

A diverse group of business professionals in a meeting, smiling and looking upwards, with hands raised in a celebratory gesture. The image is a low-angle shot looking up at the group, who are gathered around a table. The background shows a modern office interior with large windows and a brick ceiling. The overall mood is positive and collaborative.

Citrix Automation

What is Citrix automation in RPA?

Ability of a RPA platform to comprehensively connect with Citrix environment to automate applications running in the secured Citrix environment

Citrix environment limitation and AssistEdge 17.6 approach?

- Due to high security, application controls/elements are not exposed for automation field configuration or recording
- We had to rely on Image or Surface automation

Brief information on Image or Surface automation

- Image based clicks on the remote Citrix application(Image Control Activity)
- Mark the image where you need to perform the click
- Configure the fields and test run the process

What is hybrid environment?

Some applications are present and accessible from ***local (non-Citrix) environment*** and some from ***Citrix environment***.

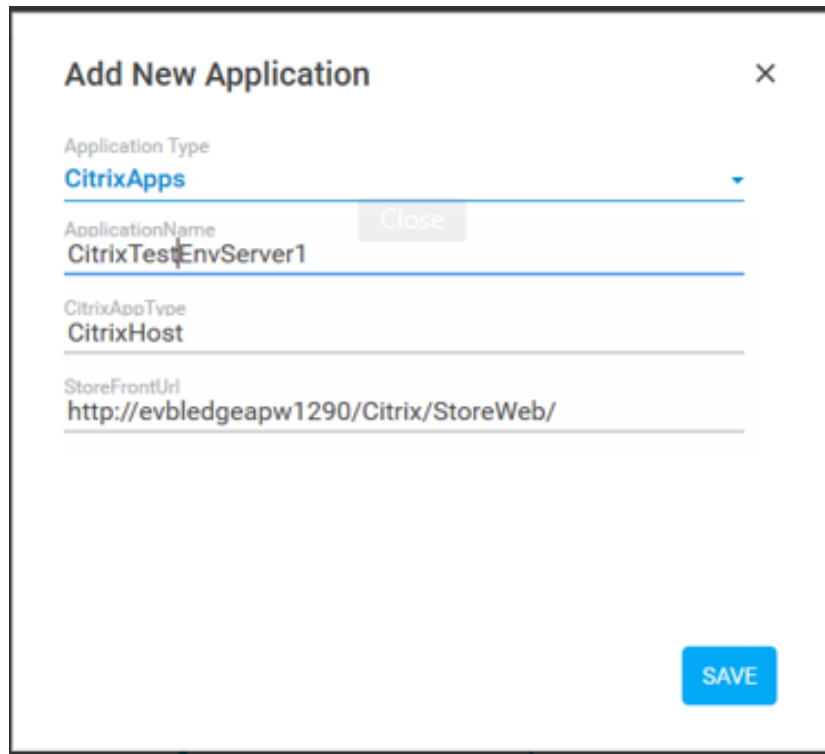
Citrix out-of-box adapter

AssistEdge RPA Studio supports automation of the Citrix based applications in a codeless manner through out-of-box adapter ***CitrixApps***.

Two types of Citrix Application

CitrixHost

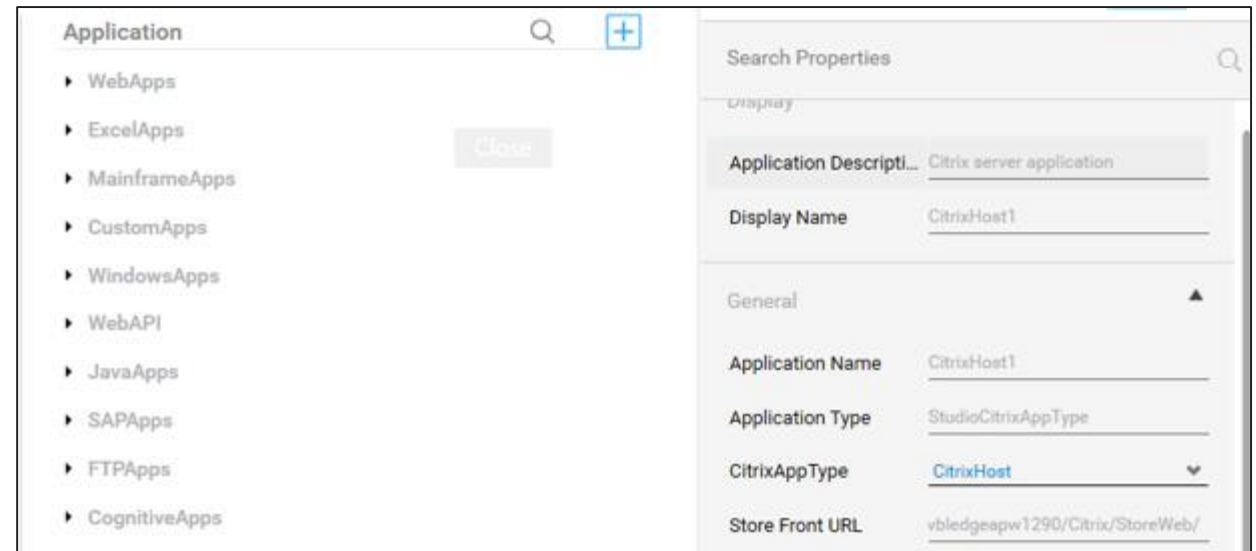
1. Citrix Host: A Citrix server on which the applications are hosted are added as 'CitrixHost' type of Citrix applications
2. CitrixHost can be added either from process canvas or admin module



The 'Add New Application' dialog box is shown with the following fields:

- Application Type:** CitrixApps (dropdown menu)
- ApplicationName:** CitrixTestEnvServer1 (text input)
- CitrixAppType:** CitrixHost (dropdown menu)
- StoreFrontUrl:** http://evbledgeapw1290/Citrix/StoreWeb/ (text input)

A 'Close' button is located next to the ApplicationName field, and a 'SAVE' button is at the bottom right.



The screenshot shows the 'Application' list on the left and the 'Search Properties' panel on the right.

Application List:

- WebApps
- ExcelApps
- MainframeApps
- CustomApps
- WindowsApps
- WebAPI
- JavaApps
- SAPApps
- FTPApps
- CognitiveApps

Search Properties Panel:

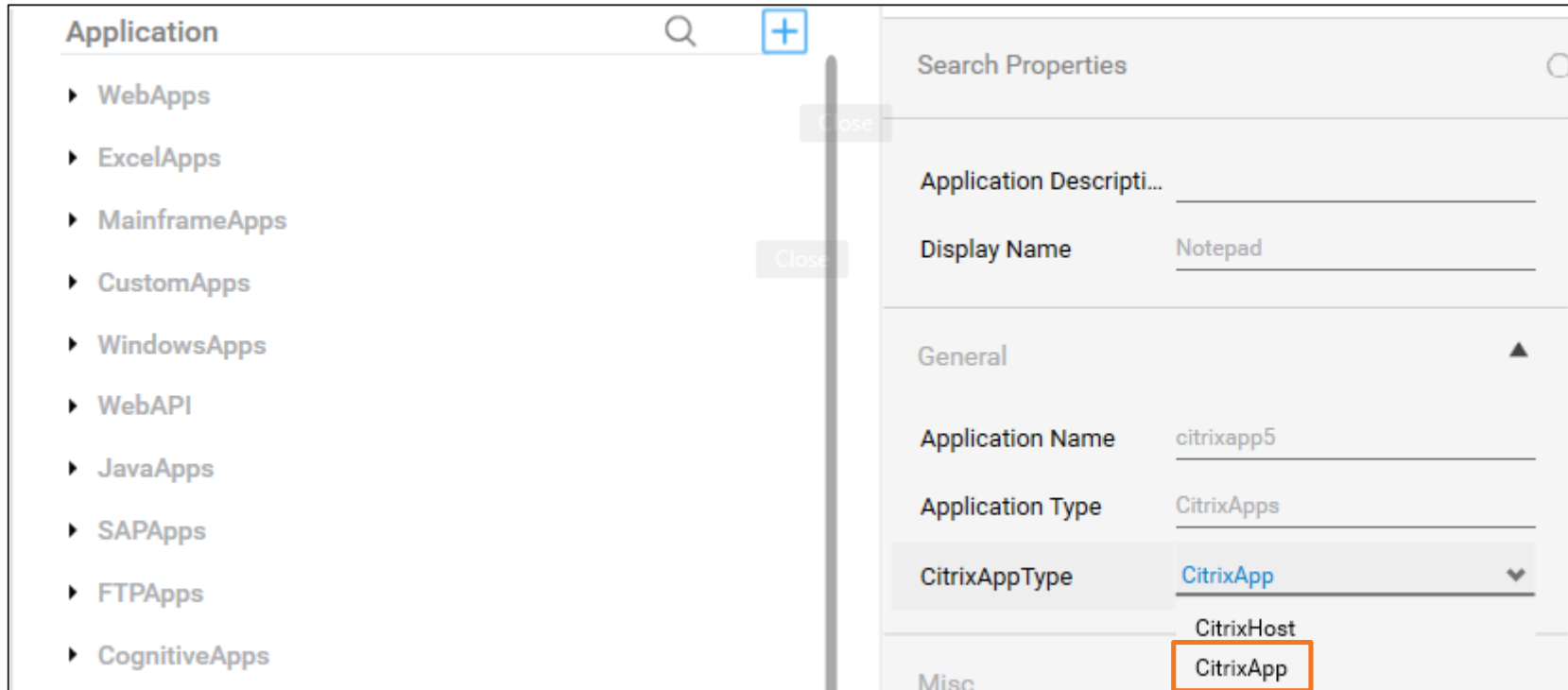
- Application Description:** Citrix server application
- Display Name:** CitrixHost1
- General Section:**
 - Application Name:** CitrixHost1
 - Application Type:** StudioCitrixAppType
 - CitrixAppType:** CitrixHost
 - Store Front URL:** vbledgeapw1290/Citrix/StoreWeb/

Note: URL for the Citrix Server application is known in Citrix terminology as 'Store front URL'

Two types of Citrix Application(cont.)

CitrixApp

1. CitrixApp: Citrix applications which are not hosts, but actual applications within Citrix environment, get added as type '**CitrixApp**'
2. Such applications would typically be added when a process configured in Automation Studio in **Citrix environment** is **imported** in the **local or non Citrix environment** into the Automation Studio



Note: If a Citrix server application is launched using a thick client interface, product provides extensibility to achieve this.

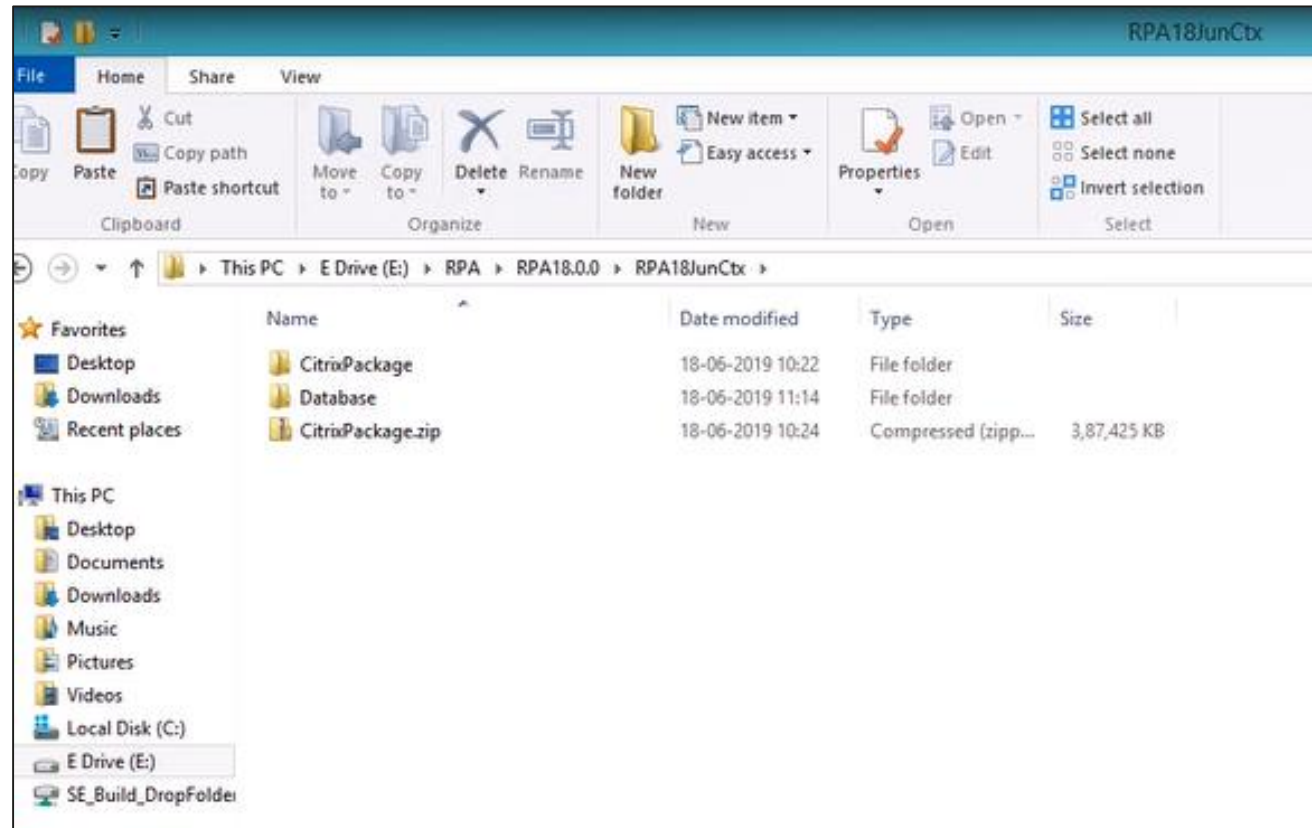
Automation of Citrix based applications in a hybrid scenario

Automation of Citrix based applications in a process containing a mix of local application as well as Citrix based applications requires the following:

1. Installation of product on ***local environment*** and Automation Studio up and running
2. Automation Studio and an automation component needs to be deployed on the ***Citrix server***
3. Automation of applications in Citrix environment in the Studio present in ***Citrix environment***

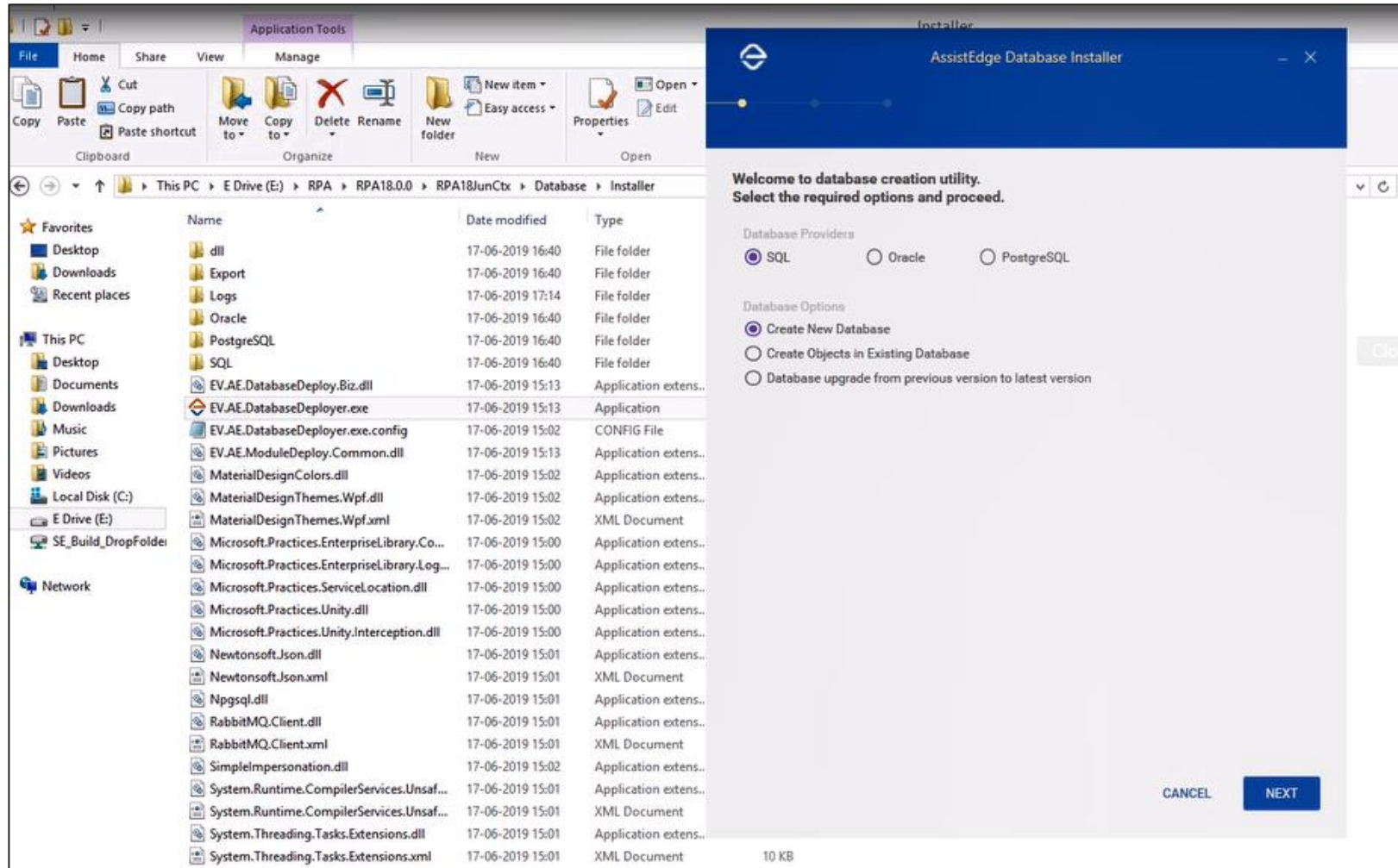
Automation Studio and an automation component needs to be deployed on the Citrix server

1. Get Citrix package and database package from the AssistEdge build and extract Citrix Package



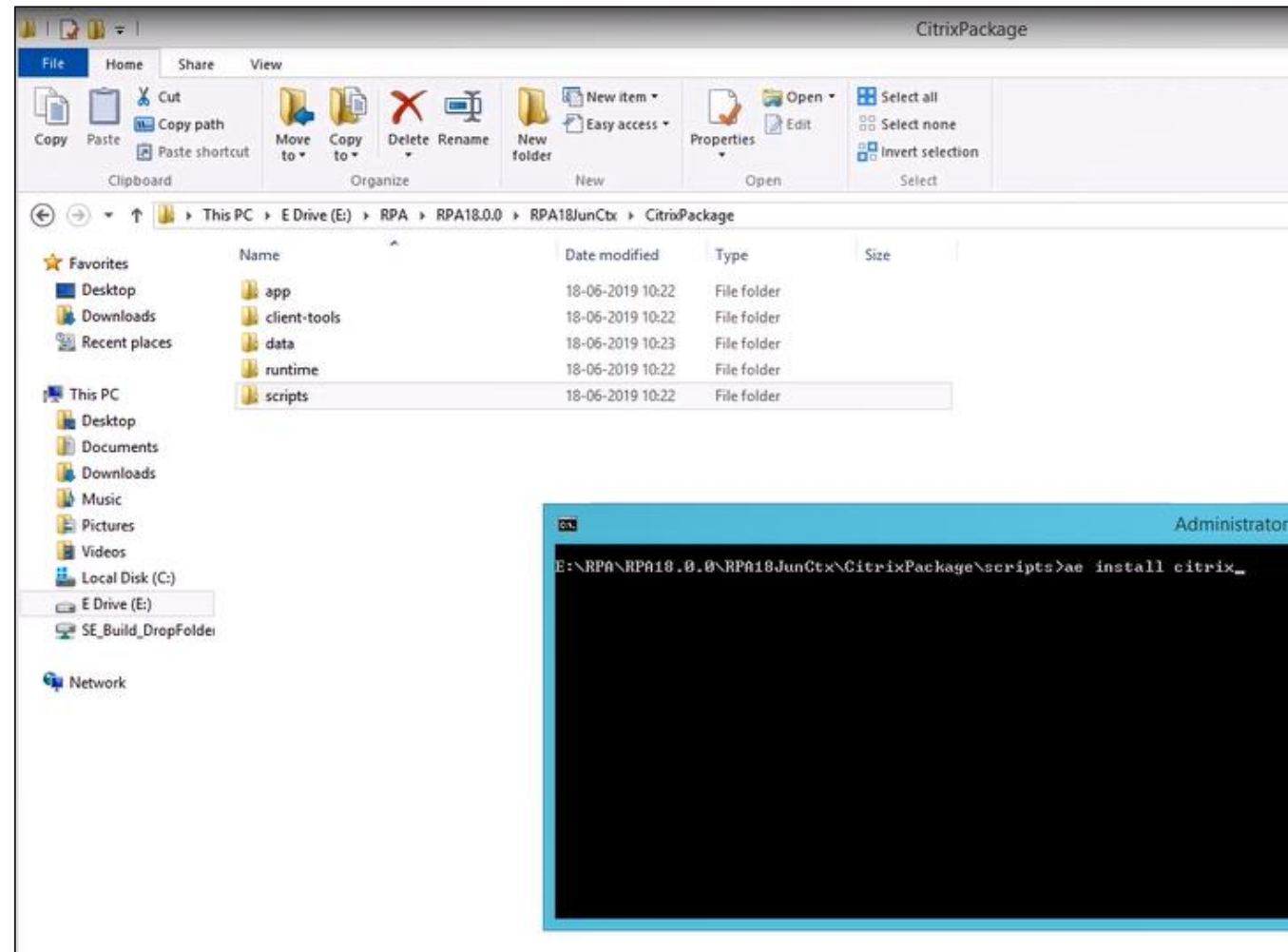
Automation Studio and an automation component needs to be deployed on the Citrix server(cont.)

2. Install Database



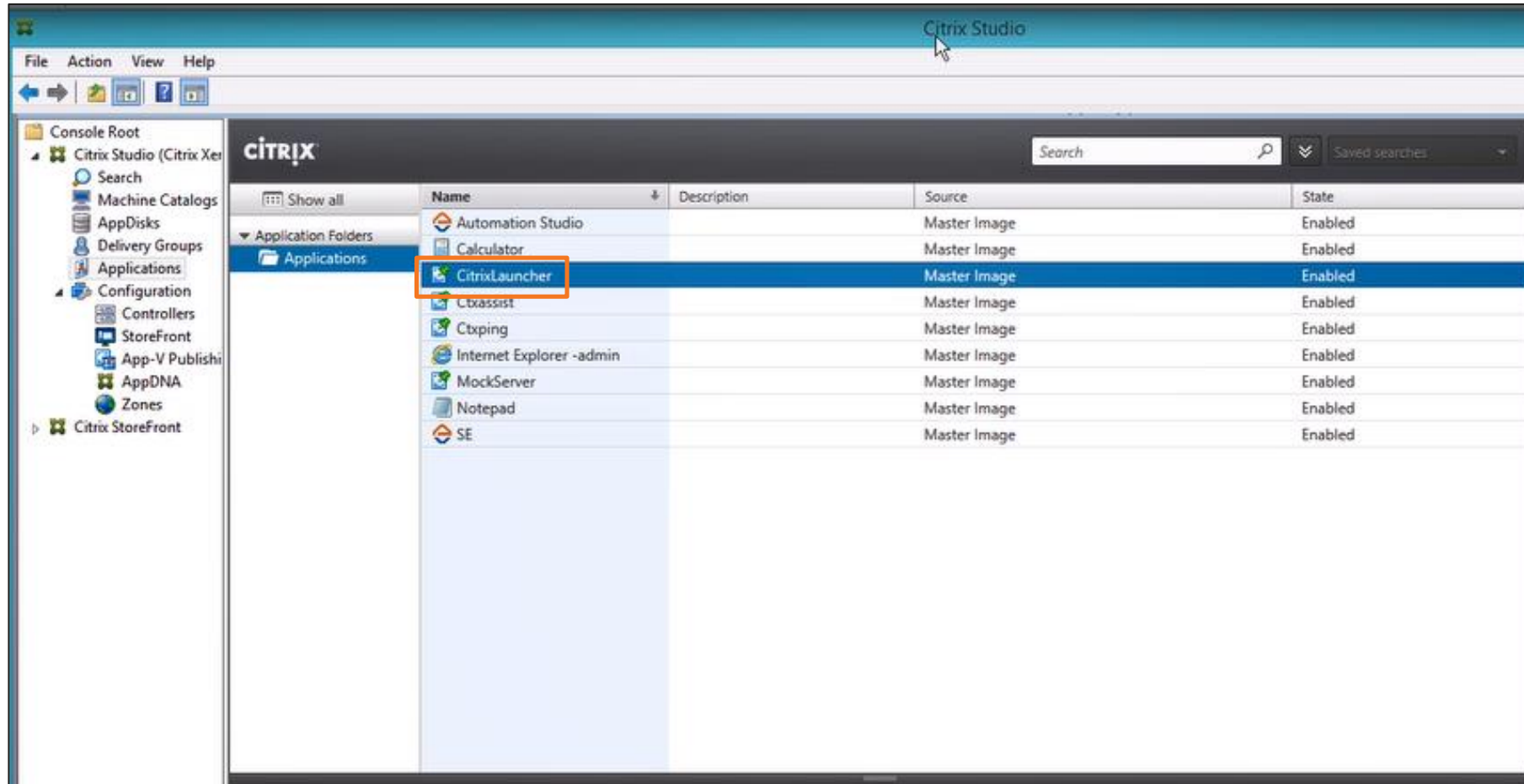
Automation Studio and an automation component needs to be deployed on the Citrix server(cont.)

3. Install Citrix Package



Automation Studio and an automation component needs to be deployed on the Citrix server(cont.)

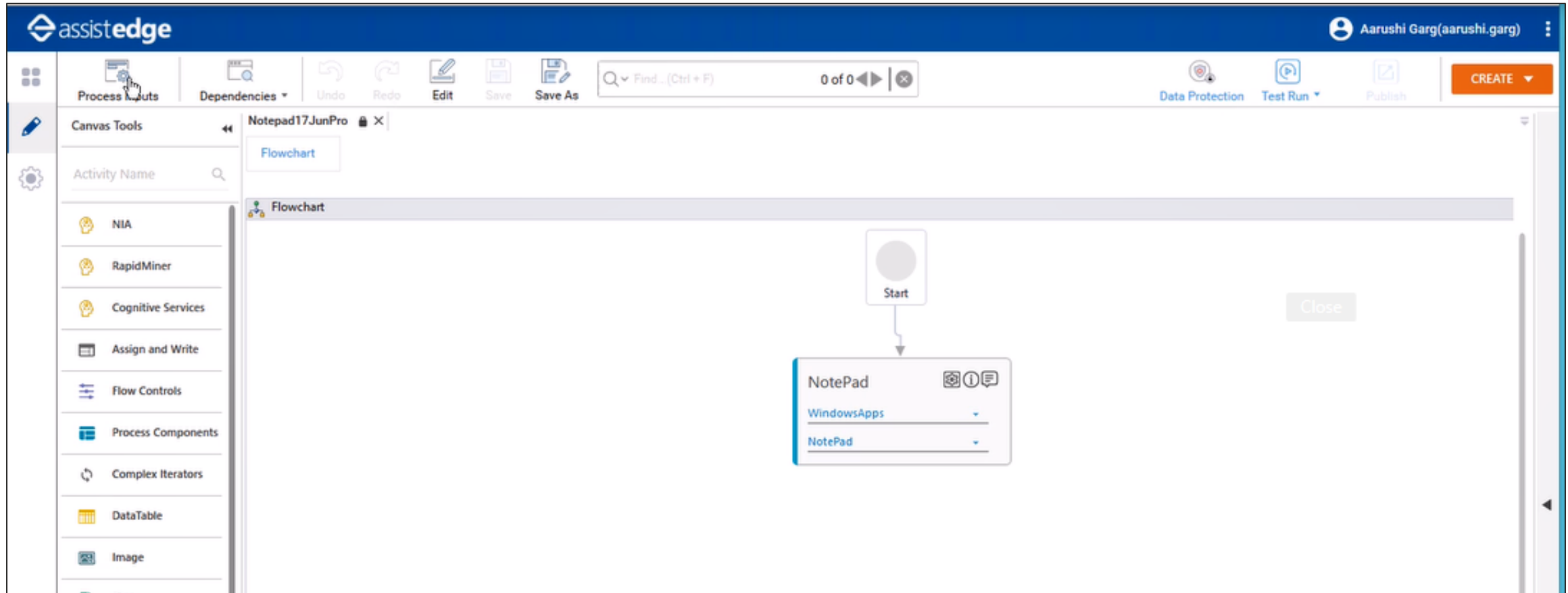
4. Publish Citrix runtime from Citrix studio



Path of the file: CitrixPackage\client-tools\AssistCtxRuntime

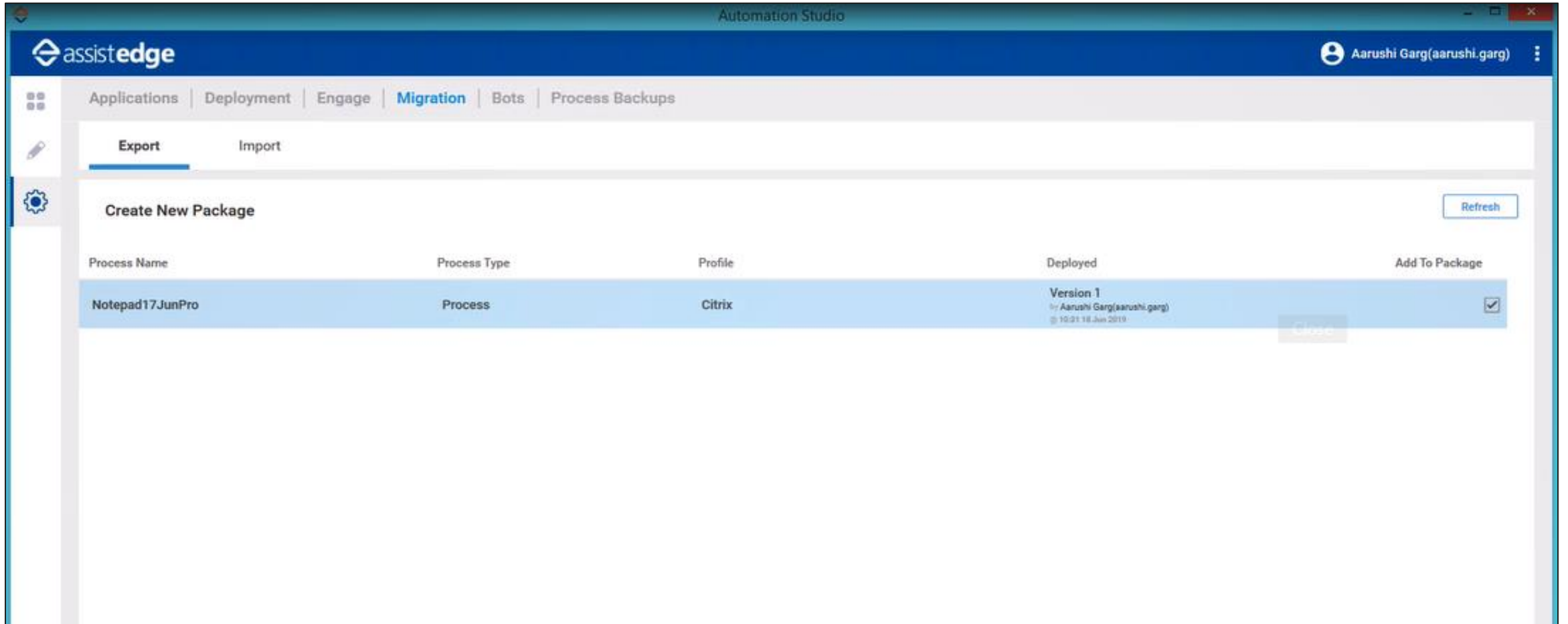
Automation of applications in Citrix environment in the Studio present in Citrix environment

5. Open automation studio and create process



Automation of applications in Citrix environment in the Studio present in Citrix environment(cont.)

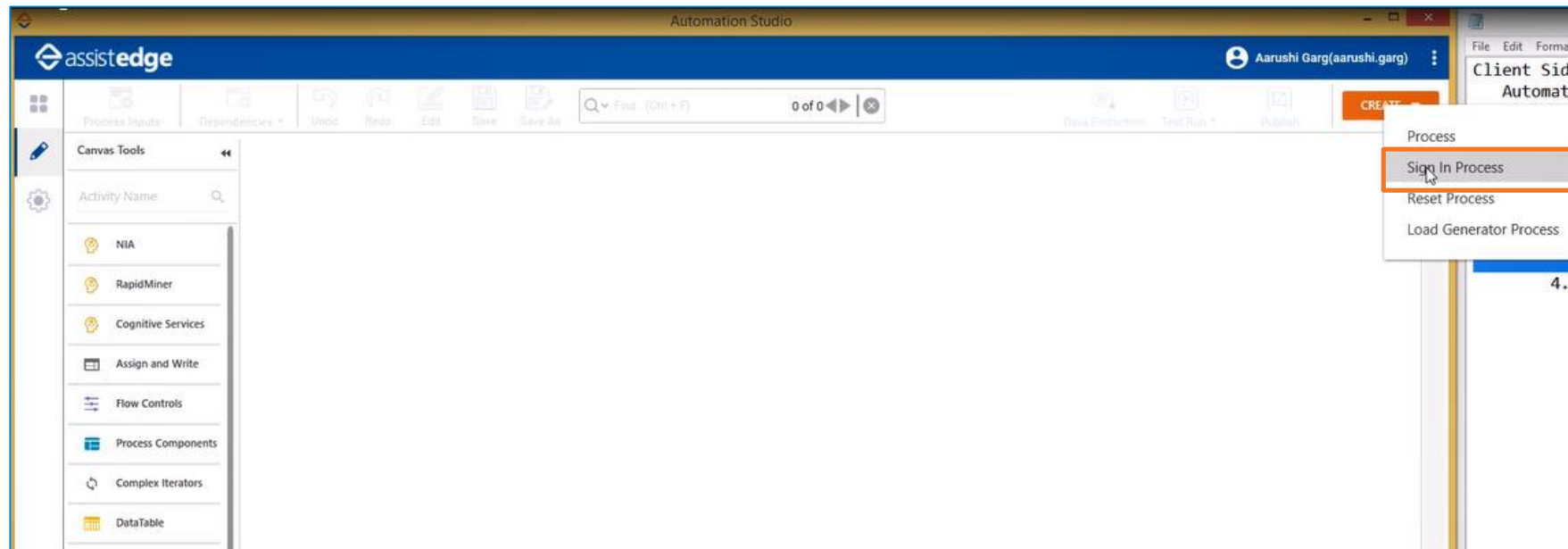
5. Export the created process



Note: The package that is created for this exported process is internally marked as Citrix automation package.

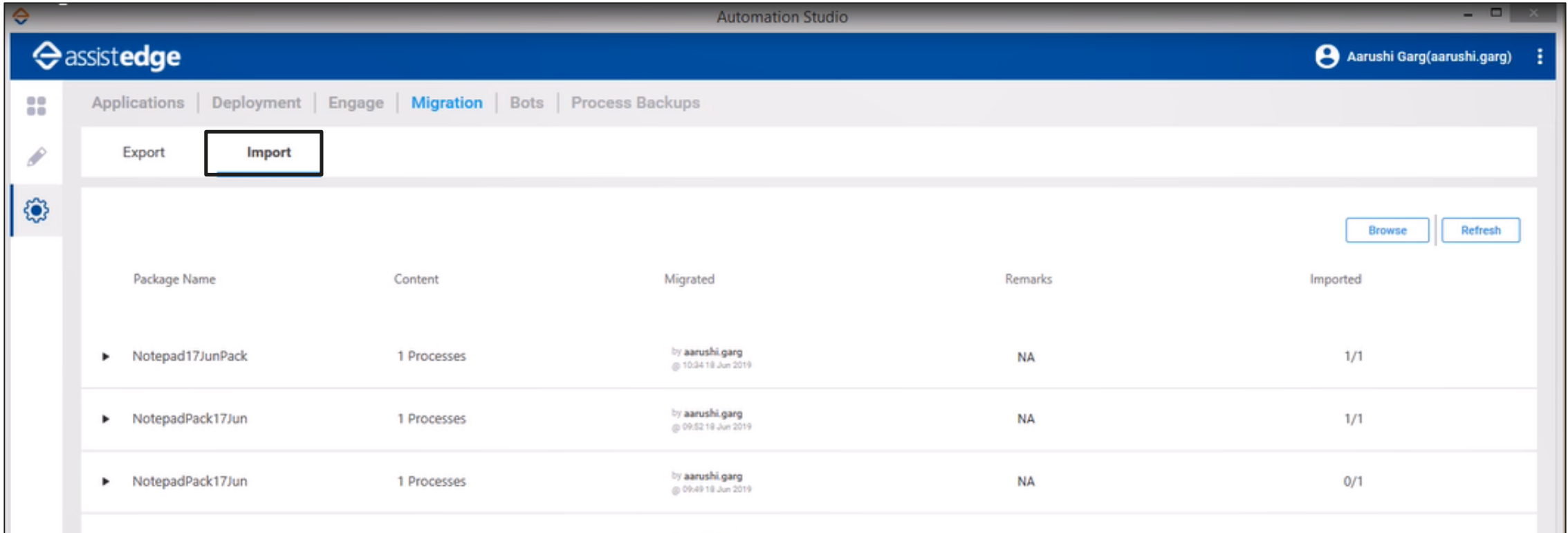
Steps to be followed in the local environment(non-Citrix)

1. Copy the exported process to a file location on the local environment outside Citrix
2. Add a Citrix Application of type 'CitrixHost' under 'CitrixApps'
3. Create a Sign-In Process for the above added CitrixHost application
 - Create a sign-in process for the application
 - Explicitly configuring the user id and password fields is not required, these 2 fields are implicitly configured
 - Test, publish and deploy the sign-in process



Steps to be followed in the local environment(cont.)

4. Import the package in the Studio instance outside the Citrix environment

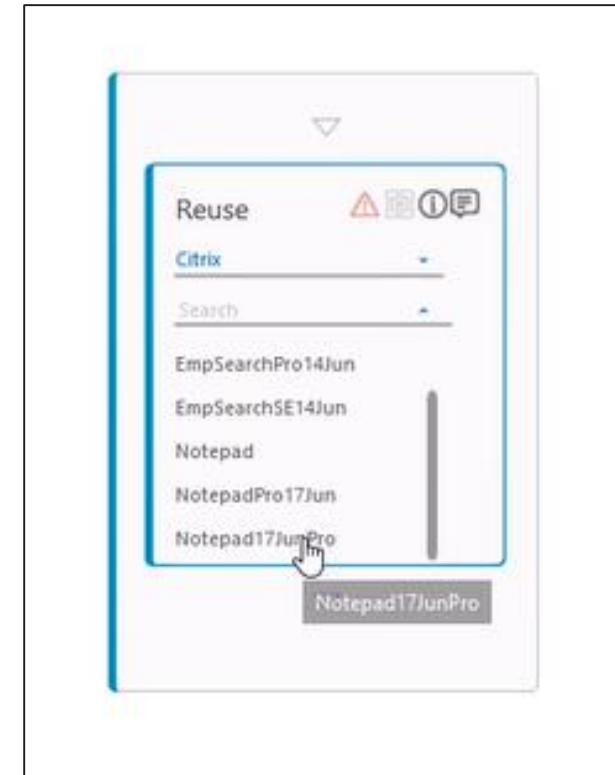
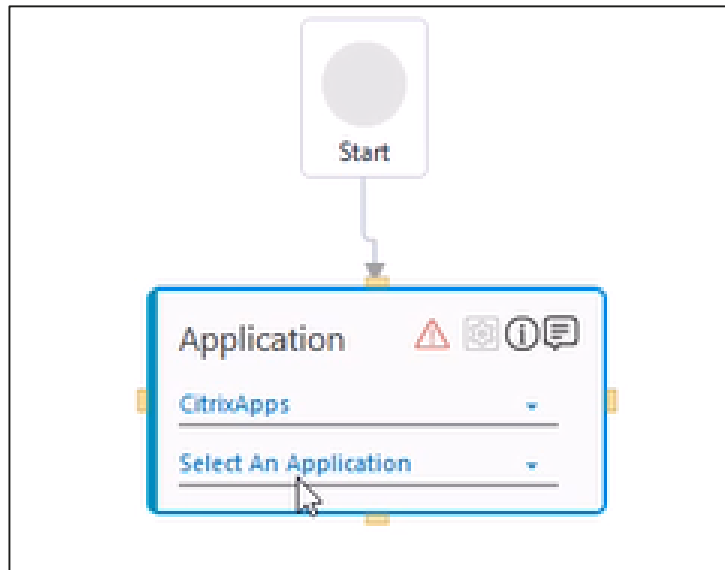


The screenshot shows the Automation Studio interface. The top navigation bar includes 'assistedge' and a user profile 'Aarushi Garg(aarushi.garg)'. The main navigation tabs are 'Applications', 'Deployment', 'Engage', 'Migration' (selected), 'Bots', and 'Process Backups'. Below these, there are 'Export' and 'Import' buttons, with 'Import' highlighted by a black box. On the left sidebar, there is a settings gear icon. The main content area features a table with columns: 'Package Name', 'Content', 'Migrated', 'Remarks', and 'Imported'. Above the table, there are 'Browse' and 'Refresh' buttons. The table contains three rows of data, all showing '1 Processes' and 'NA' in the 'Remarks' column.

Package Name	Content	Migrated	Remarks	Imported
▶ Notepad17JunPack	1 Processes	by aarushi.garg @ 10:34 18 Jun 2019	NA	1/1
▶ NotepadPack17Jun	1 Processes	by aarushi.garg @ 09:52 18 Jun 2019	NA	1/1
▶ NotepadPack17Jun	1 Processes	by aarushi.garg @ 09:49 18 Jun 2019	NA	0/1

Steps to be followed in the local environment(cont.)

4. Create a process on the Automation Studio to automate the applications in the local environment
5. To include the Citrix based application in the process flow, reuse the imported process
 - Drag and drop the CitrixHost application
 - Place the Reuse activity within the Citrix host application container
 - Select the imported Citrix process
6. Save and test the process



Steps to be followed in the local environment(cont.)

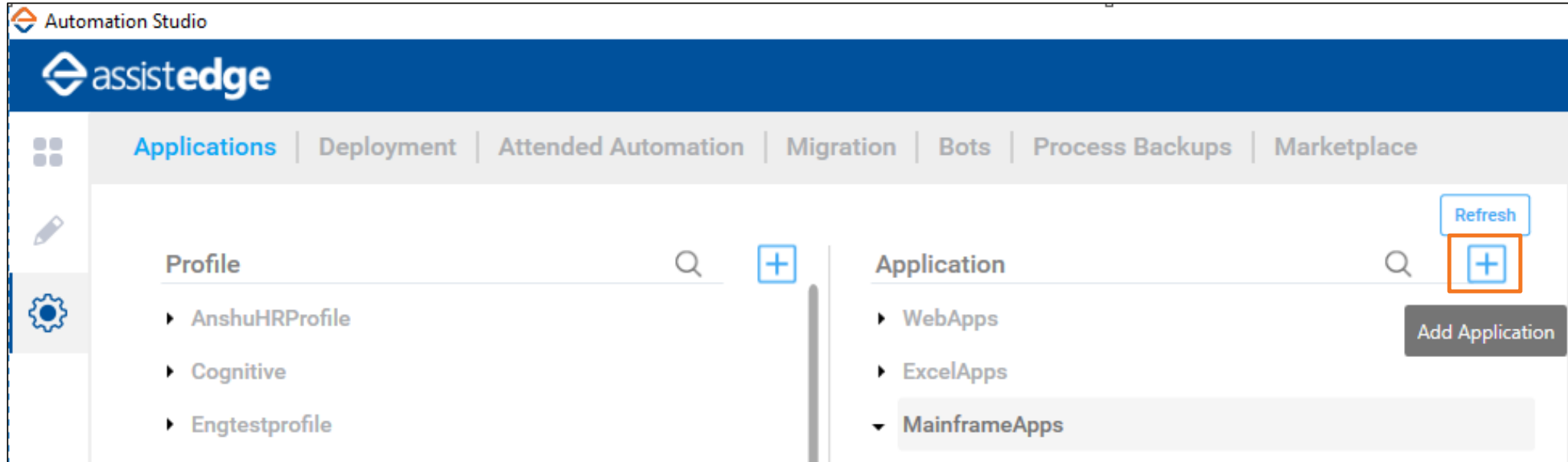
- On setup of environment and testing the process all the applications in the process including Citrix based applications are **launched, signed in and automation** is performed on them
- Communication between local environment and Citrix based environment happens through the automation component on Citrix over **virtual channel**
- Citrix based applications are **rendered as images** and the automation happening on the same can be seen from the local environment



Mainframe Automation

Steps to add a mainframe application

1. Studio>Application Section>Add application



Add Application

Application Type

MainframeApps

Application Name

App1

ADD

Mainframe Automation in 18.0

- EHLLAPI - Emulator High-level Language Application Program Interface has been added in 18.0
- No need to create a plugin for each emulator
- EHLLAPI is generic approach to automate IBM mainframe which will be emulator agnostic

Search Properties

Details

EmulatorEHLLAPI

Session Short Name

SessionPath

Display

Application Descripti...MainfrmApp1

Display NameMainfrmeApp1

Mainframe automation in 18.0

- To automate the Mainframe application, use the **"Start Field Configuration"** button.
- From the property grid, select one of the below configuration options for a Mainframe application
 - Set text - Set a value to the application
 - Get text - Fetch a value from the application
 - Fire event - Execute an action in the application

