

Configuration Manual

MSc Research Project
Cloud Computing

Jaison John
Student ID: 19104910

School of Computing
National College of Ireland

Supervisor: Manuel Tova-Izquiere

National College of Ireland
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School of Computing



Student Name:	Jaison John
Student ID:	19104910
Programme:	Cloud Computing
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Configuration Manual

Jaison John
19104910

1 Introduction

This document encompasses the details regarding the configuration set-up of Blue Prism Multi-Robot architecture. It includes the prerequisites that are needed for the successful deployment of the solution along with the tools and technologies required for the development of the same. It gives a detailed set-up instructions on how this architecture could be simulated on any other system.

2 Tools/Technologies & Prerequisites

Here's a quick glance on the tools/technologies used:

RPA Tool: Blue Prism v6.8
Framework: .Net framework 4.7
Languages: XML, C#, Java
Database: Microsoft SQL Server
Hypervisor: Oracle VM Virtualbox

Some of the prerequisites needed for the solution are as follows:

- Microsoft .Net Framework 4.7 has to be installed in the system(Limited; 2020)
- Microsoft SQL Server 2017 for database support
- Instances of Virtual Machines should be created using Oracle Virtualbox/ VMware Workstation
- Blue Prism Installation file and license(refer the zip file)

3 Solution Deployment Configuration

As the RPA tool Blue Prism is a Windows-based application and the whole architecture revolves around it, its installation and configuration is vital for the deployment of the solution.

3.1 Blue Prism Client Configuration

1. Install the Blue prism application named BluePrismEvaluation6.8.exe(from the zip folder)
2. Once installation is complete, open the application and sign-in as shown in fig. 1. While trying to login for the first time, both the username and password should be entered as “admin”.

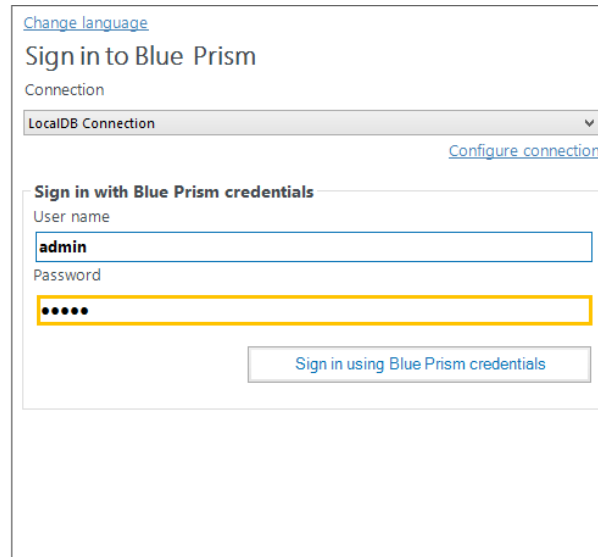
The image shows the Blue Prism login interface. At the top, there is a link "Change language". Below it is the title "Sign in to Blue Prism". A dropdown menu labeled "Connection" is set to "LocalDB Connection", with a "Configure connection" link to its right. Under the heading "Sign in with Blue Prism credentials", there are two input fields: "User name" containing the text "admin" and "Password" containing five dots. A "Sign in using Blue Prism credentials" button is located at the bottom right of the login area.

Figure 1: Blue Prism login details

3. For the Blue Prism v6.8, the local database is already configured as shown in fig. 2

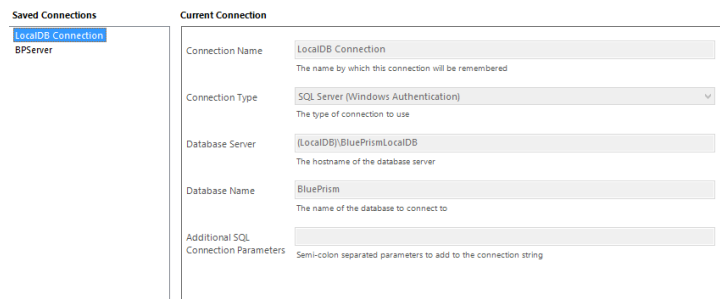
The image displays the "Current Connection" configuration window in Blue Prism. On the left, under "Saved Connections", "LocalDB Connection" is selected. The main area shows the following settings: "Connection Name" is "LocalDB Connection" (with a note: "The name by which this connection will be remembered"); "Connection Type" is "SQL Server (Windows Authentication)" (with a note: "The type of connection to use"); "Database Server" is "(LocalDB)\\BluePrismLocalDB" (with a note: "The hostname of the database server"); "Database Name" is "BluePrism" (with a note: "The name of the database to connect to"); and "Additional SQL Connection Parameters" is empty (with a note: "Semi-colon separated parameters to add to the connection string").

Figure 2: Local DB Configuration

4. After login, the system would prompt to enter the new password and confirm it
5. Then install the license(zip file) under Setting tab as displayed in fig.3
6. Once the product is activated, select System admin from User roles under Security tab(fig. 6). Check all the roles in the permissions column.(Limited; 2018)

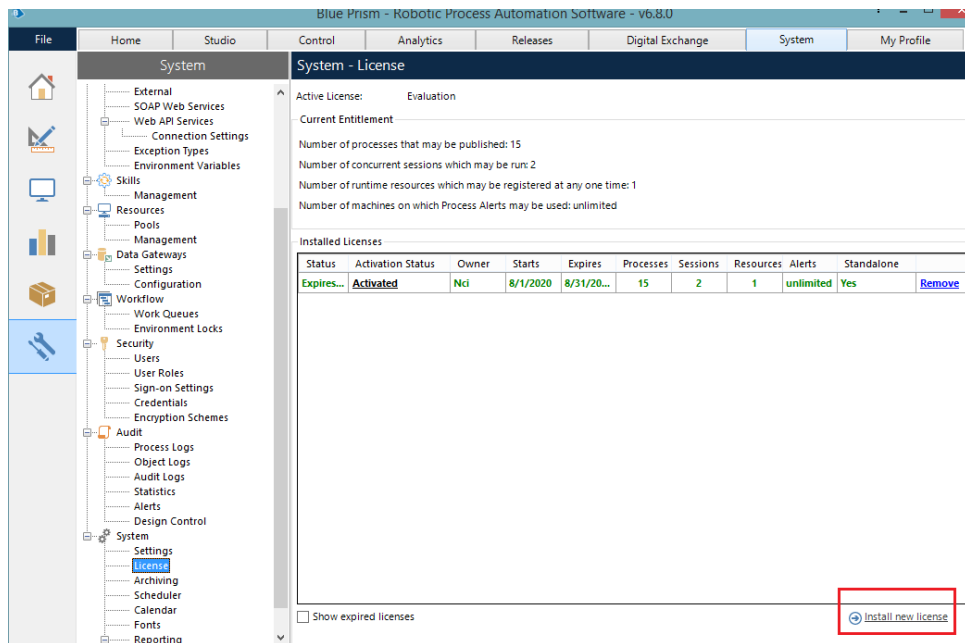


Figure 3: License Installation

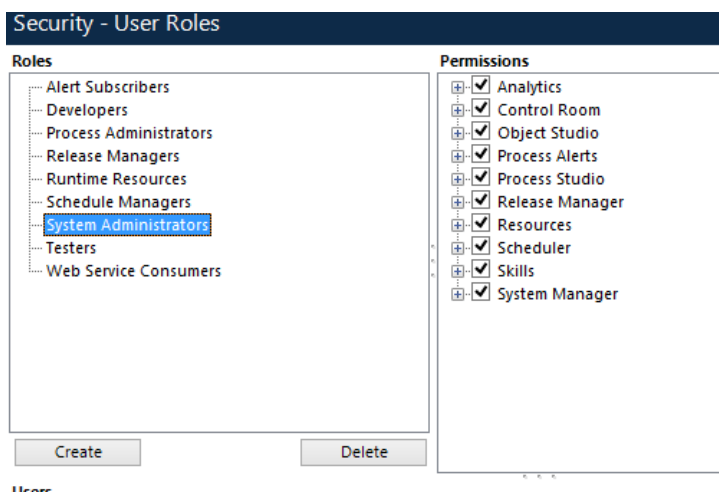


Figure 4: Admin role Configuration

3.2 Blue Prism Server Configuration

1. For setting up the Blue Prism Server, go to services in the task manager. Check whether the Blue prism server service is running and switch it to automatic if it is not(fig. 7).

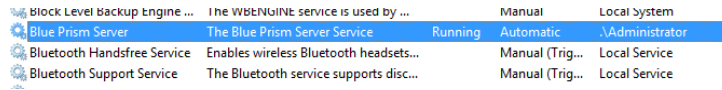


Figure 5: BP Server service

2. Log on as the user from this account instead of local system account

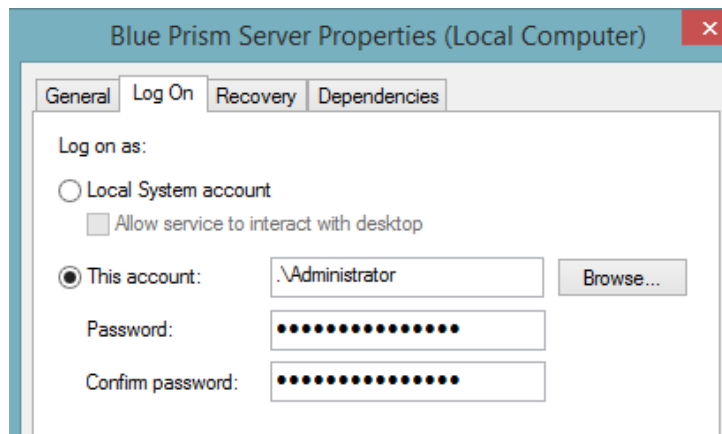


Figure 6: BP Server properties - I

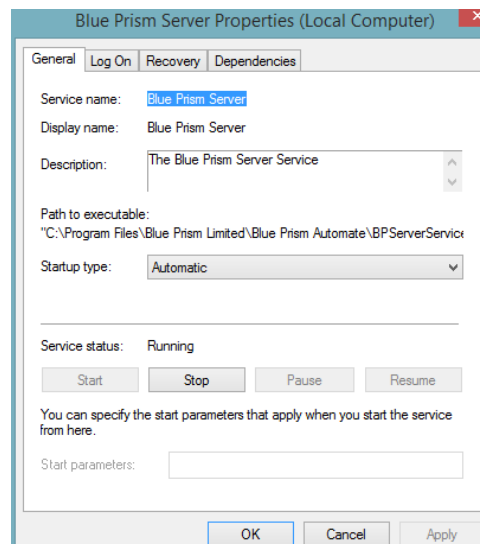


Figure 7: BP Server properties - II

3. Open the Blue Prism Server(BPServer.exe) from the installed Blue Prsim folder(fig.8)

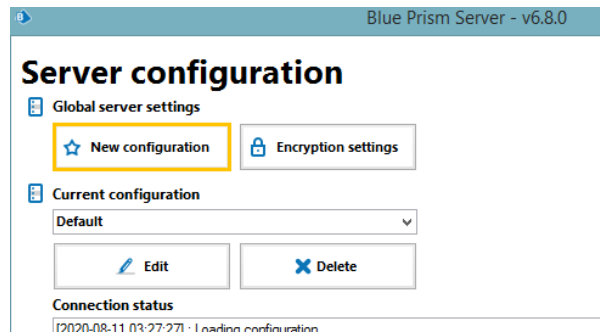


Figure 8: Blue Prism Server

4. Configure the settings as shown in fig. 9,10

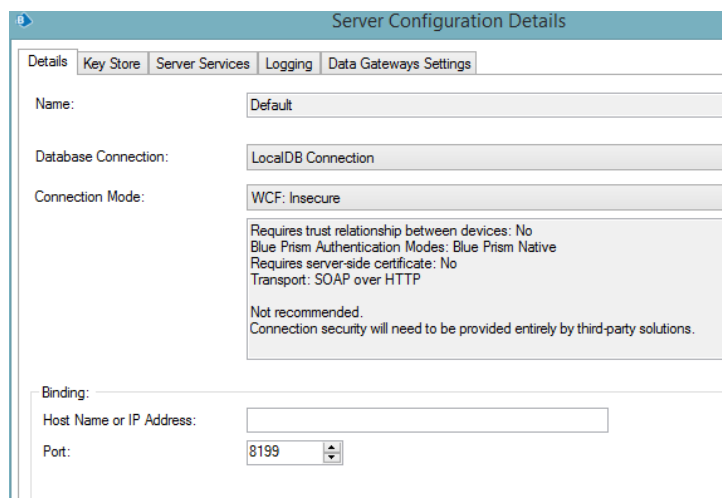


Figure 9: Server Configuration - I

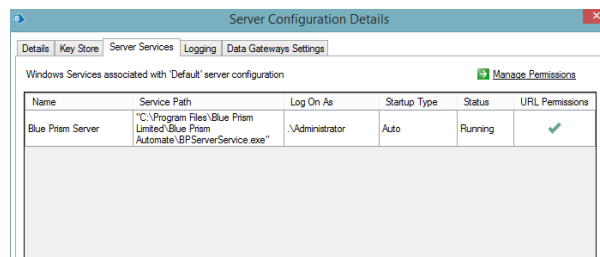


Figure 10: Server Configuration - II

5. Login back to the Blue Prism application and set up the database for BP Server as shown in fig. 11. Ensure that the connection type is set to “Blue prism server” and the IP address should be set to the IP Addr.(Limited; 2018) of the machine where the server has been configured.(host machine in this scenario)
6. Now sign in back to the Blue Prism application using the configured BP Server database connection as shown in fig.12

Connection Name:
The name by which this connection will be remembered

Connection Type:
The type of connection to use

Blue Prism Server:
The hostname of the Blue Prism Server

Connection Mode:
This must match the mode configured on the Blue Prism Server(s)

Server Port:
This must match the listening port configured on the Blue Prism Server(s)

Figure 11: BP Server database settings

Sign in to Blue Prism

Connection: [Configure connection](#)

Sign in with Blue Prism credentials

User name:

Password:

Figure 12: BP Server Login

Note that since Blue Prism has both separate client and server applications, now the server logged-in application will act as the Blue Prism server for all the machines in the network and also it would act like one of the clients(robot) in the Multi-robot setup.

3.3 Connecting Blue prism Client from VM

1. First install the Blue prism application in the VM as per 3.1
2. Login to the application using the BP Server connection(fig. 13) using the same credentials as used in the host machine

Sign in to Blue Prism

Connection: [Configure connection](#)

Sign in with Blue Prism credentials

User name:

Password:

Figure 13: Adding a VM client to the BP network

Once connected, all the available resources can be visible as shown in fig. 14

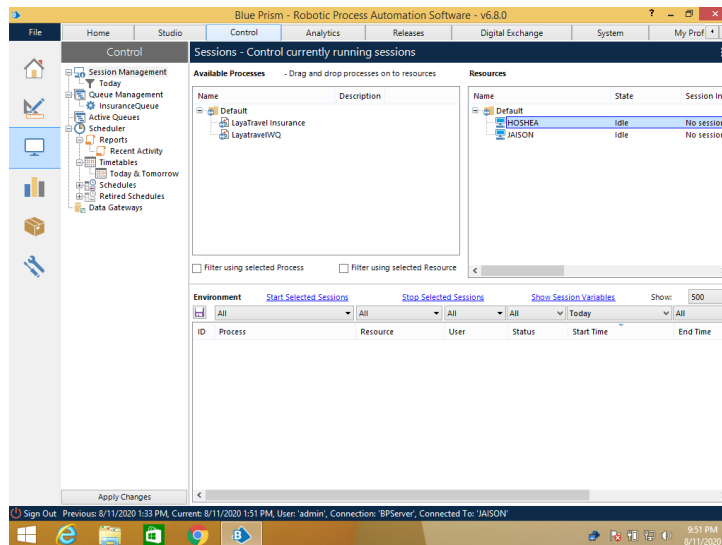


Figure 14: Multiple clients available

3.4 Sharing input file using drive mapping

Share the Excel input file named 'Insurance.xlsx'(zip file) using drive mapping so that all the machines can access the file during task execution.

1. Right-click the input file and select Share-Everyone as shown in fig.15

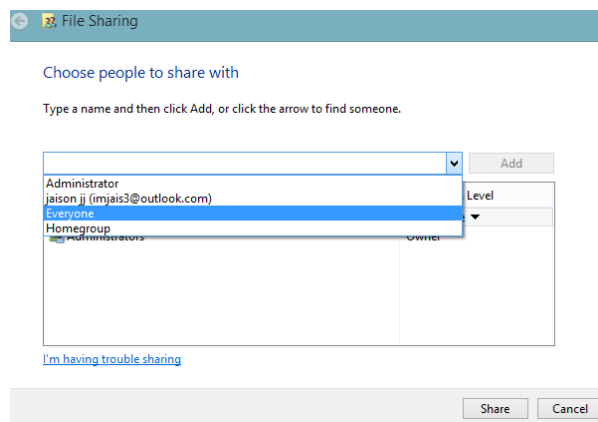


Figure 15: File sharing

2. Now map the network drive of the host machine with its IP address(fig. 17). Use the same address and drive for the virtual machines as well. Now the input file can be used by any of the clients when required in the task execution process.

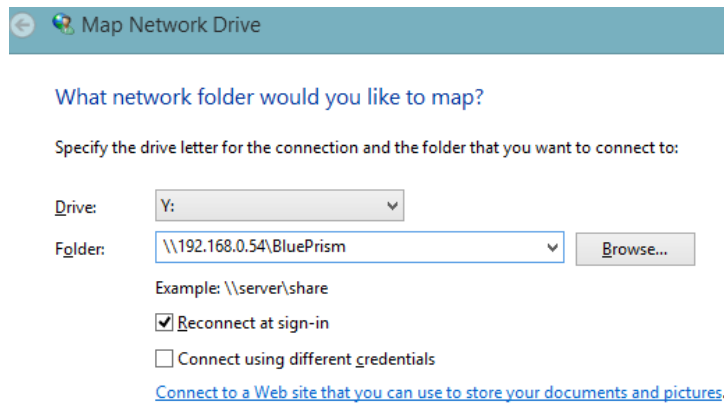


Figure 16: Mapping network drive

3.5 Execution of the task

1. Now import the bp release files(included in zip) named LayatravelWQ and laya-Google for both process and object studio respectively.

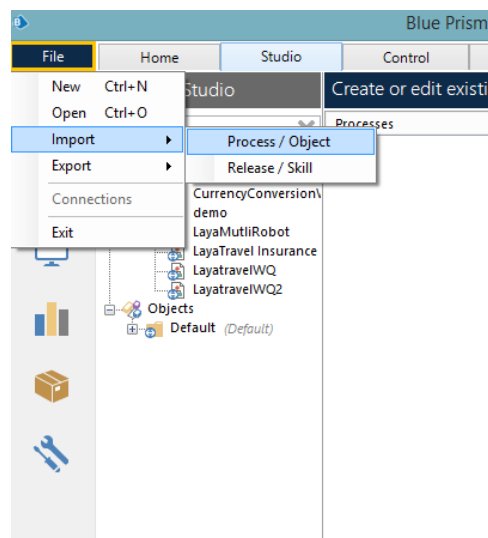


Figure 17: Importing release files

2. Since all the multiple robots are now connected, we can proceed with the execution. Execution can be done in two ways.
 - i. It can be done either using the Run option from the process Studio as shown in fig.18
 - ii. Or it can be done using the Control room(fig.19) where the process has to be just dragged to the multiple resources(bots)

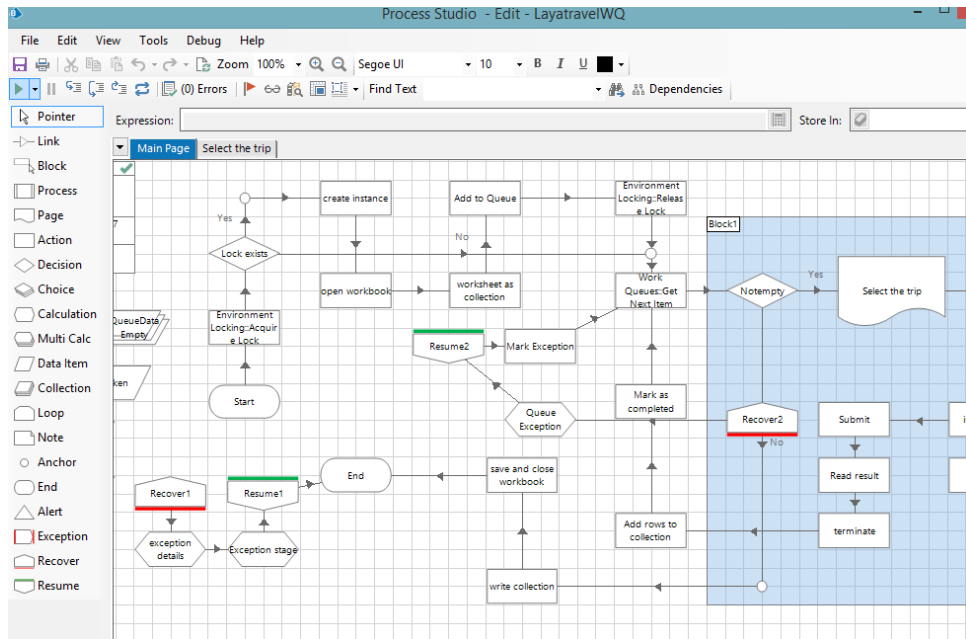


Figure 18: Execution through Process Studio

Control			Analytics	Releases	Digital Exchange	System	My Profile
Sessions - Control currently running sessions							
Available Processes				Resources			
Name				Name			
Default				Default			
LayaTravel Insurance				HOSHEA			
LayatravelWQ				JAISON			
				State			
				Session Info			
				No sessions			
				No sessions			

Figure 19: Execution through Control Room

4 Validations

Validation of the Blue Prism Multi-Robot system can be done using the Control Room's Queue Management. It displays all the items of the task queue as shown in fig. 20

Queue Name	Status	Worked	Pending	Referred	Total	Average Case Duration	Total Case Duration
InsuranceQueue	Running	3	0	1	4	00:39.750	02:39.000

Item Key	Priority	Status	Tags	Resource	Attempt	Created	Last Updated	Completed	Total Work T...
2	0	✓		HOSHEA_debug	2	7/25/2020 11:26:14 P	7/25/2020 11:28:11 P	7/25/2020 11:28:11 P	01:33
2	0	✓	Exception: Autom	HOSHEA_debug	1	7/25/2020 11:26:14 P	7/25/2020 11:27:31 P	7/25/2020 11:27:31 P	00:58
3	0	✓		JAISON_debug	1	7/25/2020 11:26:14 P	7/25/2020 11:27:23 P	7/25/2020 11:27:23 P	00:54
1	0	✓		JAISON_debug	1	7/25/2020 11:26:14 P	7/25/2020 11:26:48 P	7/25/2020 11:26:48 P	00:52

Figure 20: Validation of the Multi-Robot system

If all the items have a green-tick in the flag column, it shows that the task has been completed successfully. Else if any of items have a flag-mark, it means except those items, all others are executed properly.

Also, the audit for both the process logs and object logs can be found under the Audit column of the System tab. It has both the the statistics for their status and execution time as shown in fig.21

Start	End	Process	Status
7/20/2020 12:24:3...		LayaTravel Insurance	Debugging
7/21/2020 12:08:3...	7/21/2020 1:28:56 ...	LayaTravelWQ	Debugging
7/23/2020 8:44:26 ...	7/23/2020 8:45:07 ...	LayaTravelWQ	Completed
7/23/2020 8:48:44 ...	7/23/2020 9:04:53 ...	LayaTravelWQ	Debugging
7/23/2020 8:50:35 ...	7/23/2020 8:51:29 ...	LayaTravelWQ	Completed
7/23/2020 8:52:57 ...	7/23/2020 8:53:21 ...	LayaTravelWQ	Completed
7/23/2020 8:55:55 ...	7/23/2020 8:56:18 ...	LayaTravelWQ	Completed
7/23/2020 8:58:23 ...	7/23/2020 8:58:45 ...	LayaTravelWQ	Completed
7/23/2020 9:05:02 ...	7/23/2020 9:06:05 ...	LayaTravel Insurance	Debugging
7/23/2020 9:08:16 ...	7/23/2020 9:21:37 ...	LayaTravelWQ	Debugging
7/23/2020 9:24:40 ...	7/23/2020 9:35:42 ...	LayaTravelWQ	Debugging
7/25/2020 7:16:35 ...	7/25/2020 8:59:42 ...	LayaTravelWQ	Debugging
7/25/2020 7:18:11 ...	7/25/2020 7:23:40 ...	LayaMultiRobot	Debugging
7/25/2020 8:47:41 ...	7/25/2020 8:48:09 ...	LayaTravelWQ	Completed
7/25/2020 8:50:35 ...	7/25/2020 8:50:59 ...	LayaTravelWQ	Completed
7/25/2020 9:00:51 ...	7/25/2020 9:05:13 ...	LayaTravelWQ	Debugging
7/25/2020 9:10:59 ...	7/25/2020 9:11:27 ...	LayaTravelWQ	Completed
7/25/2020 9:17:27 ...	7/25/2020 9:18:01 ...	LayaTravelWQ	Completed
7/25/2020 9:18:43 ...	7/25/2020 9:19:16 ...	LayaTravelWQ	Completed
7/25/2020 9:20:36 ...	7/25/2020 9:21:35 ...	LayaTravelWQ	Completed
7/25/2020 9:52:56 ...	7/25/2020 9:53:41 ...	LayaTravelWQ	Completed

Figure 21: Audit - Process logs

References

Limited, B. P. (2018). *v6.4 User Guide - Installing Enterprise Edition*, Blue Prism.

Limited, B. P. (2020). *v6.7 Getting started - Blue Prism Trial and Learning Editions*, Blue Prism.