



# ubuntu

## Conhecendo o Ubuntu Enterprise Cloud - UEC

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Software Livre  
A tecnologia que liberta



# ubuntu

PyTown

# Roteiro

- Introdução
- Conceitos
- Instalação
- Ferramentas
- Considerações Finais



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# Introdução

- Modelo convencional de infra-estrutura é dimensionado para suportar a carga de pico
  - Na prática, durante boa parte do tempo, estamos deixando hardware ocioso
  - Gasto de recursos desnecessários (energia elétrica, refrigeração, etc)

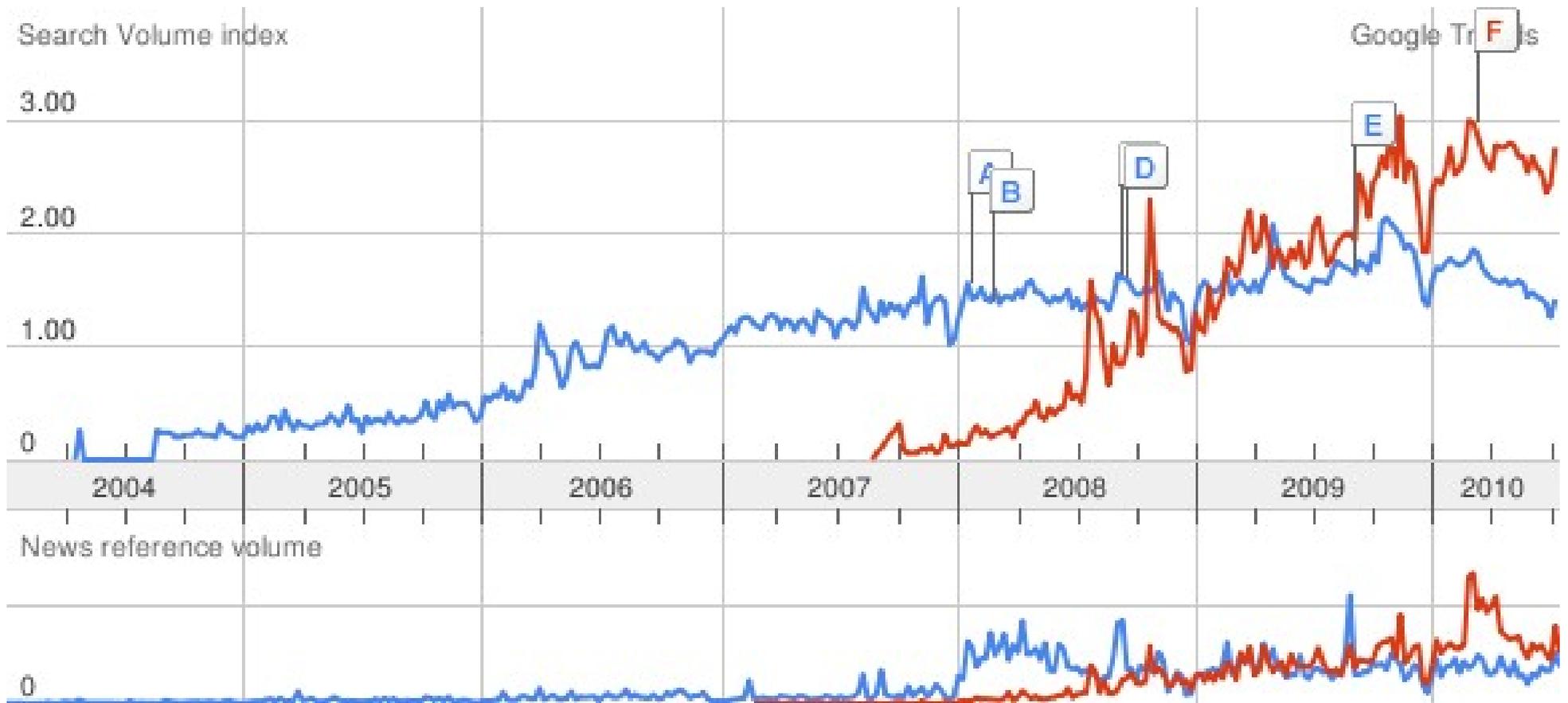


# Introdução

- Mesmo dimensionando bem sua infraestrutura, nada impede a ocorrência de picos inesperados (efeito “slashdot”)
- As redes sociais tem potencial para atrair quantidades de tráfego incríveis
- Nosso software até pode ser escalável, mas a infra-estrutura é bem mais difícil de escalar “dinamicamente”



# Virtualização x Cloud Computing

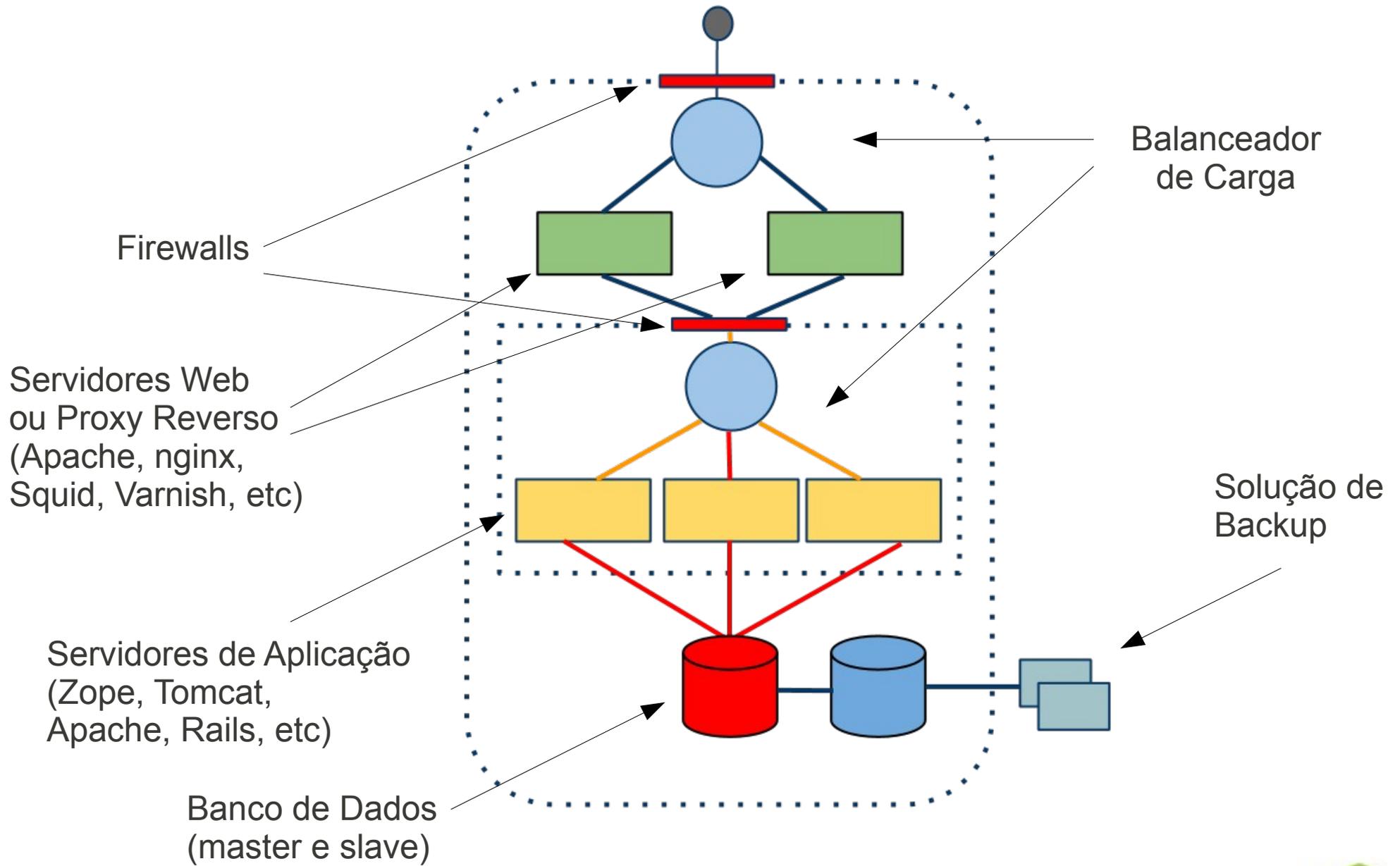


Antes de tentar entender o Ubuntu Enterprise Cloud - UEC, vejamos como costuma funcionar a infra-estrutura “padrão” para serviços web (tolerantes a falhas e escaláveis)



ubuntu





# Conceitos

- Ubuntu Enterprise Cloud – UEC
  - Baseado na versão opensource do Eucalyptus: *Elastic Utility Computing Architecture Linking Your Programs To Useful Systems*
  - Permite a criação de clouds privadas e públicas
  - **API similar ao Amazon EC2 e S3**



# Conceitos

- O Ubuntu Enterprise Cloud – UEC e o Amazon Elastic Compute Cloud – EC2 – são tão parecidos que ferramentas desenvolvidas para gerenciar clouds no EC2 funcionam no UEC.
- Amazon EC2 é, na prática, o “padrão de fato”.



# Conceitos

- UEC é *teoricamente* independente de hypervisor (utiliza a libvirt)
- O Ubuntu suporta oficialmente apenas o **KVM** para virtualização
  - Em teoria, isso não impediria o uso de XEN em Node Controllers instalados usando Debian, por exemplo...
- A Red Hat também suporta apenas o KVM



# Componentes do UEC

- Cloud Controller (CLC)
- Walrus Storage Controller (“S3 like”)
- Storage Controller (“EBS like”)
- Cluster Controller (CC)
- Node Controller (NC)

Aqui rodam as máquinas virtuais!

# Instalação

- A instalação do UEC é bastante simplificada no Ubuntu
  - Não faz sentido instalar tudo em apenas uma máquina!
- No mínimo, costuma-se utilizar servidores com pelo menos 2 interfaces de rede
  - Eth0: publica
  - Eth1: privada

- Para começar (em todos os servidores):

```
# apt-get clean; apt-get update; apt-get dist-upgrade -u; apt-get autoremove -purge
```

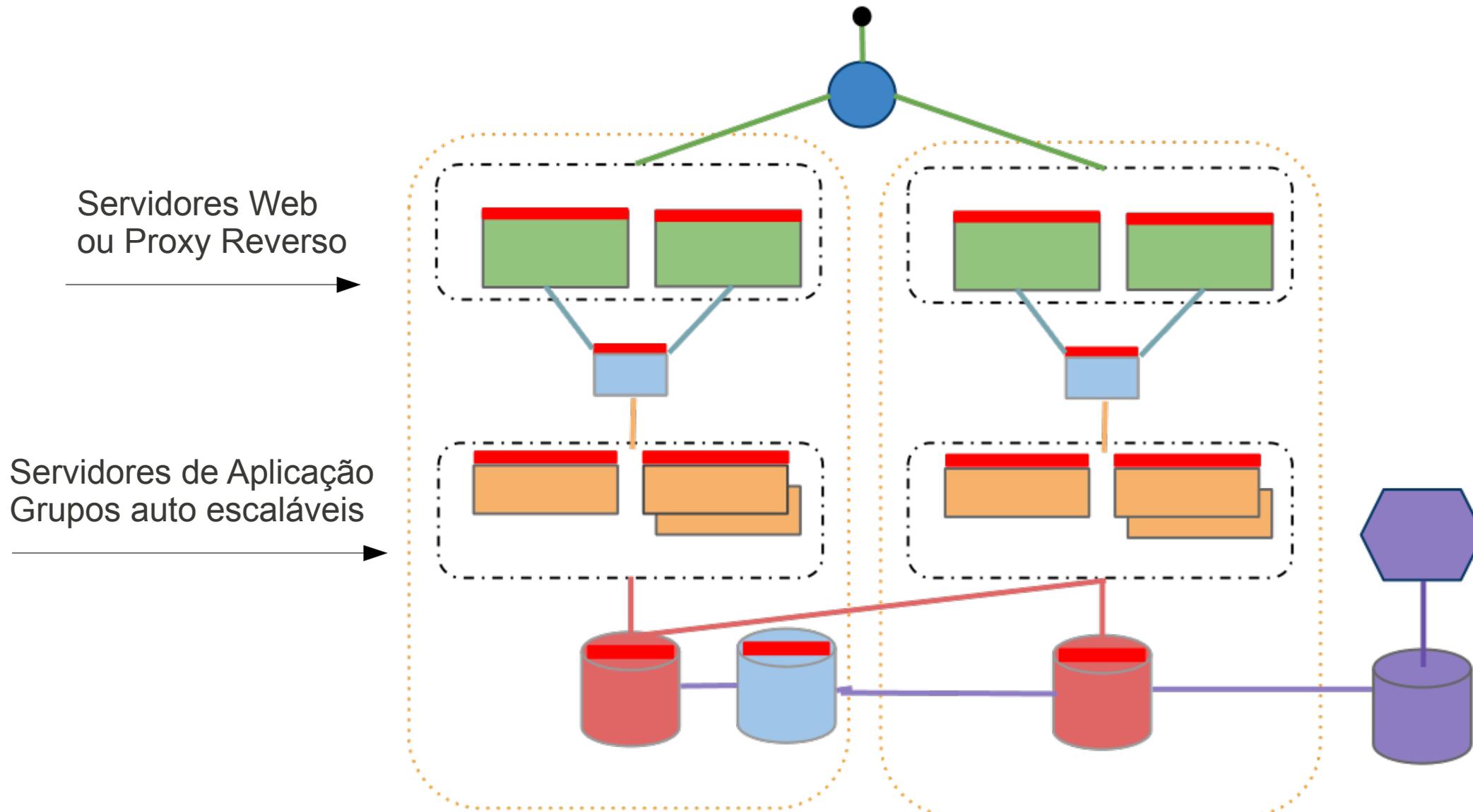
- Nos Node Controllers:

```
# apt-get install euca-nc
```

- Se você tem apenas um segundo servidor e quer instalar todos os serviços nele:

```
# apt-get install eucalyptus-cloud  
eucalyptus-cc eucalyptus-walrus  
eucalyptus-sc
```

Obviamente, para muitos servidores, convém executar os serviços “dedicados”

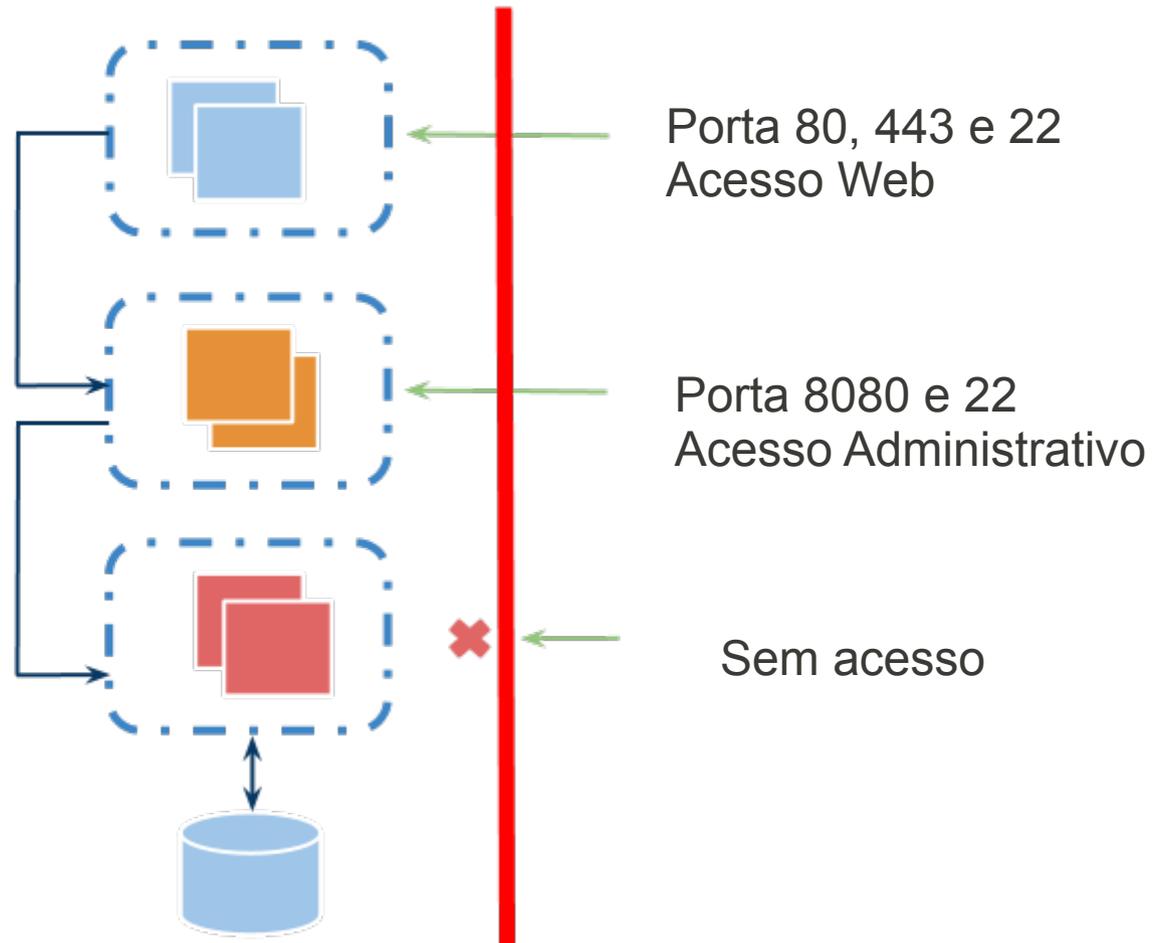


Servidores Web  
ou Proxy Reverso

Servidores de Aplicação  
Grupos auto escaláveis

Grupo de Servidores Web  
acessa servidores do grupo  
de Servidores de Aplicação

Grupo de Servidores de  
Aplicação acessa grupo de  
Servidores de Banco de Dados



# **ubuntu** enterprise cloud

Version 1.6.2

Please, sign in:

Username:

Password:

*Remember me on this computer*

[Apply](#) for account | [Recover](#) the Password

## User account Information

Login: **admin**

Name:

Email: **xirumacanudo@gmail.com**

Feel free to change the account information (except the login) and the password whenever you want. The cryptographic credentials for the Web services associated with this account, shown below, will not be affected by these changes.

[Edit Account Information](#)[Change Password](#)

## Credentials ZIP-file

Click the button to download a ZIP file with your Eucalyptus credentials. Use the public/private key pair included therein with tools that require X.509 certificates, such as Amazon's EC2 command-line tools.

[Download Credentials](#)

[Credentials](#)**Images**[Store](#)[Users](#)[Configuration](#)[Services](#)[Extras](#)

Id	Name	Kernel	Ramdisk	State	Actions
emi-DE5C1065	image-store-1275604027/image.manifest.xml	eki-F46B10E2	eri-08E61149	available	<a href="#">Disable</a>
eri-08E61149	image-store-1275604027/ramdisk.manifest.xml			available	<a href="#">Disable</a>
eki-F46B10E2	image-store-1275604027/kernel.manifest.xml			available	<a href="#">Disable</a>

powered by **Eucalyptus**



## Ubuntu 9.10 - Karmic Koala (amd64)

Install

Image version: 20091027

Ubuntu 9.10 image for amd64.

by

Ubuntu

### How to run Ubuntu 10.04 LTS - Lucid Lynx (i386)

To run an instance with this image, execute the following command:

```
euca-run-instances -k <your key pair> emi-DE5C1065
```

For more information, please consult the documentation.

Close



by

M/Gatev



by

Ubuntu

[read more...](#)



## Ubuntu 10.04 LTS - Lucid Lynx (amd64)

Install

Image version: 20100427.1

Ubuntu 10.04 LTS image for amd64

by

Ubuntu

[read more...](#)

[Credentials](#)

[Images](#)

[Store](#)

[Users](#)

**Configuration**

[Services](#)

[Extras](#)

powered by  **Eucalyptus**

### Cloud configuration:

Cloud Host:

Default kernel:

Default ramdisk:

Loaded configuration from server

### DNS configuration:

Domain name:

Nameserver:

IP:

Loaded configuration from server

## Walrus Configuration:

Walrus host:

Deregister

Buckets  
path:

Maximum buckets per user

MB maximum bucket size

MB of disk are reserved for the image cache

GB of disk are reserved for snapshots

Register Walrus

Save Walrus configuration

Walrus configuration up to date

## Clusters:

Name: cluster1 [Deregister Cluster](#)

### Cluster Controller

Host:

Port:

Dynamic public IP address assignment

Reserve for assignment  public IP addresses

Maximum of  public IP addresses per user

Use VLAN tags  through

### Storage Controller

Host:

Interface:

Volumes path:

Max volume size:  GB

Disk space reserved for volumes:  GB

Zero-fill volumes

[Register cluster](#)

[Save cluster configuration](#)

Clusters up to date



## VM Types:

Name	CPUs	Memory (MB)	Disk (GB)
m1.small	<input type="text" value="1"/>	<input type="text" value="192"/>	<input type="text" value="2"/>
c1.medium	<input type="text" value="1"/>	<input type="text" value="256"/>	<input type="text" value="5"/>
m1.large	<input type="text" value="2"/>	<input type="text" value="512"/>	<input type="text" value="10"/>
m1.xlarge	<input type="text" value="2"/>	<input type="text" value="1024"/>	<input type="text" value="20"/>
c1.xlarge	<input type="text" value="4"/>	<input type="text" value="2048"/>	<input type="text" value="20"/>

Save VmTypes



- Dashboard
- Send Feedback
- Knowledge Base
- Landscape Developers
- Administrators
- Alerts (4)
- Stored Scripts
- Package Profiles
- Clouds
  - Amazon cloud
  - Brute Robe
  - Landscape Demo Cloud
- Custom Graphs
- Access Groups
- Activities
- Pending Computers
- Computers
- Tags
  - eucalyptus (2)
  - intrepid (1)

## Landscape Developers

 **4 active alerts**  
[Configure alerts](#)

The following alerts are outstanding:

- | Description  |
|--|
|  10 computers have package upgr   |
|  9 computers have security upgrad |
|  50 computers are not compliant w |
|  45 computers haven't contacted L |

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## Summary

-  2 computers have [security upgrades to install](#)
-  2 computers have [upgrades to install](#)
-  1 computer has not reported package information

## Security Issues

USN	Summary	Affected
 892-1	<a href="#">fuse vulnerability</a>	2 computers
 893-2	<a href="#">dhcp3 vulnerability</a>	2 computers

An [Ubuntu Security Notice](#) is issued when a security vulnerability affects a supported release of Ubuntu.

## Package Information

Computer	Available	Installed	Upgrades	Locked
 EC2 Instance i-438C074C	29400	361	<a href="#">9</a>	-
 EC2 Instance i-44A90737	29400	361	<a href="#">9</a>	-

3

-  Info
-  Activities
-  Hardware
-  Monitoring
-  Scripts
-  Processes
-  Packages



# Design to meet your requirements

[Multi-cloud Support](#)   [Component Library](#)   [Partner Solutions](#)



[MANAGE THE CLOUD](#)

[IMPROVE AGILITY](#)

[MAINTAIN CHOICE](#)

[STAY IN CONTROL](#)

[WATCH DEMO](#)

## Cloud Computing Benefits

More companies are choosing to deploy their applications in the cloud to realize:

- Cost savings
- Efficiency gains
- Faster time to market

[LEARN MORE](#)

## Cloud Computing Uses

- [Scalable Website](#)
- [Grid Computing](#)
- [Test & Development](#)
- [Social Gaming Applications](#)
- [Business Intelligence](#)

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## See For Yourself

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- Configuration & management
- Multi-cloud interoperability

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- [Webinar: Cloud Application Security: Best Practices for Amazon...](#)

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- [EC2](#)

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- [Managing Systems, Not Servers](#)

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- [Scalable Website](#)

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Obrigado

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