

Virtualização e Cloud Computing



Conteúdo...

- O que é virtualização
- O que é Cloud Computing
 - Virtualizadores
 - Clouds

Prática....

O que é virtualização

- Instâncias executadas simultaneamente.
 - Abstração do hardware
- Gerenciados por VMM (Virtual Machine Monitor) / hypervisor.
- Controle de CPU, memória, armazenamento, migração, etc

-- by RedHat

Paravirtualização

- O sistema operacional da máquina virtual "sabe" que está rodando num ambiente virtualizado.

-- by Oracle

Fullvirtualização

- A máquina virtual simula todo o hardware para permitir que um sistema operacional guest seja executado de maneira isolada.

-- by Oracle

Comparação



Full-virtualization



Para-virtualization

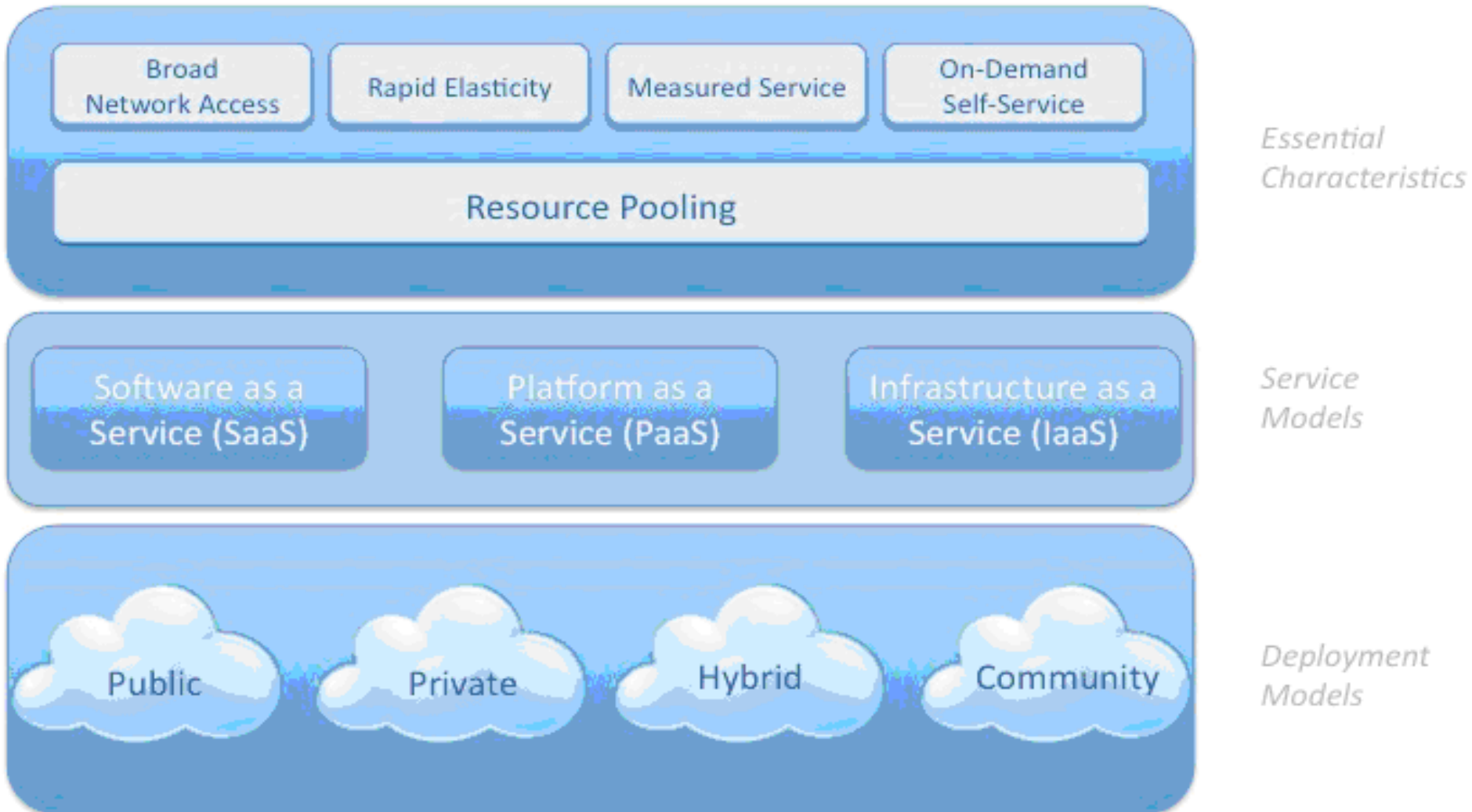
Cloud-Computing

- “Um modelo para acesso a rede sob demanda, ubíquo e conveniente para um pool compartilhado de recursos computacionais configuráveis que podem ser rapidamente provisionados e lançados com mínimo esforço de gerenciamento ou interação com o provedor de serviços”

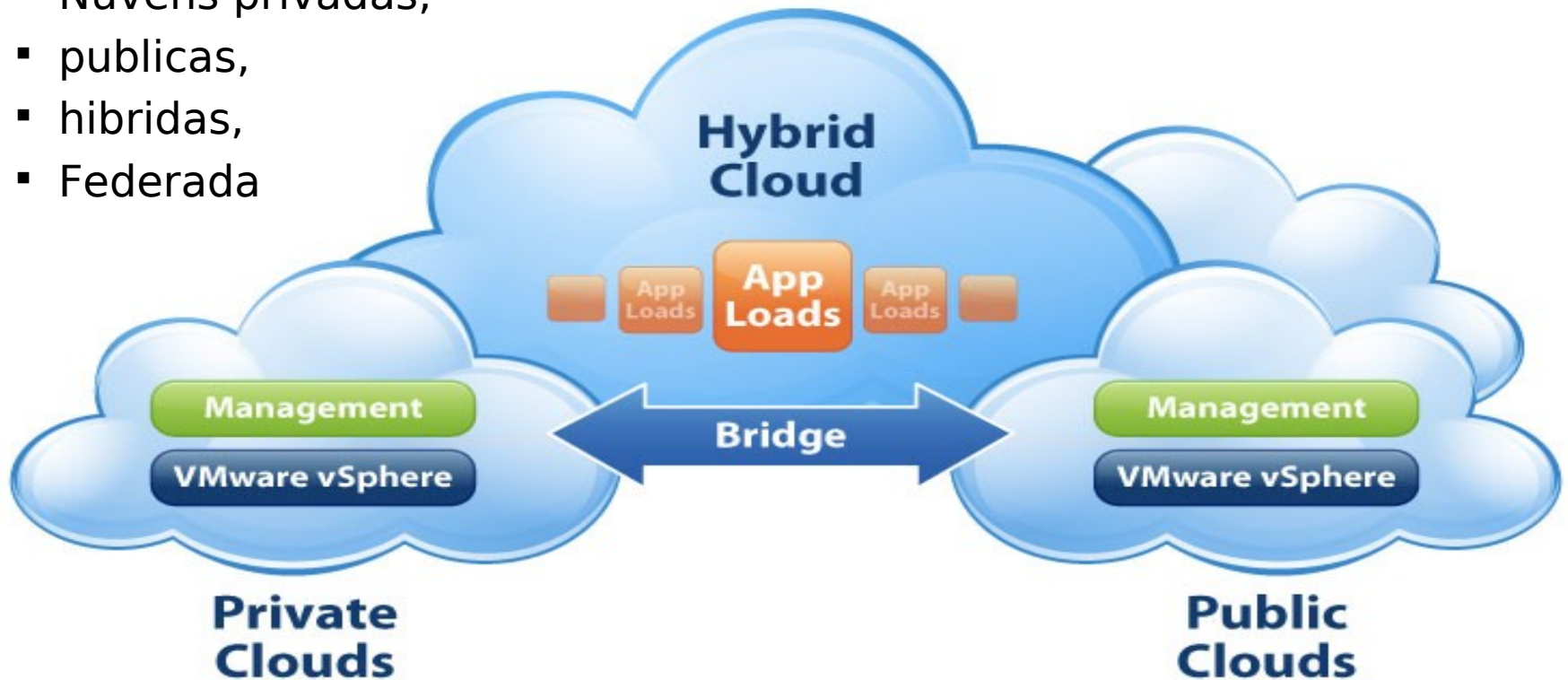
-- By NIST
(National Institute of Standards and Technology)

Visual Model Of NIST Working Definition Of Cloud Computing

<http://www.csrc.nist.gov/groups/SNS/cloud-computing/index.html>



- Nuvens privadas,
- publicas,
- híbridas,
- Federada



Modelos mais comuns

- **IaaS** - Infrastructure as a Service ou Infra-estrutura como Serviço
 - **PaaS** - Platform as a Service ou Plataforma como Serviço
 - **DaaS** - Development as a Service ou Desenvolvimento como Serviço
 - **SaaS** - Software as a Service ou Software como Serviço
 - **CaaS** - Communication as a Service ou Comunicação como Serviço
 - Etc...
- Achamos vários conceitos, pois cada vez mais, o comercio de Cloud esta trazendo novas maneiras de disponibilizar para o cliente o produto sem que ele tenha requisitos em loco.

Virtualizadores



Testamos 64
tecnologias

Virtualizadores

Virtualizador	Fabricante	Licença	Guest OS
Hyper-V	Microsoft	Proprietary	Windows
KVM	Qumranet	GPL	ALL
Linux-VServer	Community Project	GPL	Linux
OpenVZ	Community Project	GPL	Linux
Oracle VM	Oracle Corporation	GPL / Proprietary	Windows, Oracle Linux, Red Hat, Solaris, FreeBSD
Parallels	Parallels, Inc.	Proprietary	ALL
PowerVM	IBM	Proprietary	PowerPC, x86; AIX, i5/OS, IBM
QEMU	Fabrice Bellard	GPL	ALL
VirtualBox	Oracle Corporation	GPL	ALL
VMware ESX	Vmware	Proprietary	ALL
Xen	Xensource	GPL	ALL

OpenVZ / KVM

Wiki

Blog

Open- Source

Fórum

Bugzilla

Suporte pela
comunidade

+ 1 atualização/dia

Suporte pago

Fácil acesso

Muitos profissionais

Grandes sucessos!

OpenVZ / KVM

OpenVZ	KVM
ParaVirtual	FullVirtual
Linux	All
90% Compatível	100% Compatível
HOT-ADD	Não HOT-ADD
Muito Rápido	Rápido

Proxmox

- Conjunto de ferramentas embutidos em um linux.
- Gestão Web
- Opensource
- Desde 2008 no mercado
- 19 atualizações até 27/04/2012
- Suporte pago
- Fórum, wiki e muito material na internet gratuito

Clone P2V



http://pve.proxmox.com/wiki/Migration_of_servers_to_Proxmox_VE

Importando V2V



ETC...

Clouds

- **Google Docs** - office <http://docs.google.com>
- **Microsoft Skydrive** - 25G para armazenar arquivos
- **Dropbox** - Armazenamento
- **Editor de fotos** - <http://www.phixr.com/>
- **GMAIL** - www.gmail.com
- **Netsabe** - é um exemplo de empresa que utiliza a nuvem da google para a aplicacao de mapeamento geografico
- **Gadget domestico de automação** - mbed.org
- **Ferramenta para gerar IaaS** - Proxmox
- **DaaS (Desktop as a Service)** - <http://zimcompany.com/zimdesk/>

Mundo

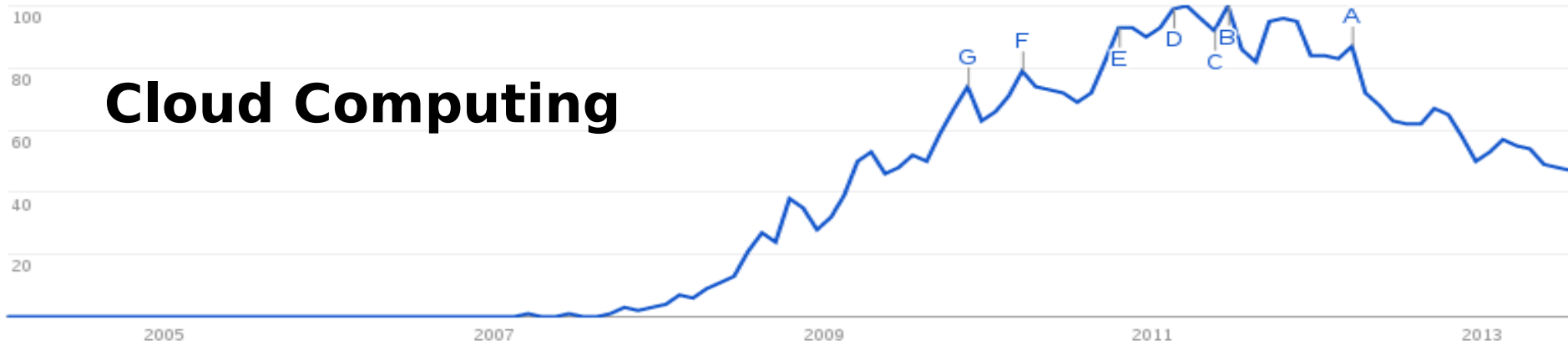
Interesse com o passar do tempo ?

O número 100 representa o interesse máximo das pesquisas

☒ Títulos das notícias

☐ Previsão ?

Cloud Computing



interesse com o passar do tempo ?

O número 100 representa o interesse máximo das pesquisas

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☐ Previsão ?

Virtualização



Fornecedores

 DigitalOcean



Pricing

Features

Customers

Help & Community

Sign Up

Login

Simple Cloud Hosting

Built for developers. Deploy an SSD cloud server in 55 seconds!

Now offering ...



Blazing fast!



2x more!



Create an Account
Deploy in 55 Seconds



Email

Password

Get Started!



Choosing a Cloud Platform

[Security](#)

[Global Infrastructure](#)

[Compute](#)

[Storage](#)

[Content Distribution](#)

[Database](#)

[Application Services](#)

[Deployment & Management](#)

[Development](#)

[Support](#)

[Integration with Existing Infrastructure](#)

[Big Data](#)

[Ecosystem](#)

Choosing a Cloud Platform

[Get Started for Free »](#)[Learn about the AWS Free Tier](#)

Developing, managing, and operating your applications requires a wide variety of technology services. Customers often ask us what represents a fully-functional, flexible technology infrastructure platform. Below, we outline requirements for a modern, robust, industry-leading technology infrastructure platform with all the benefits that the cloud brings to bear. We also provide information about how AWS delivers against these requirements and why you might need each of these capabilities.

AWS began offering its technology infrastructure platform in 2006. Since then, with hundreds of thousands of customers across 190 countries using AWS in every imaginable way, we have developed considerable experience operating at scale. We've also innovated and delivered at a very rapid pace (delivering over 80 significant features and services in 2011 and nearly 160 in 2012). Expect this focus on rapidly delivering what customers want to continue.



[Download](#) a spreadsheet listing these requirements that you can use in your cloud evaluation activities.



OVH.COM

Le meilleur des infrastructures pour tous

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Web

Dédié

Cloud

Télécom

À propos

Univers Cloud ▶ Testez, évaluez, bâtissez vos projets, payez vos ressources à l'heure.

Produits

Tous les produits Cloud

Public Cloud

- Instances (machines virtuelles)
- Stockage Cloud
- Archives Cloud
- Cloud CDN

Dedicated Cloud

- vSphere as a Service
- vCloud as a Service

hubiC

Solutions

Bibliothèque d'images :

- Développement
- CRM et entreprises
- Web & serveurs d'applis
- Bases de données
- Travail collaboratif

Marketplace

API 

Pour qui ?

Incubateurs et start-ups

Test et préproduction

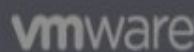
Montée en charge

Communautés de développeurs

Utilisateurs de ressources XaaS

Le Cloud dédié OVH
récompensé


PARTNER NETWORK AWARD
2013 GLOBAL WINNER


PARTNER NETWORK AWARD
2013 EMEA WINNER

Build your app fast. Don't worry about scaling or servers.

Google Cloud Platform lets you build applications and websites, store data, and analyze data on Google's infrastructure.

[Try it now](#)

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NEW

Get Started With Google Cloud Datastore

[Learn more »](#)



NEW

Compute Engine - Now available for everyone

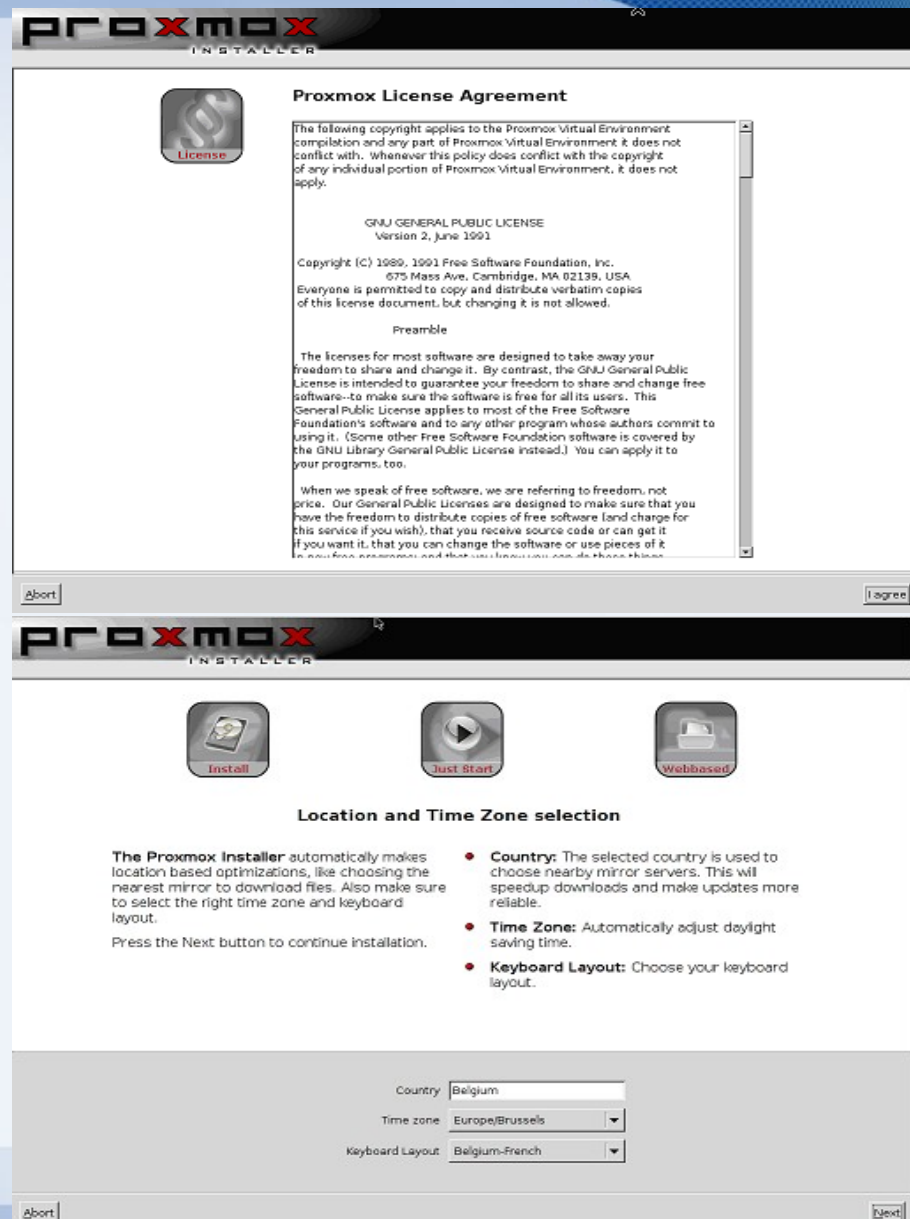
[Learn more »](#)

Como pagar?

All applications have a free amount of usage (reset daily) and Paid/Premier applications can use more at the prices below

	Free quota per app per day	Pricing if you exceed your free quota
Hosting	Free quota per app per day	Price
On-demand Frontend Instances	28 free instance hours	\$0.08 / hour
Reserved Frontend Instances		\$0.05 / hour
High Replication Datastore	1G	\$0.18 / G / month
Outgoing Bandwidth	1G	\$0.12 / G
Incoming Bandwidth	1G	Free
APIs		
Datastore API	50k free read/write/small	\$0.09/100k write ops \$0.06/100k read ops \$0.01/100k small ops
Blobstore API	5G	\$0.13 / G / month
Email API	100 recipients	\$0.01 / 100 recipients

Instalação:



Instalação:

proxmox
INSTALLER

Administration Password and E-Mail Address

Proxmox Virtual Environment is a full featured GNU/Linux system based on Debian. Therefore you should use a strong password with at least 5 characters.

All administrative emails are sent to the specified address.

Press the Next button to continue installation.




- **Password:** Please use strong passwords. Your password should be 8 or more characters in length. Also combine letters, numbers, and symbols.
- **E-Mail:** Administrator email address.

Password:

Confirm:

E-Mail:

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Installation successful!

The Proxmox Virtual Environment is now installed and ready to use.

- **Next steps**
Reboot and point your web browser to the selected IP address.

100%

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INSTALLER

Network Configuration

Please verify the displayed network configuration. You will need a valid network configuration to access the configuration interface after installation.

Afterwards press the Next button to continue installation. The installer will then partition your hard disk and start copying packages.

- **IP address:** Set the IP address for the Proxmox Virtual Environment.
- **Netmask:** Set the netmask of your network.
- **Gateway:** IP address of your gateway or firewall.
- **DNS Server:** IP address of your DNS server.

IP Address:

Netmask:

Gateway:

DNS Server:



Duvidas?

Feedback?

Obrigado!