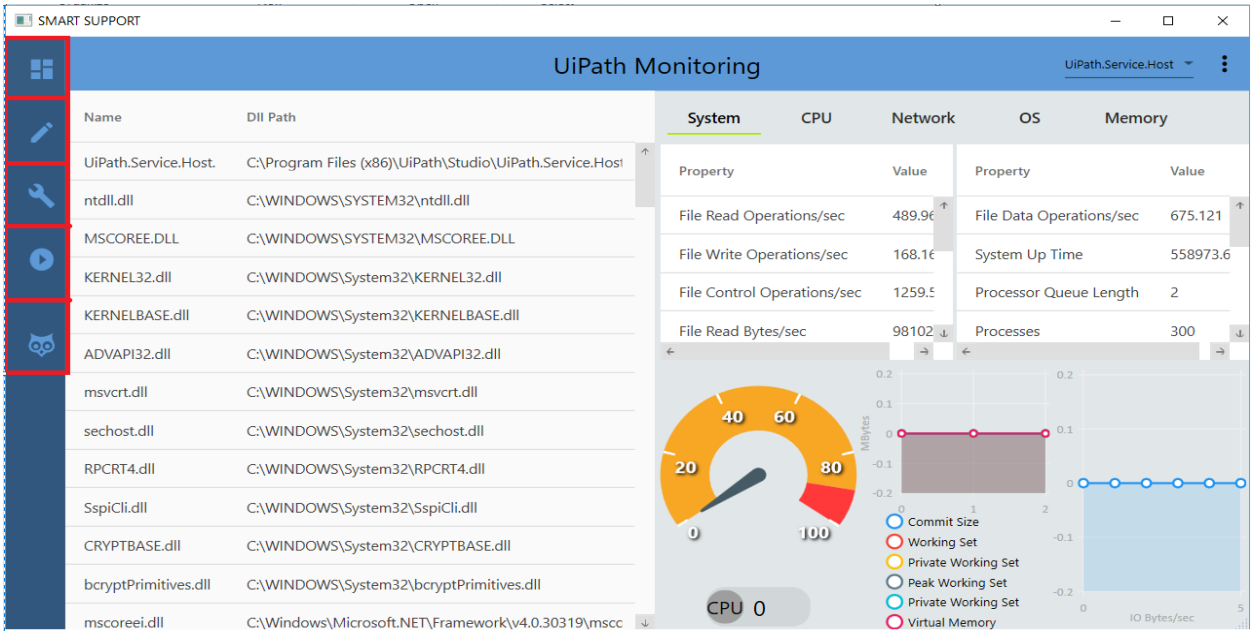
6. Wait till the UI gets connected to service and the connect button changes to disconnect button 
7. The time stamp in the "Dashboard" tab is visible now



The UI and the service are connected. Moving on to any other tab(except Database Maintenance), the details from the remote machine will be obtained.

7. User Interface Acquaintance

The landing page of the Monitoring Tool V2, offers 5 buttons(on the left-hand side) which serves different purpose i.e. capturing different sets of information.

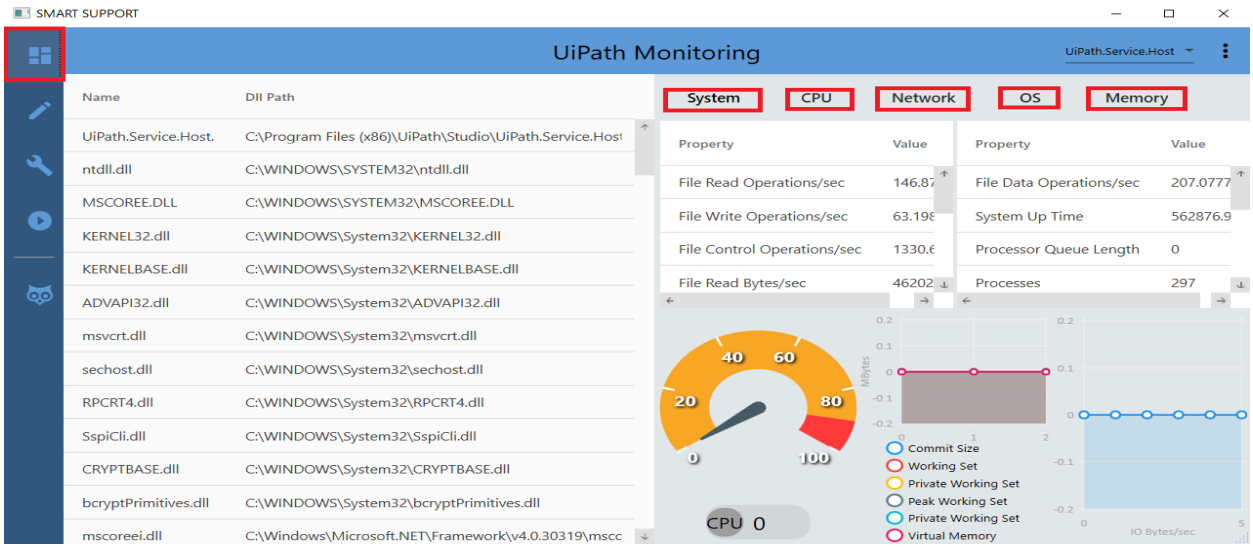


On analysis, UiPath Robot crashes because of poor design of workflow, improper memory management in the workflow or the environment not coping with Robot interacting with multiple application as a part of automation.

Each of the features are explained in detail with illustrative screenshots as below:

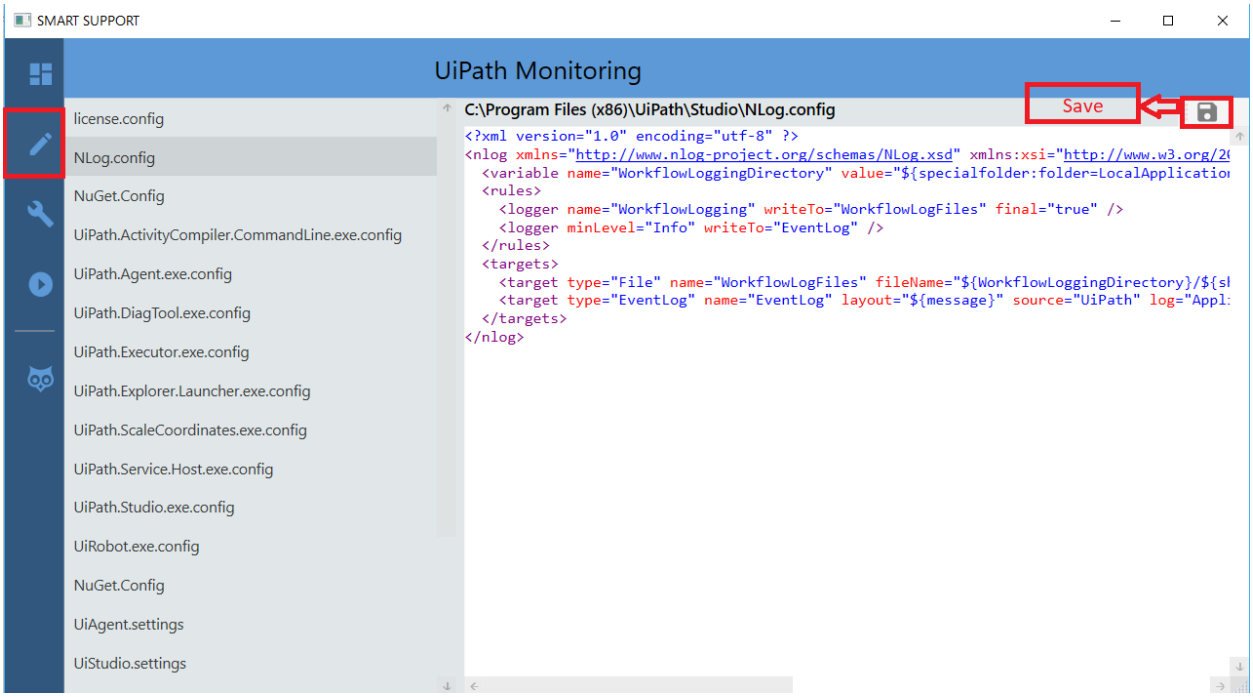
a) System Related Information

In the Left pane, the **dll's** used by UiPath Robot are listed with their location. In the Right hand side, the speedometer shows the CPU utilization per sec along with other graphs details like memory utilization and network details for a bot, etc. There are also other system related parameters available, which is helpful to understand the performance of the system. These parameters aid to distinguish if the issue is with Bot or specific to environment.



b) Configuration Details

Using the Monitoring tool - configuration tab, changes in the respective config file can be performed instantaneously and the job of determining the RPA status is performed. The changes made on the config file in the Monitoring tool gets reflected in the original config file as well.

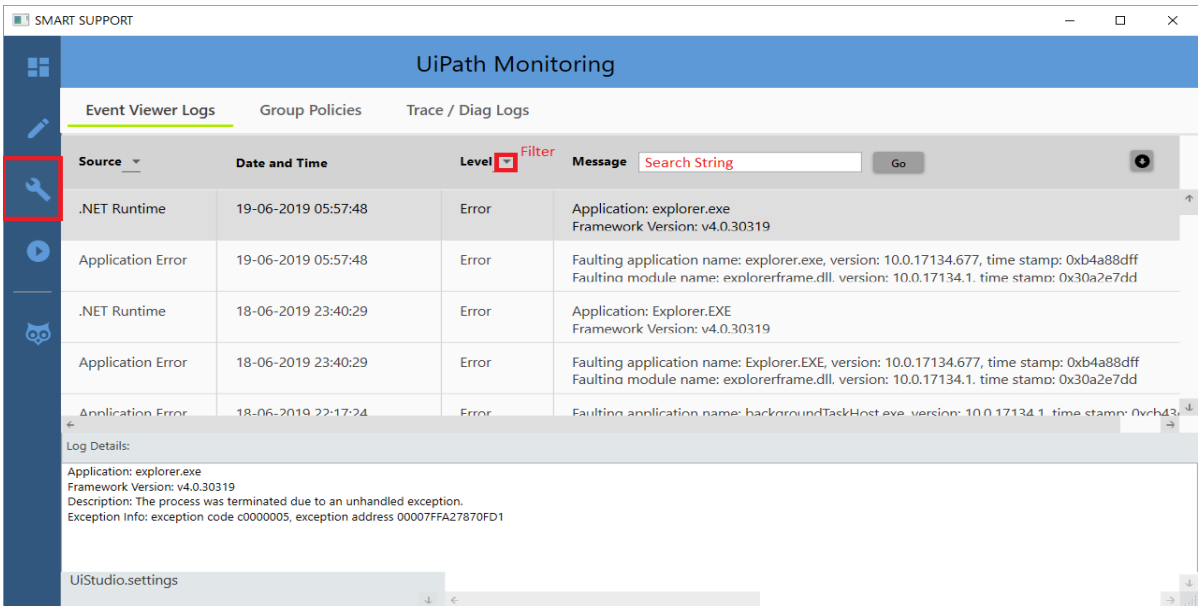


c) Logging Details

Different logging levels are captured using the Monitoring Tool V2 and are described as –

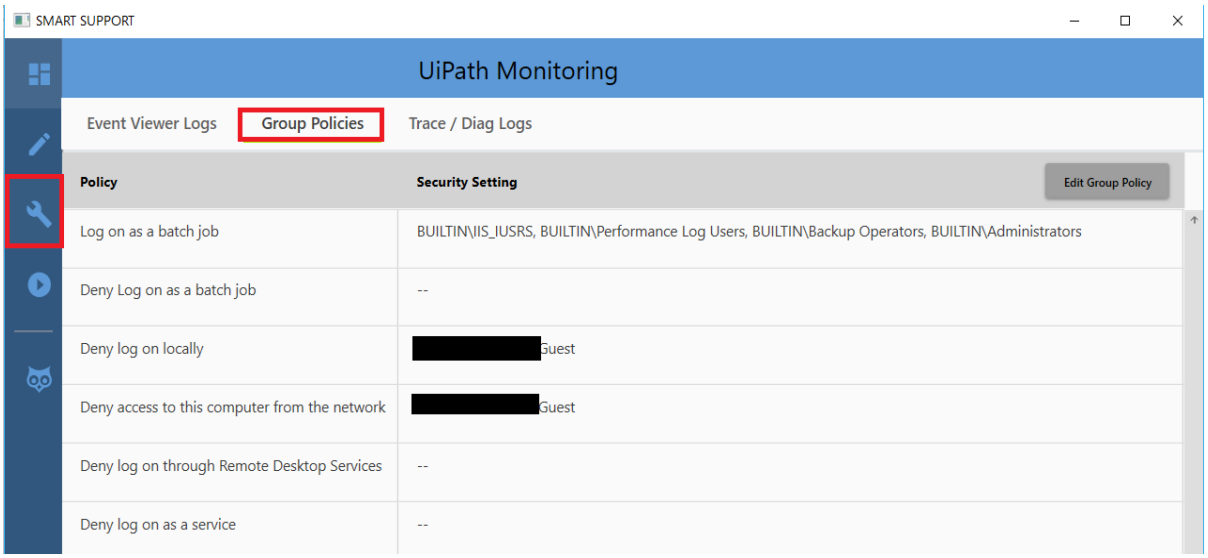
- **Event Viewer Logs** - This Feature allows you to check last 15 days Windows event viewer logs of the machine, specifically for Sources which are required in order to debug an issue with respect to UiPath and comes with different Level of event logs.

  How to use: This is landing page of Logging tab. All the event viewer logs can be filtered based on various Sources available and level of severity. There is an additional Smart Search functionality is available for Logs, where any combination of keywords can be searched and the same can also be exported into one CSV file.

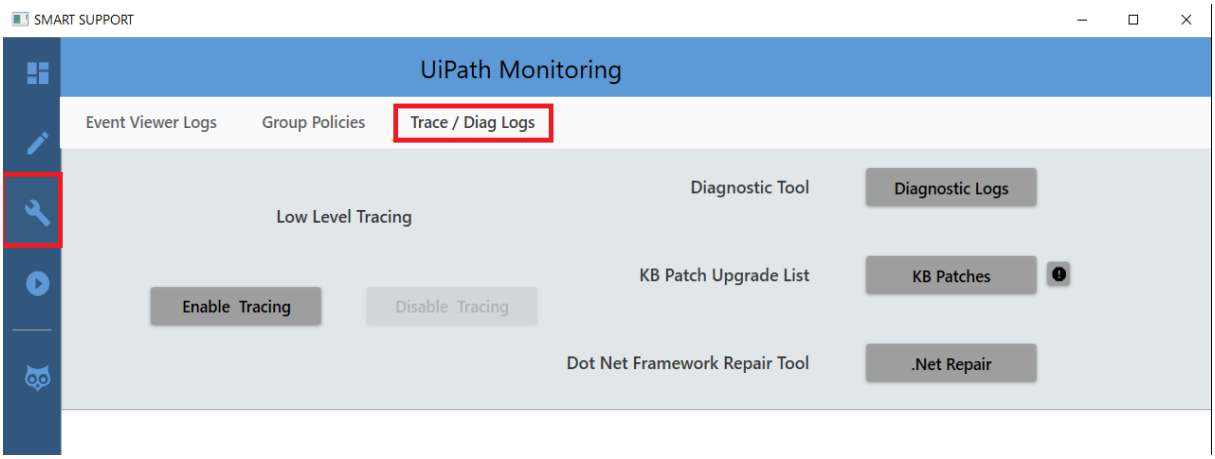


- **Group Policies** - This feature allows you to verify and confirm if a Specific User/Robot is a part of any mentioned group policy or not. There are only some of the Group policies fetched which in some way matters with UiPath.

  How to use: When this page is loaded, group policies are fetched. There is a button for Edit Group Policy available, on click of this button, Windows Group Policy editor will be opened. This button is only enabled when the service is running in the same machine where UI is seen. In case the data is coming from different machine (service is running in different machine) then this button will be disabled. This will prevent any group policy changes made from any outer machine.



➢ **Trace/Diag Logs -** This tab contains the functionalities given in the below screenshot. The details about each functionality has been mentioned in the description given in next page



- **Enable/Disable Tracing:**
    - This functionality is used for enabling low level tracing, to troubleshoot any issue with more detailed logging mechanism.

    - **How to use:** By default, Enable Tracing button will be enabled, on click of this button, Low level tracing will be enabled, and Disable Tracing button will be enabled. When performing any operation in this mode, will be logged with detailed logs mechanism [Only used for troubleshooting purpose], once the operation is completed. Disable Tracing button can be clicked, which will be stopped Low Level tracing and one **etl** file will be generated on the desktop, where the service is running. This etl file can be used in order to further troubleshoot the issue.

- **Diagnostic Logs:**
    - This tool is used for troubleshooting purpose, where on clicking of it, creates a zip file in C:\ drive with name Logs.zip. This zip folder contains various logs like etl, event viewer, Studio Logs, Nuget user settings etc.

- **KB Patch List:**
    - This functionality is used for generating a text file consisting all the recent KB patches from Microsoft, applied in the machine. KB Patch list is shown on the UI as well with any of the known affected KB patch status [if available]

    - **How to use:** On click of “KB Patches” button, a text file with datatime format is downloaded in C:\ drive and the list is also shown on the UI in a grid.
    - There is one extra button added, which is used for showing some of the known KB lists.

- **Dot net Framework Repairing Tool:**
    - This functionality is used for repairing the dot net framework available in the machine

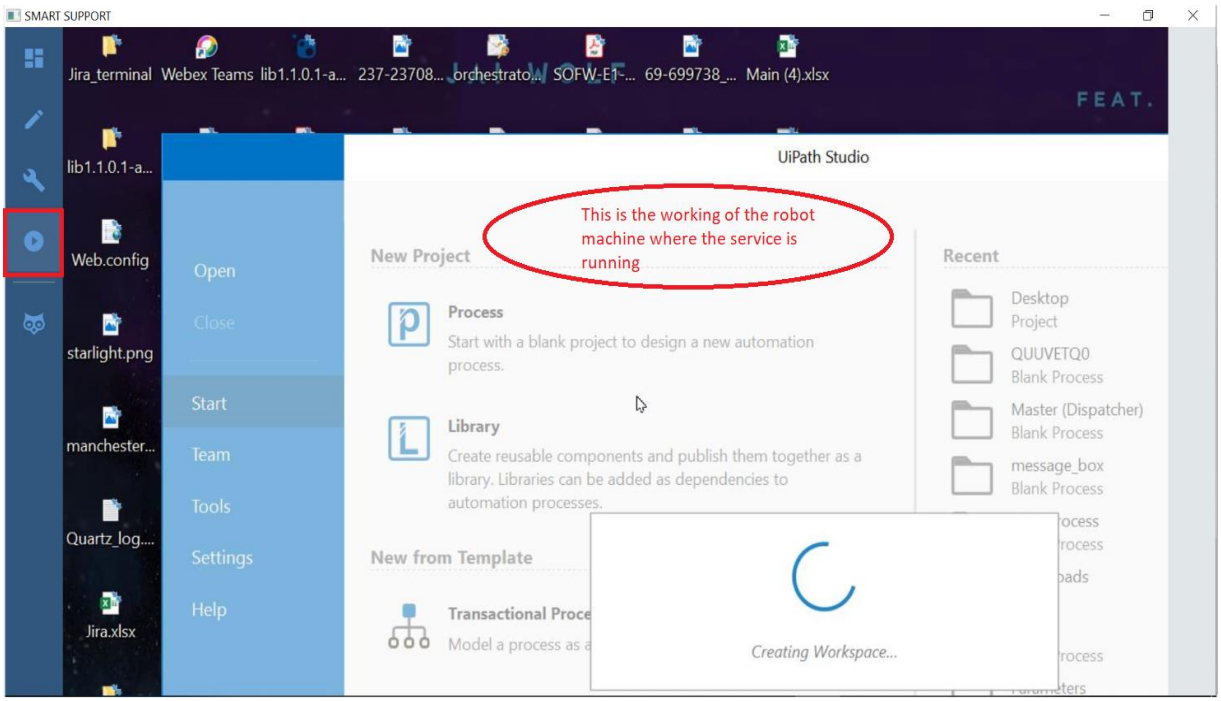
    - **How to use:** On click of the button, it will redirect to a Microsoft webpage for dot net repair tool, from where the tool can be downloaded and install with the instructions given.

d) Robot Streaming

This feature allows you to stream the working of an unattended/attended robot to any other machine in same domain network.

Pre-requisites- The UI should be connected to the service. Please follow the steps mentioned with the heading <Connecting Service with UI> to connect the UI with the service

How to Use- Once the service gets connected successfully, click on the stream button as highlighted in the below screenshot and the stream of the robot machine, where the service is running, will be started-



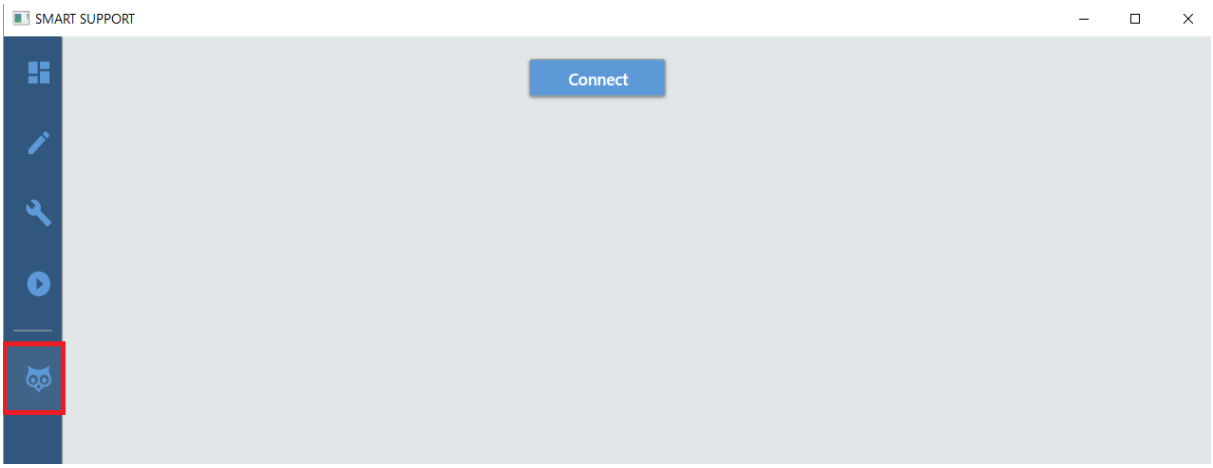
e) Database Maintenance

This feature will be used to perform database maintenance in Orchestrator database. It is important to keep Orchestrator database free from clutter because large number of data may result in various issues in Orchestrator. Hence, it is good to clear old data from the database periodically.

Pre-requisites - The user should have read/write access to the Orchestrator database.

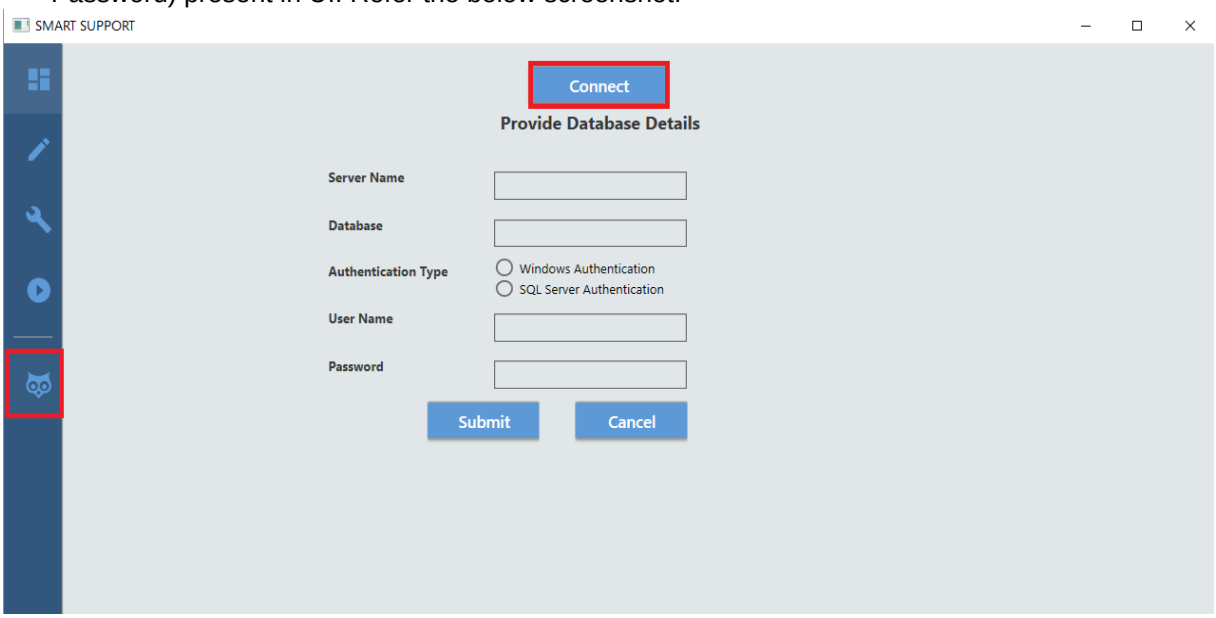
How to use –

- ✓ Click on the Orchestrator button highlighted in the below screenshot.



- ✓ Click on the “Connect” button. This will make “Database Details” form visible on the screen.

- ✓ Fill the correct details in the respective fields (Server Name, Database, Authentication Type, Username, Password) present in UI. Refer the below screenshot.



Note: In case the user selects authentication type as “Windows authentication”, He / She doesn’t need to provide user name and password. These fields will be disabled. These fields are required only when the authentication type is “SQL server authentication”.

- ✓ Once all the required data are filled, Click on “Submit” button. This will make a data grid appear on the screen with count of rows from dbo.Logs, dbo.QueueItems, dbo.UserNotifications and dbo.TenantNotifications table along with size of MDB and LDB file in MB. Please note that the MDB / LDB size label appears in green. However, if the size crosses 2000 MB, it will appear in red colour.
- ✓ Select the Start Date and End Date. Below are the points that needs to be considered for date selection.
    - Start Date and End Date cannot be null. These are mandatory fields.
    - Start Date should be prior to End Date.
    - The difference between Start Date and End Date should fall within a range of 30 days.
- ✓ Post selecting Start Date and End Date, click on the Delete button in order to delete the data from the respective table for the selected range of date. A confirmation popup will appear.

Once user clicks on “Ok” button, data will be deleted from the database for the specific range of date.

8. Conclusion

This innovative tool gathers required RPA setup information, that empowers Customer for a self – resolution model and gives UiPath Product Support Engineer an edge for performing faster and easier first - hand analysis of Customer issue.