



# OPENSHIFT

SWAP | UGR 2014-2015

JESÚS PRIETO LÓPEZ

CLOUD COMPUTING

# Introducción

- ▶ Veremos una solución a problemas relacionados con la programación web:
  - ▶ Infraestructura y servicios (servidor, hosting, módulos, ...)
  - ▶ Proceso de desarrollo (organización, control, ...)
- ▶ Definición de PaaS
- ▶ OpenShift y como funciona
- ▶ Ejemplo de uso

# PaaS (Platform As A Service)

“

automatizar el almacenamiento, administración y desarrollo de aplicaciones web, además servir la aplicación y lanzarla para acceder a su contenido.

”

# OpenShift

- ▶ Proyecto PaaS de código abierto.
- ▶ Creado por RedHat
- ▶ Presenta varios modelos
  - ▶ OpenShift Online
  - ▶ OpenShift Enterprise
  - ▶ OpenShift Origin

# Características

- ▶ Código abierto
- ▶ Soporte de de varios lenguajes: PHP, Ruby, JAVA, Node.js, Python y Perl
- ▶ Proporciona varias herramientas y módulos: phpmyadmin, consola web, IDE, y otros
- ▶ Soporte de frameworks de aplicaciones web
- ▶ Entorno de nube flexible
- ▶ Infraestructura base en la que apoyarse sin necesidad de instalar nada

# Ventajas

- ▶ Fácil de usar
- ▶ Fácil de configurar
- ▶ Múltiples lenguajes, frameworks y herramientas
- ▶ No requiere instalar ningún software, solo es necesario un navegador
- ▶ Proporciona hosting
- ▶ Portabilidad
- ▶ No dependencia de proveedores
- ▶ Escalabilidad

# Como funciona – Ciclo de vida

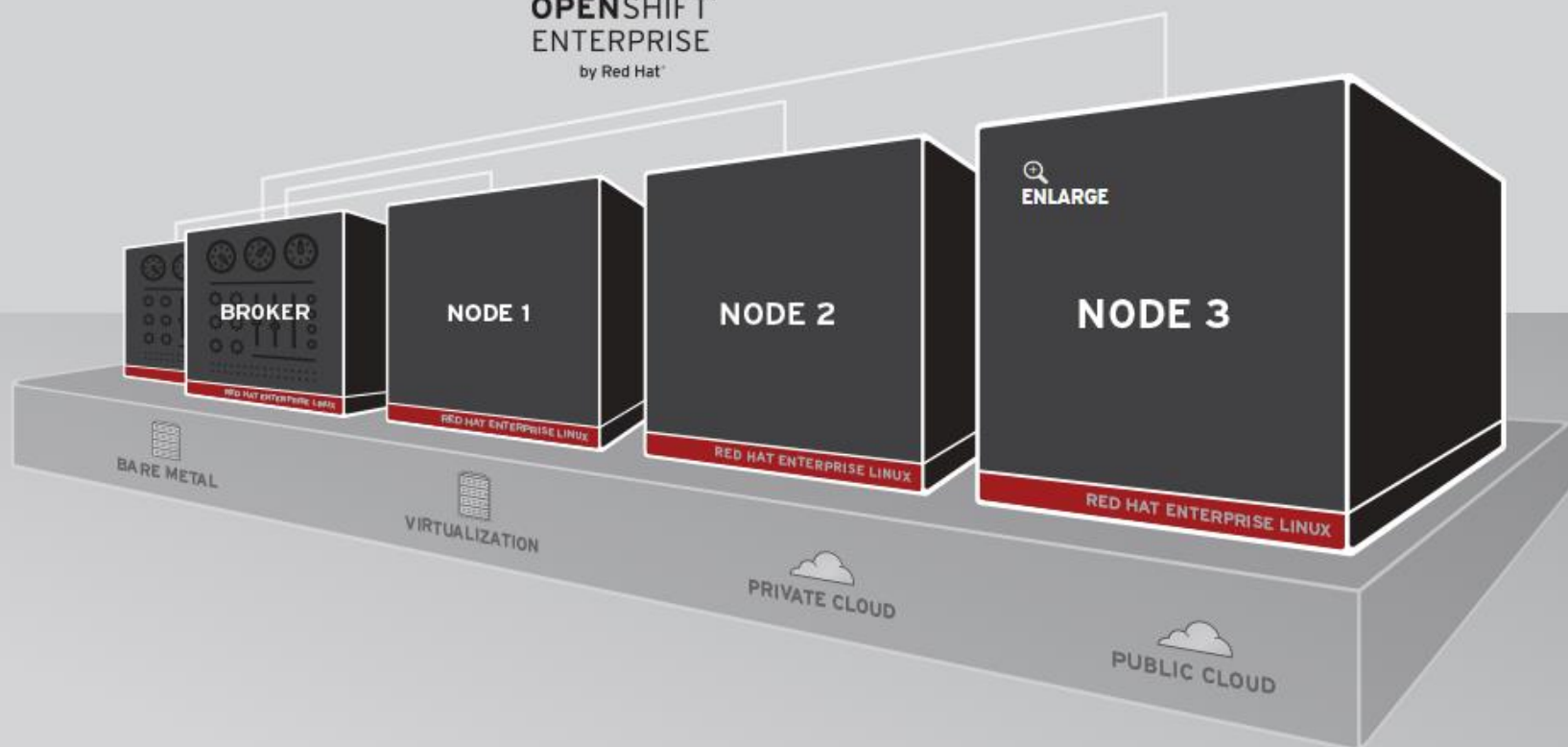
- ▶ **1. Code** programar la aplicación, apoyándose en Git.
- ▶ **2. Build** se compila y ejecuta el código desde la nube
- ▶ **3. Deploy** desplegar módulos y funcionalidades adicionales
- ▶ **4. Manage** monitorizar, configurar y modificar sobre la marcha

# Como funciona - Componentes

HOW  
OPENSIFT  
WORKS

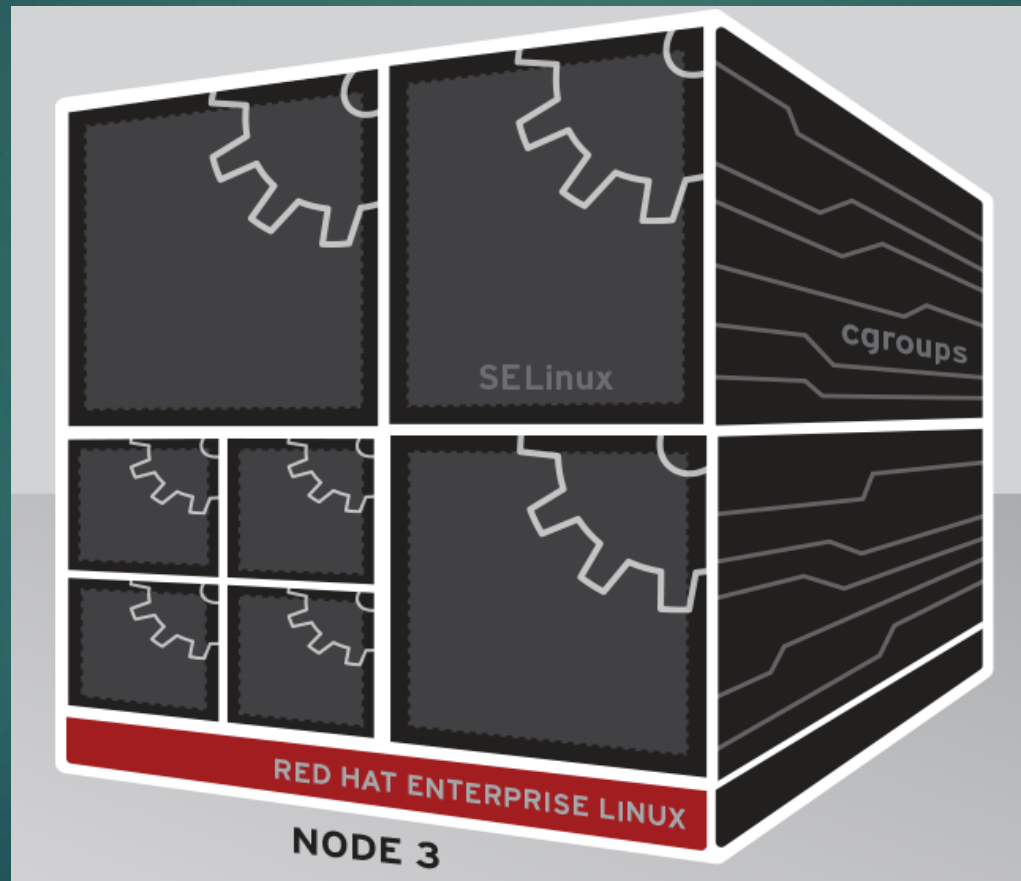


OPENSIFT<sup>™</sup>  
ENTERPRISE  
by Red Hat<sup>®</sup>

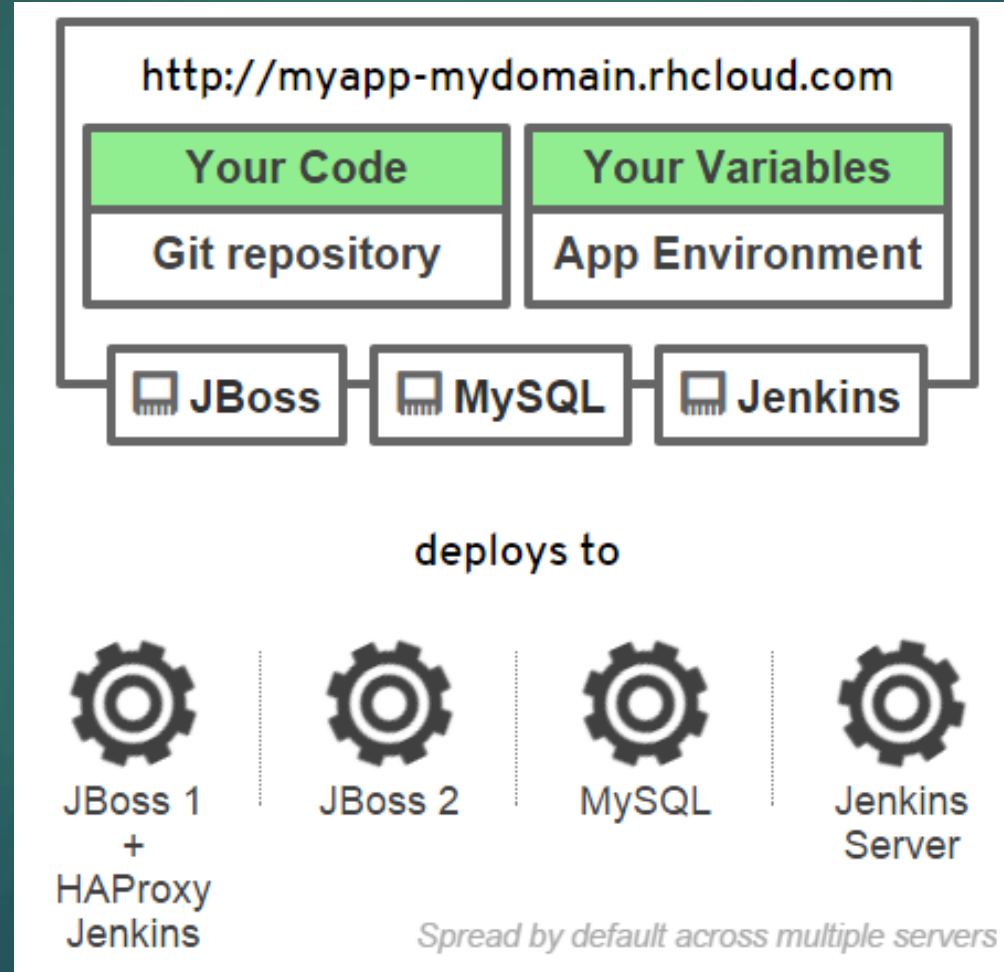




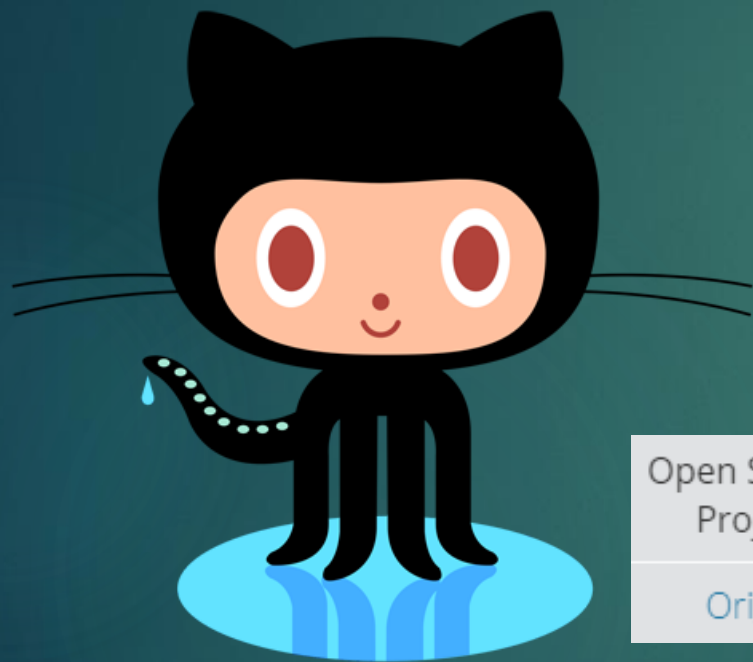
# Como funciona - Componentes



# Como funciona - Aplicación



# Código abierto



<https://github.com/openshift/origin>


Open Source Project	Red Hat Commits last 30 days	Red Hat Pull Requests last 30 days	Issues involved in last 30 days
Origin	851	242	86


# OpenShift Online

<https://openshift.redhat.com/>

	Free Plan	Bronze Plan	Silver Plan
\$ BASE PRICE	Free	Free	€15/month
🕒 APPLICATION IDLING	24 hours	Never	Never
⚙️ INCLUDED GEARS	3 small gears	3 small gears	3 small gears
⚙️ MAX GEARS	3	16	16+
📈 SCALING	Yes (3 min / 3 max)	Yes (3 min / 16 max)	Yes (3 min / 16 max)
⚙️ GEAR SIZES	small	small (\$0.02/hour) small.highcpu (\$0.025/hour) medium (\$0.05/hour) large (\$0.10/hour)	small (\$0.02/hour) small.highcpu (\$0.025/hour) medium (\$0.05/hour) large (\$0.10/hour)
💾 STORAGE	1GB per gear	1GB per gear; \$1.00/month per additional GB	6GB per gear; \$1.00/month per additional GB
🔒 SSL	Shared	For custom domains	For custom domains
👥 TEAMS	Not included	Up to 15	Up to 15
📦 JBOSS EAP 6	Included	3 gears free; \$0.03/hr per additional gear	3 gears free; \$0.03/hr per additional gear
💬 SUPPORT FROM	Community	Community	Red Hat & Community

# Probando OpenShift Online

 **OPENSIFT** ONLINE

☆ Upgrade Plan     [jesusgorillo@gmail.com](#) ▾

Applications    Settings    Help ▾

OpenShift Hub

## Welcome to OpenShift

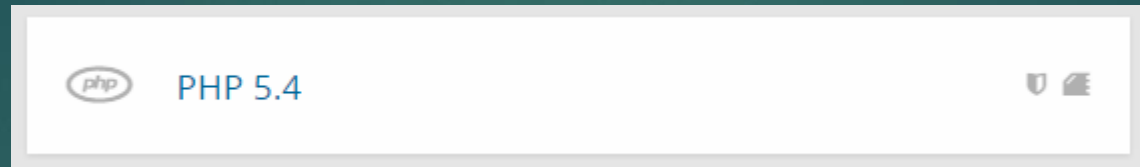
OpenShift helps you build and deploy web applications, mobile backends, service oriented architectures, and host your favorite services.

- 1. Choose a web framework or codebase to start from**  
Try JBoss, PHP, Python, Ruby, Node.js, or create a new Drupal or Wordpress site instantly.
- 2. Add cartridges like MySQL or MongoDB to your application**  
OpenShift lets you add services and tools to your application through **cartridges** - including databases, cache servers, management tools, and continuous integration servers.
- 3. Upload your code to OpenShift via Git**  
Your source code is stored with your application in a Git version control repository.

→ [Create your first application now](#)

For more about OpenShift, visit the [OpenShift Developer Portal](#).

# Creando la aplicación



Applications Settings Help ▾ OpenShift Hub


1 Choose a type of application

2 Configure the application

3 Next steps

---

Based On

PHP 5.4 Cartridge 

PHP is a general-purpose server-side scripting language originally designed for Web development to produce dynamic Web pages. Popular development frameworks include CakePHP, Zend, Symfony, and Code Igniter.

<http://www.php.net>

☆ OpenShift maintained

🛡️ Receives automatic security updates

Public URL

http:// tienda -jesuspl.rhcloud.com

OpenShift will automatically register this domain name for your application. You can add your own domain name later.

Source Code

Optional URL to a Git repository Branch/tag

We'll create a Git code repository in the cloud, and populate it with a set of reasonable defaults. If you provide a Git URL, your application will start with an exact copy of the code and configuration provided in this Git repository.

Gears

small



Gears are the application containers running your code. For most applications, the small gear size provides plenty of resources. You can also [upgrade your plan](#) to get access to

# Panel de aplicación

[Applications](#) [Settings](#) [Help](#) ▼ OpenShift Hub




tienda-jesuspl.rhcloud.com [change](#)

Created 16 minutes ago in domain [jesuspl](#) and the [aws-us-east-1](#) region

Started 1  

✓ Please make note of these MySQL credentials again:  
Root User: ██████████  
Root Password: ██████████  
URL: <https://tienda-jesuspl.rhcloud.com/phpmyadmin/>

Cartridges

 PHP 5.4	Status Started	Gears 1 small	Storage 1 GB
 MySQL 5.5	Database: tienda User: <span>██████████</span> Password: <a href="#">show</a>		
 phpMyAdmin 4.0	<a href="#">↗</a>		

Source Code

`ssh://55745993500446e6200000df@tienda-jesuspl.rhcloud.com`

Pass this URL to 'git clone' to copy the repository locally.

Remote Access

Want to log in to your application?

[Delete this application...](#)

# Balanceador de carga

HAProxy version 1.4.22, released 2012/08/09

## Statistics Report for pid 232733

### > General process information

pid = 232733 (process #1, nbproc = 1)  
uptime = 0d 0h00m47s  
system limits: memmax = unlimited; ulimit-n = 526  
maxsock = 526; maxconn = 256; maxpipes = 0  
current conns = 1; current pipes = 0/0  
Running tasks: 1/2

active UP      backup UP  
active UP, going down      backup UP, going down  
active DOWN, going up      backup DOWN, going up  
active or backup DOWN      not checked  
active or backup DOWN for maintenance (MAINT)

Note: UP with load-balancing disabled is reported as "NOLB".

Display option:

- [Hide 'DOWN' servers](#)
- [Refresh now](#)
- [CSV export](#)

External resources:

- [Primary site](#)
- [Updates \(v1.4\)](#)
- [Online manual](#)

#### stats

	Queue			Session rate			Sessions					Bytes		Denied		Errors			Warnings		Server										
	Cur	Max	Limit	Cur	Max	Limit	Cur	Max	Limit	Total	LbTot	In	Out	Req	Resp	Req	Conn	Resp	Retr	Redis	Status	LastChk	Wght	Act	Bck	Chk	Dwn	Dwntme	Thrtle		
Frontend				1	1	-	1	1	128	2		202	978	0	0	0					OPEN										
Backend	0	0		0	0		0	0	128	0	0	202	978	0	0		0	0	0	0	47s UP		0	0	0		0				

#### express

	Queue			Session rate			Sessions					Bytes		Denied		Errors			Warnings		Server									
	Cur	Max	Limit	Cur	Max	Limit	Cur	Max	Limit	Total	LbTot	In	Out	Req	Resp	Req	Conn	Resp	Retr	Redis	Status	LastChk	Wght	Act	Bok	Chk	Dwn	Dwntme	Thrtle	
Frontend				0	0	-	0	0	128	0		0	0	0	0	0					OPEN									
local-gear	0	0	-	0	0		0	0	-	0	0	0	0		0		0	0	0	0	47s UP	L7OK/200 in 0ms	1	Y	-	0	0	0s	-	
Backend	0	0		0	0		0	0	128	0	0	0	0	0	0		0	0	0	0	47s UP		1	1	0		0	0s		



```
Jesus@JES /C/Users/Jesus/Desktop/openshift (master)
$ eval $(ssh-agent -s)
Agent pid 2172

Jesus@JES /C/Users/Jesus/Desktop/openshift (master)
$ ssh-add openshift
Identity added: openshift (openshift)
```

```
Jesus@JES /C/Users/Jesus/Desktop/openshift (master)
$ git clone ssh://55745993500446e6200000df@tienda-jesuspl.rhcloud.com/~/.git/tienda.git/ tienda
Cloning into 'tienda'...
remote: Counting objects: 19, done.
remote: Compressing objects: 100% (13/13), done.
remote: Total 19 (delta 2), reused 19 (delta 2)
Receiving objects: 100% (19/19), 18.12 KiB | 0 bytes/s, done.
Resolving deltas: 100% (2/2), done.
Checking connectivity... done.
```

# Ejemplo

tienda-jesuspl.rhcloud.com/index.php

**ugr** Universidad de Granada

Usuario

**PORTADA** PORTÁTILES SOBREMESA PERIFÉRICOS



**ASUS X552LAV-SX370H Intel Core i5-4210U/4GB/500GB/15.6"**

475 €



**Acer TC-605 Intel i5-4460/16GB/1TB/AMD R5-235**

625 €



**OFERTAS**

**PcCom Gaming Revolution Ultra i5-4670K/8GB/2TB**

919 €



**Lenovo B50-70 i3-4005U/4GB/500GB/15.6"**



**Genesis RX66 Pro Gaming Keyboard - Teclado**



**OFERTAS**

**Logitech Wireless Mouse M175 Negro - Ratón**

Últimas noticias

Tu anuncio aquí

Tu anuncio



**GENIAL FPS**

NUEVOS HÉROES MÁS ACCIÓN

JUEGA AHORA

www.texyon.com



**GENIAL FPS**

NUEVOS HÉROES MÁS ACCIÓN

JUEGA AHORA

www.texyon.com

# Referencias

<https://openshift.redhat.com/>

<http://www.redhat.com/es/technologies/cloud-computing/openshift>

<http://www.redhat.com/es/about/press-releases/openshift-red-hat-named-infoworld-technology-year-award-winner>

[http://docs.openshift.org/origin-m4/oo\\_deployment\\_guide\\_comprehensive.html](http://docs.openshift.org/origin-m4/oo_deployment_guide_comprehensive.html)

<https://github.com/openshift/origin>

<https://www.openshift.com/products/architecture>