

# IBM Cloud Pak for Business Automation

## Demos and Labs

### Orchestrating scripts in IBM RPA

V 30.0.0

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# 1 Introduction

IBM RPA provides a comprehensive set of Robotic Process Automation (RPA) features:

- **Unattended bots**  
Use an RPA-driven digital workforce to automate repetitive tasks without human intervention.
- **Attended bots**  
Remote Desktop Automation (RDA) enables a human workforce to augment work using bots to perform repetitive tasks on demand.
- **Orchestrating Scripts**  
Combine message queues with the orchestrator technology in your IBM RPA Control Center environment to orchestrate scripts.
- **Workflows in IBM RPA**  
Combine BPMN files or create your own workflows in IBM RPA Studio and integrate them into scripts that implement the workflow process in IBM RPA.
- **Optical Character Recognition (OCR)**  
Process documents by extracting structured data from unstructured content.
- **Dashboards**  
Gain business insights into business operations.

With IBM RPA, IBM can provide customers with additional benefits:

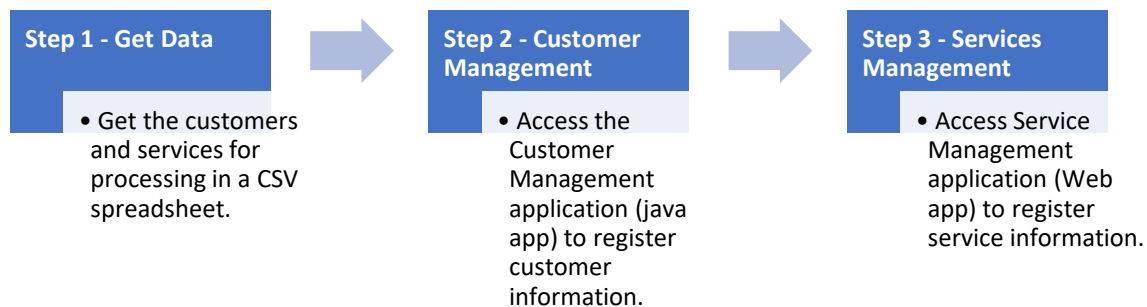
- **Faster time to value**  
Speed and simplicity of purchasing and deploying through easier licensing.
- **A comprehensive platform to automate all types of use cases**  
Tighter integrations between RPA and the rest of IBM business automation platform.
- **Automate business and IT processes**  
Expand the IBM business automation mission to IT use cases.
- **Operationalize AI**  
Fulfill IBM's vision of operationalizing AI in every aspect of the business.

You can explore the [Documentation](#) to understand more details about IBM RPA.

## 2 Process Overview

The objective of this lab exercise is to demonstrate in practice how to use IBM RPA Orchestrator. The orchestration process leverages message queues capability of serving messages of multiple customers. It can consume messages from the message queue with the guarantee that each bot will always process independent and exclusive messages.

In this lab, we will automate the customer and service registration process, and it will be divided into three steps:



## 3 Pre-requisites

For this lab, you need to reserve an **IBM Robotic Process Automation** environment from IBM Technology Zone (see chapter 4). All the pre-requisites have been pre-installed/configured in the lab template. The information below is just for information purposes.

IBM Products:

- IBM Robotic Process Automation v23.0.x.

Custom Solutions/Code:

- The important files to run this lab are in [C:\CP4AutoDemo\Lab 3 - Orchestrating Scripts in IBM RPA](#)
  - *data.csv*: Spreadsheet with customer data and services that will be processed.
  - *script\_01\_getData.wal*: Script responsible for obtaining data from the csv spreadsheet.
  - *script\_02\_clientManagement.wal*: Script responsible for registering the customer in the Customer Management application.
  - *script\_03\_servicesManagement.wal*: Script responsible for registering the service in the Services Management application.
- A Java swing application simulating the backend, third-party system for the Client Management System.
- A web application simulating the backend, third-party Services Management System for managing the services a client has signed up to.

### 3.1 References

1. [IBM Robotic Process Automation Documentation](#)
2. [IBM Robotic Process Automation Command Documentation](#)
3. [IBM Robotic Process Automation Orchestrating Scripts](#)

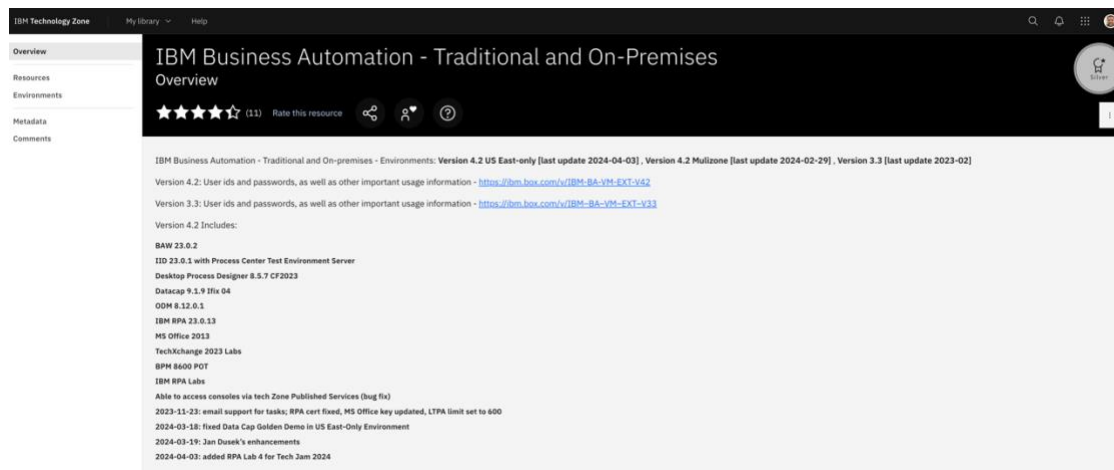
## 4 Accessing the Environment

If you have already reserved a lab environment from IBM Technology Zone, please go to [Chapter 5](#) directly.

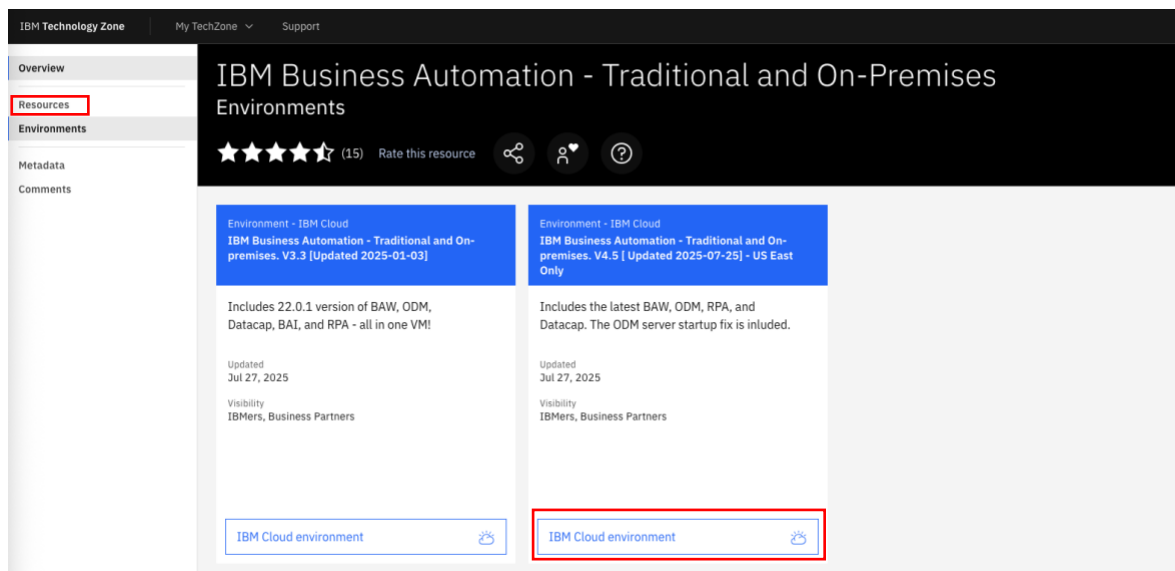
### 4.1 Reserve Environment

To get started with this lab, please follow the below steps to reserve an environment:

1. Click [here](#) to open IBM Technology Zone Reservation portal. You need to use your IBMID to login to the portal.

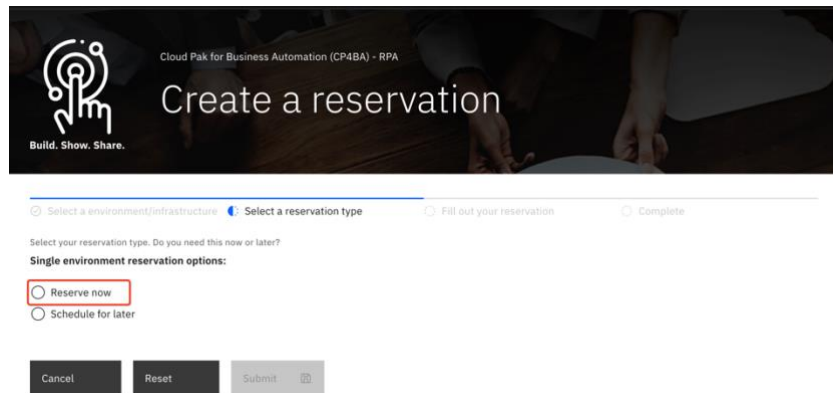


2. Click **Environments** on the left panel, and then reserve the last environment on click the blue button.





3. Select **Reserve for now**, then click **Submit**.



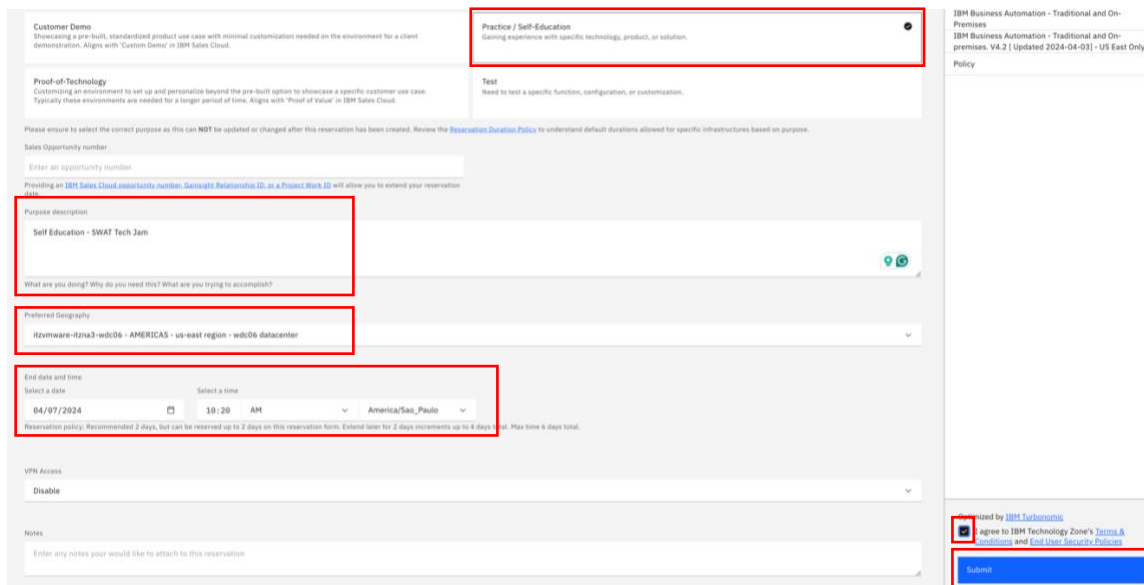
4. On the reservation page, make the appropriate selections as below. Once done, click **Submit**.

**Purpose:** Select Practice/Self-Education.

**Purpose description:** Enter something like **Self Education**.

**End date and time:** Select the end date and time that the environment will be deleted.

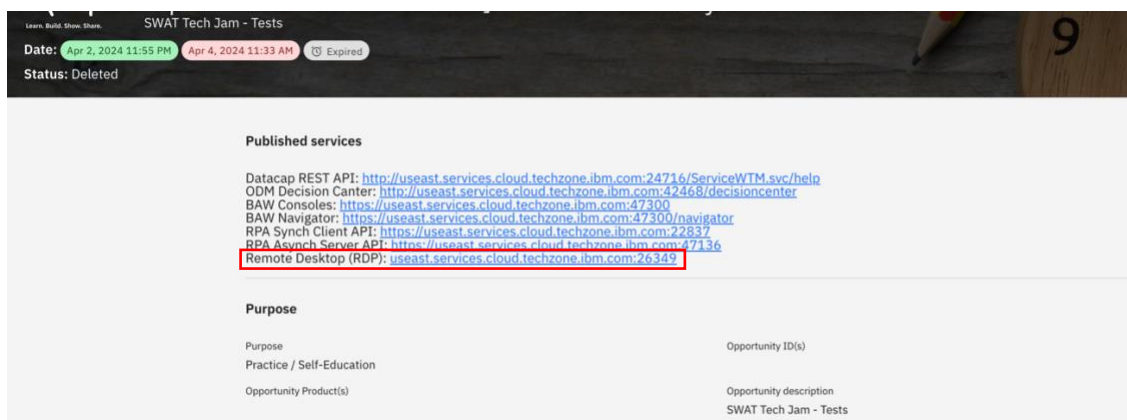
**Preferred Geography:** Select the geography where your environment will be created. To get a better network connection, select the same geography as where you are located in.



- Once you have reserved an environment, you will receive an email with a link to access the environment's management console, click on Reservation ID.



- You can access the environment using Remote Desktop (RDP) or Remote Console (Web). Our recommendation is to use Remote Console (Web) for practicality. If you prefer to use the RPD, use the Remote Desktop (RDP) link, or keep rolling the page to access the Remote Console (Web).



Public VPN Endpoint  
Disabled

Router Password

Router User  
admin

Router WAN IP  
10.188.112.107


vCenter  
itzna3-vc.na3.cloud.techzone.ibm.com

vCenter Password

vCenter Console Access  
Disabled

vCenter Username  
Disabled

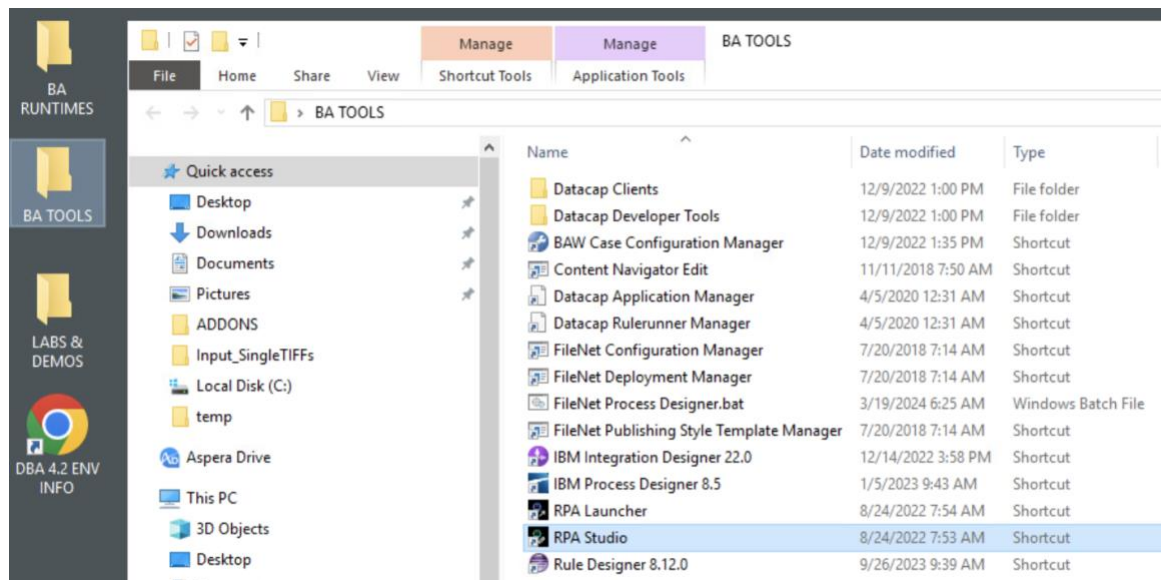
Download and install Wireguard VPN Client  
<https://wg-download.techzone.ibm.com>

Download Wireguard VPN config 

**VM Remote Console**

660cc5323abee4001ecaab9f-  
DBA-4  
Processor: 24 vCPUs  
Memory: 64 GB

7. After waiting for the VM to load, open the folder BA TOOLS on the Desktop to access the IBM RPA Studio.



## 5 Build it yourself – Step-by-step instructions.

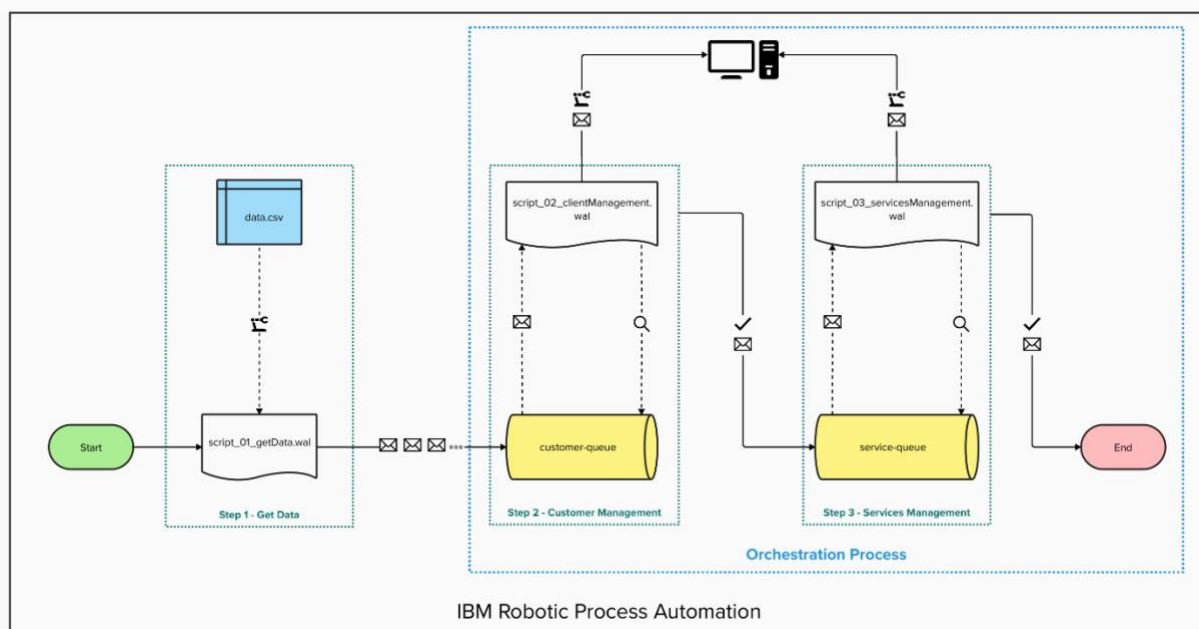
### 5.1 Architecture Overview

Keeping the focus on the proposal of this lab exercise, it will not be necessary to create the entire mapping of the systems involved in the process, the exercises are aimed at the practical use of Orchestration in IBM RPA. See [Orchestrating Scripts do IBM RPA](#) for more details on their features and usage.

Based on the process, the bot architecture will also be divided into three parts:

- **Step 1 – Get Data:**  
This is the initial step of the process, where the *script\_01\_getData.wal* will be executed to obtain all the data for processing from the *data.csv* sheet.
- **Step 2 – Customer Management:**  
The customers data obtained from the spreadsheet will be queued in the *customer-queue*, and subsequently consumed by the *script\_02\_clientManagement.wal*.
- **Step 3 – Services Management:**  
Now that the client has been registered, the *service-queue* receives the service, which will be consumed by the *script\_03\_servicesManagement.wal*.

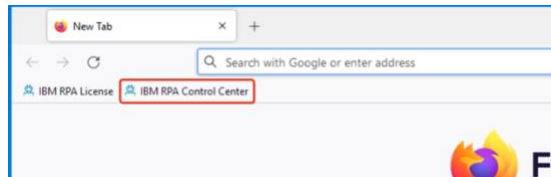
**Important:** The last two parts of the process (step 2 and 3) will be managed and executed by the IBM RPA Orchestrator. It is responsible for validating in each queue, the existence of any client or service to be executed, including identifying whether there is or not a machine available to run the robot.



## 5.2 Exercise 1: Create Queues

As previously described, the IBM RPA Orchestrator uses the concept of queues as a basis to execute the process. Therefore, the first exercise will be to create the two queues in the IBM RPA Control Center:

### 5.2.1 Open Control Center



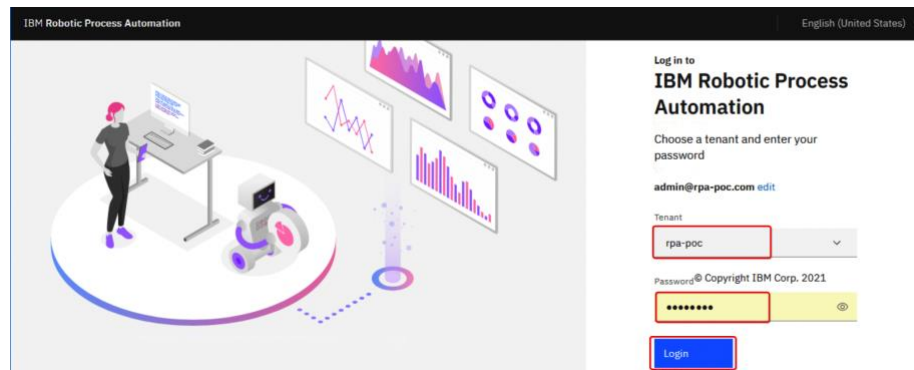
#	Description
1	Start Firefox and click <b>IBM RPA Control Center</b>

### 5.2.2 Enter username.



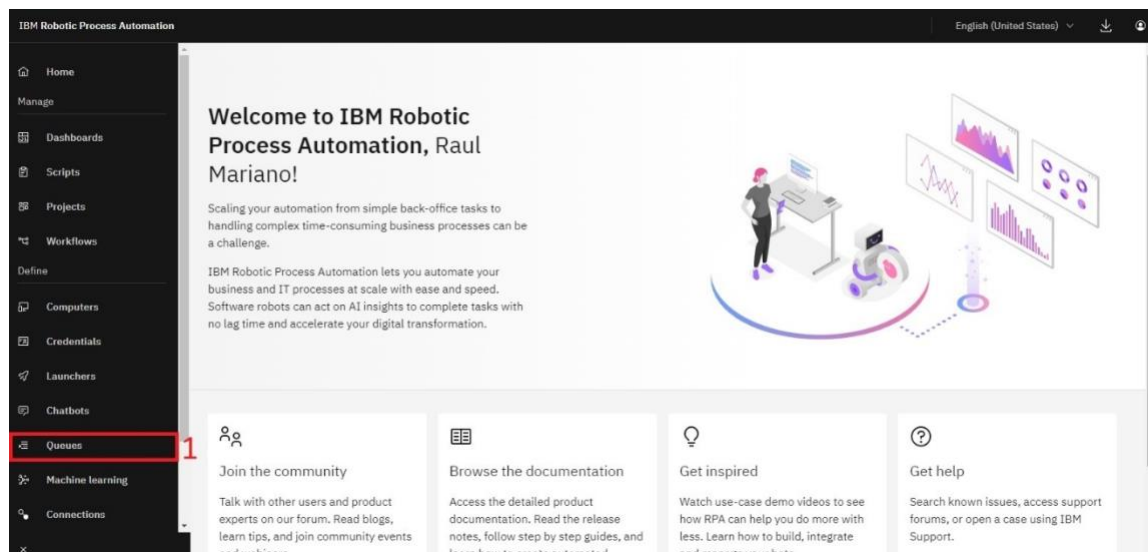
#	Description
1	Enter the “ <a href="mailto:admin@rpa-poc.com">admin@rpa-poc.com</a> ” as the <b>Username</b>
2	Click <b>Continue</b>

### 5.2.3 Enter Tenant and Password



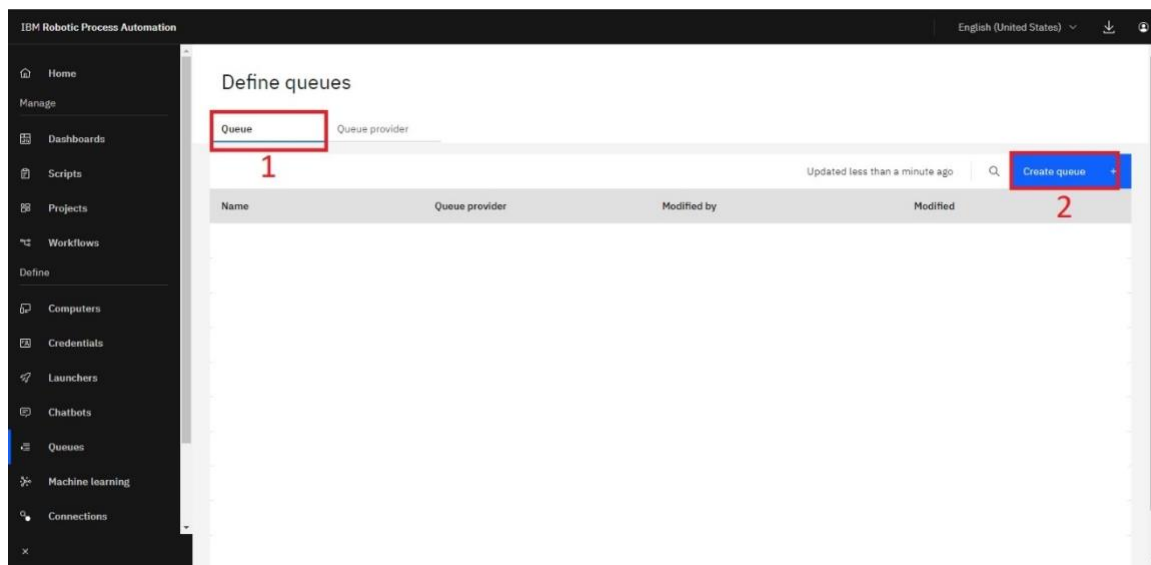
#	Description
1	Enter the “ <i>rpa-poc</i> ” as the <b>Tenant</b>
2	Enter “ <i>passwOrd</i> ” (make sure to use a zero not an uppercase o) as the <b>Password</b>
3	Click <b>Login</b>

### 5.2.4 Open the Queues menu.



#	Description
1	Click on the <b>Queues</b> menu

### 5.2.5 Creating the customer queue



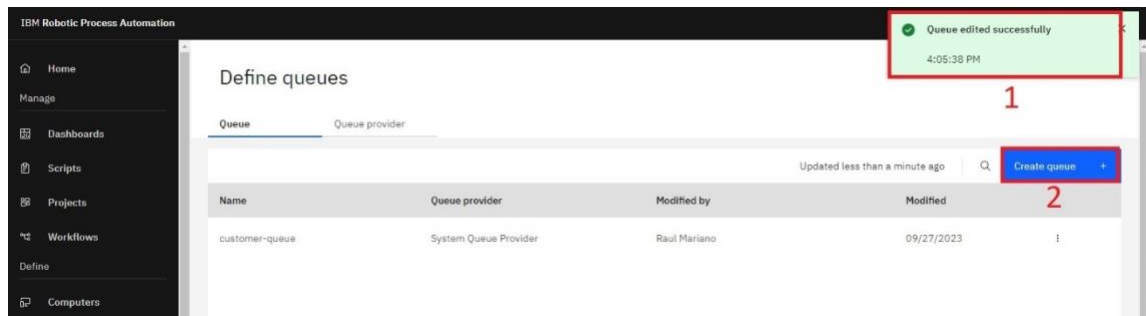
#	Description
1	Confirm that the <b>Queue</b> tab is selected
2	Click the <b>Create queue</b> button

### 5.2.6 Create customer-queue.

The screenshot shows a 'Create queue' dialog box. It has a title bar with a close button. Below the title bar, there are three input fields: 'Queue provider' with a dropdown menu showing 'System Queue Provider' (labeled 1), 'Name' with the text 'customer-queue' (labeled 2), and 'Description' with the text 'This queue will receive all customers who will be registered in the java app' (labeled 3). At the bottom, there are two buttons: 'Cancel' and 'Create' (labeled 4). The 'Create' button is highlighted in blue.

#	Description
1	Enter the “ <i>System Queue Provider</i> ” as the <b>Queue provider</b>
2	Write “ <i>customer-queue</i> ” in the <b>Name</b> field
3	Write a brief description about the queue
4	Click the <b>Create</b> button

### 5.2.7 Check the message.



#	Description
1	Confirm success message
2	Click the <b>Create queue</b> button to also add the service queue

### 5.2.8 Creating the Service Queue

Create queue

Queue provider

System Queue Provider 1

Name

service-queue 2

Description

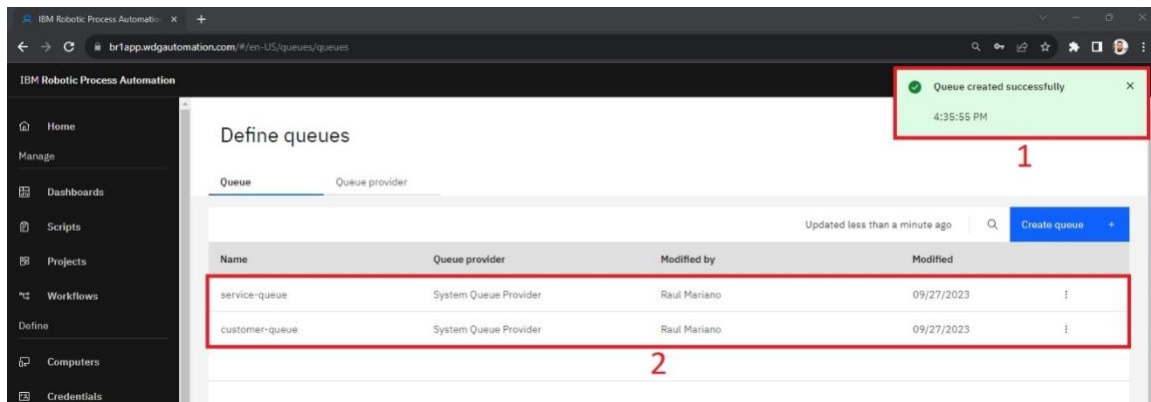
This queue will receive service from customers who will be registered on the web portal 3

Cancel Create 4

#	Description
1	Enter the “ <i>System Queue Provider</i> ” as the <b>Queue provider</b>
2	Write “ <i>service-queue</i> ” in the field <b>Name</b>
3	Write a brief description about the queue
4	Click the <b>Create</b> button



### 5.2.9 Check the queues.

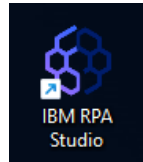


#	Description
1	Confirm success message
2	Confirm the registration of the two queues that we will use in the grid

## 5.3 Exercise 2: Add commands to queue data.

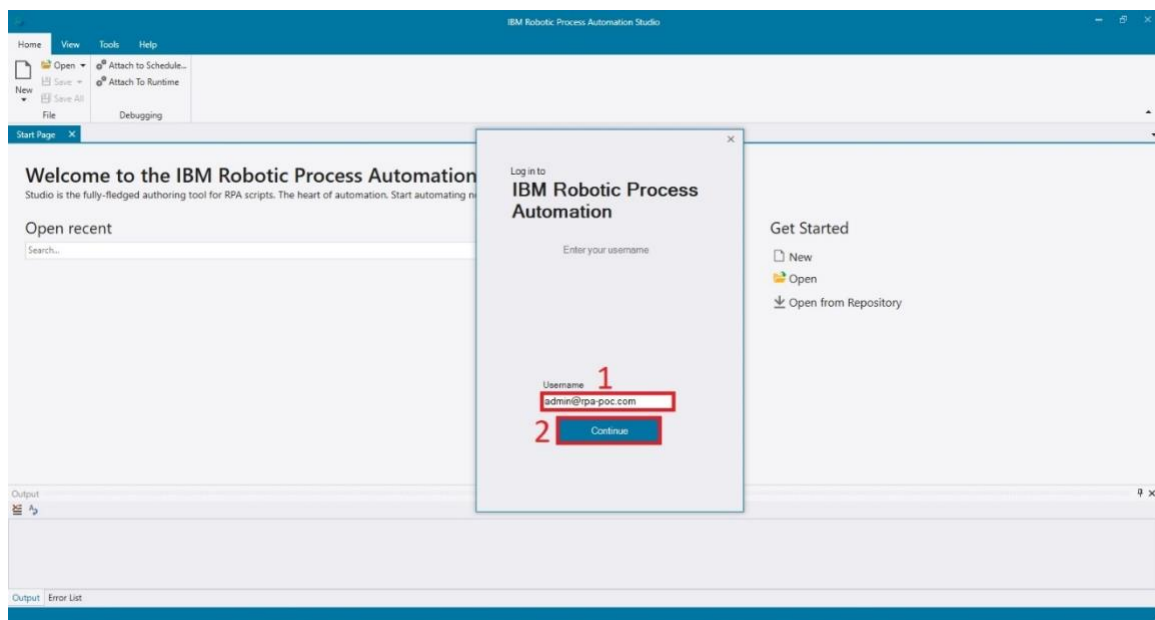
As presented in the [Architecture Overview](#), the entire mapping of artifacts involved in the process are already ready. So, in this exercise, we will edit each of the scripts to include only the unique commands for using the IBM RPA Orchestrator:

### 5.3.1 Open IBM RPA Studio



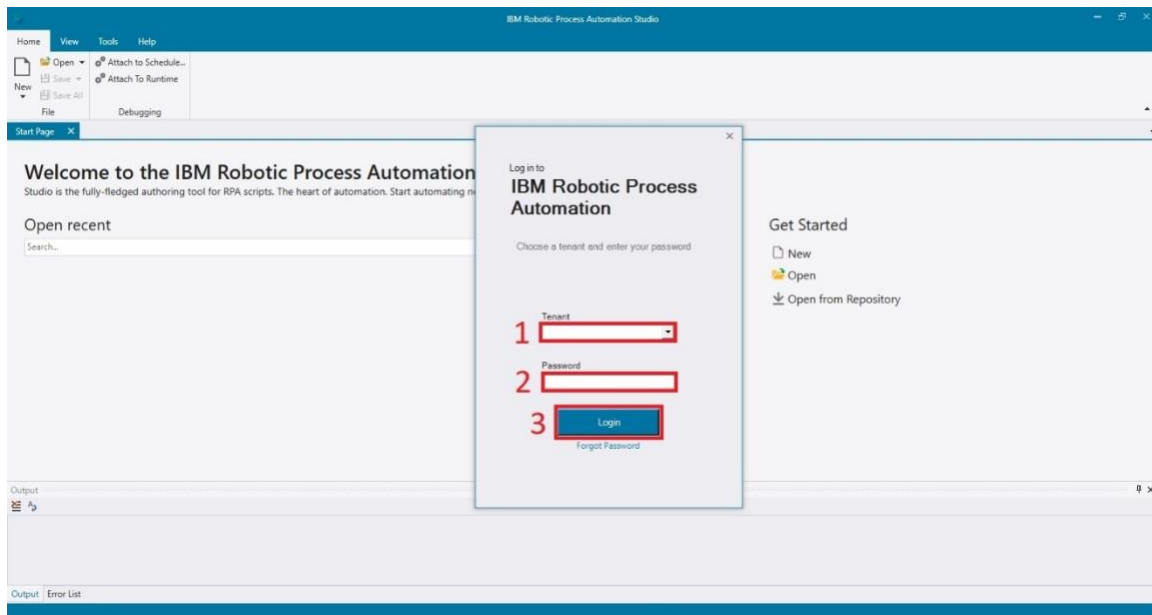
#	Description
1	Start the <b>IBM RPA Studio</b> by clicking the Studio icon on the Windows desktop

### 5.3.2 Inform the user.



#	Description
1	Write " <i>admin@rpa-poc.com</i> " in the <b>Username</b> field and press <b>[enter]</b>
2	Click the <b>Continue</b> button

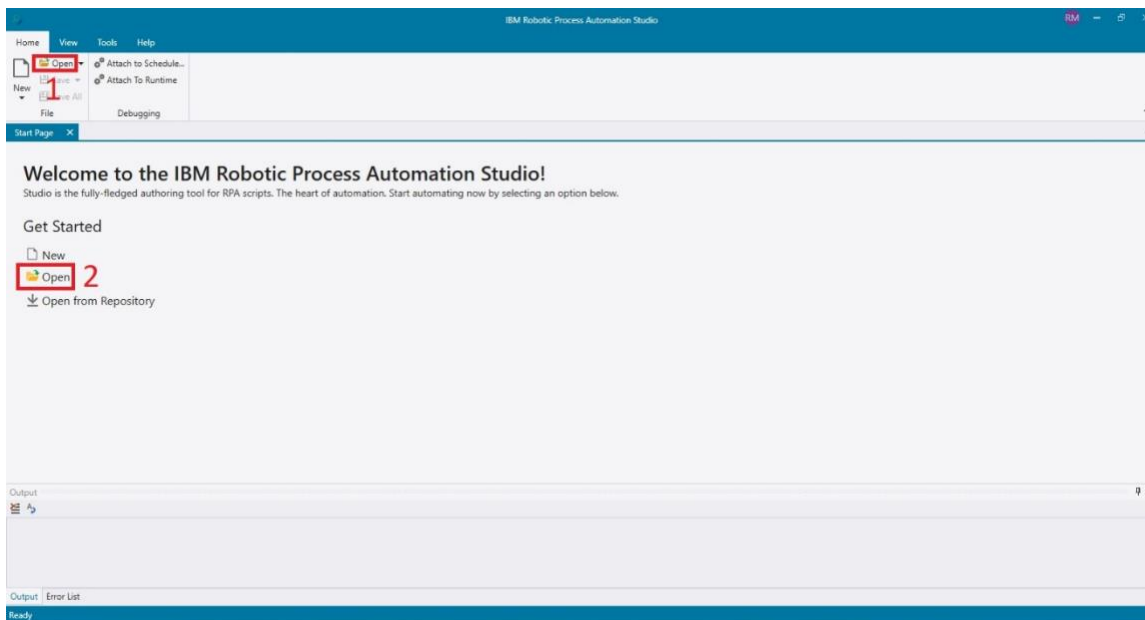
### 5.3.3 Inform Tenant name and Password.



#	Description
1	Select the " <i>rpa-poc</i> " as the <b>Tenant</b>
2	Enter " <i>passw0rd</i> " (use a zero not a capital o)
3	Click on the <b>Login</b> button

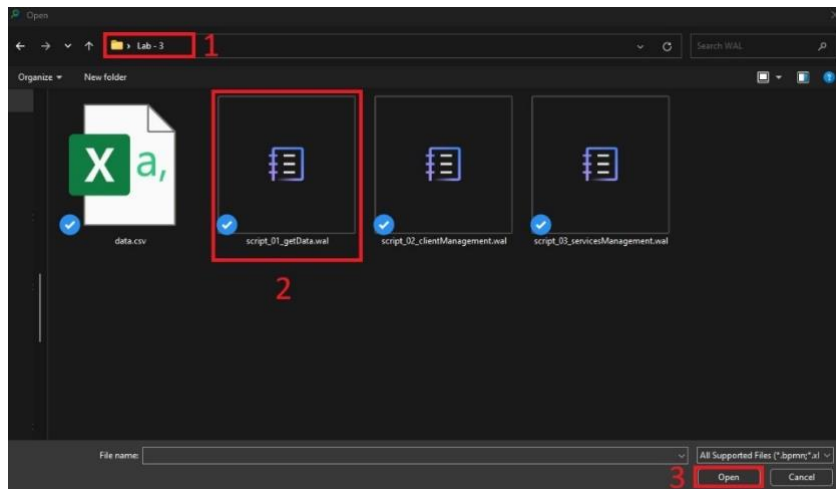
### 5.3.4 Changing script\_01\_getData.wal

#### 5.3.4.1 Open file



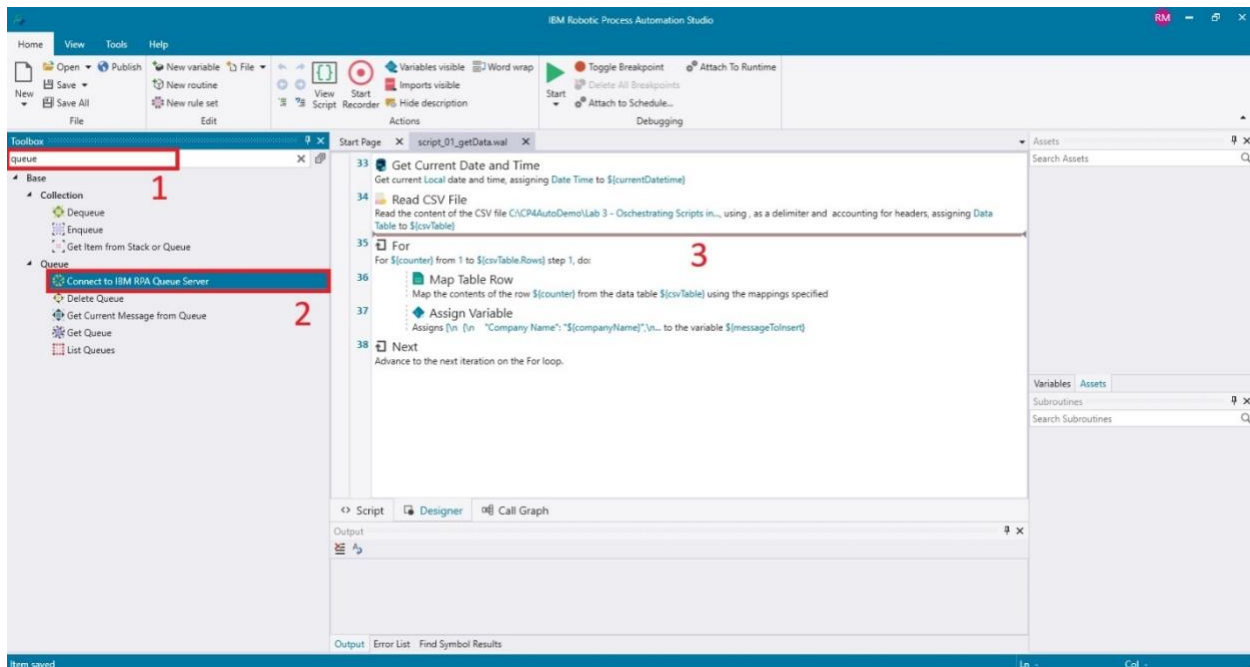
#	Description
1 or 2	Click on the <b>Open</b> button to search the script

#### 5.3.4.2 Open script



#	Description
1	All files are in the <a href="#">C:\CP4AutoDemo\Lab 3 - Orchestrating Scripts in IBM RPA</a>
2	Select the “script_01_getData.wal”
3	Click on the <b>Open</b> button

### 5.3.4.3 Connect to Queue



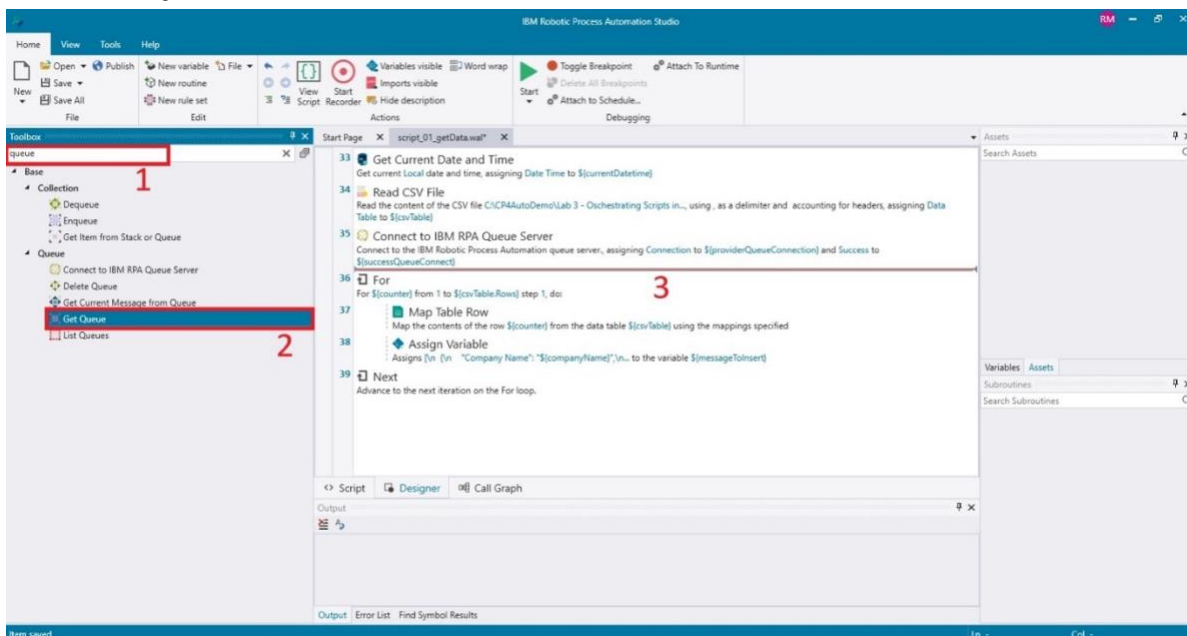
#	Description
1	Search " <i>queue</i> " in the toolbox
2	Let's use the command " <b>Connect to IBM RPA Queue Server</b> "
3	Drag the command positioning it between lines <b>34</b> and <b>35</b>

### 5.3.4.4 Connection queue configuration



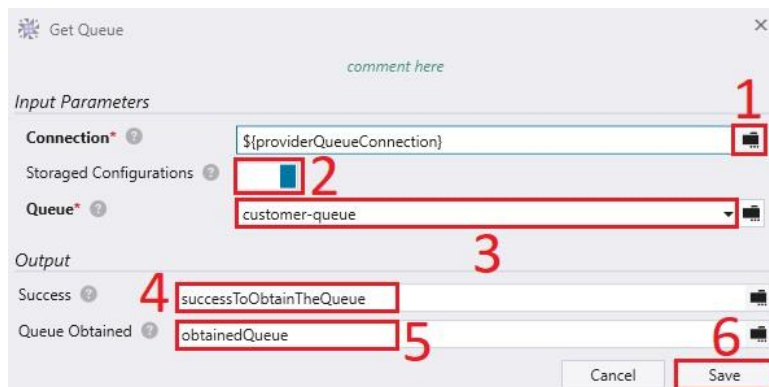
#	Description
1	Write " <i>successQueueConnect</i> " in the field <b>Success</b>
2	Write " <i>providerQueueConnection</i> " in the field <b>Connection</b>
3	Click on the <b>Save</b> button

### 5.3.4.5 Get Queue



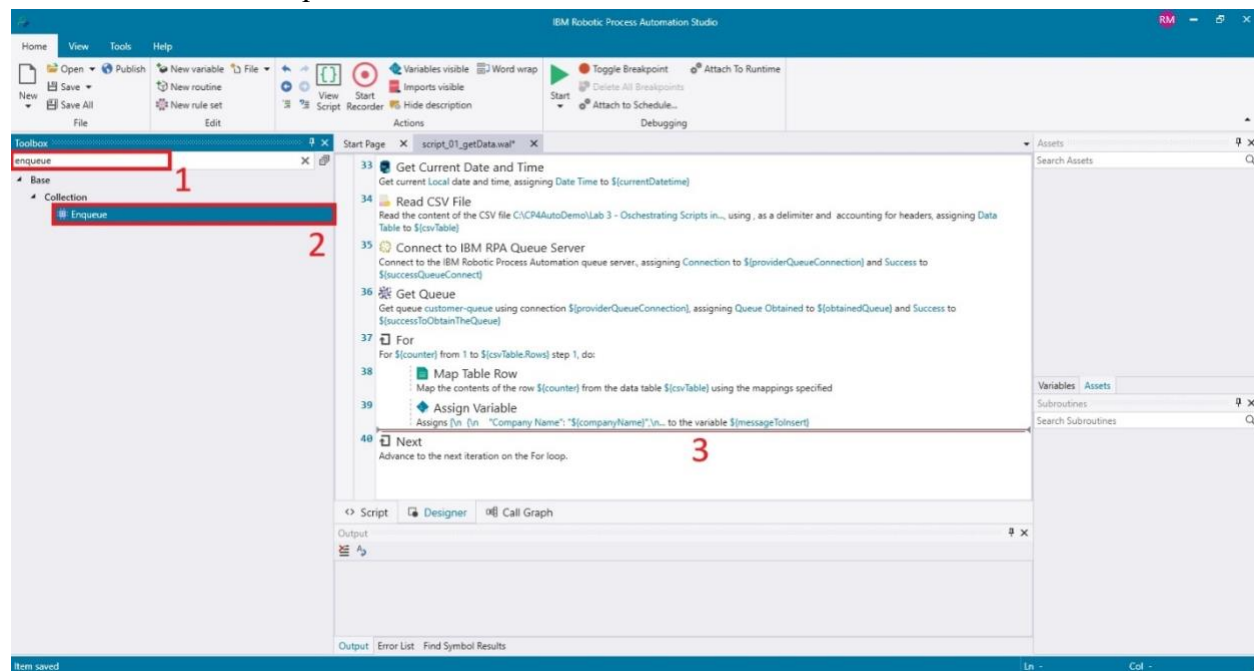
#	Description
1	Search " <i>queue</i> " in the toolbox
2	Let's use the command " <b>Get Queue</b> "
3	Drag the command positioning it between lines <b>35</b> and <b>36</b>

### 5.3.4.6 Configure the Get Queue command



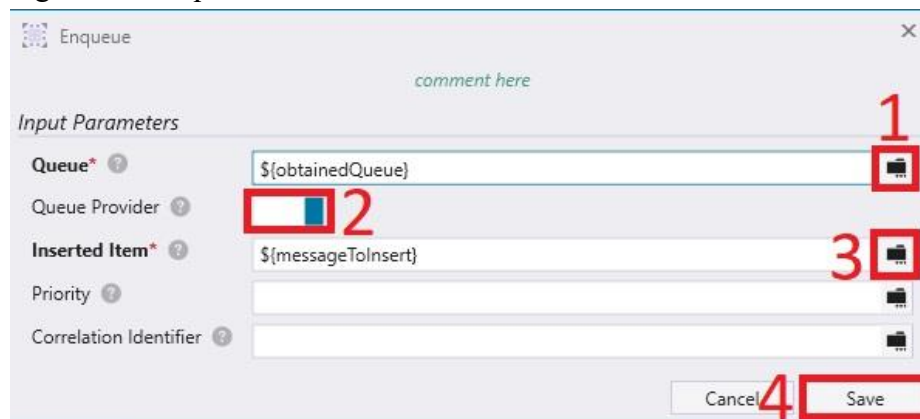
#	Description
1	Click on the button and select the <b>Connection</b> “ <i>`\${providerQueueConnection}`</i> ”
2	Turn on the <b>Stored Configurations</b> (this indicates a queue that is already configured in Control Center).
3	Select the “ <i>customer-queue</i> ”, as <a href="#">mentioned previously</a>
4	Write “ <i>successToObtainTheQueue</i> ” in the <b>Success</b> field
5	Write “ <i>obtainedQueue</i> ” in the <b>Queue Obtained</b> field
6	Click on the <b>Save</b> button

### 5.3.4.7 Customer Enqueue



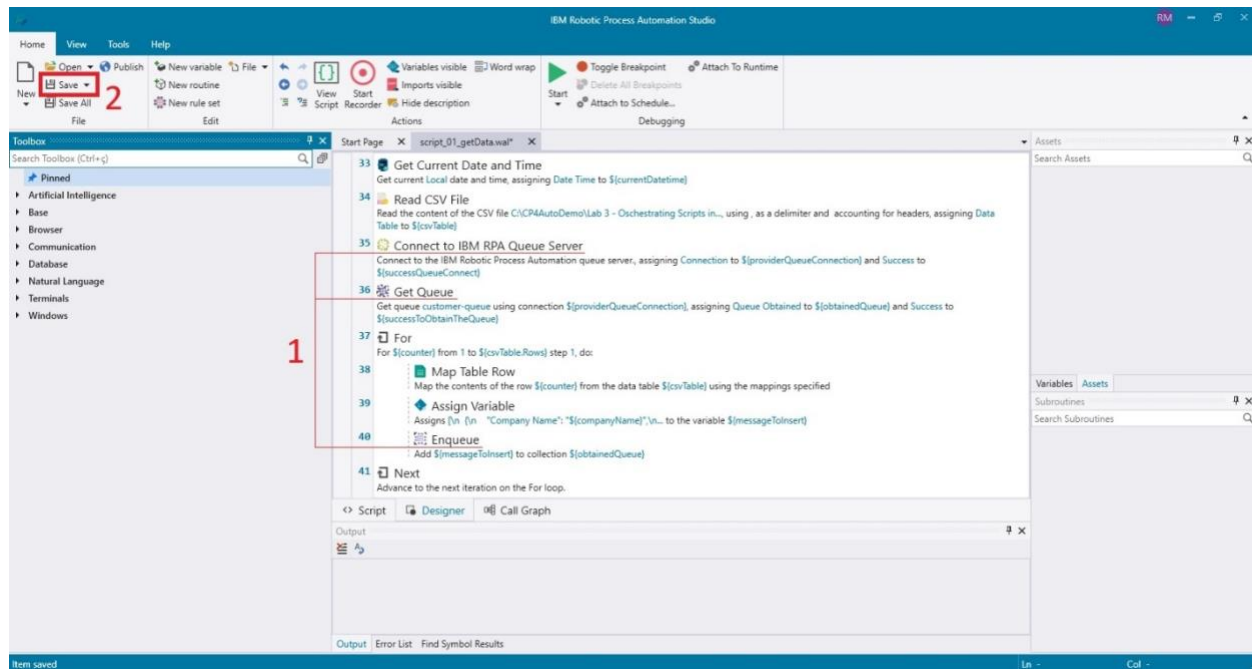
#	Description
1	Search " <i>enqueue</i> " in the toolbox
2	Let's use the command " <b>Enqueue</b> "
3	Drag the <b>Enqueue</b> command into the <b>For</b> command (between line 39 and 40), it will add each customer to the queue

### 5.3.4.8 Configuration Enqueue



#	Description
1	Click on the button and select the Queue " <i>\${obtainedQueue}</i> "
2	Enable to enqueue when using a <b>Queue provider</b> and not a local queue
3	Click on the button and select the <b>Inserted Item</b> " <i>\${messageToInsert}</i> "
4	Click on the <b>Save</b> button

### 5.3.4.9 Summary and save script.

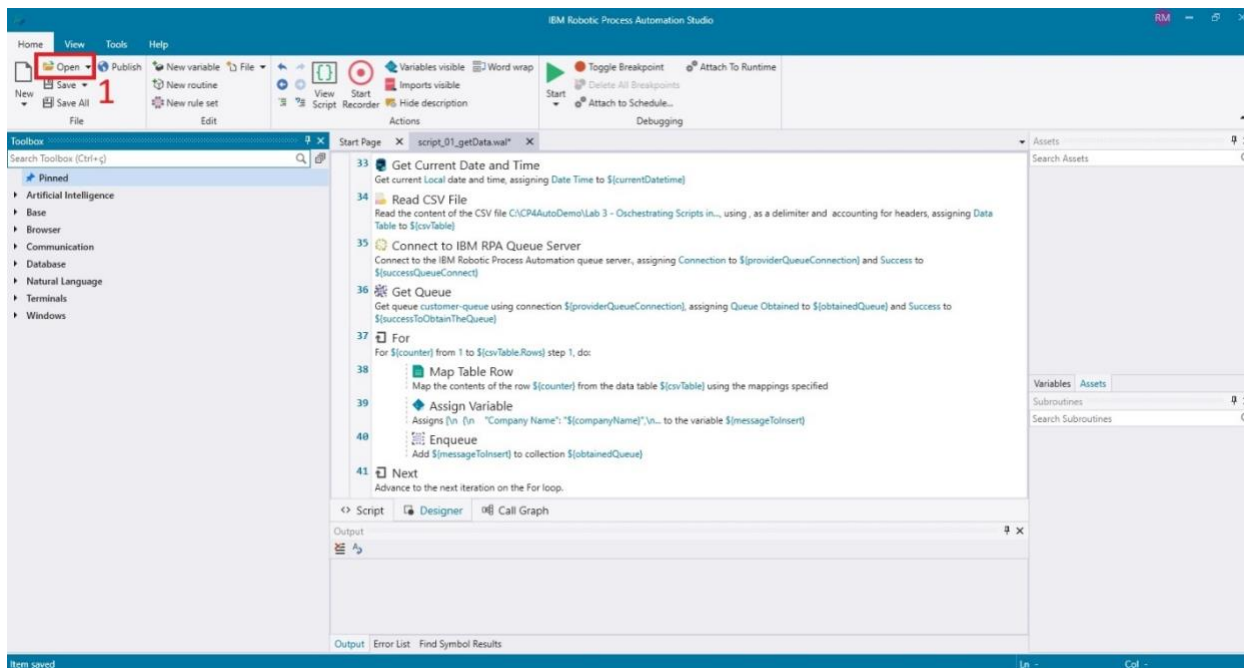


#	Description
1	For this script, it was necessary to enter the 3 commands: <ul style="list-style-type: none"> <li>• <b>Connect To IBM RPA Queue Server:</b> to connect to the queue server.</li> <li>• <b>Get Queue:</b> to point to the queue that will store the items.</li> <li>• <b>Enqueue:</b> to queue each customer obtained from the CSV spreadsheet.</li> </ul>
2	Save changes by clicking the <b>Save</b> button
3	<b>WARNING!</b> Do not run this script. Follow the steps in the guide until guidance on execution. As previously stated, this script is responsible for queuing the clients to be processed, so, for each execution, all CSV items will be queued, and this could hinder you in the final execution of the lab.



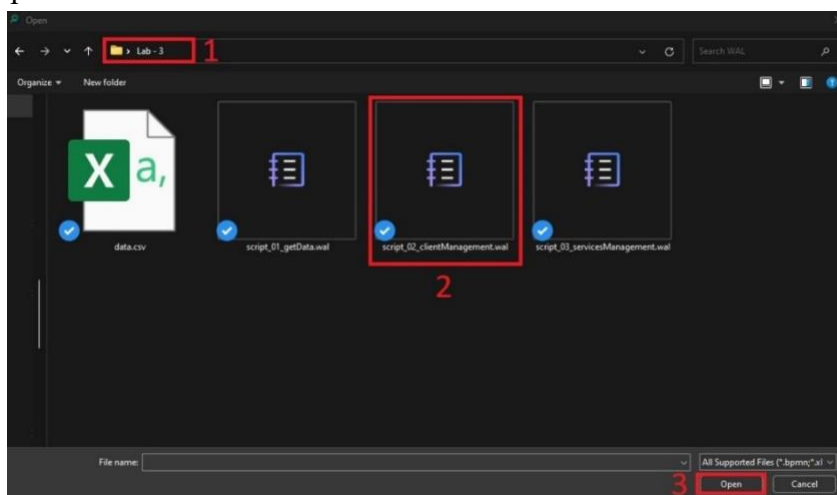
### 5.3.5 Changing script\_02\_clientManagement.wal

#### 5.3.5.1 Open file



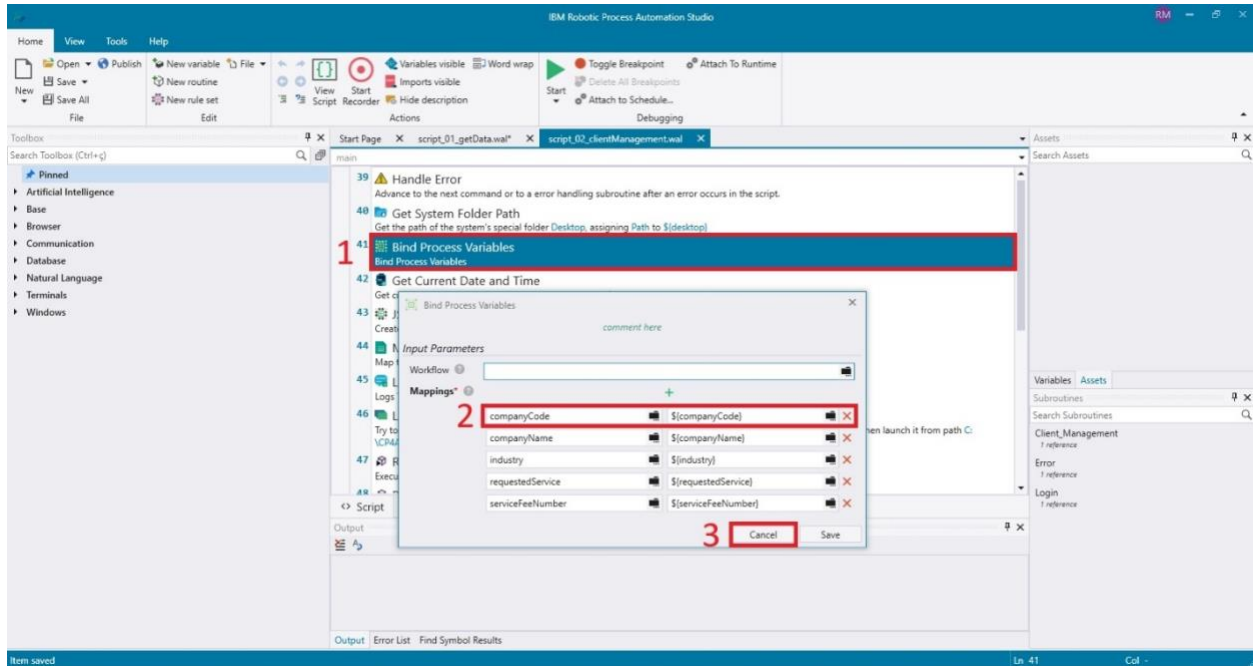
#	Description
1	Click on the <b>Open</b> button to search the script

#### 5.3.5.2 Open script



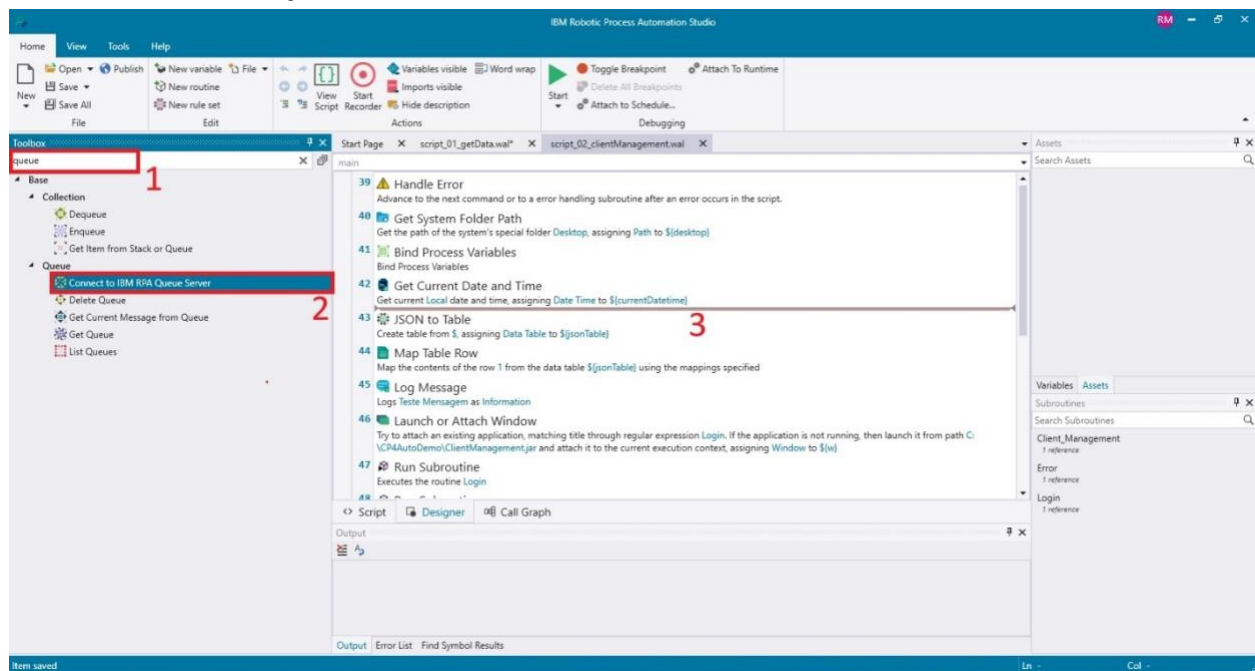
#	Description
1	All files are in the <a href="#">C:\CP4AutoDemo\Lab 3 - Orchestrating Scripts in IBM RPA</a>
2	Select the <a href="#">script_02_clientManagement.wal</a>
3	Click in the <b>Open</b> button

### 5.3.5.3 Orchestration process' variables binding.



#	Description
0	Before including the other commands, it is important to present the importance of this <b>Bind Process Variables</b> command. For more details, visit <a href="#">Orchestration process' variables binding</a> documentation
1	Double-click the <b>Bind Process Variables</b> command (line 41)
2	For the Orchestrator to manage the items in the queue, it is mandatory to pass some process data to be the primary key. In this case, we have already configured the <code>companyCode</code> variable. Other data can also be sent to the Orchestrator as it will be presented in the Control Center panel.
3	This command will not be changed, just click the <b>Cancel</b> button

### 5.3.5.4 Connect to Queue



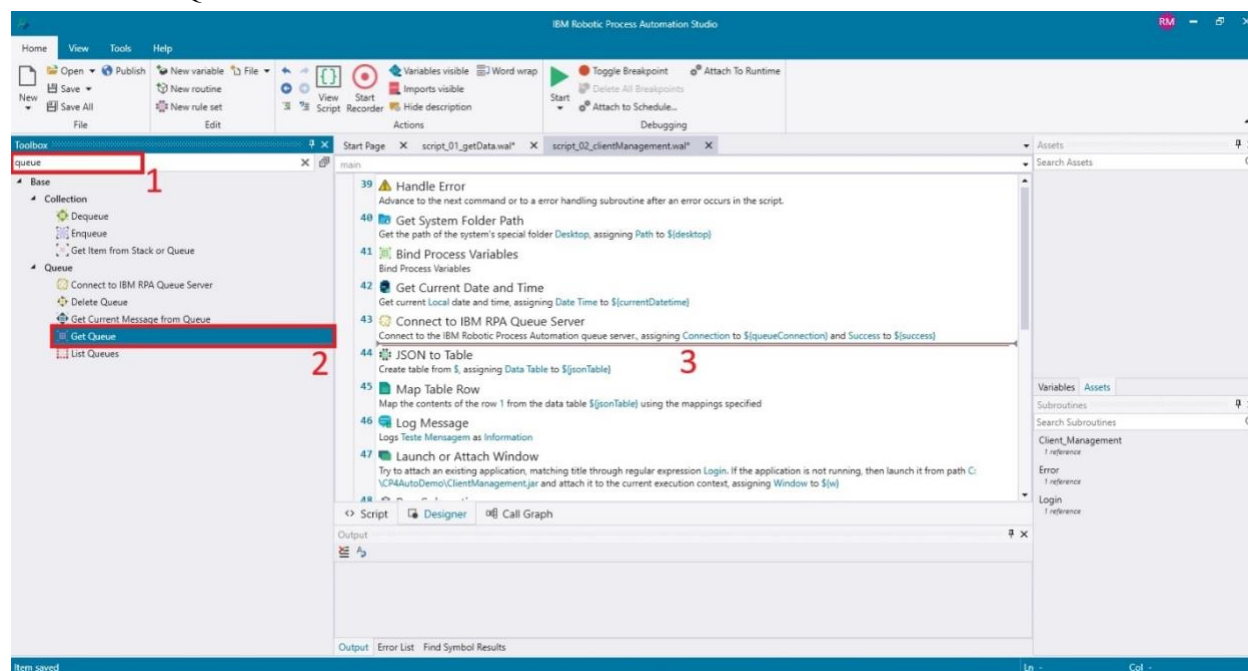
#	Description
1	Search " <i>queue</i> " in the toolbox
2	Let's use the command " <b>Connect to IBM RPA Queue Server</b> "
3	Drag the command positioning it between lines 42 and 43

### 5.3.5.5 Connection queue configuration



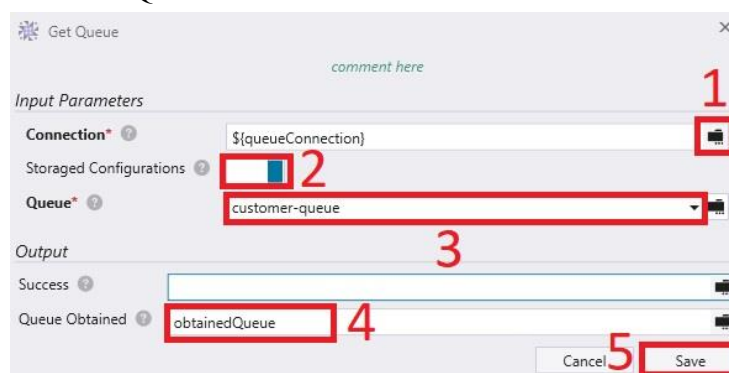
#	Description
1	Write " <i>success</i> " in the <b>Success</b> field
2	Write " <i>queueConnection</i> " in the <b>Connection</b> field
3	Click on the <b>Save</b> button

### 5.3.5.6 Get Queue



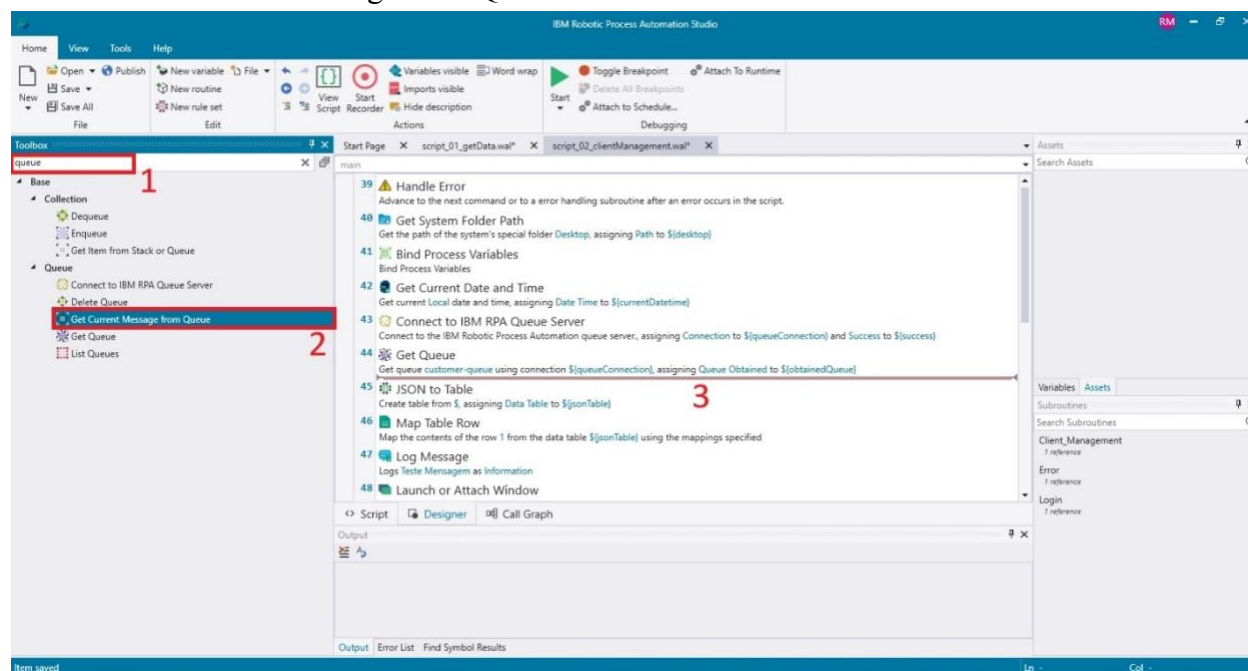
#	Description
1	Search " <i>queue</i> " in the toolbox
2	Let's use the command " <b>Get Queue</b> "
3	Drag the command positioning it between lines 43 and 44

### 5.3.5.7 Configure the Get Queue



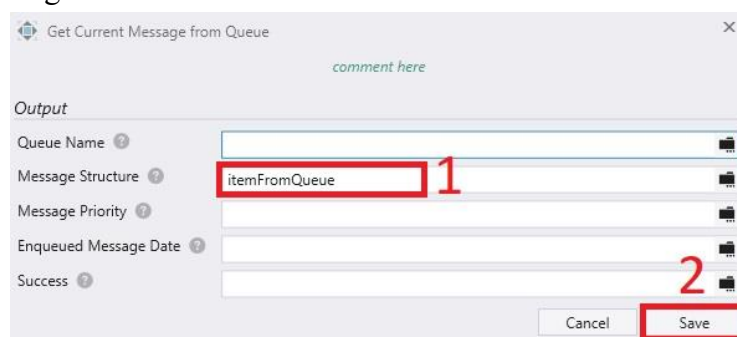
#	Description
1	Click on the button and select the <b>Connection</b> " <i>`\${queueConnection}`</i> "
2	Turn on the <b>Stored Configurations</b>
3	Select the " <i>customer-queue</i> ", as <a href="#">mentioned previously</a>
4	Write " <i>obtainedQueue</i> " in the <b>Queue Obtained</b> field
5	Click on the <b>Save</b> button

### 5.3.5.8 Get Current Message from Queue



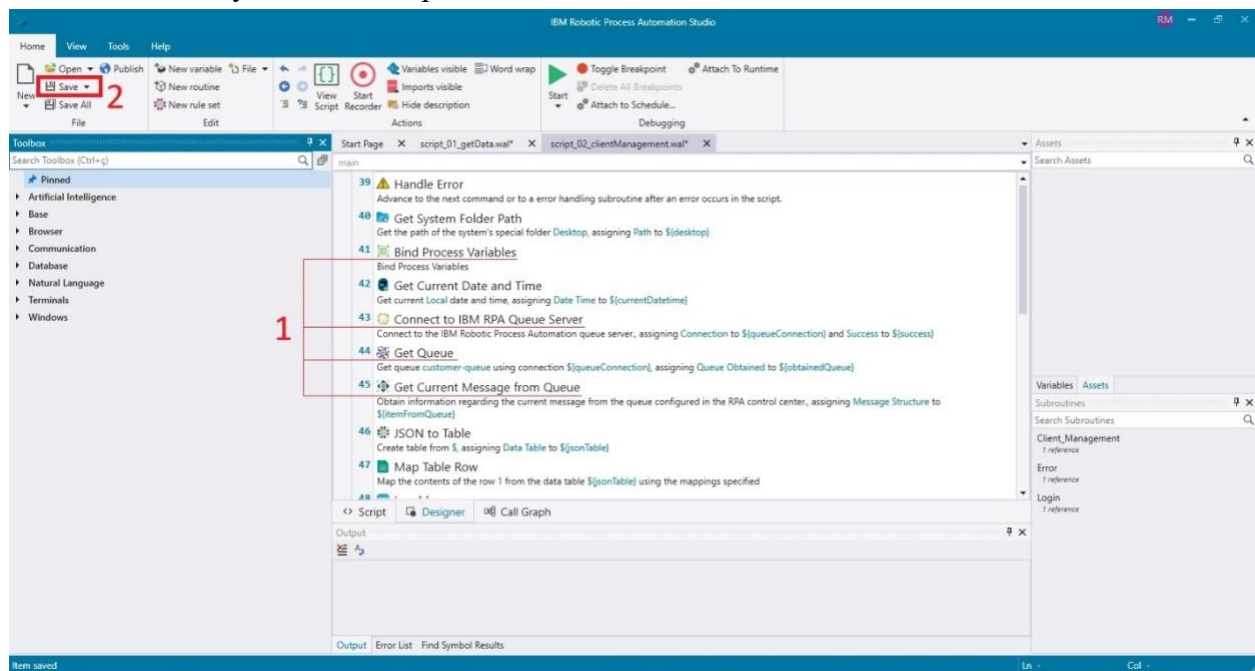
#	Description
1	Search " <i>queue</i> " in the toolbox
2	Let's use the command " <b>Get Current Message from Queue</b> "
3	Drag the command positioning it between lines 44 and 45

### 5.3.5.9 Enter the Message Structure



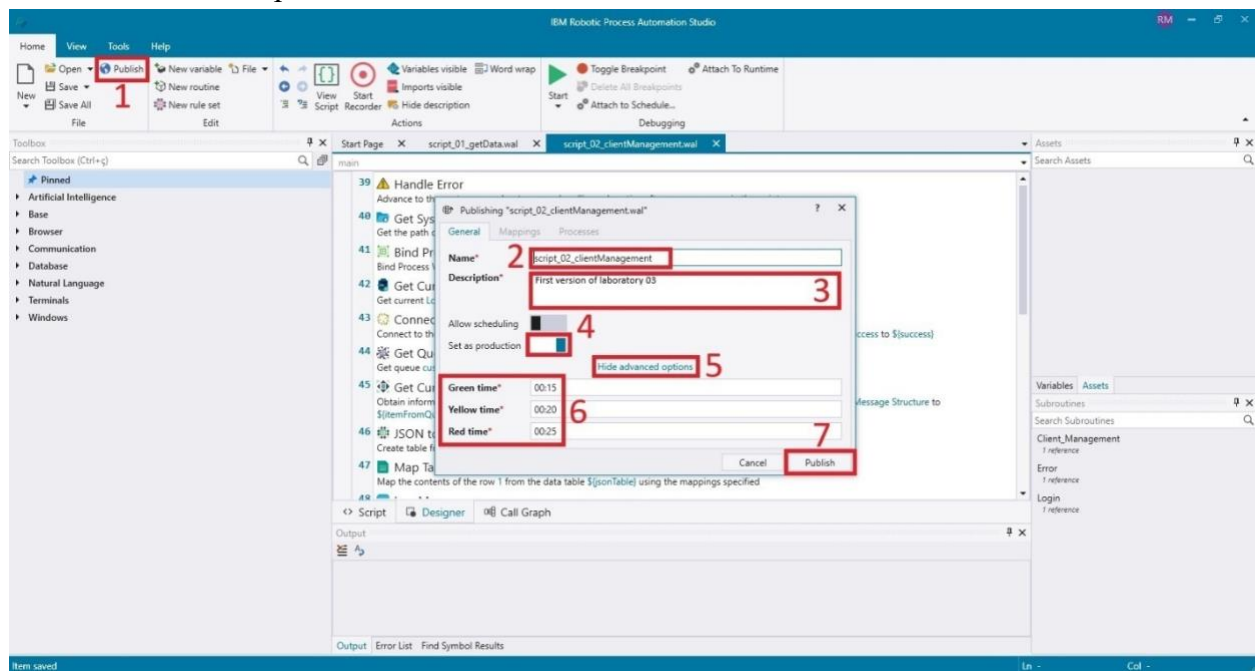
#	Description
1	Write " <i>itemFromQueue</i> " in the <b>Message Structure</b> field
2	Click on the <b>Save</b> button

### 5.3.5.11 Summary and save script.



#	Description
1	For this script, it was necessary to use these commands: <ul style="list-style-type: none"> <li>• <b>Bind Process Variables:</b> To bind the primary key in the process.</li> <li>• <b>Connect To IBM RPA Queue Server:</b> to connect to the queue server.</li> <li>• <b>Get Queue:</b> to point to the queue that will store the items.</li> <li>• <b>Get Current Message from Queue:</b></li> </ul>
2	Save changes by clicking the <b>Save</b> button
3	<b>WARNING!</b> Do not run this script. Follow the steps in the guide until guidance on execution. This script will be executed automatically by the IBM RPA Orchestrator, so this script is not prepared to be executed in the conventional way.

### 5.3.5.12 Publish script.

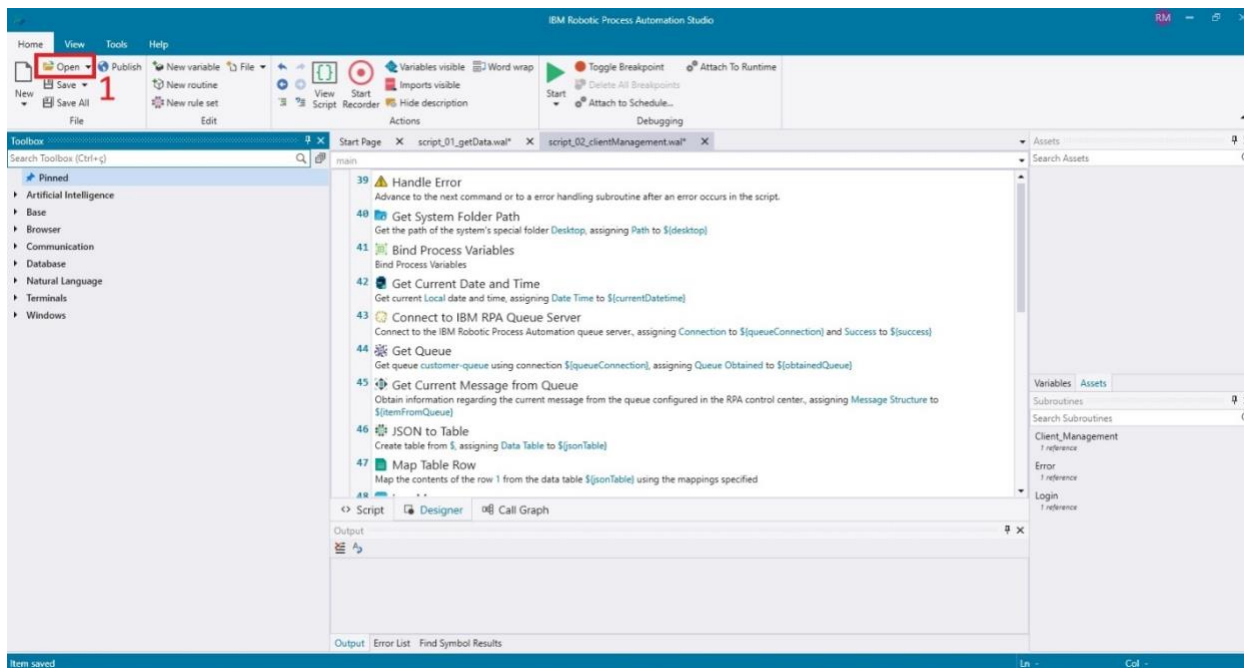


#	Description
1	As this script will be managed by the orchestrator, it is necessary to make it public in the Control Center, then click the <b>Publish</b> button.
2	Keep the script name " <i>script 02 clientManagement</i> "
3	Write a brief description about the script.
4	Turn on the <b>Set as production</b>
5	Click " <b>Show advanced options</b> " to see more options
6	Configure the times (hh:mm): <ul style="list-style-type: none"> <li><i>Green time: 00:15</i></li> <li><i>Yellow time: 00:20</i></li> <li><i>Red time: 00:25</i></li> </ul> Find more information in the <a href="#">Publishing the script</a> documentation
7	Click on the <b>Publish</b> button
8	<b>WARNING!</b> Do not run this script. Follow the steps in the guide until guidance on execution. This script will be executed automatically by the IBM RPA Orchestrator, so this script is not prepared to be executed in the conventional way.



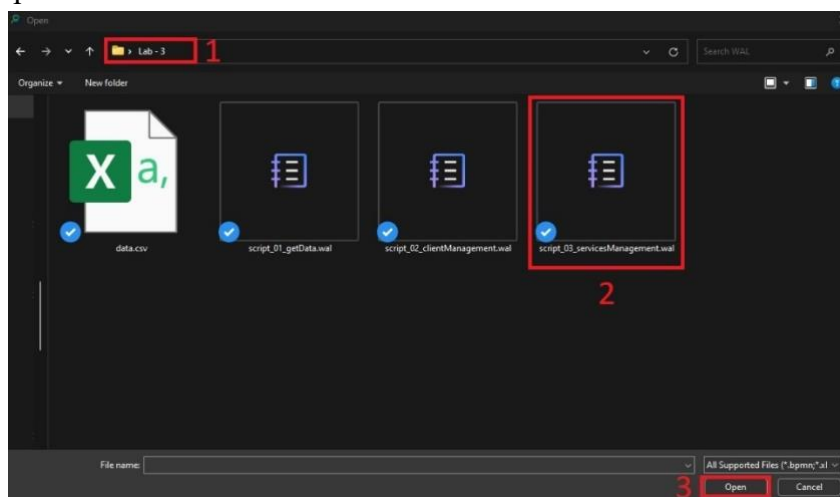
### 5.3.6 Changing script\_03\_servicesManagement.wal

#### 5.3.6.1 Open file



#	Description
1	Click on the <b>Open</b> button to search the script

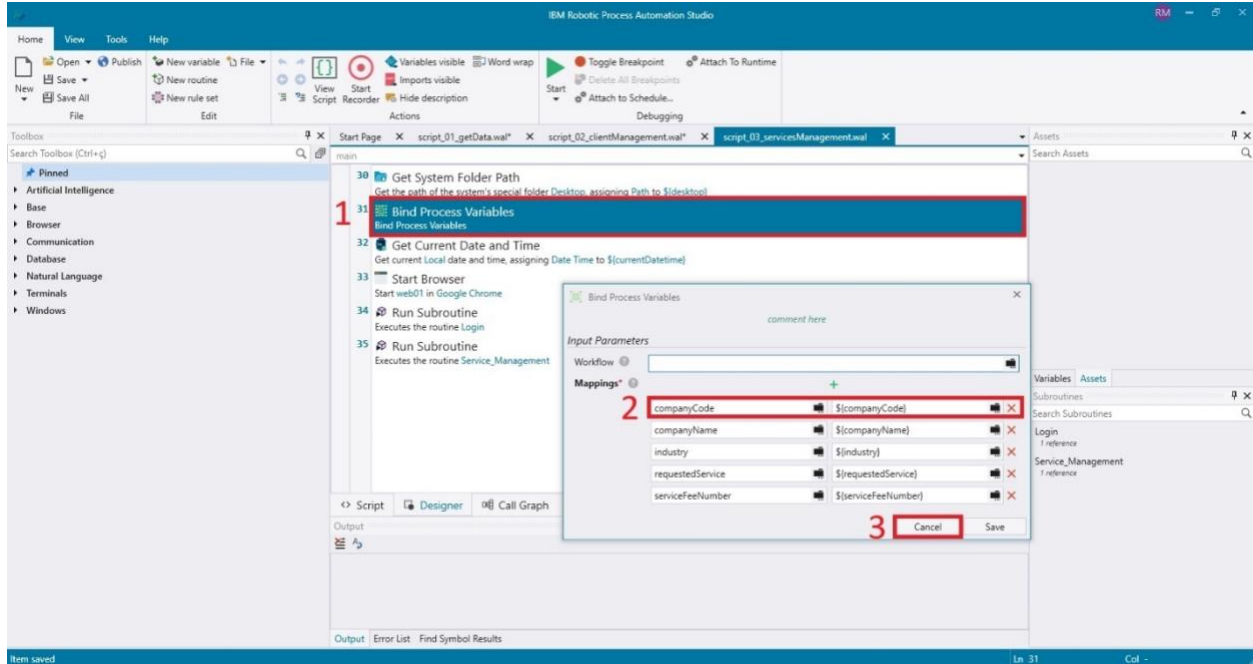
#### 5.3.6.2 Open script



#	Description
1	All files are in the <a href="#">C:\CP4AutoDemo\Lab 3 - Orchestrating Scripts in IBM RPA</a>
2	Select the “Script web.wal”
3	Click in the <b>Open</b> button

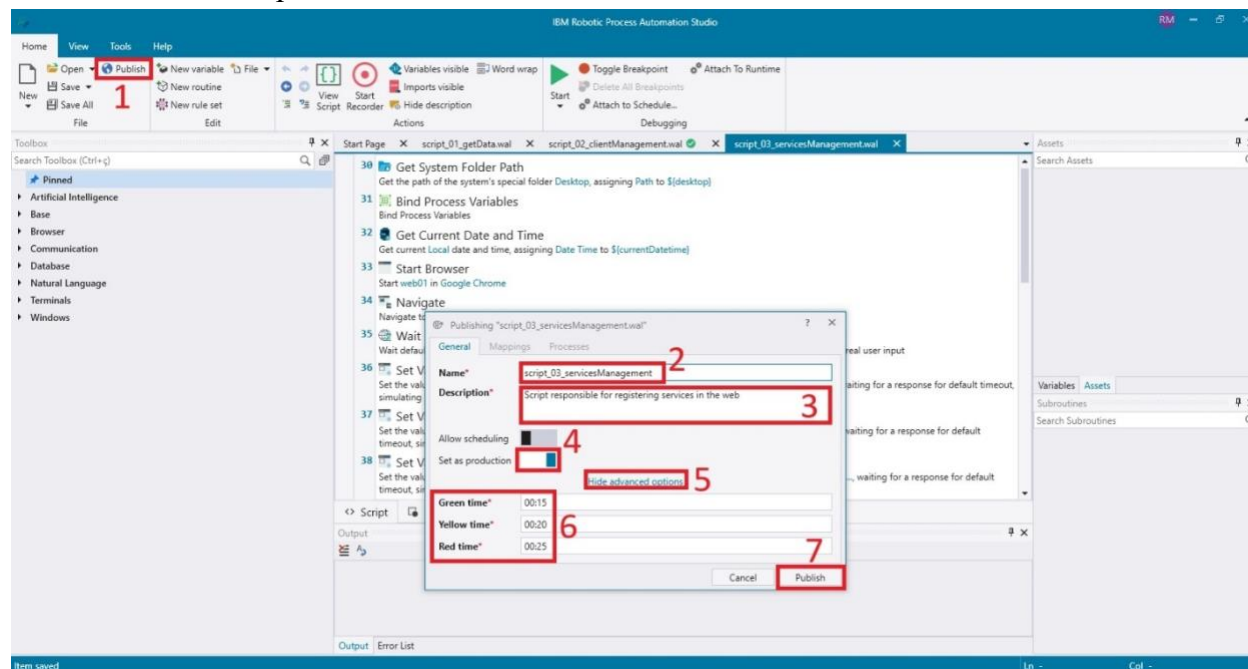


### 5.3.6.3 Orchestration process' variables binding.



#	Description
0	As in the <a href="#">previous script</a> , before including the other commands, it is important to present the importance of this <b>Bind Process Variables</b> command. For more details, visit <a href="#">Orchestration process' variables binding</a> documentation
1	Double-click the <b>Bind Process Variables</b> command (line 31)
2	For the Orchestrator to manage the items in the queue, it is mandatory to pass some process data to be the primary key. In this case, we have already configured the <code>\${companyCode}</code> variable. Other data can also be sent to the Orchestrator as it will be presented in the Control Center panel.
3	This command is already configured, so just click the <b>Cancel</b> button
5	<b>WARNING!</b> <b>Do not run this script. Follow the steps in the guide until guidance on execution.</b> This script will be executed automatically by the IBM RPA Orchestrator, so this script is not prepared to be executed in the conventional way.

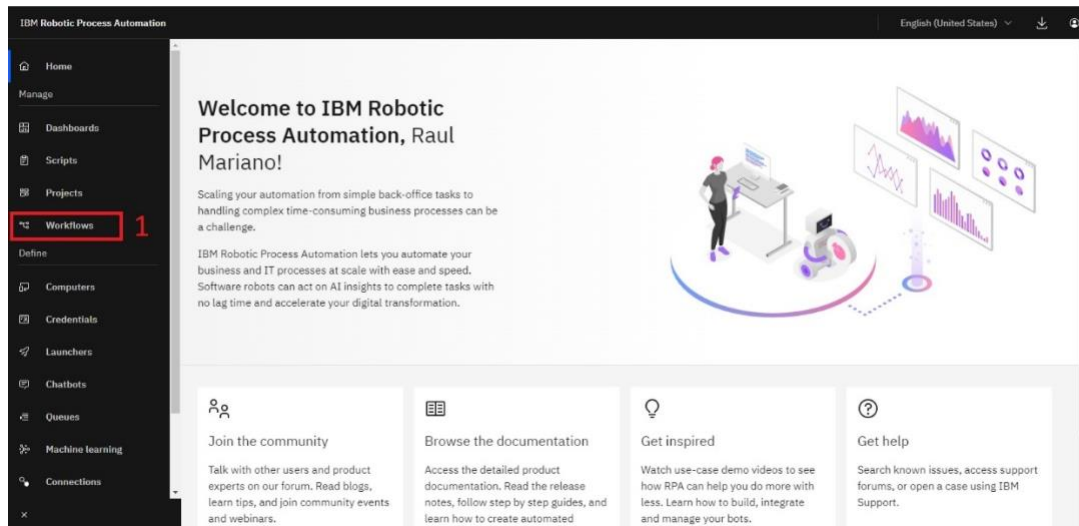
### 5.3.6.4 Publish script.



#	Description
1	As this script will be managed by the orchestrator, it is necessary to public it in the Control Center, then click the <b>Publish</b> button.
2	Keep the script name " <i>script 03 servicesManagement</i> "
3	Write a brief description about the script.
4	Turn on the <b>Set as production</b>
5	Click " <b>Show advanced options</b> " to see more options
6	Configure the times (hh:mm): <ul style="list-style-type: none"> <li><i>Green time: 00:15</i></li> <li><i>Yellow time: 00:20</i></li> <li><i>Red time: 00:25</i></li> </ul> Find more information in the <a href="#">Publishing the script</a> documentation
7	Click on the <b>Publish</b> button
8	<b>WARNING!</b> Do not run this script. Follow the steps in the guide until guidance on execution. This script will be executed automatically by the IBM RPA Orchestrator, so this script is not prepared to be executed in the conventional way.

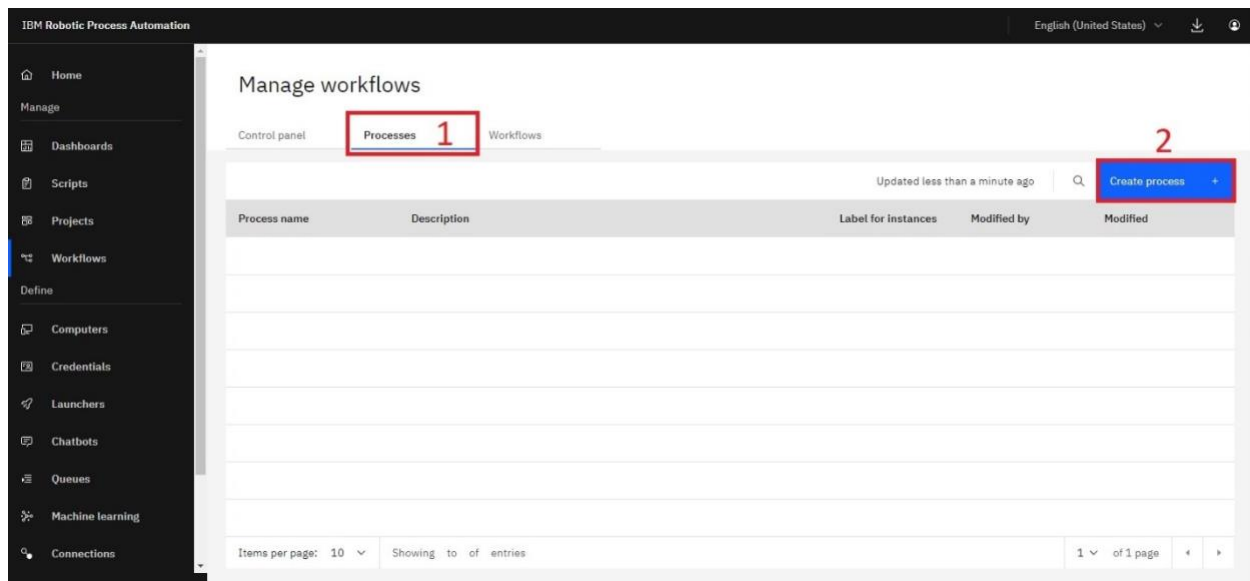
## 5.4 Exercise 3: Create process and configure the steps.

### 5.4.1 Return Control Center and access Workflows menu.



#	Description
1	Click on the <b>Workflows</b> menu

### 5.4.2 Create Process



#	Description
1	Click on the <b>Processes</b> tab
2	Click on the <b>Create process</b> button

### 5.4.3 Create Process: General

Create process ✕

**General**

☐ SLA Configuration

☐ Steps

☐ Variables

1 **Process name**  
Lab3\_OrchestratingScripts

**Description**

Select a workflow to be created with each process instances (optional)

Workflow  
Workflow

Workflow Version  
Select a process

What may the instances be called?

2 **Label for Singular**  
OrchestratingScripts

3 **Label for Plural**  
OrchestratingScripts

4 **Next**

#	Description
1	Write “ <i>Lab3 OrchestratingScripts</i> ” in the <b>Process name</b> field
2	Write “ <i>Customer</i> ” in the <b>Label for Singular</b> field
3	Write “ <i>Customers</i> ” in the <b>Label for Plural</b> field
4	Click on the <b>Next</b> button

## 5.4.5 Create Process: SLA Configuration

Create process X

General

**SLA Configuration**

Steps

Variables

What is the desired time interval for an instance to wait to start being processed? What is the minimal acceptable percentage of instances that is required to meet this target?

Target Waiting Time

1 00:00:05

Waiting Time Required Service Level

2 100%

What is the desired time interval for an instance to finish the whole process after starting? What is the minimal acceptable percentage of instances that is required to meet this target?

Target Handling Time

3 00:00:30

Handling Time Required Service Level

4 100%

What is the desired time interval, including waiting time, for an instance to finish the whole process? What is the minimal acceptable percentage of instances that is required to meet this target?

Target Processing Time

5 00:00:45

Processing Time Required Service Level

6 100%

7

Previous Next

#	Description
1	Set <b>00:00:05</b> to <b>Target Waiting Time</b>
2	Set <b>100%</b> to <b>Waiting Time Required Service Level</b>
3	Set <b>00:00:30</b> to <b>Target Handling Time</b>
4	Set <b>100%</b> to <b>Handling Time Required Service Level</b>
5	Set <b>00:00:45</b> to <b>Target Processing Time</b>
6	Set <b>100%</b> to <b>Processing Time Required Service Level</b>
7	Click on the <b>Next</b> button

## 5.4.6 Create Process: Steps (1/4)

Create process

General

SLA Configuration

Steps

Variables

Step2\_CustomerManagement

Step name

1 Step2\_CustomerManagement

You need to select an input queue for items to be processed and optionally a success and error queue to move items upon completion.

Input Queue

2 customer-queue

Output Queue (On Success)

3 service-queue

Priority on Success Queue

4 Normal

Output Queue (On Error)

5 Mark as error

Priority on Error Queue

6 Normal

7

Previous Next

#	Description
1	Write “ <i>Step2 CustomerManagement</i> ” in the <b>Step name</b> field
2	Select “ <i>customer-queue</i> ” in the <b>Input Queue</b> field
3	Select “ <i>service-queue</i> ” in the <b>Output Queue</b> field
4	Select “ <i>Normal</i> ” in the <b>Priority on Success Queue</b> field
5	Select “ <i>Mark as error</i> ” in the <b>Output Queue (On Error)</b> field
6	Select “ <i>Normal</i> ” in the <b>Priority on Error Queue</b> field
7	Go down

### 5.4.7 Create Process: Steps (2/4)

Create process

General

SLA Configuration

Steps

Variables

Mark as error

Priority on Error Queue

Normal

Which scripts will process the items in the input queue?

Script

1 script\_02\_clientManagement

Version

2 1 - "Script responsible for registering customer in the java app"

Where will this script run?

Computers

3 1 - Computers

Group (optional)

Group

Previous

Next

4

#	Description
1	Select “ <i>script 02 clientManagement</i> ” in the <b>Script</b> field
2	Select the first item (latest version of the script) in the <b>Version</b> field
3	Select the “ <i>WIN-IGPQ0NALNPB</i> ” in the <b>Computers</b> field
4	Back to the top

### 5.4.8 Create Process: Steps (3/4)

Create process

General

SLA Configuration

Steps

Variables

Step2\_CustomerManagement

Step3\_ServicesManagement

Step name

Step3\_ServicesManagement

You need to select an input queue for items to be processed and optionally a success and error queue to move items upon completion

Input Queue

service-queue

Output Queue (On Success)

Mark as success

Priority on Success Queue

Normal

Output Queue (On Error)

Mark as error

Priority on Error Queue

Previous

Next

1 Add

2

3

4

5

6

7

8

#	Description
1	Click the <b>Add</b> button to add the last step of the process
2	To improve visualization, collapse <b>Step2_CustomerManagement</b>
3	Write “ <i>Step3 ServicesManagement</i> ” in the <b>Step name</b> field
4	Select “ <i>service-queue</i> ” in the <b>Input Queue</b> field
5	Select “ <i>Mark as success</i> ” in the <b>Output Queue</b> field
6	Select “ <i>Normal</i> ” in the <b>Priority on Success Queue</b> field
7	Select “ <i>Mark as error</i> ” in the <b>Output Queue (On Error)</b> field
8	Go down



### 5.4.9 Create Process: Steps (4/4)

Create process ✕

General

SLA Configuration

**Steps**

Variables

1

Priority on Error Queue

Normal

2

Which scripts will process the items in the input queue?

Script

script\_03\_servicesManagement.wal

3

Version

1 - "Script responsible for registering customer in the web"

4

Where will this script run?

Computers

1 Computers

Group (optional)

Group

Delete

5

Previous

Next

#	Description
1	Select “ <i>Normal</i> ” in the <b>Priority on Error Queue</b> field
2	Select “ <i>script 03 servicesManagement</i> ” in the <b>Script</b> field
3	Select the first item (latest version of the script) in the <b>Version</b> field
4	Select the “ <i>Computer name</i> ” in the <b>Computers</b> field
5	Click on the <b>Next</b> button

### 5.4.10 Create Process: Variables (1/3)

Create process ×

General

SLA Configuration

Steps

**Variables**

These variables can be mapped to script variables in order to have their value stored.

companyCode

Variable Name (1)

1 companyCode

Type

2 Numeric

Business Key

3 ☒ Yes

Delete

4 Add Variable

Previous

Create

#	Description
1	Here it is necessary to create the business key with the same name indicated in the code ( <a href="#">5.3.5.3</a> and <a href="#">5.3.6.3</a> ), then write “ <i>companyCode</i> ” in the <b>Variable name</b> field.
2	Select “ <i>Numeric</i> ” in the <b>Type</b> field
3	Set “ <i>Yes</i> ” in the Business Key field
4	Let's include one more variable, which was also defined in the code. Click on the <b>Add Variable</b> button.

### 5.4.11 Create Process: Variables (2/3)

The screenshot shows the 'Create process' dialog box with the 'Variables' tab selected. The left sidebar has 'General', 'SLA Configuration', 'Steps', and 'Variables' (selected). The main area lists two variables:

- companyCode**: Type is 'Numeric', Business Key is 'Yes' (checked). A red box labeled '1' highlights the variable name, a red box labeled '2' highlights the 'Text' type dropdown, and a red box labeled '3' highlights the 'No' radio button for the Business Key.
- companyName**: Type is 'Text', Business Key is 'No' (checked). A red box labeled '4' highlights the 'Add Variable' button (labeled 'Create' in the image).

At the bottom right, there are 'Previous' and 'Create' buttons. A red arrow points to the 'Create' button.

The other variables registered in the Bind command (mentioned in previous topics [5.3.5.3](#) and [5.3.6.3](#)) must also be registered. Repeat this step for all variables, filling in the corresponding value:

1 – Variable Name	2 - Type	3 – Business Key	4 – Add Variable
Write “ <i>companyName</i> ”	Select “ <i>Text</i> ”	Set “ <i>No</i> ”	Click on the <b>Add Variable</b> button.
Write “ <i>industry</i> ”	Select “ <i>Text</i> ”	Set “ <i>No</i> ”	Click on the <b>Add Variable</b> button.
Write “ <i>requestedService</i> ”	Select “ <i>Text</i> ”	Set “ <i>No</i> ”	Click on the <b>Add Variable</b> button.
Write “ <i>serviceFeeNumber</i> ”	Select “ <i>Numeric</i> ”	Set “ <i>No</i> ”	Done! Go to the next section

### 5.4.12 Create Process: Variables (3/3)

Create process

General

SLA Configuration

Steps

Variables

These variables can be mapped to script variables in order to have their value stored.

Add Variable

+

companyCode

companyName

industry

requestedService

serviceFeeNumber

1

Previous

2

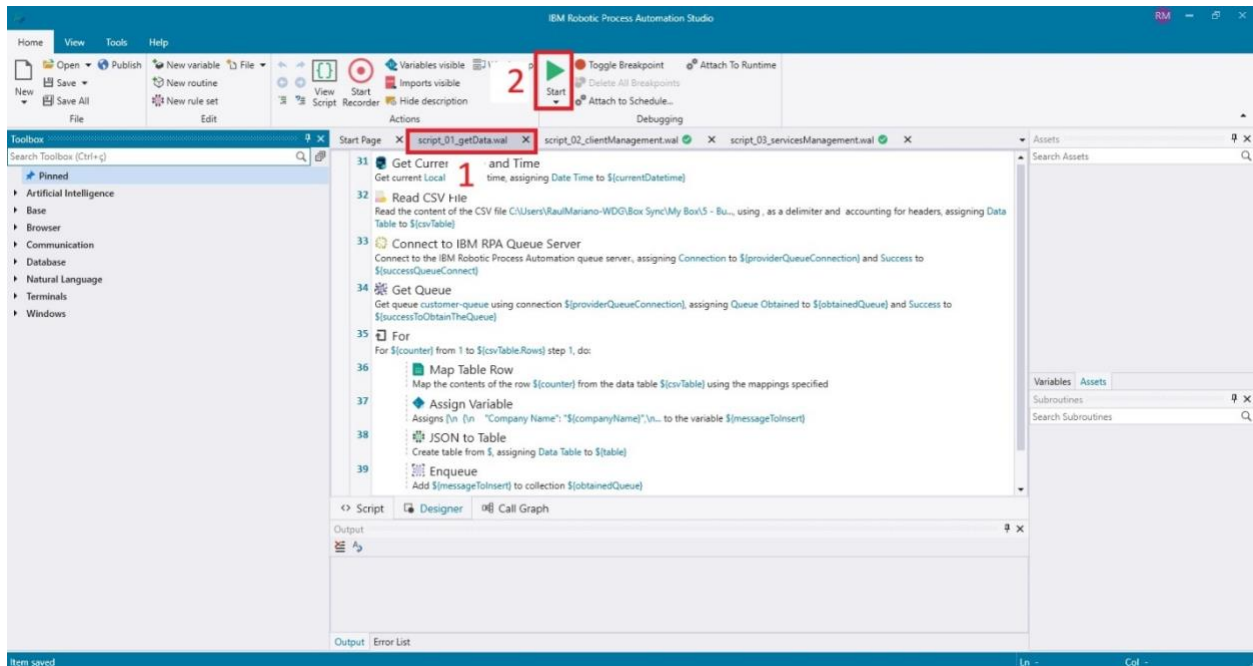
Create

#	Description
1	Check that all variables were added correctly.
4	Click on the <b>Create</b> button to complete the registration.

## 5.5 Exercise 4: Execute bot and see results.

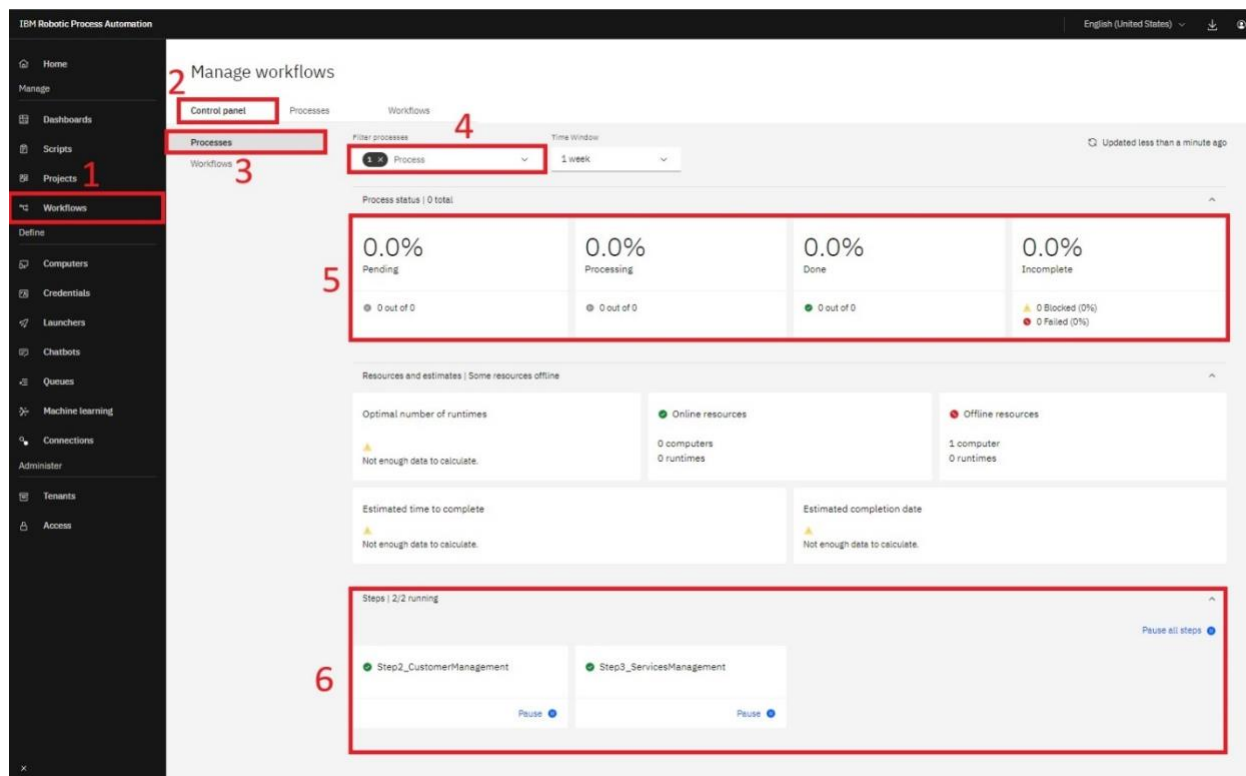
Now that all the scripts have all the commands, and the entire process registration process has been carried out in the Control Center. Let's run the bot and view the result.

### 5.5.1 Run Script\_getData.WAL



#	Description
1	Return to IBM RPA Studio, and open the first script, responsible for getting and enqueue data to processing (script_01_getData.wal)
2	Click in <b>Start</b> button to run
3	<p>At this point, it is important to remember that the customer and service registration steps are managed by the IBM RPA Script Orchestrator, that is, as soon as the script_01_getData.wal is executed and inserts an item in the queue, the next steps will automatically be executed.</p> <p><b>WARNING!</b> Customer registration is done in a java application, so <b>DO NOT USE THE COMPUTER NOW</b>. Wait 10 minutes for the entire process to complete.</p>

### 5.5.2 See results of the process



#	Description
1	Back in Control Center, let's access the process panel to view processing information. Click on the <b>Workflows</b> menu
2	Select the <b>Control panel</b> tab
3	Select the <b>Processes</b> tab
4	Select the process that created: " <i>Lab3_OrchestratingScripts</i> "
5	This is the main panel for monitoring processing, where: <ul style="list-style-type: none"> <li>• <b>Pending:</b> These are all items that are already in the queue awaiting their turn to be processed.</li> <li>• <b>Processing:</b> It is the number of items being processed (you can have a scenario that allows simultaneous execution).</li> <li>• <b>Done:</b> These are items that have already been successfully processed at all stages of the process, in this case, the customer and service has been successfully registered.</li> <li>• <b>Incomplete:</b> All items that for some reason were not executed successfully.</li> </ul>
6	You can see and manage the process steps.

### Variables history

**Congratulations, you have successfully completed this lab!!!**