TP5 Report

WEB APP, FUNCTION APP AND LOGIC APP

By: Nadia FRIKHA and Rania MIDAOUI, RT4-G2

Introduction:

As businesses continue to embrace digital transformation, cloud computing has emerged as a key enabler, providing scalable and cost-effective solutions for running applications and services.

Azure Web App, Azure Functions, and Azure Logic App are three critical cloud services offered by Microsoft Azure that allow businesses to build and deploy cloud-based solutions quickly and efficiently. By leveraging the power and flexibility of these services, we can help businesses streamline their operations and stay competitive in a rapidly evolving digital landscape.

Azure Web App :

Azure Web App is a fully managed platform for building, deploying, and scaling web apps. It provides a range of features to streamline the development process, including support for multiple programming languages and frameworks, automatic scaling, and built-in DevOps tools. With Azure Web App, developers can focus on writing code rather than managing infrastructure, making it an ideal choice for building and deploying web applications quickly and efficiently.

Azure Functions:

Azure Functions is a serverless compute service that enables developers to build event-driven applications. With Functions, developers can write code to respond to events such as changes in data, user actions, or messages from other services, without worrying about the underlying infrastructure. This makes Functions an ideal choice for building applications that require rapid scaling and high availability, as well as for integrating disparate services and systems.

Azure Logic App:

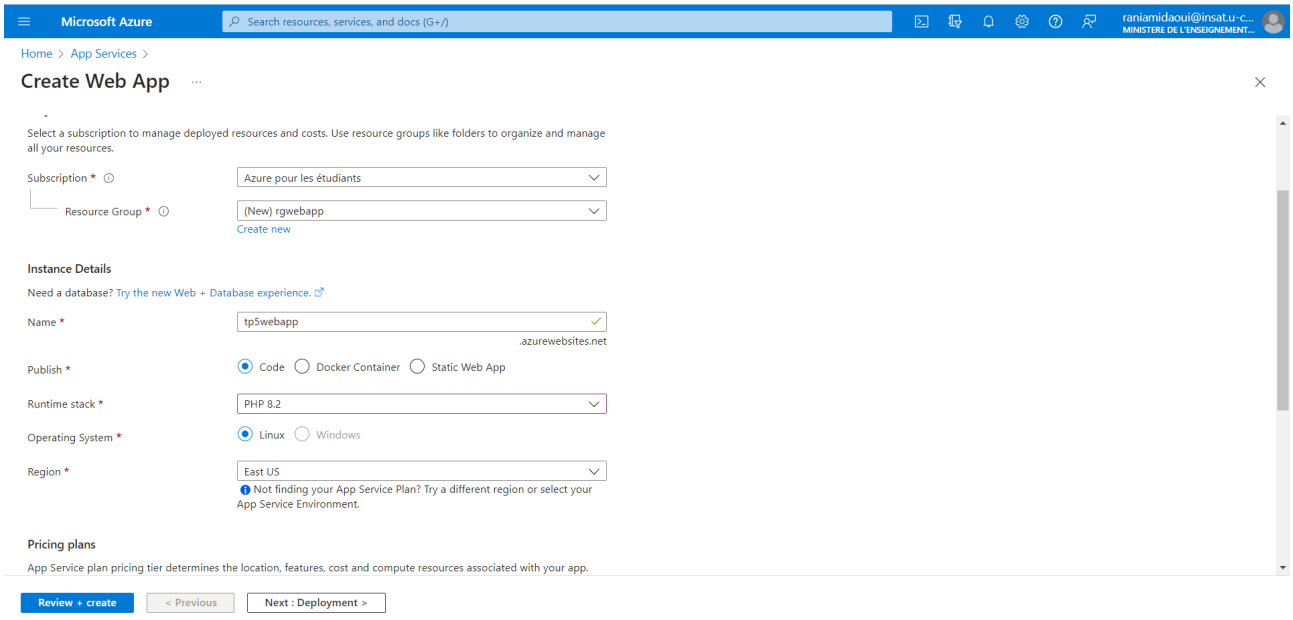
Azure Logic App is a cloud-based service that allows users to create and run workflows that integrate various applications and services. Logic Apps provide a visual interface for defining workflows, which can include actions such as data transformation, conditional logic, and integration with third-party services. With Logic Apps, users can automate business processes and workflows, making it easier to manage complex systems

and streamline operations. Logic Apps can integrate with a wide range of services, including Office 365, Dynamics 365, Salesforce, and many others.

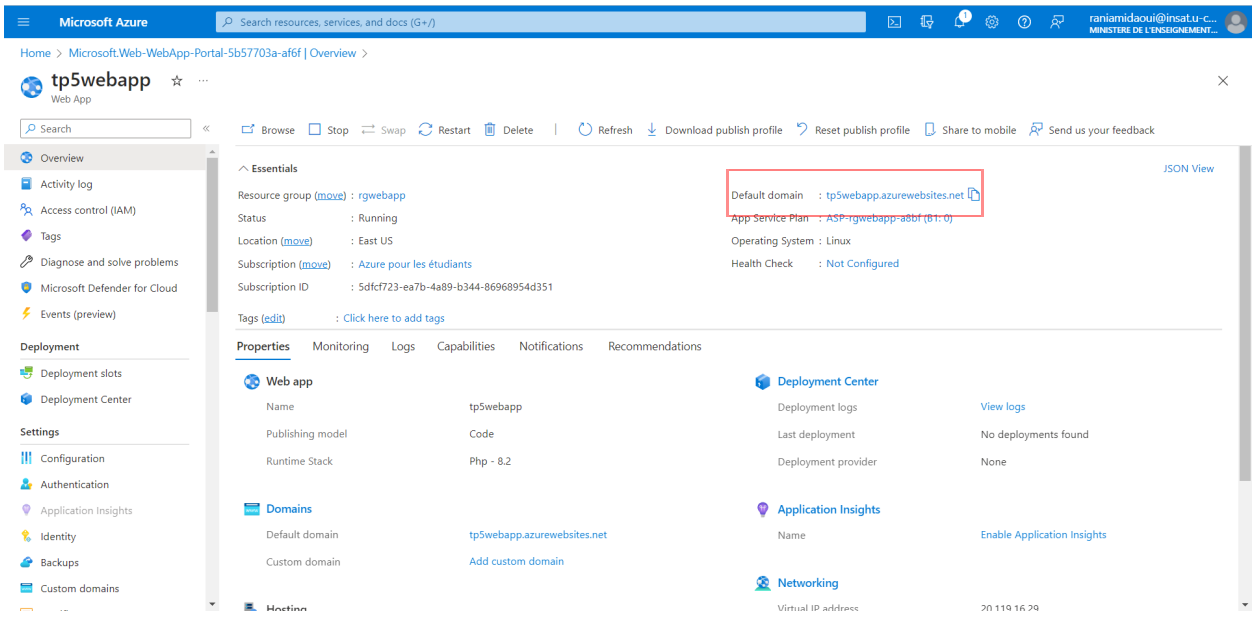
Questions:

Task 1: Azure Web App:

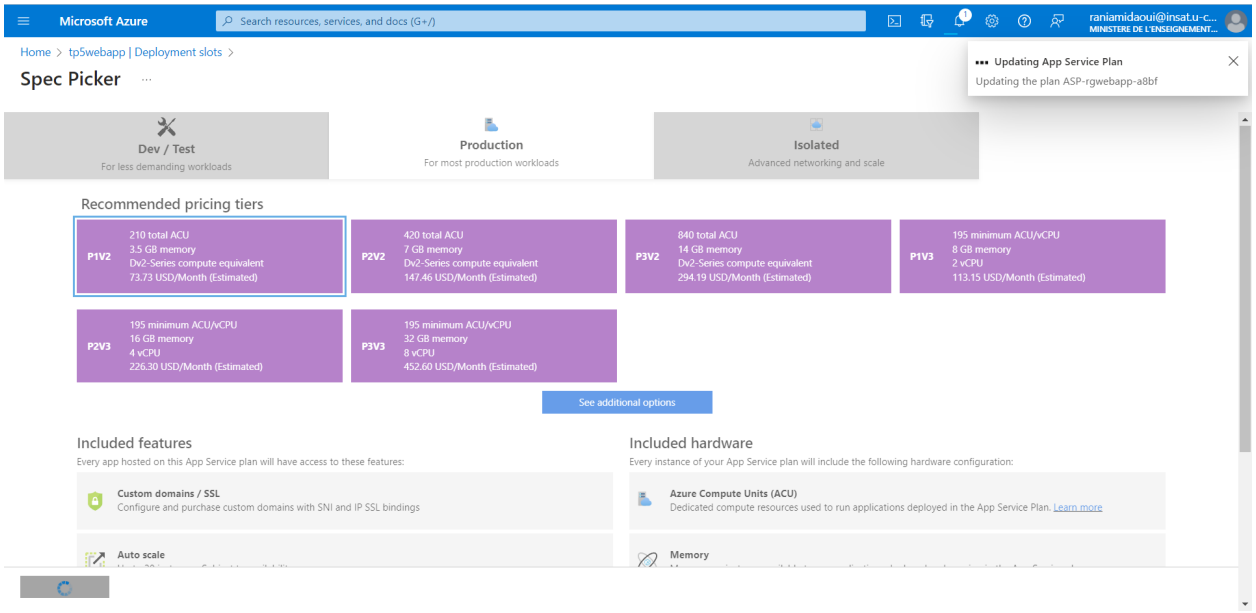
1. We create a Web App named tp5webapp:

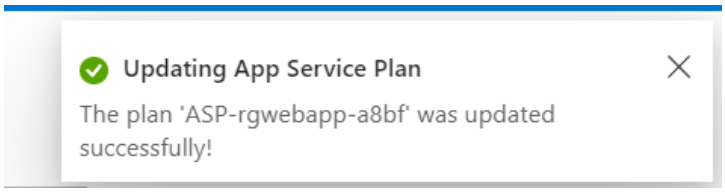


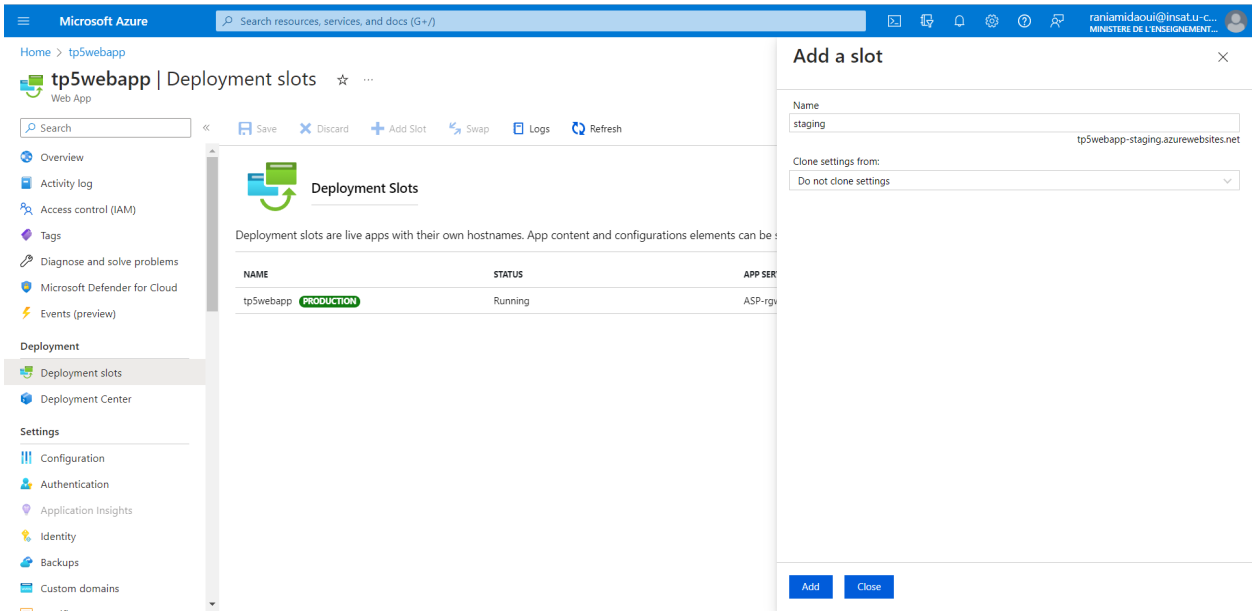
2- We review the app link

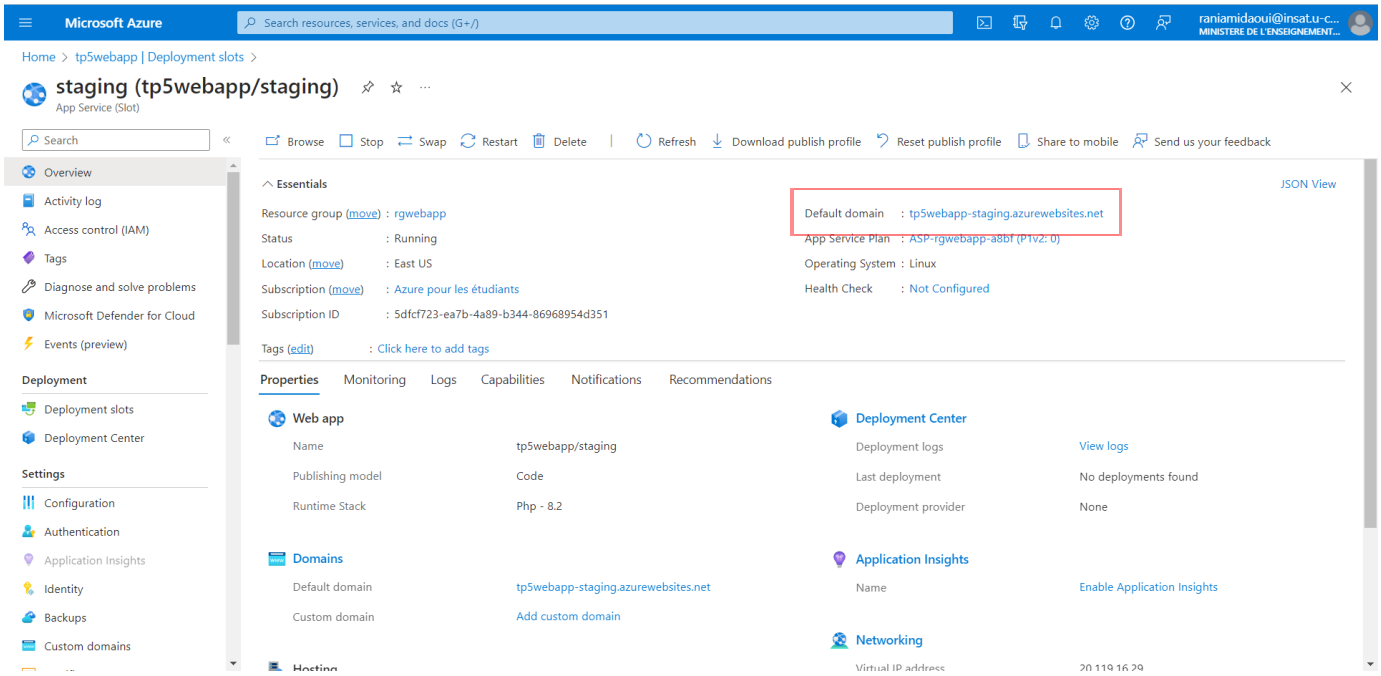


We now update the SKU to standard and create a new slot (staging slot):

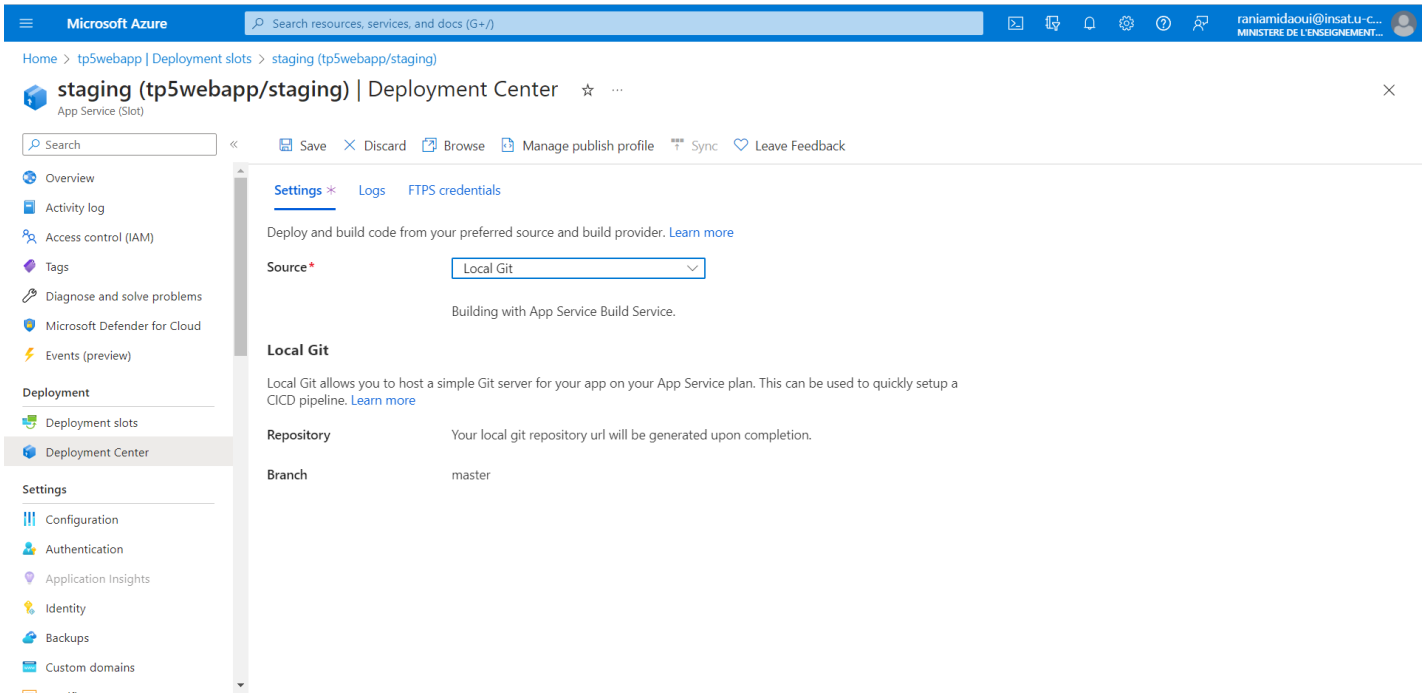


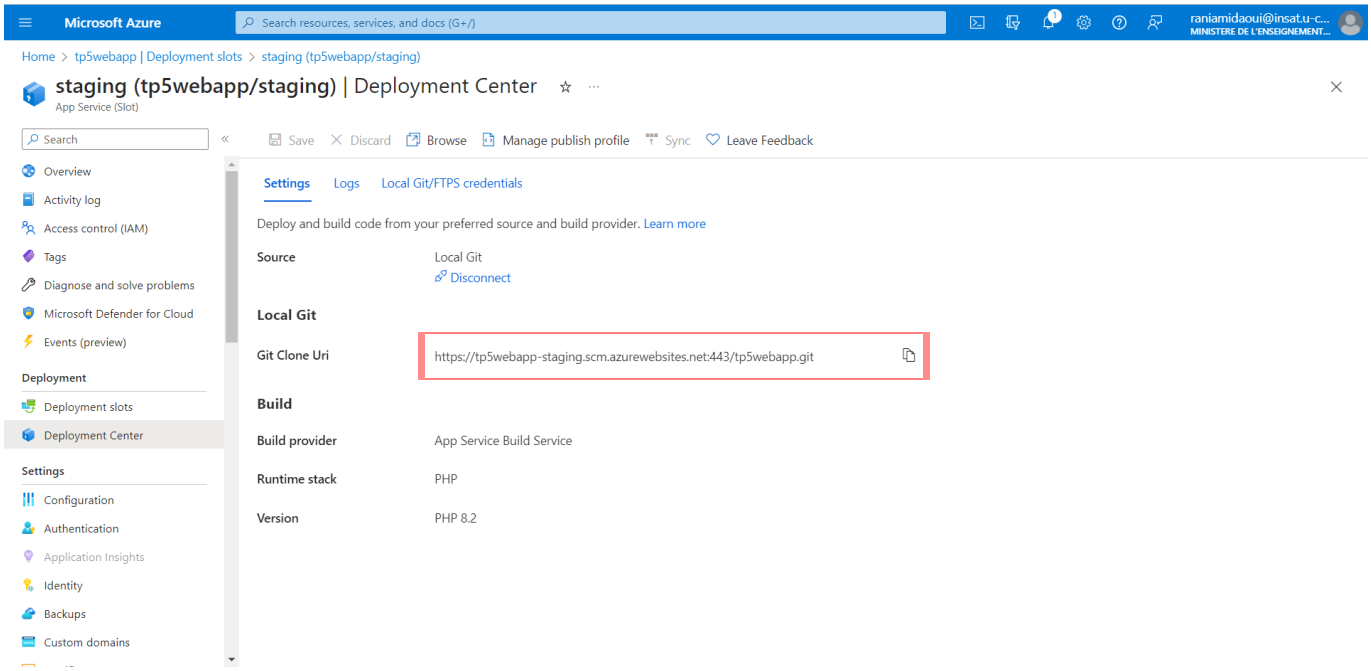




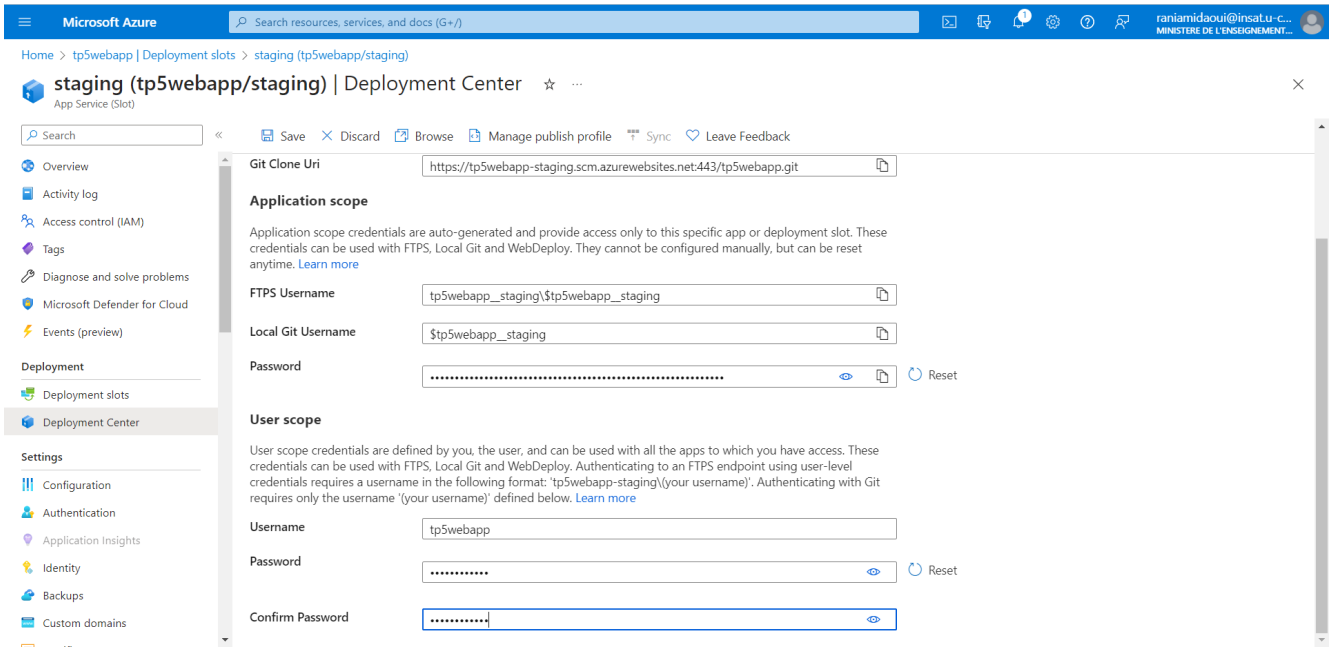


3- Configure Web app deployment settings:





We specify user credentials:



4- Deploy code to staging:

```
PS /home/raniamidaoui/php-docs-hello-world> git clone https://github.com/Azure-Samples/php-docs-hello-world
Cloning into 'php-docs-hello-world'...
remote: Enumerating objects: 26, done.
remote: Total 26 (delta 0), reused 0 (delta 0), pack-reused 26
Receiving objects: 100% (26/26), 5.64 KiB | 5.64 MiB/s, done.
Resolving deltas: 100% (6/6), done.
PS /home/raniamidaoui/php-docs-hello-world> Set-Location -Path $HOME/php-docs-hello-world/
```

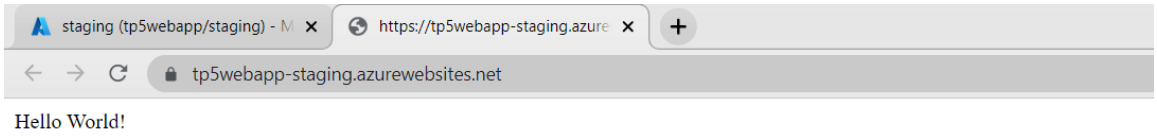
```
PS /home/raniamidaoui/php-docs-hello-world> git remote add tp5webapp123 https://tp5webapp-staging.scm.azurewebsites.net:443/tp5webapp.git
fatal: not a git repository (or any parent up to mount point /home)
Stopping at filesystem boundary (GIT_DISCOVERY_ACROSS_FILESYSTEM not set).
PS /home/raniamidaoui/php-docs-hello-world> git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /home/raniamidaoui/php-docs-hello-world/.git/
PS /home/raniamidaoui/php-docs-hello-world> git remote add tp5webapp123 https://tp5webapp-staging.scm.azurewebsites.net:443/tp5webapp.git
PS /home/raniamidaoui/php-docs-hello-world> ls
```

```
PS /home/raniamidaoui/php-docs-hello-world> git push tp5webapp123 master
```

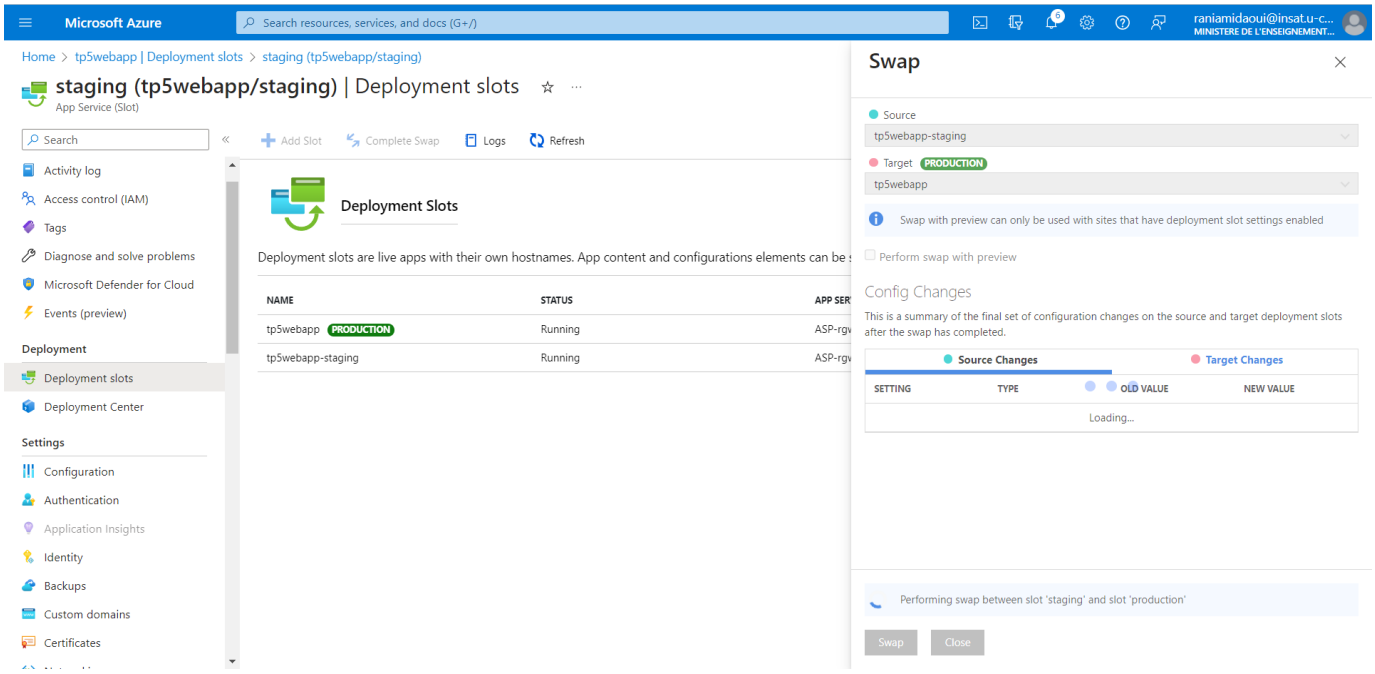
```
Username for 'https://tp5webapp-staging.scm.azurewebsites.net': tp5webapp123
Password for 'https://tp5webapp123@tp5webapp-staging.scm.azurewebsites.net':
Enumerating objects: 26, done.
Counting objects: 100% (26/26), done.
Delta compression using up to 2 threads
Compressing objects: 100% (17/17), done.
Writing objects: 100% (26/26), 5.64 KiB | 5.64 MiB/s, done.
Total 26 (delta 6), reused 26 (delta 6), pack-reused 0
remote: Deploy Async
remote: Updating branch 'master'.
remote: Updating submodules.
remote: Preparing deployment for commit id 'df425ea6ef'.
remote: PreDeployment: context.CleanOutputPath False
remote: PreDeployment: context.OutputPath /home/site/wwwroot
remote: Repository path is /home/site/repository
remote: Running oryx build...
remote: Operation performed by Microsoft Oryx, https://github.com/Microsoft/Oryx
remote: You can report issues at https://github.com/Microsoft/Oryx/issues
remote:
```

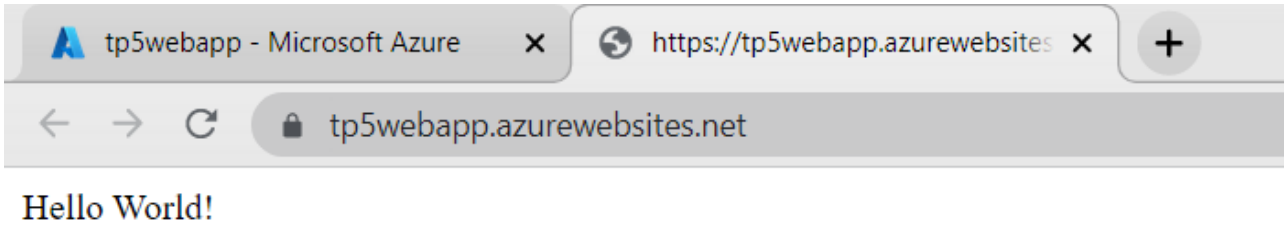
```
remote: Verifying checksum...
remote: Extracting contents...
remote: performing sha512 checksum for: php-composer...
remote: Done in 0 sec(s).
remote:
remote: PHP executable: /tmp/oryx/platforms/php/8.2.5/bin/php
remote: No 'composer.json' file found; not running 'composer install'.
remote: Preparing output...
remote:
remote: Copying files to destination directory '/home/site/wwwroot'...
remote: Done in 0 sec(s).
remote:
remote: Removing existing manifest file
remote: Creating a manifest file...
remote: Manifest file created.
remote: Copying .ostype to manifest output directory.
remote:
remote: Done in 2 sec(s).
remote: Running post deployment command(s)...
remote:
remote: Generating summary of Oryx build
remote: Parsing the build logs
remote: Found 0 issue(s)
remote:
remote: Build Summary :
remote: ===============
remote: Errors (0)
remote: Warnings (0)
remote:
remote: Triggering recycle (preview mode disabled).
remote: Deployment successful. deployer =  deploymentPath =
remote: Deployment Logs : 'https://tp5webapp-staging.scm.azurewebsites.net/newui/jsonviewer?view_url=/api/deployments/df425ea6ef61f981c71537ec89d1d821a2de975c/log'
To https://tp5webapp-staging.scm.azurewebsites.net/tp5webapp.git
 * [new branch]      master -> master
```

Done, everything works:

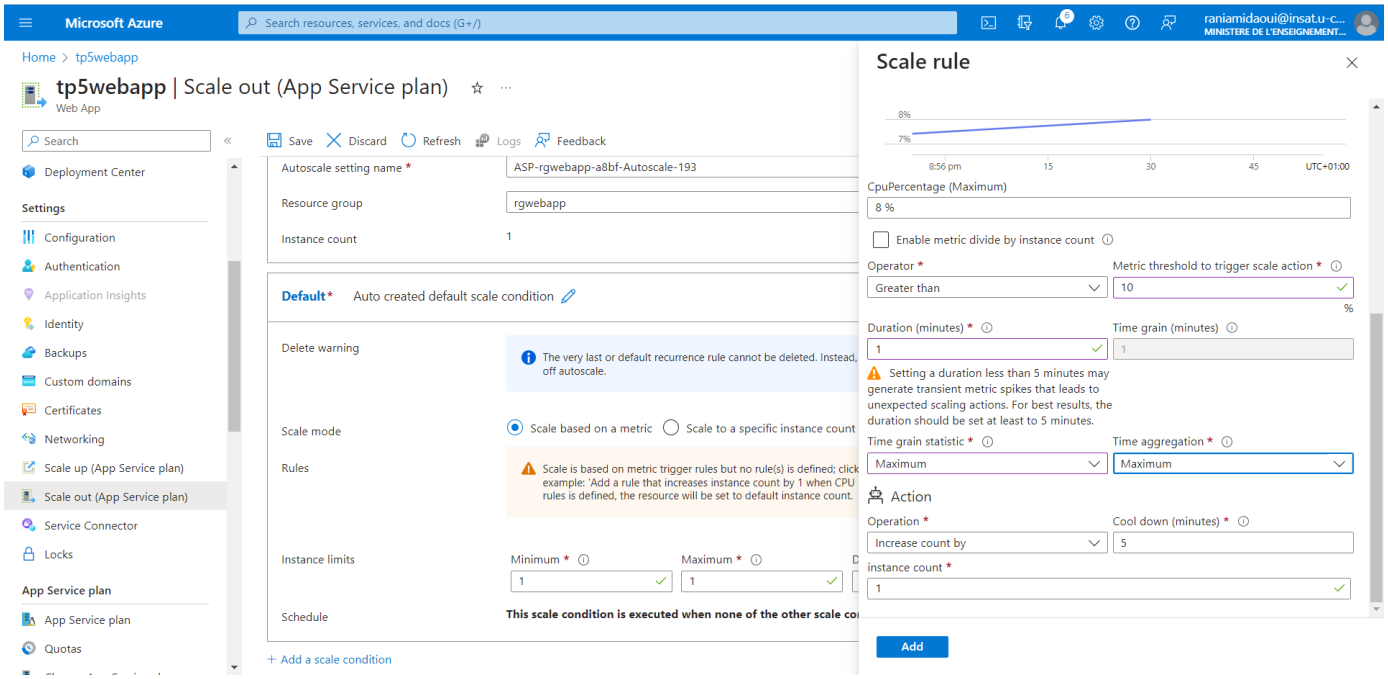


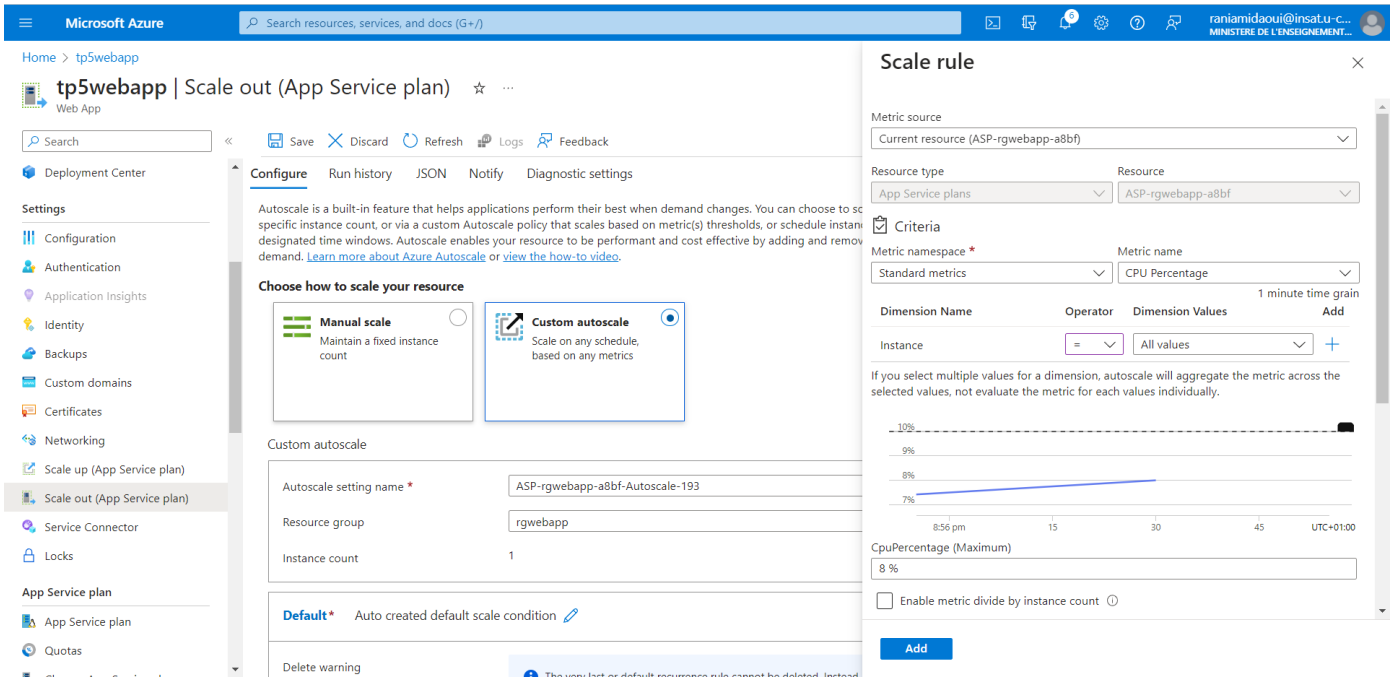
5- We swap the staging slots:

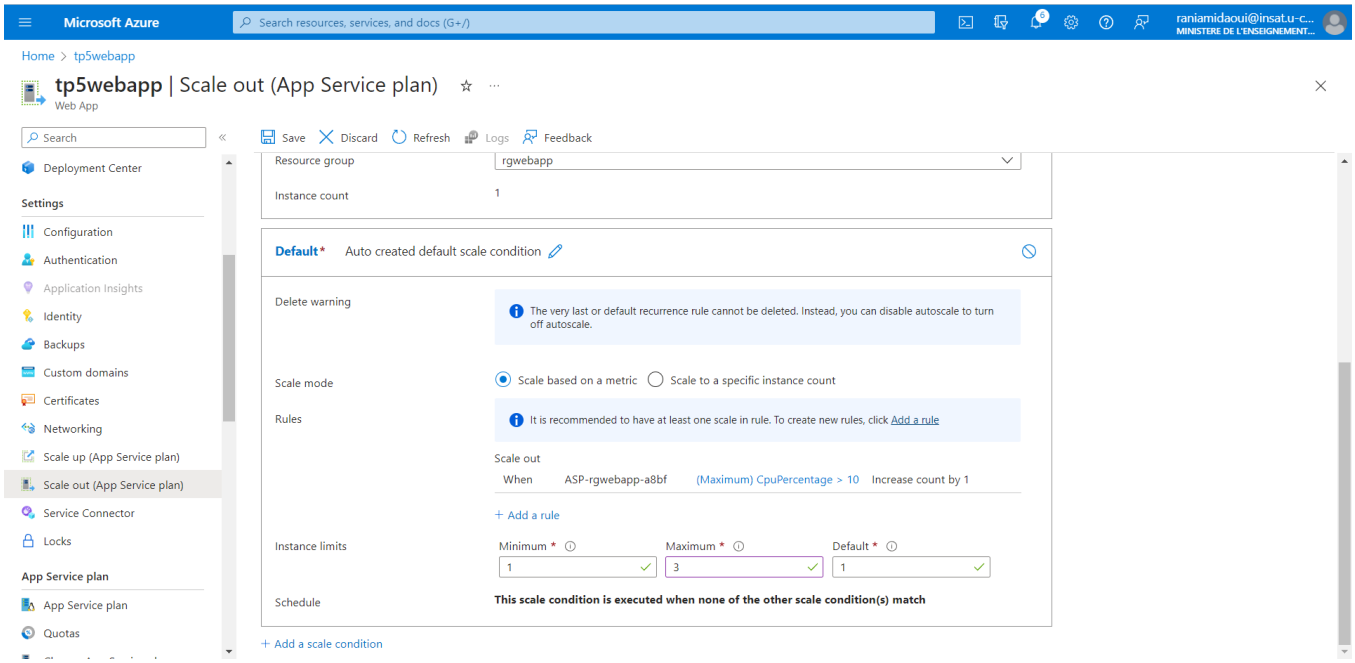




6- We configure and test autoscaling of the Azure web app:





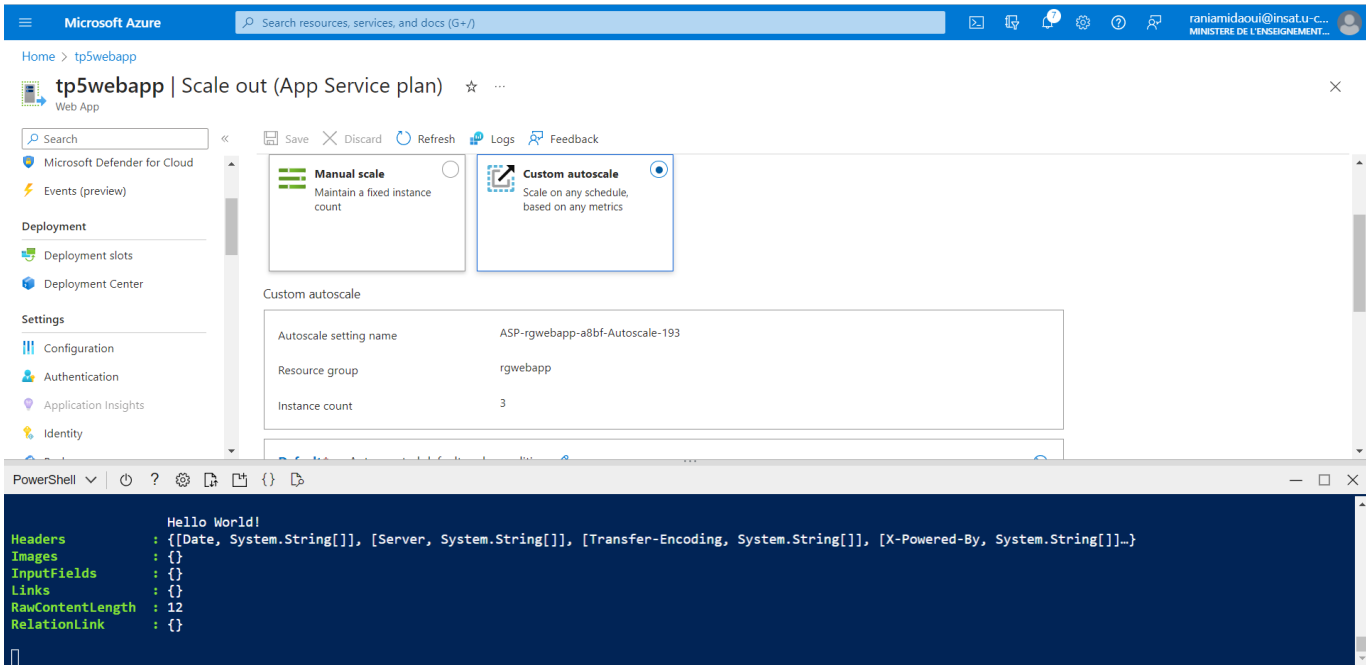



```
PS /home/raniamidaoui> $rgName = 'rgwebapp'
PS /home/raniamidaoui> $webapp = Get-AzWebApp -ResourceGroupName $rgName
PS /home/raniamidaoui>
```

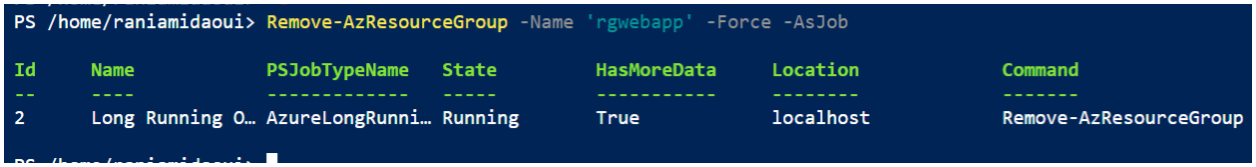
```
PS /home/raniamidaoui> while ($true) { Invoke-WebRequest -Uri $webapp.DefaultHostName }

StatusCode        : 200
StatusDescription : OK
Content           : Hello World!
RawContent        : HTTP/1.1 200 OK
                    Date: Sun, 07 May 2023 20:05:16 GMT
                    Server: nginx/1.22.1
                    Transfer-Encoding: chunked
                    X-Powered-By: PHP/8.2.5
                    Content-Type: text/html; charset=utf-8

                    Hello World!
Headers           : {[Date, System.String[]], [Server, System.String[]], [Transfer-Encoding, System.String[]], [X-Powered-By, System.String[]]…}
Images            : {}
InputFields       : {}
Links             : {}
RawContentLength  : 12
RelationLink      : {}
```

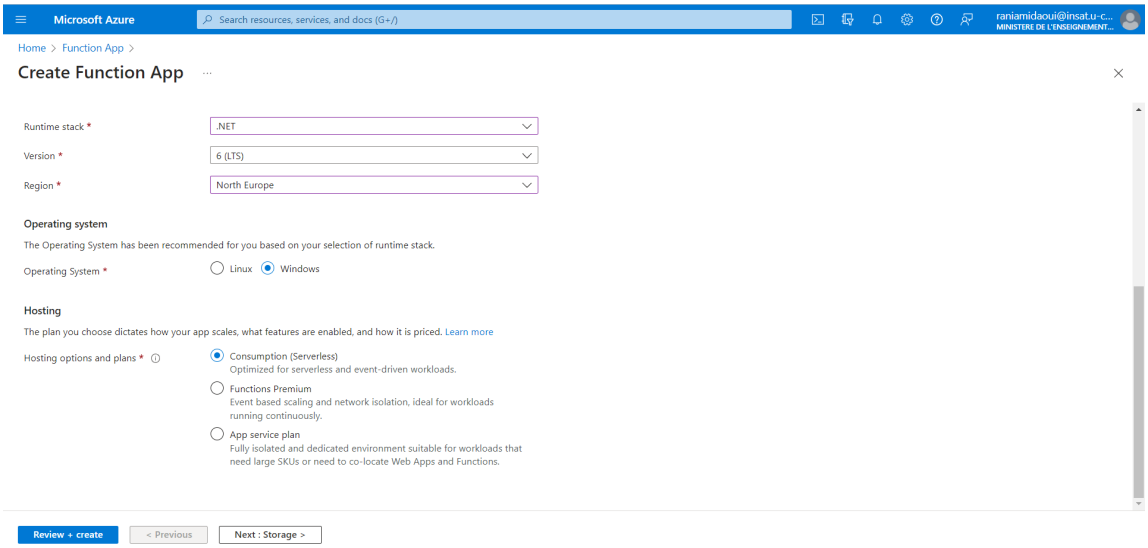


7- We remove the resource group:

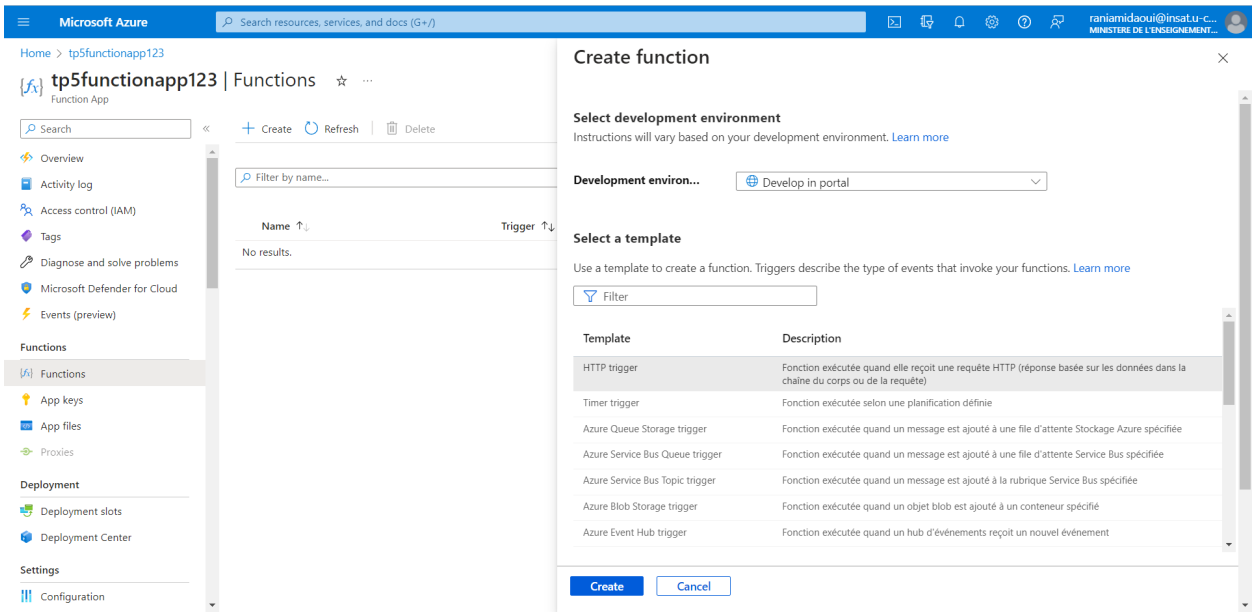


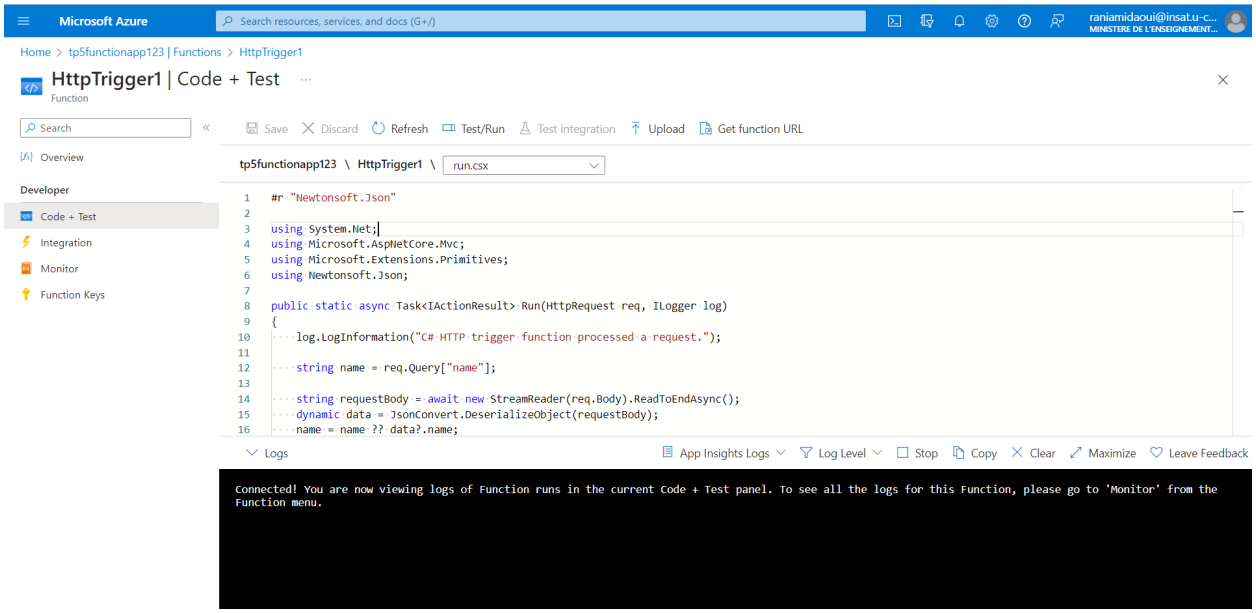
Task 2: Azure Functions and Azure Logic App:

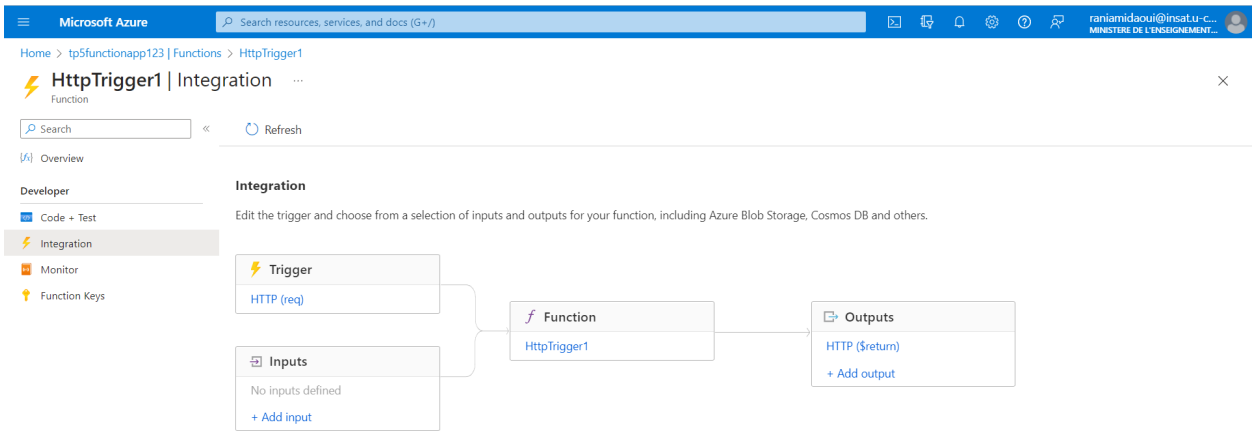
1- We create a Function App:



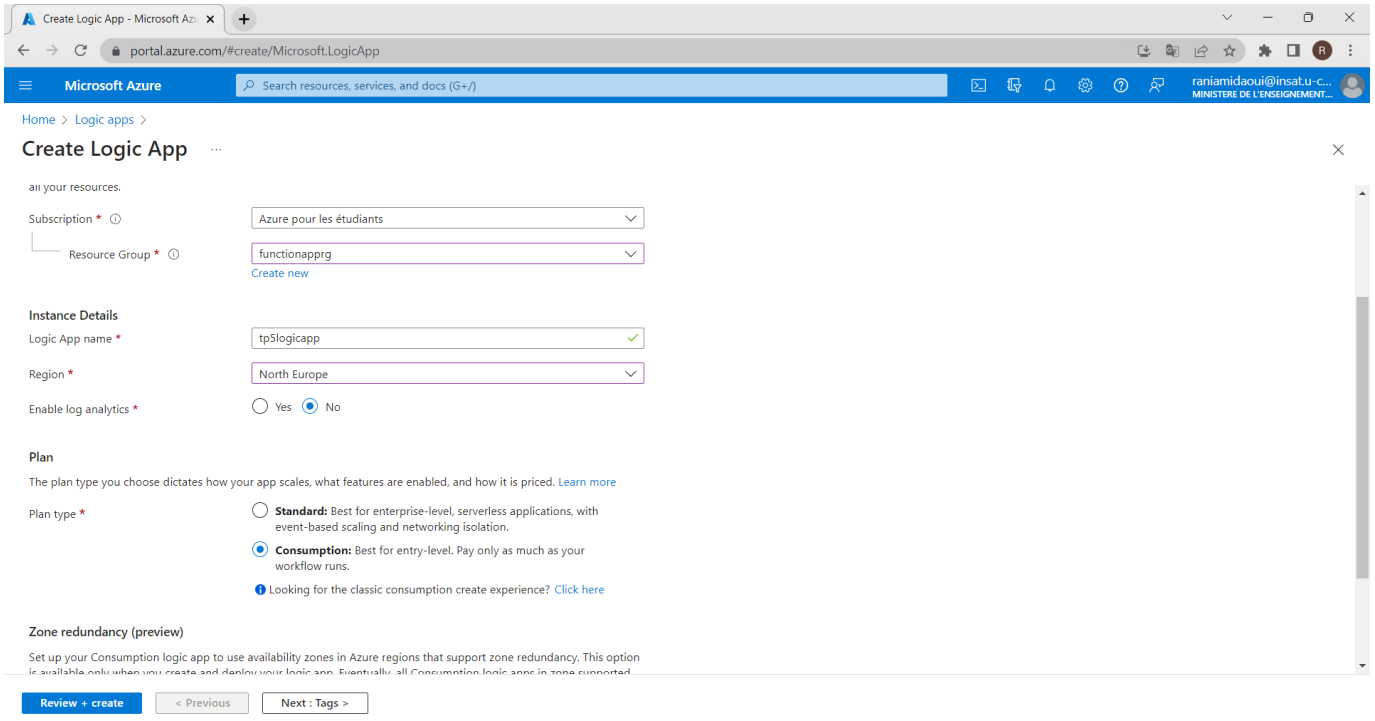
2- We create a function with HTTP trigger:

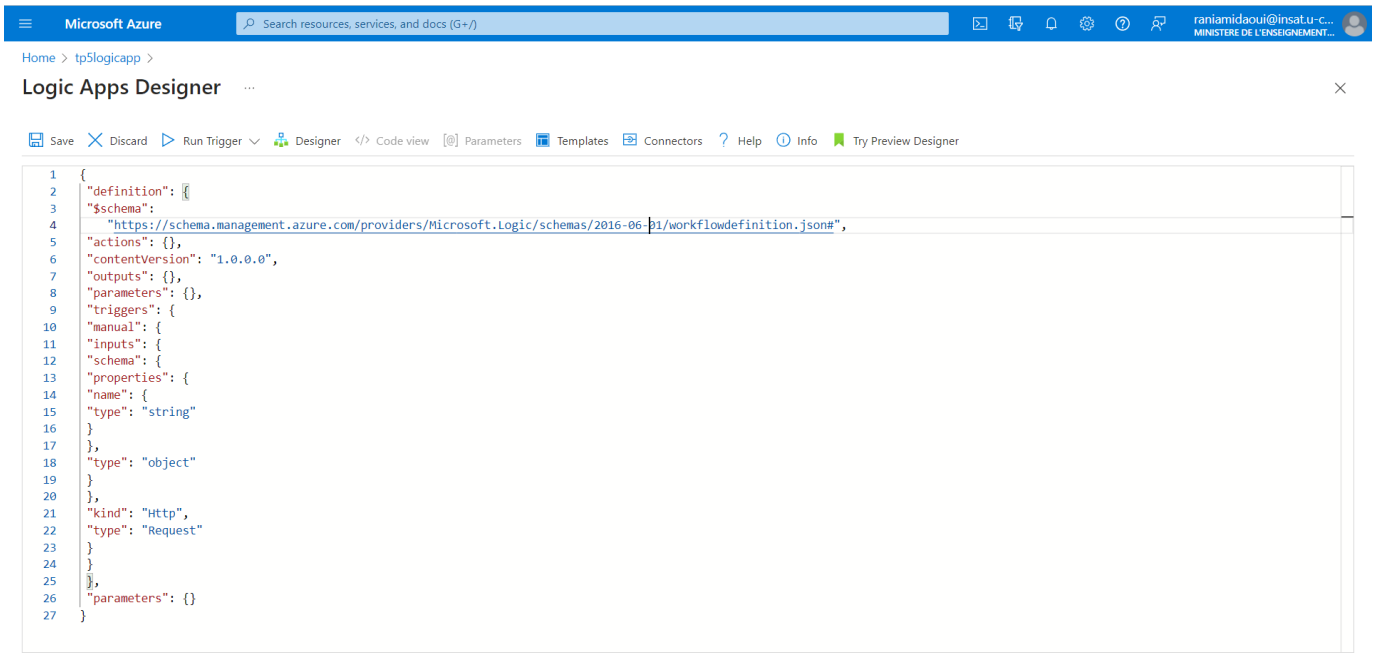






3- We create a logic app that uses the function app:

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raniamidaoui@insat.u-c...
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Home > tp5logicapp >
Logic Apps Designer
Save
Discard
Run Trigger
Designer
Code view
Parameters
Templates
Connectors
Help
Info
Try Preview Designer
{
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"$schema":
"https://schema.management.azure.com/providers/Microsoft.Logic/schemas/2016-06-01/workflowdefinition.json#",
"actions": {},
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"outputs": {},
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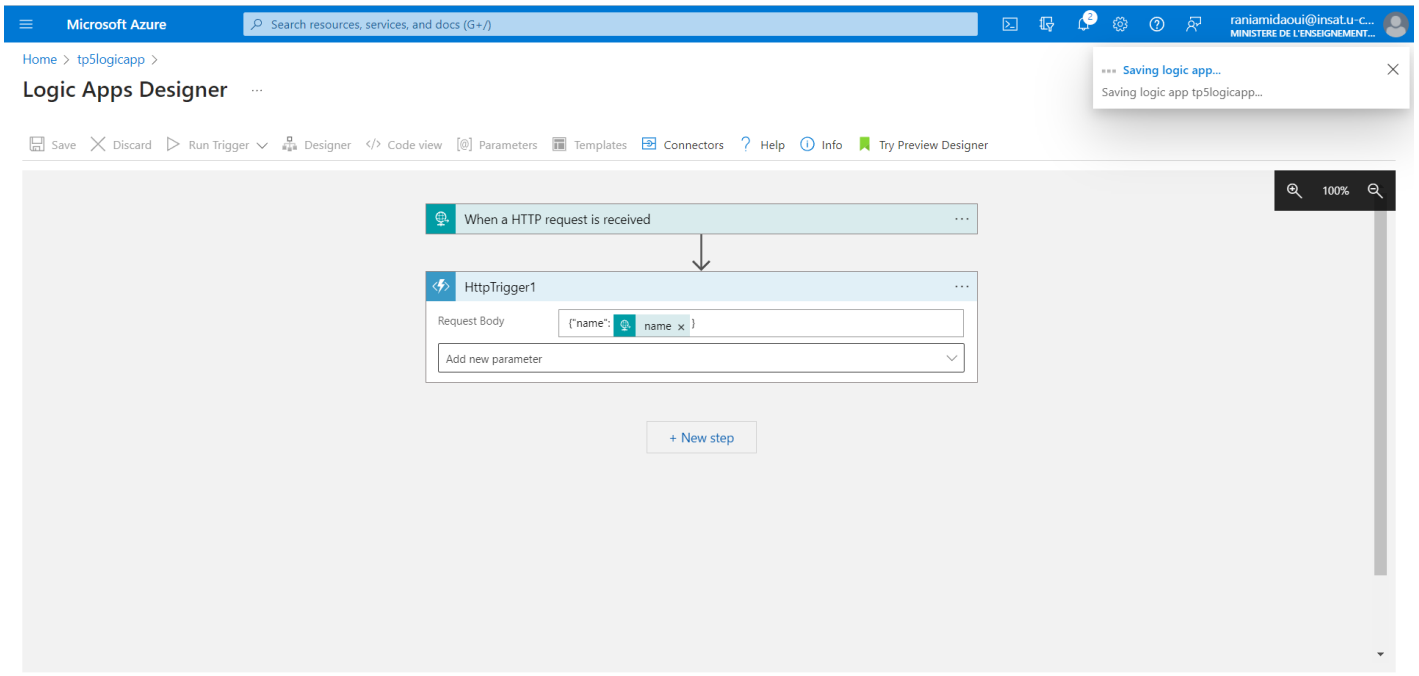
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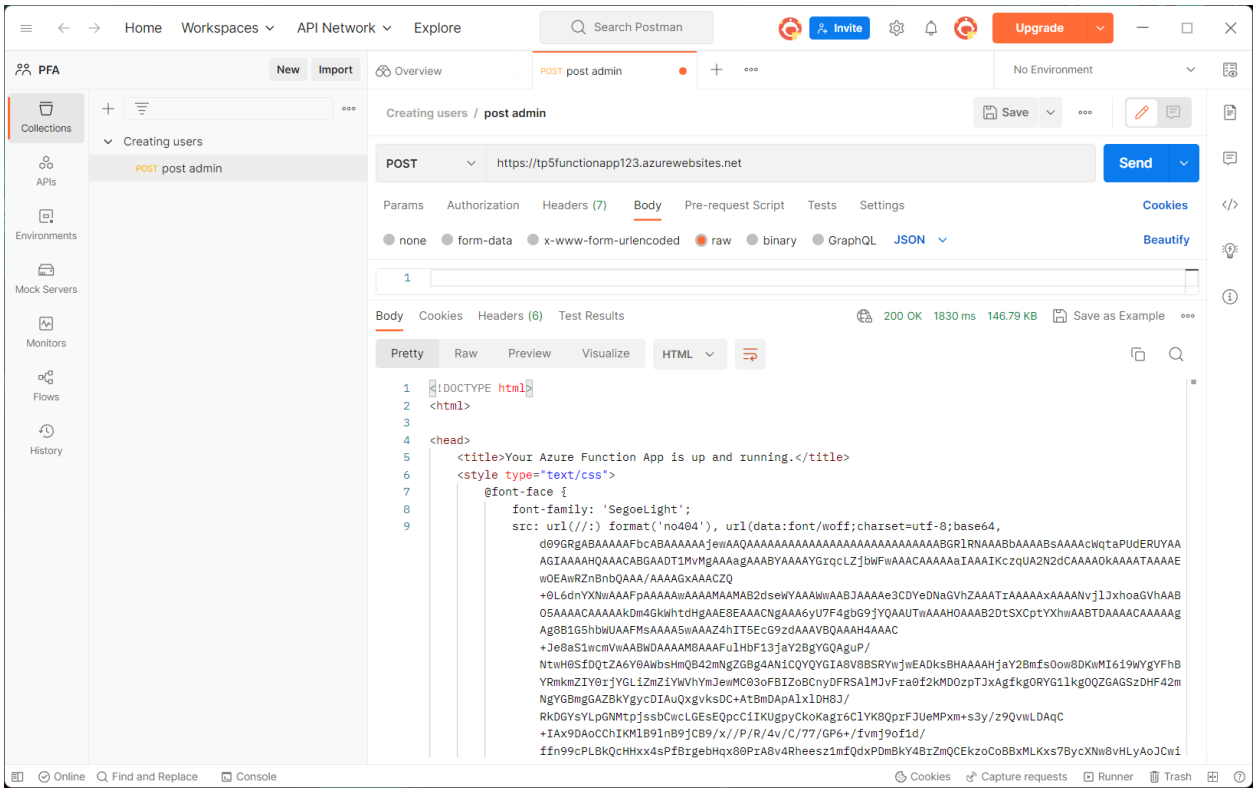
MINISTERE DE L'ENSEIGNEMENT...
Home > tp5logicapp >
Logic Apps Designer
Saving logic app...
Saving logic app tp5logicapp...
Save
Discard
Run Trigger
Designer
Code view
Parameters
Templates
Connectors
Help
Info
Try Preview Designer
100%
When a HTTP request is received
HttpTrigger1
Request Body
{"name":
name
}
Add new parameter
+ New step


Home
Workspaces
API Network
Explore
Search Postman
Invite
Upgrade
PFA
New
Import
Overview
POST post admin
No Environment
Collections
APIs
Environments
Mock Servers
Monitors
Flows
History
Creating users
POST post admin
Creating users / post admin
Save
POST
https://tp5functionapp123.azurewebsites.net
Send
Params
Authorization
Headers (7)
Body
Pre-request Script
Tests
Settings
Cookies
none
form-data
x-www-form-urlencoded
raw
binary
GraphQL
JSON
Beautify
Body
Cookies
Headers (6)
Test Results
200 OK
1830 ms
146.79 KB
Save as Example
Pretty
Raw
Preview
Visualize
HTML
<!DOCTYPE html>
<html>
<head>
<title>Your Azure Function App is up and running.</title>
<style type="text/css">
@font-face {
font-family: 'SegoeLight';
src: url(//:) format('no404'), url(data:font/woff;charset=utf-8;base64,
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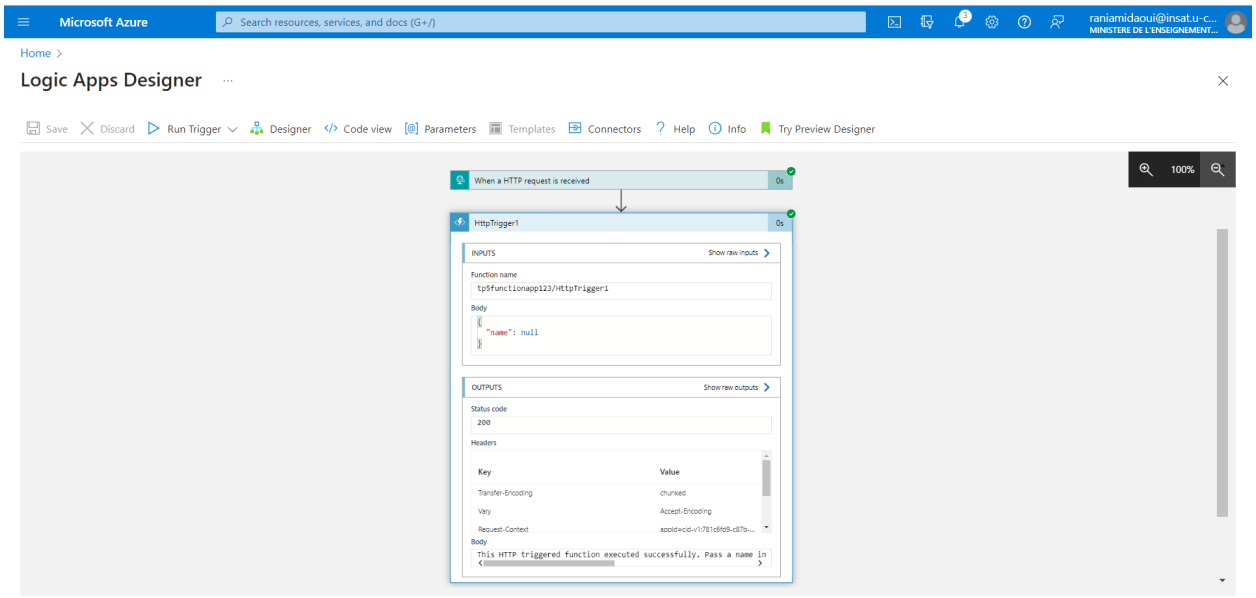
Online
Find and Replace
Console
Cookies
Capture requests
Runner
Trash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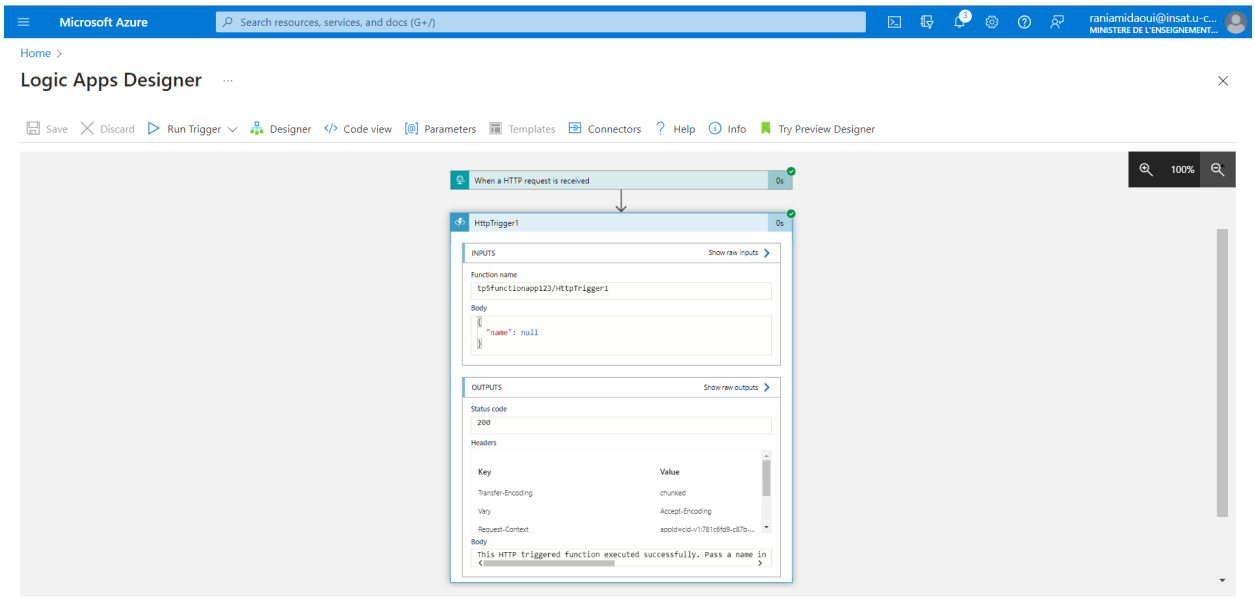
Discard
Run Trigger
Designer
Code view
Parameters
Templates
Connectors
Help
Info
Try Preview Designer
100%
When a HTTP request is received
0s
HttpTrigger1
0s
INPUTS
Show raw inputs
Function name
tp5functionapp123/HttpTrigger1
Body
{
"name": null
}
OUTPUTS
Show raw outputs
Status code
200
Headers
Key
Value
Transfer-Encoding
chunked
Vary
Accept-Encoding
Request-Context
Body
This HTTP triggered function executed successfully. Pass a name in

4- Delete the resource group:



Conclusion:

In conclusion, Azure Web App, Azure Functions, and Azure Logic App are powerful cloud services offered by Microsoft Azure that enable businesses to develop and deploy cloud-based solutions with ease. These services provide a range of features to streamline the development process and automate workflows, making it easier to manage complex systems and stay competitive in a rapidly evolving digital landscape.

By leveraging the capabilities of these services, businesses can build robust and responsive web applications that can handle diverse workflows and tasks, and integrate with a wide range of services and systems.