

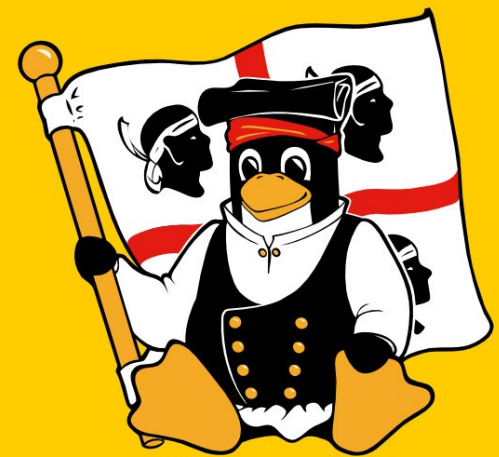


# Openshift

di Massimiliano Dessi

**GULCh**

*Gruppo Utenti Linux Cagliari h...?*



The linuxday 2014 in Cagliari  
and this preso are dedicated  
to the memory of  
Giulio Concas.



Ciao Giulio 



## 20 min with @desmax74 & Openshift



Massimiliano Dessi has more than 13 years of experience in programming.

He's a proud father of three, Manager of Google Developer Group Sardegna, Founder of SpringFramework IT, co-founder of JugSardegna. Author of Spring 2.5 AOP.



# Intro

- Infrastructure as a Service (IaaS)

Amazon EC2, Rackspace, Microsoft Azure, Google Compute Engine, etc.

Choose RAM, CPU, disk

Ready in minutes.

Users: System admins and DevOps



# Software as a Service (SaaS)

- Sign in and use the service

Gmail, Dropbox, Evernote, FB, Twitter



# Platform as a Service (Paas)

- Between IaaS and SaaS  
the platform spins up the dev env  
with all the “server” pieces you need to run your  
application



# Openshift PaaS

- Three version

OpenShift Origin (<https://openshift.github.io/>)

OpenShift Online (<https://www.openshift.com/>)

OpenShift Enterprise



Current release 2.2

Version 3 will be released in 2015

Docker - Kubernetes





# Basics

- **Application**

Your typical web application that will run on OpenShift.

- Open-Shift is focused on hosting web applications. With this in mind, for security reasons, the only ports exposed to incoming traffic are HTTP (80), HTTPS (443), SSH (22), WebSocket HTTP (8000) and HTTPS (8443).



# Basics

- **Gear**

A gear is a server container with a set of resources that allows users to run their applications. Your gears run on OpenShift.

- There are three gear types on OpenShift Online:
- small, medium, and large. Each size provides 1 GB of disk space by default.
- The large gear has 2 GB of RAM, the medium gear has 1GB of RAM, and the small gear has 512 MB of RAM



# Basics

- **Cartridge**

Cartridges are the plug-ins that that can be used to create and run an application (framework or components).

- One or more cartridges run on each gear, and the same cartridge can run on many gears for clustering or scaling. There are two kinds of cartridges:

Standalone

Embedded



# Basics

- **Scalable application**

Application scaling enables your application to react to changes in traffic and automatically allocate the necessary resources to handle your increased demand.

- The OpenShift infrastructure monitors web traffic and automatically brings up new gears with the appropriate web cartridge to handle more requests.

When traffic decreases, the platform removes the extra resources.



## Basics

- **Client tools, Web Console /Eclipse plug-ins**

You can interact with the OpenShift platform via RHC client command-line tools, installed on your local machine, the OpenShift Web Console, or a plug-in in Eclipse to interact with your application in the OpenShift cloud.

- The rest of your work with your application will happen through Git and SSH.



# Demo

```

$ cat /etc/cartridge-list
(1) https://www.openshift.com (Line 1.0.2) /usr/share/system_extensions.rb:230:
warning: insecure world writable dir /data in PATH, Mode 040777
jbossas-7 JBoss Application Server 7 web
jboss-dv-6.0.0 (!) JBoss Data Virtualization 6 web
jbosseap-6 (*) JBoss Enterprise Application Platform 6 web
jenkins-1 Jenkins Server web
nodejs-0.10 Node.js 0.10 web
perl-5.10 Perl 5.10 web
php-5.3 PHP 5.3 web
php-5.4 PHP 5.4 web
zend-6.1 PHP 5.4 with Zend Server 6.1 web
python-2.6 Python 2.6 web
python-2.7 Python 2.7 web
python-3.3 Python 3.3 web
ruby-1.8 Ruby 1.8 web
ruby-1.9 Ruby 1.9 web
ruby-2.0 Ruby 2.0 web
jbosssews-1.0 Tomcat 6 (JBoss EWS 1.0) web
jbosssews-2.0 Tomcat 7 (JBoss EWS 2.0) web
jboss-vertx-2.1 (!) Vert.x 2.1 web
diy-0.1 Do-It-Yourself 0.1 web
10gen-mms-agent-0.1 10gen Mongo Monitoring Service Agent add-on
cron-1.4 Cron 1.4 add-on
jenkins-client-1 Jenkins Client add-on
mongodb-2.4 MongoDB 2.4 add-on
...skipping...
jbossas-7 JBoss Application Server 7 web
jboss-dv-6.0.0 (!) JBoss Data Virtualization 6 web
jbosseap-6 (*) JBoss Enterprise Application Platform 6 web
jenkins-1 Jenkins Server web
nodejs-0.10 Node.js 0.10 web
perl-5.10 Perl 5.10 web
php-5.3 PHP 5.3 web
php-5.4 PHP 5.4 web
zend-6.1 PHP 5.4 with Zend Server 6.1 web
python-2.6 Python 2.6 web
python-2.7 Python 2.7 web
python-3.3 Python 3.3 web
ruby-1.8 Ruby 1.8 web
ruby-1.9 Ruby 1.9 web
ruby-2.0 Ruby 2.0 web
jbosssews-1.0 Tomcat 6 (JBoss EWS 1.0) web
jbosssews-2.0 Tomcat 7 (JBoss EWS 2.0) web
jboss-vertx-2.1 (!) Vert.x 2.1 web
diy-0.1 Do-It-Yourself 0.1 web
10gen-mms-agent-0.1 10gen Mongo Monitoring Service Agent add-on
cron-1.4 Cron 1.4 add-on
jenkins-client-1 Jenkins Client add-on
mongodb-2.4 MongoDB 2.4 add-on
mysql-5.1 MySQL 5.1 add-on
mysql-5.5 MySQL 5.5 add-on
phpmyadmin-4 phpMyAdmin 4.0 add-on
postgresql-8.4 PostgreSQL 8.4 add-on
postgresql-9.2 PostgreSQL 9.2 add-on
rockmongo-1.1 RockMongo 1.1 add-on
switchyard-0 SwitchYard 0.8.0 add-on
haproxy-1.4 Web Load Balancer add-on

```

PRODUCTS PRICING DEVELOPERS SUPPORT ADD-ONS

## DEVELOP, HOST, AND SCALE YOUR APPS IN THE CLOUD

The Open Hybrid Cloud Application Platform by Red Hat

Now available  
App Marketplace

### ONLINE

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Host your applications in the public cloud. OpenShift Online automates the provisioning, management and scaling of applications so that you can focus on development and creativity.

Learn more >

**SIGN UP FOR FREE**

### ENTERPRISE

Private PaaS

Accelerate your IT service delivery and streamline application development by leveraging PaaS in your own datacenters or private cloud.

Learn more >

REQUEST EVALUATION

### ORIGIN

Community PaaS

Explore the community-driven open source upstream of OpenShift. Download the bits, join the growing community, and help extend the functionality of OpenShift.

Learn more >

JOIN THE COMMUNITY

### YOUR CODE. YOUR CHOICE.

Java .PHP Ruby Node.js Python Perl MySQL MongoDB PostgreSQL Jenkins

Browse all supported cartridges or extend OpenShift with your favorite stack.



# Q & A



# Thank you for your attention !

