

# 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

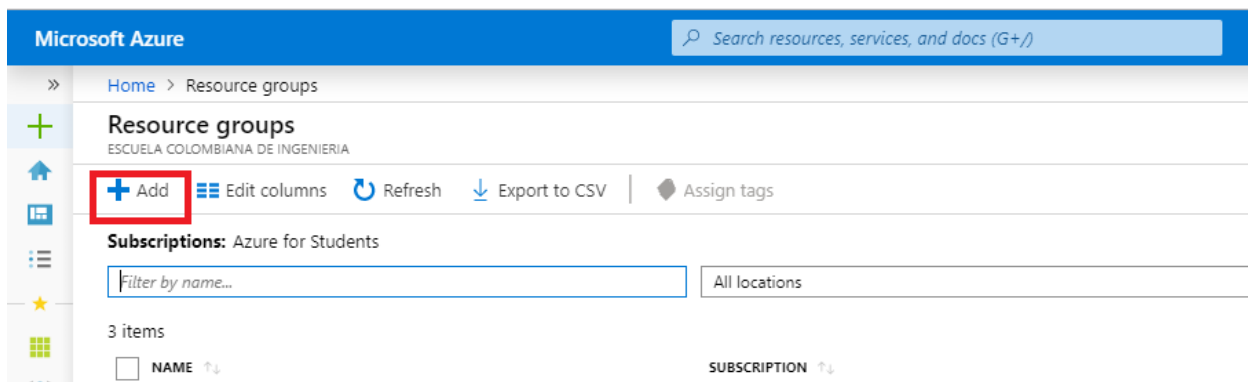
### Descripción General

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



Microsoft Azure Search resources, services, and docs (G+)

Home > Resource groups > Create a resource group

## Create a resource group

Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

**Project details**

\* Subscription Azure for Students

\* Resource group AzureAppService

**Resource details**

\* Region (US) Central US

Review + create < Previous Next : Tags >

Microsoft Azure Search resources, services, and docs (G+)

Home > Resource groups > Create a resource group

## Create a resource group

Validation passed.

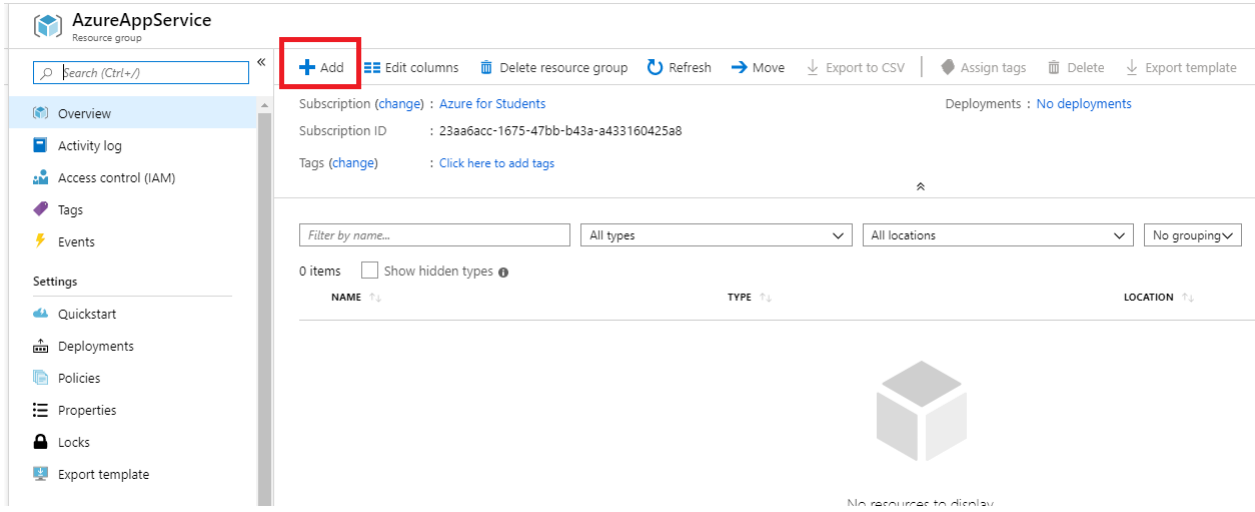
Basics Tags Review + create

**Basics**

Subscription	Azure for Students
Resource group	AzureAppService
Region	(US) Central US

Create < Previous Next >

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



**AzureAppService**  
Resource group


Search (Ctrl+/) **+ Add** Edit columns Delete resource group Refresh Move Export to CSV Assign tags Delete Export template

Subscription (change) : Azure for Students  
Subscription ID : 23aa6acc-1675-47bb-b43a-a433160425a8  
Tags (change) : Click here to add tags

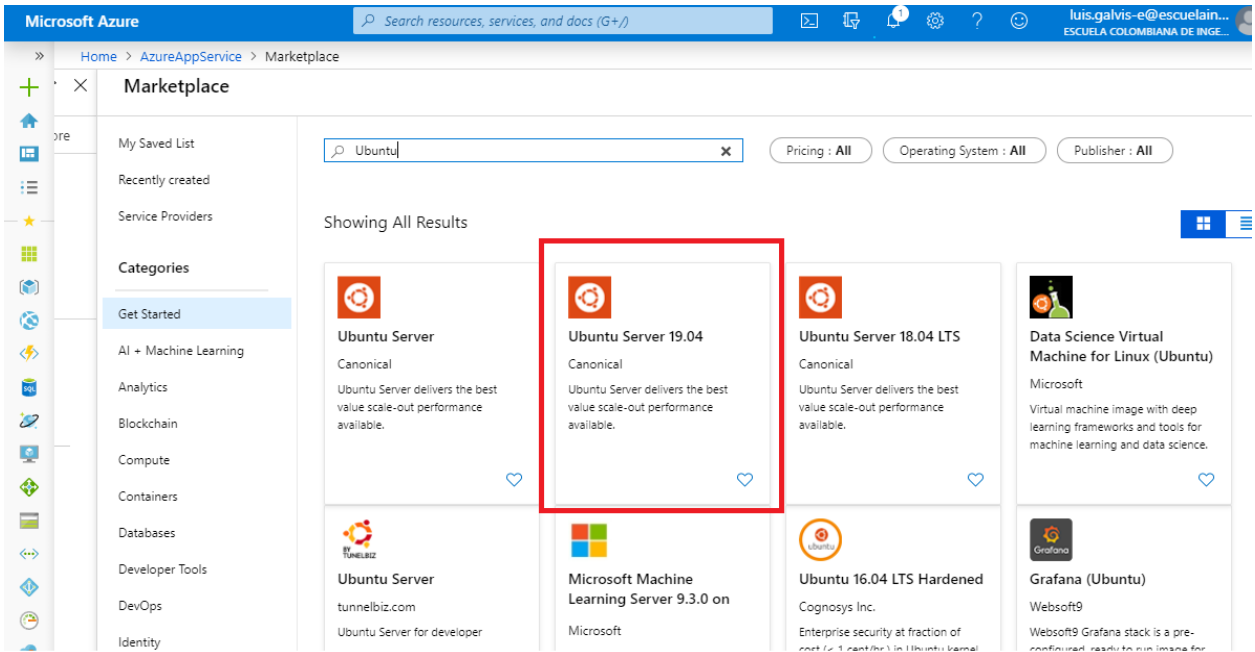
Deployments : No deployments

Filter by name... All types All locations No grouping

0 items ☐ Show hidden types

NAME	TYPE	LOCATION
 No resources to display		

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



Microsoft Azure Search resources, services, and docs (G+)

Home > AzureAppService > Marketplace

Marketplace

My Saved List Recently created Service Providers









Categories

Get Started

AI + Machine Learning Analytics Blockchain Compute Containers Databases Developer Tools DevOps Identity

Showing All Results

Search: Ubuntu Pricing: All Operating System: All Publisher: All

 <b>Ubuntu Server</b> Canonical Ubuntu Server delivers the best value scale-out performance available.	 <b>Ubuntu Server 19.04</b> Canonical Ubuntu Server delivers the best value scale-out performance available.	 <b>Ubuntu Server 18.04 LTS</b> Canonical Ubuntu Server delivers the best value scale-out performance available.	 <b>Data Science Virtual Machine for Linux (Ubuntu)</b> Microsoft Virtual machine image with deep learning frameworks and tools for machine learning and data science.
 <b>Ubuntu Server</b> tunnelbiz.com Ubuntu Server for developer	 <b>Microsoft Machine Learning Server 9.3.0 on</b> Microsoft	 <b>Ubuntu 16.04 LTS Hardened</b> Cognosys Inc. Enterprise security at fraction of cost (vs 1 cent per 1 in 1000000 kernel)	 <b>Grafana (Ubuntu)</b> Websoft9 Websoft9 Grafana stack is a pre-configured, ready to run image for

**Microsoft Azure**

Search resources, services, and docs (G+/)

Home > AzureAppService > Marketplace > Ubuntu Server 19.04


+

Home

Marketplace

Ubuntu Server 19.04

Canonical



## Ubuntu Server 19.04

Canonical

Create

Start with a pre-set configuration

Deploy with Resource Manager [\(change to Classic\)](#)

Ubuntu Server 19.04 amd64 Public Azure, Azure Germany, Azure China. Ubuntu Server is the world's most popular Linux for cloud environments. Updates and patches for Ubuntu 19.04 will be available until January 2020. Ubuntu Server is the perfect virtual machine (VM) platform for all workloads from web applications to NoSQL databases: Hadoop. For more information see [Ubuntu on Azure](#) and [using Juju to deploy your workloads](#).

**Legal Terms**

By clicking the Create button, I acknowledge that I am getting this software from Canonical and that the [legal terms](#) of Canonical apply to it. Microsoft does not provide r for third-party software. Also see the [privacy statement](#) from Canonical.

**Useful Links**

- [Linux VM Documentation](#)
- [Ubuntu Documentation](#)
- [Ubuntu 19.04 Release Notes](#)
- [FAQ](#)
- [Pricing Details](#)

Developer tools

DevOps

Identity

Ubuntu Server

tunnelbiz.com

Ubuntu Server for developer

Microsoft Machine Learning Server 9.3.0 on

Microsoft

Ubuntu 16.04 LTS Hardened

Cognosys Inc.

Enterprise security at fraction of cost (vs. 1 cent/hr) for Ubuntu-based

Grafana (L

Websoft9

Websoft9 Gri configured a

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

### Create a virtual machine

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

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image.  
Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization.  
Looking for classic VMs? [Create VM from Azure Marketplace](#)

#### Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

\* Subscription ⓘ

Azure for Students

\* Resource group ⓘ

AzureAppService

[Create new](#)

#### Instance details

\* Virtual machine name ⓘ

AppLabVM

✓

\* Region ⓘ

(US) East US

▼

Availability options ⓘ

No infrastructure redundancy required

▼

\* Image ⓘ

Ubuntu Server 19.04

▼

[Browse all public and private images](#)

\* Size ⓘ

**Standard D2s v3**  
2 vcpus, 8 GiB memory  
[Change size](#)

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.

### Administrator account

Authentication type ⓘ

\* Username ⓘ

\* Password ⓘ

\* Confirm password ⓘ

☒ Password ☐ SSH public key

devuser



.....



.....



### 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 >

## 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

Microsoft Azure

Search resources, services, and docs (G+)

Home > CreateVm-Canonical.UbuntuServer-19.04-20190929220351 - Overview

CreateVm-Canonical.UbuntuServer-19.04-20190929220351 - Overview  
Deployment

Search (Ctrl+)

Delete Cancel Redeploy Refresh

Overview

Inputs

Outputs

Template

**Your deployment is underway**

Deployment name: CreateVm-Canonical.UbuntuServer-19.04-2019... Start time: 9/29/2019, 10:05:15 PM  
Subscription: [Azure for Students](#) Correlation ID: 70b66e50-db22-4377-8ba1-59e1eb9143bc  
Resource group: [AzureAppService](#)

Deployment details (Download)

RESOURCE	TYPE	STATUS	OPERATION DETAILS
AppLabVM	Microsoft.Compute/virt...	Created	<a href="#">Operation details</a>
applabvm884	Microsoft.Network/netw...	Created	<a href="#">Operation details</a>
AppLabVM-nsg	Microsoft.Network/netw...	OK	<a href="#">Operation details</a>
AzureAppService-vnet	Microsoft.Network/virtu...	OK	<a href="#">Operation details</a>
AppLabVM-ip	Microsoft.Network/publ...	OK	<a href="#">Operation details</a>
azureappservicediag255	Microsoft.Storage/stora...	OK	<a href="#">Operation details</a>

Next steps

Una vez termine el deployment, diríjase al recurso:

CreateVm-Canonical.UbuntuServer-19.04-20190929220351 - Overview  
Deployment

Search (Ctrl+)

Delete Cancel Redeploy Refresh

Overview

Inputs

Outputs

Template

**Your deployment is complete**

Deployment name: CreateVm-Canonical.UbuntuServer-19.04-2019... Start time: 9/29/2019, 10:05:15 PM  
Subscription: [Azure for Students](#) Correlation ID: 70b66e50-db22-4377-8ba1-59e1eb9143bc  
Resource group: [AzureAppService](#)

Deployment details (Download)

Next steps

[Setup auto-shutdown](#) Recommended

[Monitor VM health, performance and network dependencies](#) Recommended

[Run a script inside the virtual machine](#) Recommended

[Go to resource](#)







## CreateVm-Canonical.UbuntuServer-19.04-20190929220351 - Overview

Deployment

 Delete  Cancel  Redeploy  Refresh

 Overview

 Inputs

 Outputs

 Template

### ✓ Your deployment is complete



Deployment name: CreateVm-Canonical.UbuntuServer-19.04-2019... Start time: 9/29/2019,  
Subscription: [Azure for Students](#) Correlation ID: 70b66e  
Resource group: [AzureAppService](#)

✓ Deployment details [\(Download\)](#)

^ Next steps

[Setup auto-shutdown](#) Recommended

[Monitor VM health, performance and network dependencies](#) Recommended


[Run a script inside the virtual machine](#) Recommended

[Go to resource](#)

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

### Connect to virtual machine

AppLabVM


 To improve security, enable just-in-time access on this VM. [→](#)

RDP

SSH

To connect to your virtual machine via SSH, select an IP address, optionally change the port number, and use one of the following commands:


\* IP address

Public IP address (157.56.183.21) 

\* Port number

22

Login using VM local account

ssh devuser@157.56.183.21 

Having trouble connecting to this VM?

- [Diagnose and solve problems](#)
- [Troubleshoot connection](#)
- [Serial console](#)

```
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:~$
```

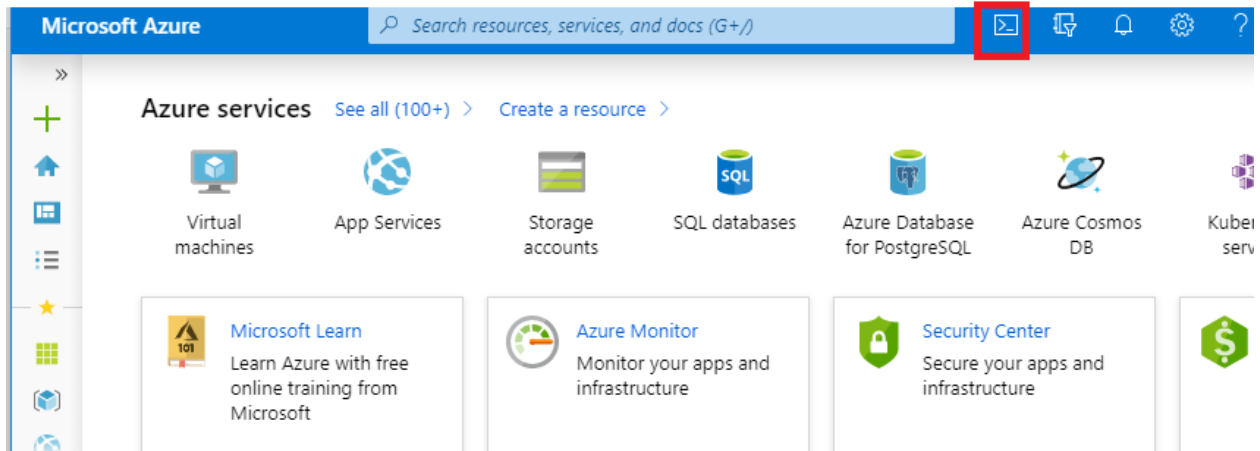
Proceda a clonar el código fuente de la aplicación del repositorio de GIT usando el siguiente comando:

```
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:~$
```

## 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 aplicación 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 realizar 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>**

phpapp2072358.azurewebsites.net




## Hey, App Service developers!

Your app service is up and running.  
Time to take the next step and deploy your code.

Have your code ready?  
Use deployment center to get code published from your client or setup continuous deployment.

Don't have your code yet?  
Follow our quickstart guide and you'll have a full app ready in 5 minutes or less.

[Deployment Center](#)[Quickstart](#)



### 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>
```

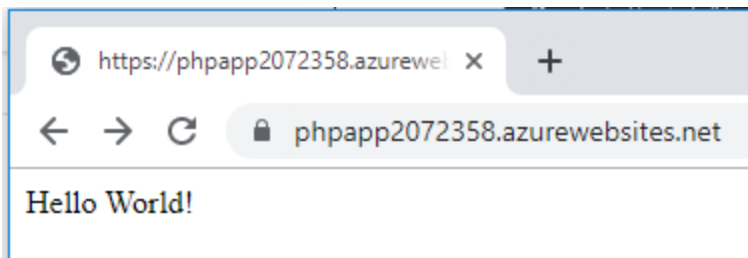
```
devuser@AppLabVM:~/php-docs-hello-world$ pwd
/home/devuser/php-docs-hello-world
devuser@AppLabVM:~/php-docs-hello-world$ git remote add azure https://phpAppUserCONU@phpapp2072358.scm.azurewebsites.net/phpApp2072358.git
```

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 Máquina 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.



## 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!.**