ESCUELA COLOMBIANA DE INGENIERÍA JULIO GARAVITO

PEMU 2020- Laboratorio 6

Web Application PaaS – Azure App Services

Objetivo

Implementar una Aplicación Web PHP mediante las herramientas PaaS de Azure:

- Azure App Services

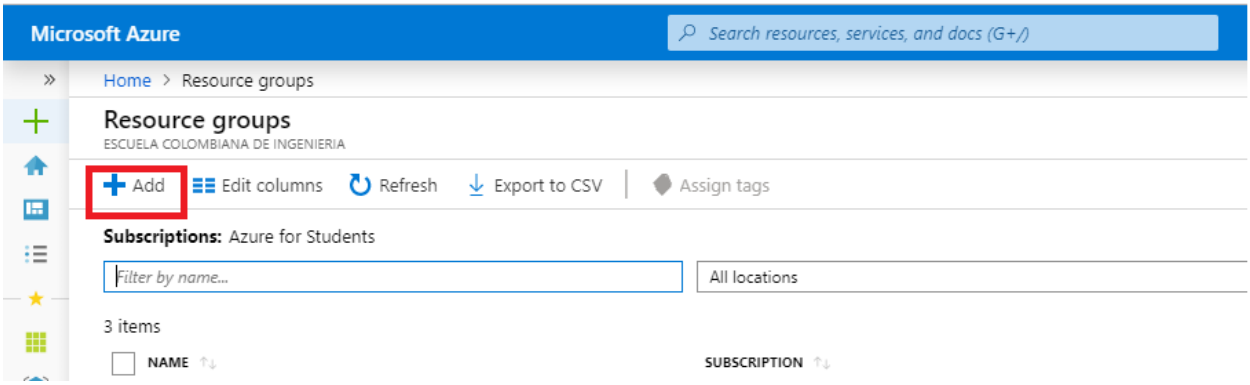
Descripción General

En este laboratorio se realizará una implementación de una aplicación web PHP usando los servicios PaaS de Azure. En este modelo no se crearán máquinas virtuales, sino que se utilizarán los servicios para aplicaciones que ofrece Azure bajo el modelo PaaS.

Instrucciones

1. Crear máquina Virtual para Desarrollo.

Acceda a la Consola de Azure y cree un nuevo Resource Group llamado **AzureAppService**, Ubíquelo en la Zona Central US



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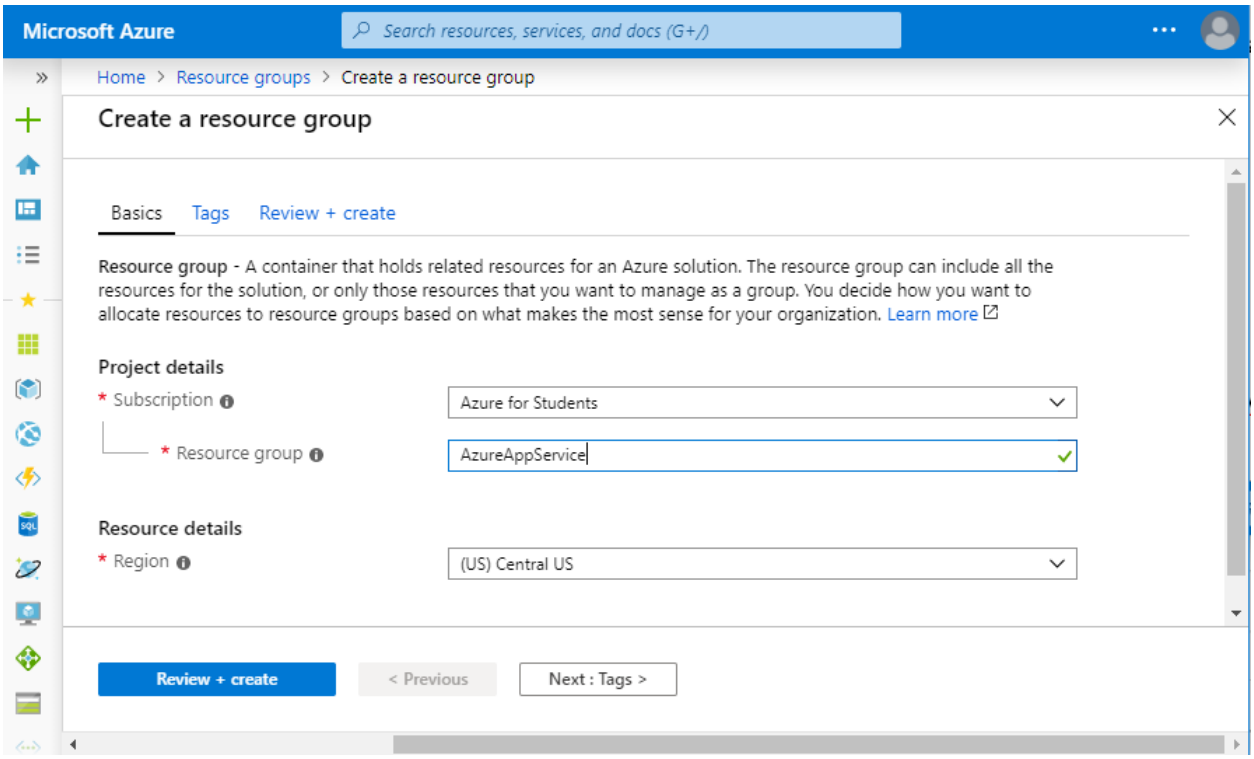
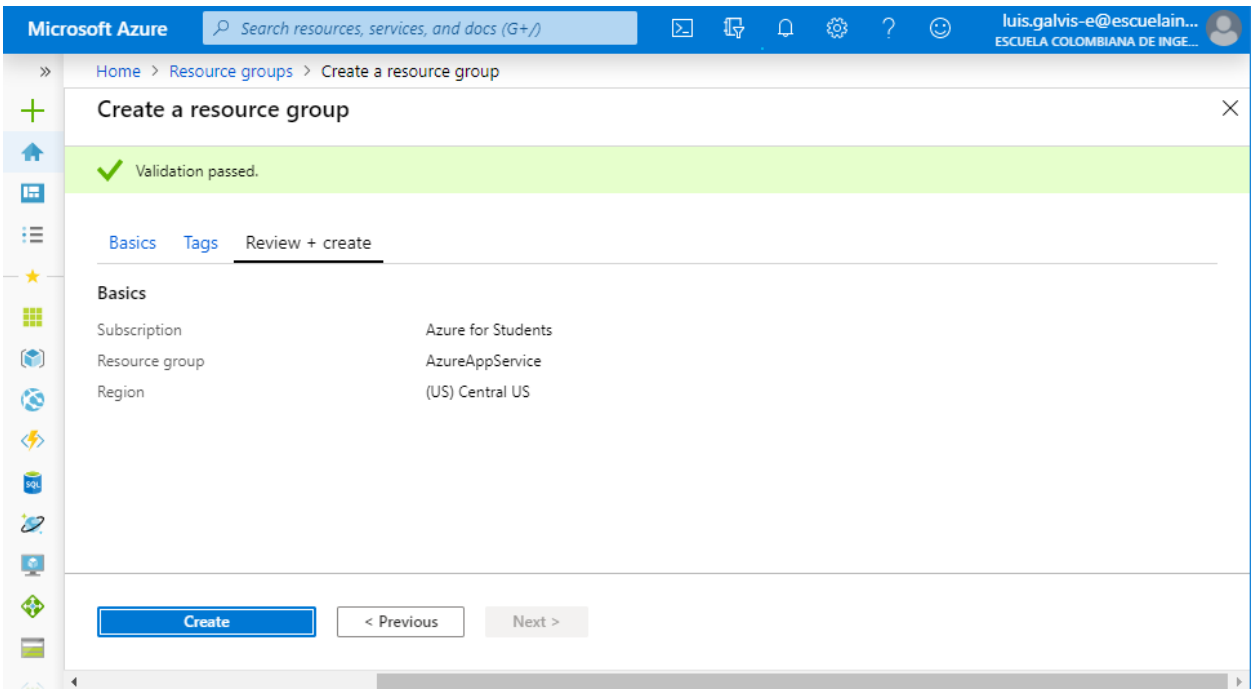
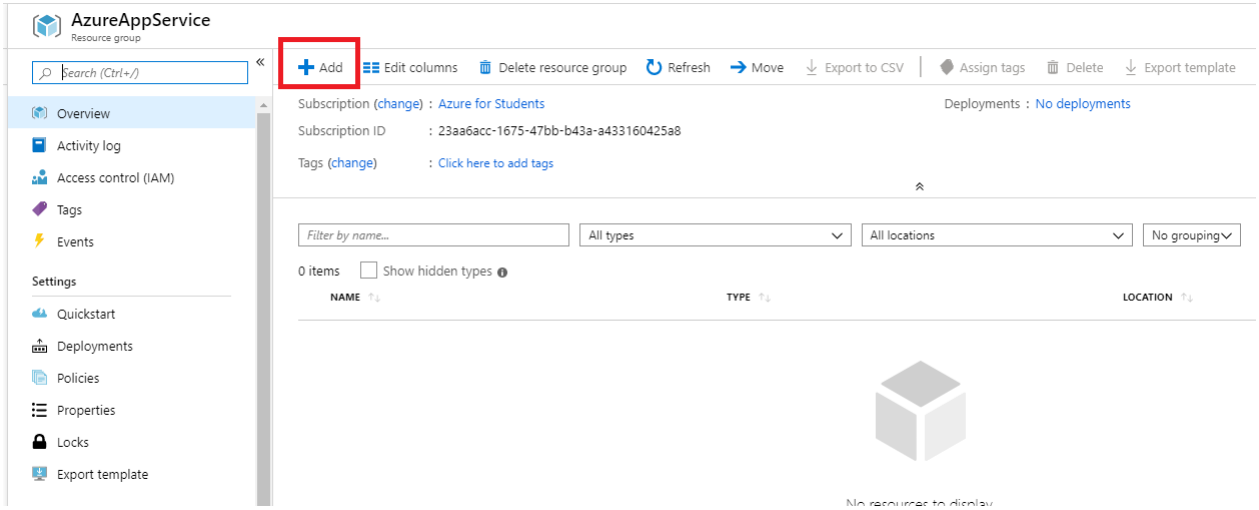
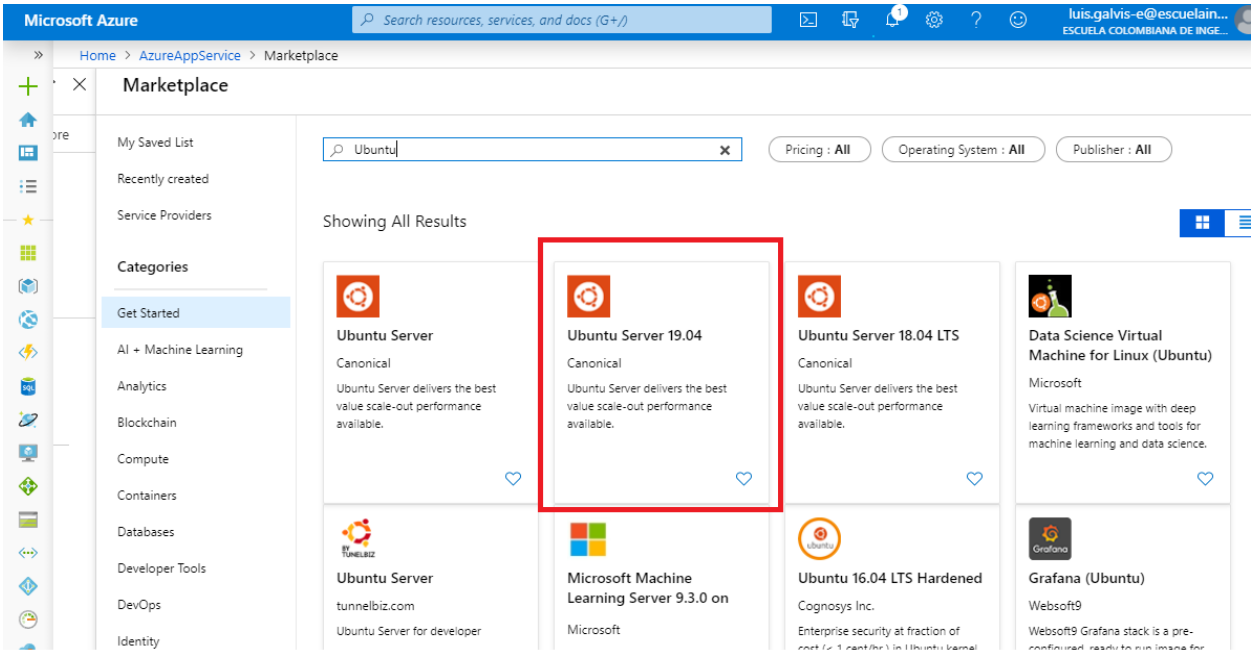




Una vez el Resource Group se encuentre disponible, Adicione un nuevo recurso:



Busque en el Marketplace la imagen de Ubuntu Server 19.04 y selecciónela



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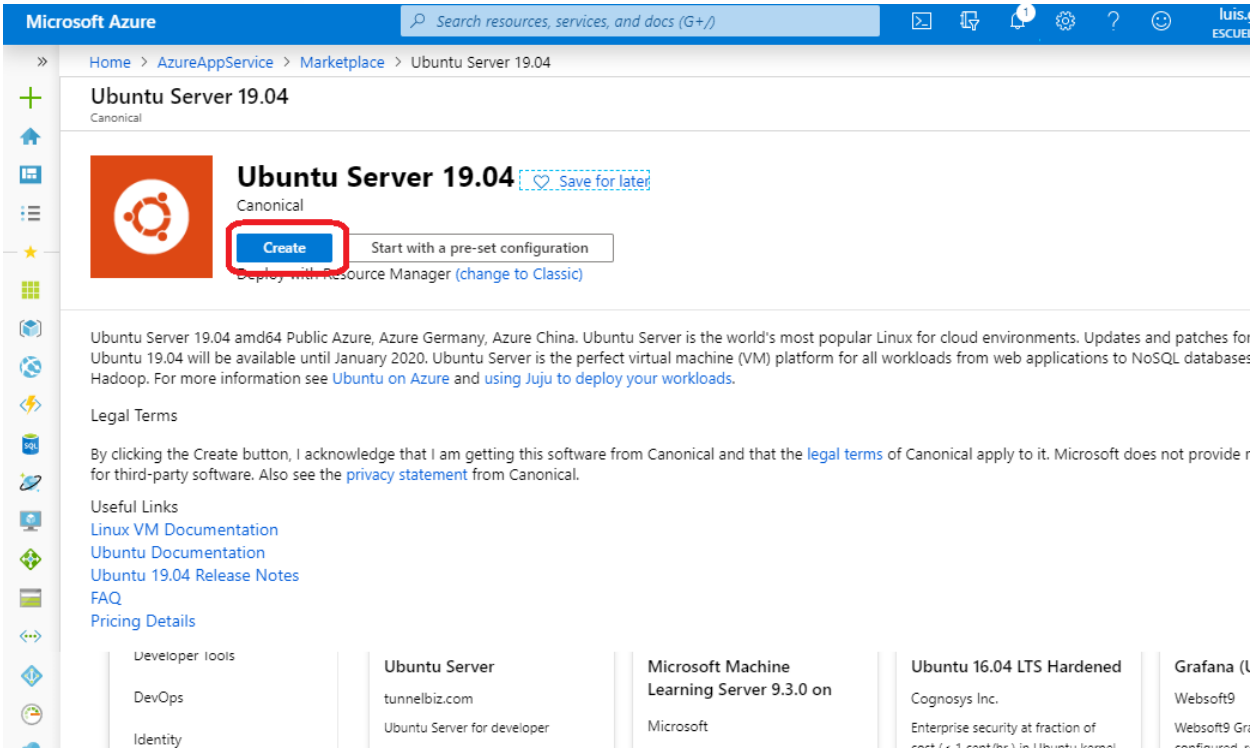
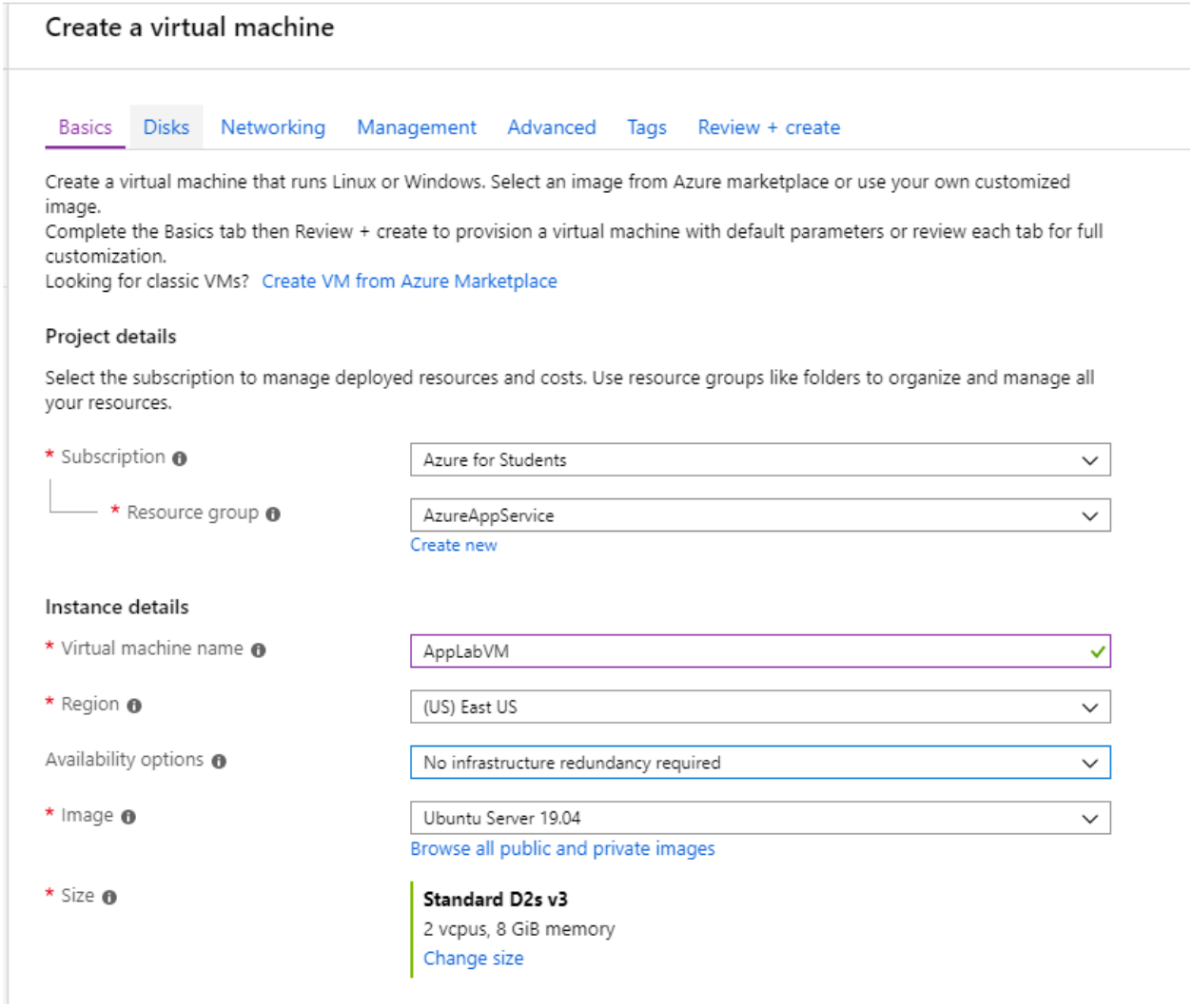


Asigne **AppLabVM** como nombre de máquina virtual:



Seleccione **Password** como mecanismo de Autenticacion con los siguientes valores:

- **Username:** devuser
- **Password:** PEMU2020@LAB

En las reglas de ingreso seleccione HTTP, HTTPS y SSH. Proceda a Crear el recurso.

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Administrator account

Authentication type ⓘ — (•) Password ( ) SSH public key

* Username ⓘ — devuser

* Password ⓘ — ••••••••••••

* Confirm password ⓘ — ••••••••••••

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

* Public inbound ports ⓘ — ( ) None (•) Allow selected ports

* Select inbound ports — HTTP, HTTPS, SSH

⚠ These ports will be exposed to the internet. Use the Advanced controls to limit inbound traffic to known IP addresses. You can also update inbound traffic rules later.

Review + create | < Previous | Next : Disks >

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Home > AzureAppService > Marketplace > Ubuntu Server 19.04 > Create a virtual machine

Create a virtual machine

Validation passed

Basics | Disks | Networking | Management | Advanced | Tags | Review + create

PRODUCT DETAILS

Standard D2s v3
by Microsoft
Terms of use | Privacy policy

Subscription credits apply
0.0960 USD/hr
Pricing for other VM sizes

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.

Basics

Subscription	Azure for Students
Resource group	AzureAppService
Virtual machine name	AppLabVM
Region	(US) East US
Availability options	No infrastructure redundancy required
Authentication type	Password
Username	devuser
Public inbound ports	HTTP, HTTPS, SSH

Disks

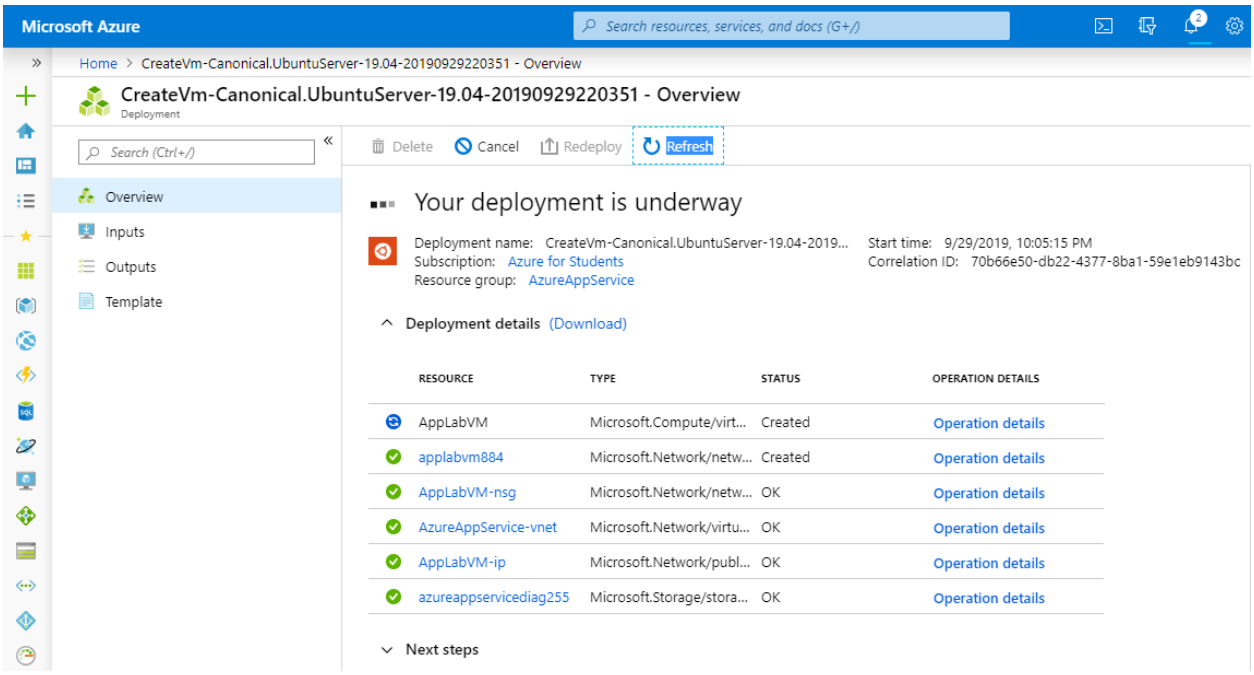
OS disk type	Premium SSD
Use managed disks	Yes
Use ephemeral OS disk	No

Networking

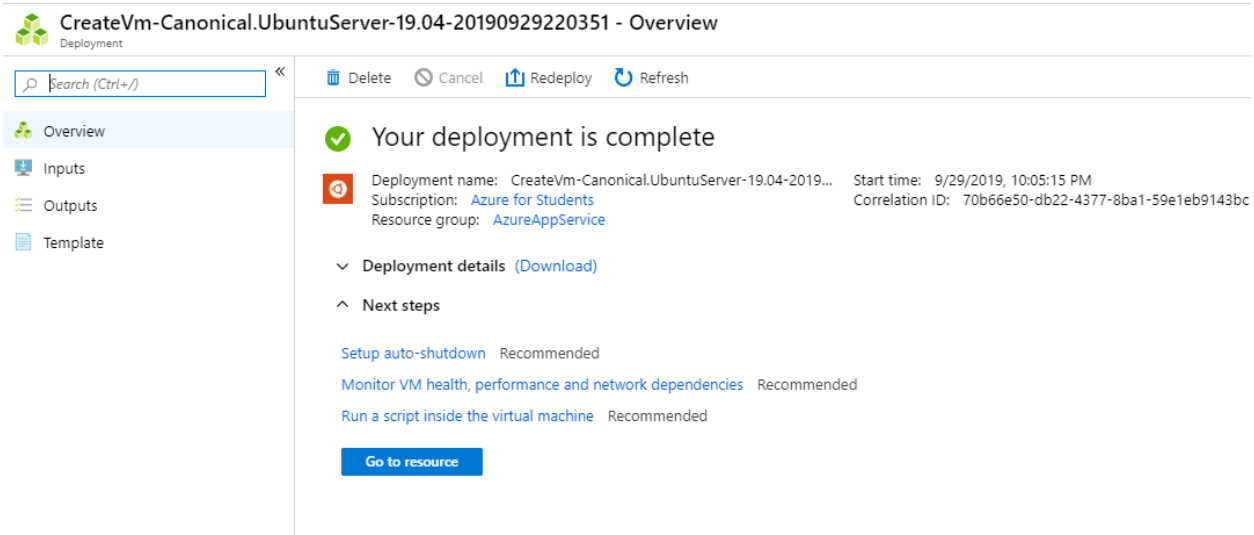
Virtual network	(new) AzureAppService-vnet

Create | < Previous | Next > | Download a template for automation

Espere a que el recurso sea creado



Una vez termine el deployment, diríjase al recurso:



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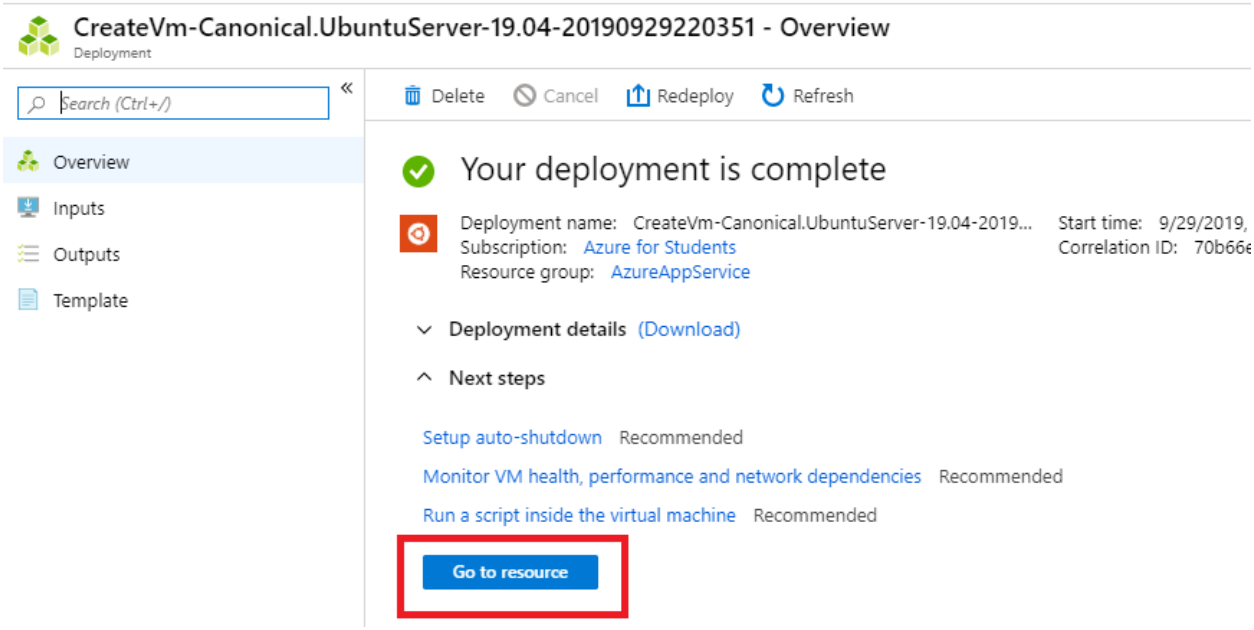
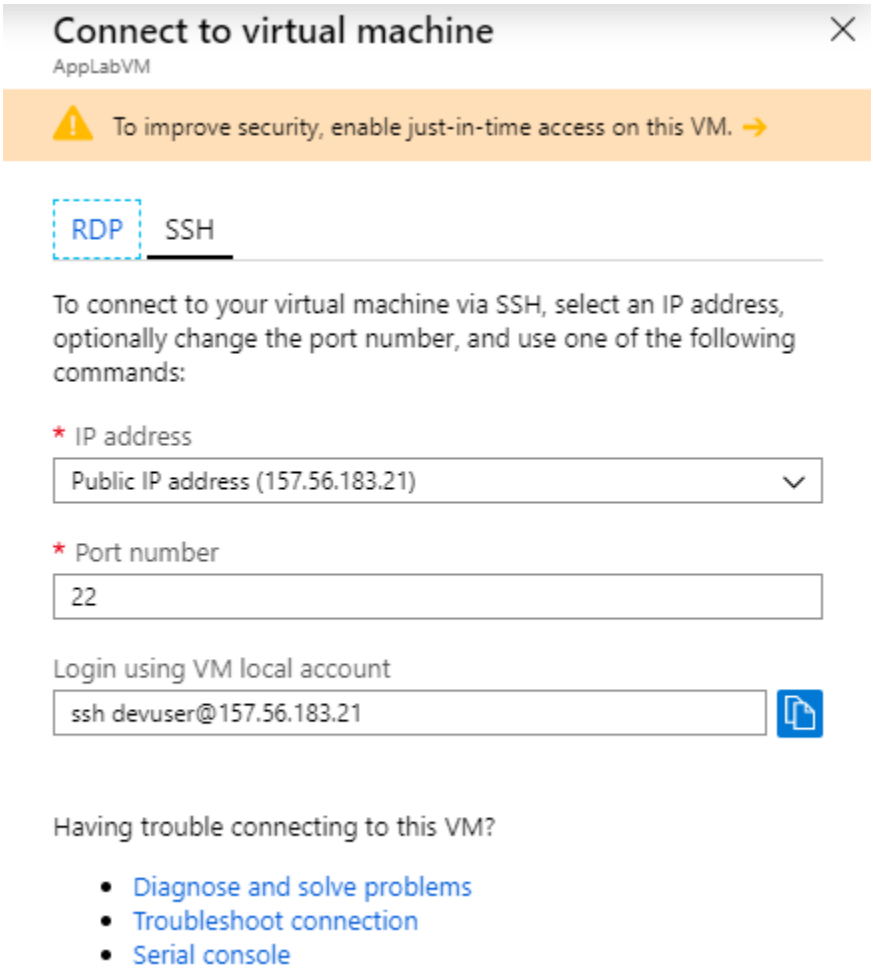


Verifique el método de conexión y realice una conexión ssh al recurso creado:



```
devuser@157.56.183.21's password:
Welcome to Ubuntu 19.04 (GNU/Linux 5.0.0-1014-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Mon Sep 30 03:12:55 UTC 2019

  System load:  0.12              Processes:           151
  Usage of /:   4.4% of 28.90GB   Users logged in:     0
  Memory usage: 4%                IP address for eth0: 10.0.0.4
  Swap usage:   0%

0 updates can be installed immediately.
0 of these updates are security updates.



The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

devuser@AppLabVM:~$
```

Proceda a clonar el código fuente de la aplicación del repositorio de GIT usando el siguiente comando:

`git clone https://github.com/Azure-Samples/php-docs-hello-world`

```
devuser@AppLabVM:~$ git clone https://github.com/Azure-Samples/php-docs-hello-world
Cloning into 'php-docs-hello-world'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 23 (delta 0), reused 1 (delta 0), pack-reused 20
Unpacking objects: 100% (23/23), done.
devuser@AppLabVM:~$
```

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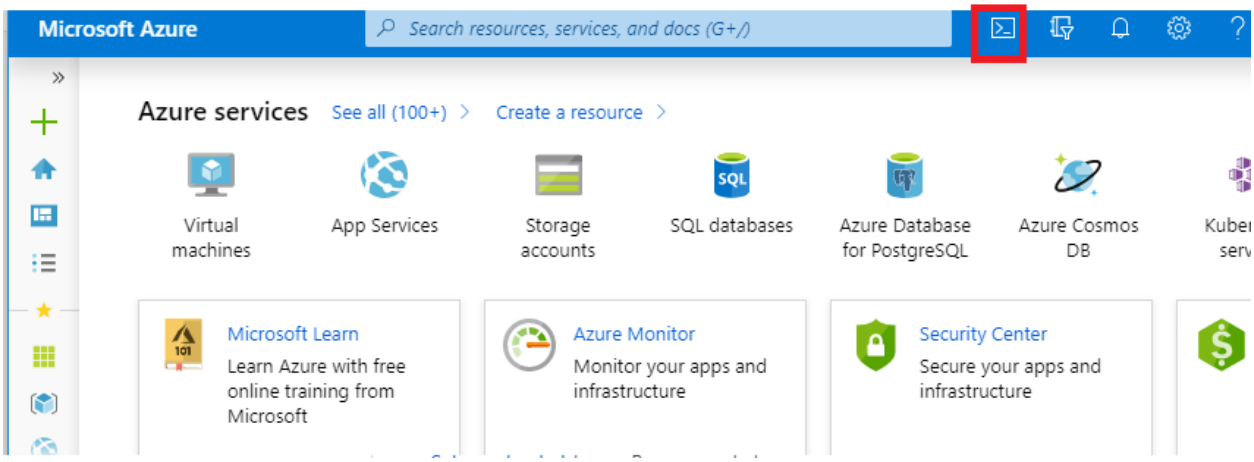
2. Crear Aplicacion en App Services

Acceda a la consola de Azure en el Portal



Cree un usuario y password para desplegar el Servicio de AppService. Asigne como usuario **phpAppUserPEMU** y Password **PEMU2020@LAB** ejecutando el siguiente comando:

```
az webapp deployment user set --user-name phpAppUserPEMU --password PEMU2020@LAB
```

```
^Cluis@Azure:~$ az webapp deployment user set --user-name phpAppUserCONU --password CONU2019@LAB
{
  "id": null,
  "kind": null,
  "name": "web",
  "publishingPassword": null,
  "publishingPasswordHash": null,
  "publishingPasswordHashSalt": null,
  "publishingUserName": "phpAppUserCONU",
  "scmUri": null,
  "type": "Microsoft.Web/publishingUsers/web"
}
```

Cree un Application plan usando su código de estudiante mas la palabra AppPlan (Ejemplo 2072358AppPlan) y asígnelo al resource group creado. Para ello ejecute el siguiente comando:

```
az appservice plan create --name 2072358AppPlan --resource-group AzureAppService
--sku FREE
```

```
Requesting a Cloud Shell.Succeeded.
Connecting terminal...

luis@Azure:~$ az appservice plan create --name 2072358AppPlan --resource-group AzureAppService --sku FREE
{
  "freeOfferExpirationTime": null,
  "geoRegion": "Central US",
  "hostingEnvironmentProfile": null,
  "hyperV": false,
  "id": "/subscriptions/23aa6acc-1675-47bb-b43a-a433160425a8/resourceGroups/AzureAppService/providers/Microsoft.Web/serverfarms/2072358AppPlan",
  "isSpot": false,
  "isXenon": false,
  "kind": "app",
  "location": "Central US",
  "maximumElasticWorkerCount": 1,
  "maximumNumberOfWorkers": 1,
  "name": "2072358AppPlan",
  "numberOfSites": 0,
  "perSiteScaling": false,
  "provisioningState": "Succeeded",
  "reserved": false,
  "resourceGroup": "AzureAppService",
  "sku": {
    "capabilities": null,
    "capacity": 0,
    "family": "F",
    "locations": null,
    "name": "F1",
    "size": "F1",
    "skuCapacity": null,
    "tier": "Free"
  },
  "spotExpirationTime": null,
  "status": "Ready",
  "subscription": "23aa6acc-1675-47bb-b43a-a433160425a8",
  "tags": null,
  "targetWorkerCount": 0,
  "targetWorkerSizeId": 0,
  "type": "Microsoft.Web/serverfarms",
  "workerTierName": null
}
luis@Azure:~$
```

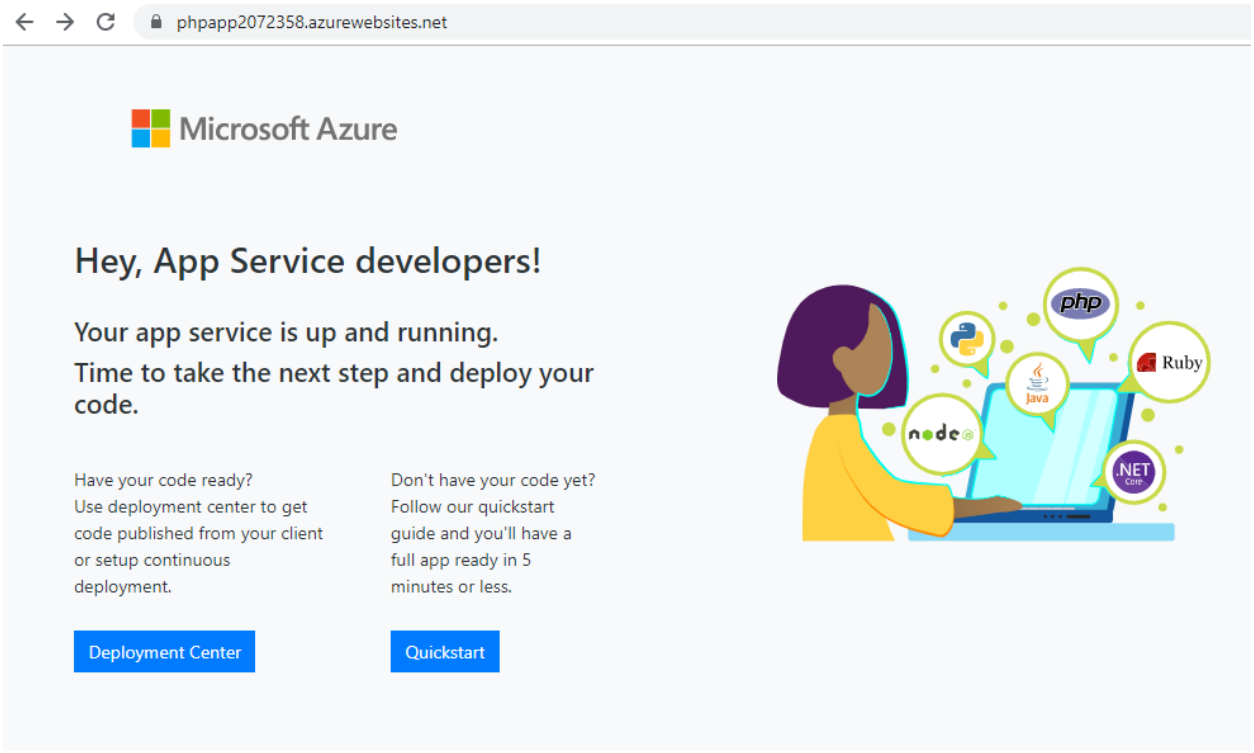
Proceda a crear una aplicacion php en AppService usando el plan y el Resource Group creados. Asigne como nombre **<phpApp + código de estudiante>** (Ejemplo: phpApp2072358). Tome como ejemplo el siguiente comando:

```
az webapp create --resource-group AzureAppService --plan 2072358AppPlan --name phpApp2072358 --runtime "php|7.2" --deployment-local-git
```

El comando retorna una URL en Amarillo. Esta es la del repositorio git creado para realziar el despliegue de la aplicación. **Guarde esa URL ya que se requiere para realizar el deployment de la aplicación**

```
luis@Azure:~$ az webapp create --resource-group AzureAppService --plan 2072358AppPlan --name phpApp2072358 --runtime "PHP|7.0" --deployment-local-git
Local git is configured with url of 'https://phpAppUserCONU@phpapp2072358.scm.azurewebsites.net/phpApp2072358.git'
{
  "availabilityState": "Normal",
  "clientAffinityEnabled": true,
  "clientCertEnabled": false,
  "clientCertExclusionPaths": null,
  "cloningInfo": null,
  "containerSize": 0,
  "dailyMemoryTimeQuota": 0,
  "defaultHostName": "phpapp2072358.azurewebsites.net",
  "deploymentLocalGitUrl": "https://phpAppUserCONU@phpapp2072358.scm.azurewebsites.net/phpApp2072358.git",
  "enabled": true,
  "enabledHostNames": [
    "phpapp2072358.azurewebsites.net",
    "phpapp2072358.scm.azurewebsites.net"
  ],
  "ftpPublishingUrl": "ftp://waws-prod-dm1-143.ftp.azurewebsites.windows.net/site/wwwroot",
  "geoDistributions": null,
  "hostNameSslStates": [
    {
      "hostType": "Standard",
      "ipBasedSslResult": null,
      "ipBasedSslState": "NotConfigured",
      "name": "phpapp2072358.azurewebsites.net",
      "sslState": "Disabled",
      "thumbprint": null,
      "toUpdate": null,
      "toUpdateIpBasedSsl": null,
      "virtualIp": null
    },
    {
      "hostType": "Repository",
      "ipBasedSslResult": null,
```

Acceda a la aplicación mediante la URL **https://<nombre aplicación>.azurewebsites.net**



3. Despliegue de Aplicación desde GIT

En la consola de la máquina virtual, diríjase al directorio del repositorio y adicione el repositorio de la aplicación de App Services usando la URL del repositorio GIT de la aplicación.

```
git remote add azure <URL Repositorio GIT Appservice>
```

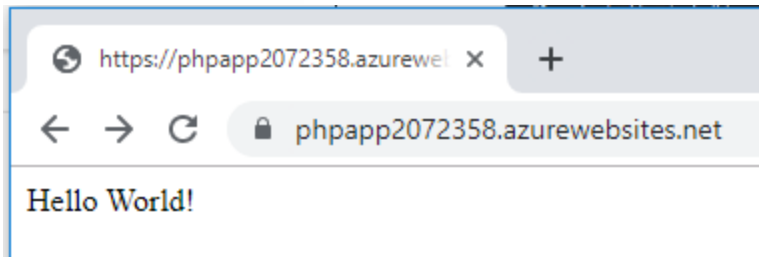
```
devuser@AppLabVM:~/php-docs-hello-world$ pwd
/home/devuser/php-docs-hello-world
devuser@AppLabVM:~/php-docs-hello-world$ git remote add azure https://phpAppUserCONU@phpapp2072358.scm.azurewebsites.net
/phpApp2072358.git
```

Ahora inyecte el código a la app ejecutando el siguiente comando:

```
git push azure master
```

```
devuser@AppLabVM:~/php-docs-hello-world$ git push azure master
Password for 'https://phpAppUserCONU@phpapp2072358.scm.azurewebsites.net':
Enumerating objects: 23, done.
Counting objects: 100% (23/23), done.
Delta compression using up to 2 threads
Compressing objects: 100% (20/20), done.
Writing objects: 100% (23/23), 4.35 KiB | 2.17 MiB/s, done.
Total 23 (delta 7), reused 0 (delta 0)
remote: Updating branch 'master'.
remote: Updating submodules.
remote: Preparing deployment for commit id 'f6c814d9c3'.
remote: Generating deployment script.
remote: Generating deployment script for Web Site
remote: Generated deployment script files
remote: Running deployment command...
remote: Handling Basic Web Site deployment.
remote: Creating app_offline.htm
remote: KuduSync.NET from: 'D:\home\site\repository' to: 'D:\home\site\wwwroot'
remote: Deleting file: 'hostingstart.html'
remote: Copying file: '.gitignore'
remote: Copying file: 'index.php'
remote: Copying file: 'LICENSE'
remote: Copying file: 'README.md'
remote: Deleting app_offline.htm
remote: Finished successfully.
remote: Running post deployment command(s)...
remote: Deployment successful.
To https://phpapp2072358.scm.azurewebsites.net/phpApp2072358.git
 * [new branch]      master -> master
devuser@AppLabVM:~/php-docs-hello-world$
```

Acceda a la URL de aplicación nuevamente, debe lucir de la siguiente manera:



Edite en la Maquina Virtual el Archivo index.php de tal manera que en lugar de la palabra **Hello World**! aparezca un mensaje con su nombre completo y código de estudiante. Realice commit al cambio y realice un push para que se actualice la aplicación

```
devuser@AppLabVM:~/php-docs-hello-world$ vi index.php
devuser@AppLabVM:~/php-docs-hello-world$ git commit -am "Modificacion 2072358"
[master 0d69424] Modificacion 2072358
 Committer: Ubuntu <devuser@AppLabVM.5ohjqwhjlssexhn2mnfk2hhucc.bx.internal.cloudapp.net>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 1 file changed, 1 insertion(+), 1 deletion(-)
devuser@AppLabVM:~/php-docs-hello-world$ git push azure master
Password for 'https://phpAppUserCONU@phpapp2072358.scm.azurewebsites.net':
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 348 bytes | 348.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Updating branch 'master'.
remote: Updating submodules.
remote: Preparing deployment for commit id '0d69424bb9'.
remote: Generating deployment script.
remote: Running deployment command...
remote: Handling Basic Web Site deployment.
remote: Creating app_offline.htm
remote: KuduSync.NET from: 'D:\home\site\repository' to: 'D:\home\site\wwwroot'
remote: Copying file: 'index.php'
remote: Deleting app_offline.htm
remote: Finished successfully.
remote: Running post deployment command(s)...
remote: Deployment successful.
To https://phpapp2072358.scm.azurewebsites.net/phpApp2072358.git
   f6c814d..0d69424  master -> master
devuser@AppLabVM:~/php-docs-hello-world$
```

Por último, acceda nuevamente a la aplicación web.

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Instrucciones de Entrega:

1. **Cree un Documento Word donde adjunte los siguientes screenshots**:
   - Output JSON de la creación del Usuario de Aplicación de App Services
   - Output JSON de la creación del App Plan
   - Out JSON de la creación de la aplicación WEB
   - Output del Push de la aplicación
   - Screenshots con la URL de la ejecución de la aplicación en explorador WEB
2. **Realice el mismo ejercicio del numeral 1, pero en este caso genere el código en otro framework de aplicación de su preferencia (.NET, Python, Java, node … etc). La página debe mostrar un perfil profesional (Como un CV) y que no sea solo texto (Imágenes, Stilos …etc).. Cargue la misma evidencia solicitada:wq en el punto 1.**

Cargue el documento en Campus Virtual.

Una vez finalizado el LAB y los entregables. Destruya todos los elementos del Resource Group en su suscripción de Azure!.