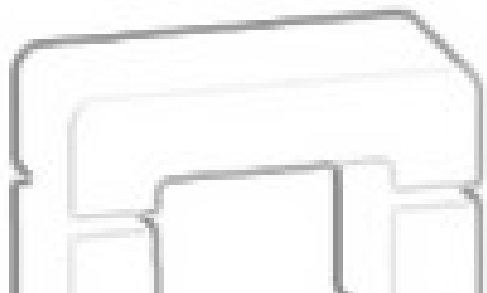




# Introdução ao OpenStack



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## Eu? Sou este aí



<https://github.com/joubertredrat>



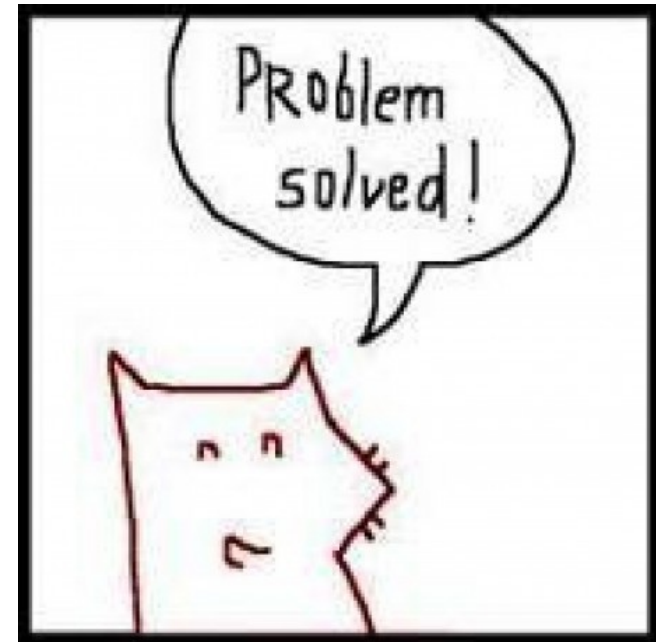
<https://br.linkedin.com/in/joubertredrat>



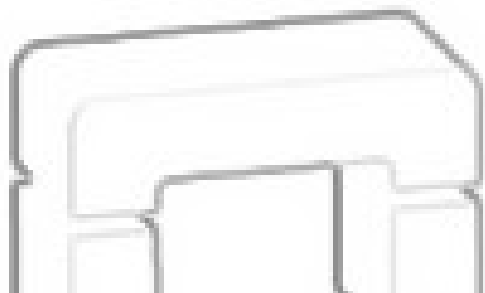
<https://twitter.com/joubertredrat>



<http://www.vivaolinux.com.br/~joubertredrat>



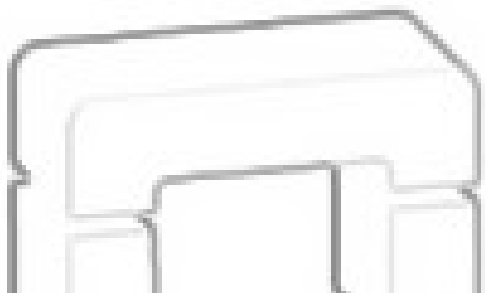
\* no meu LinkedIn explica o porque do apelido RedRat



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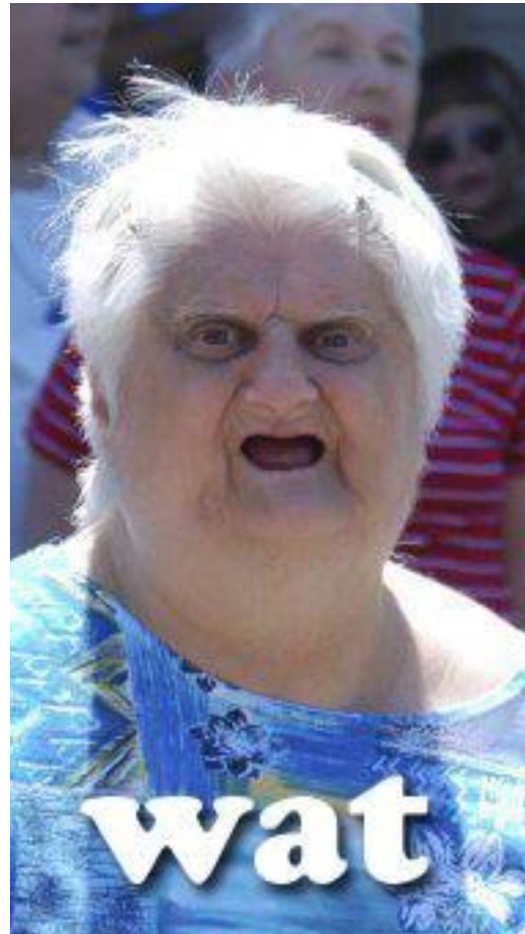
# Cloud Computing? Que legal

## Computação em nuvem? Gosto disto

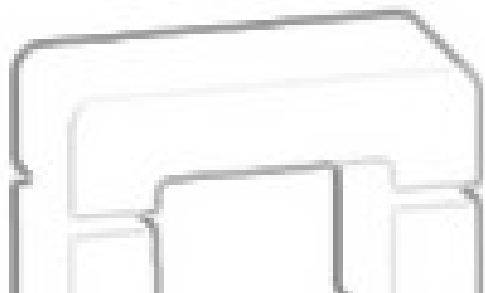


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Mas...

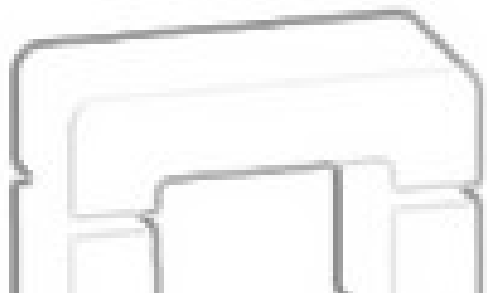


O que é?



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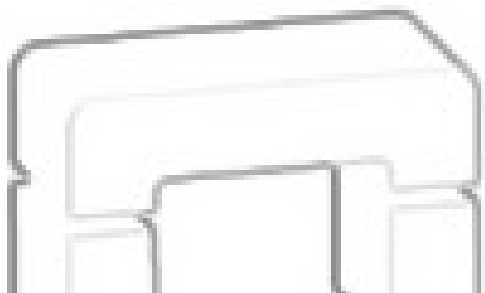
# E tudo começou com a



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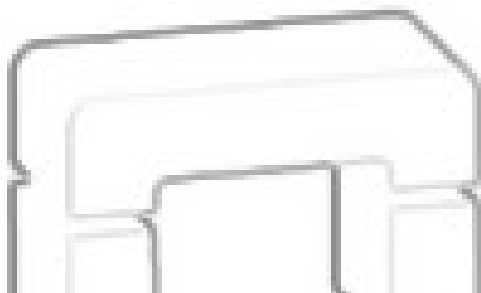
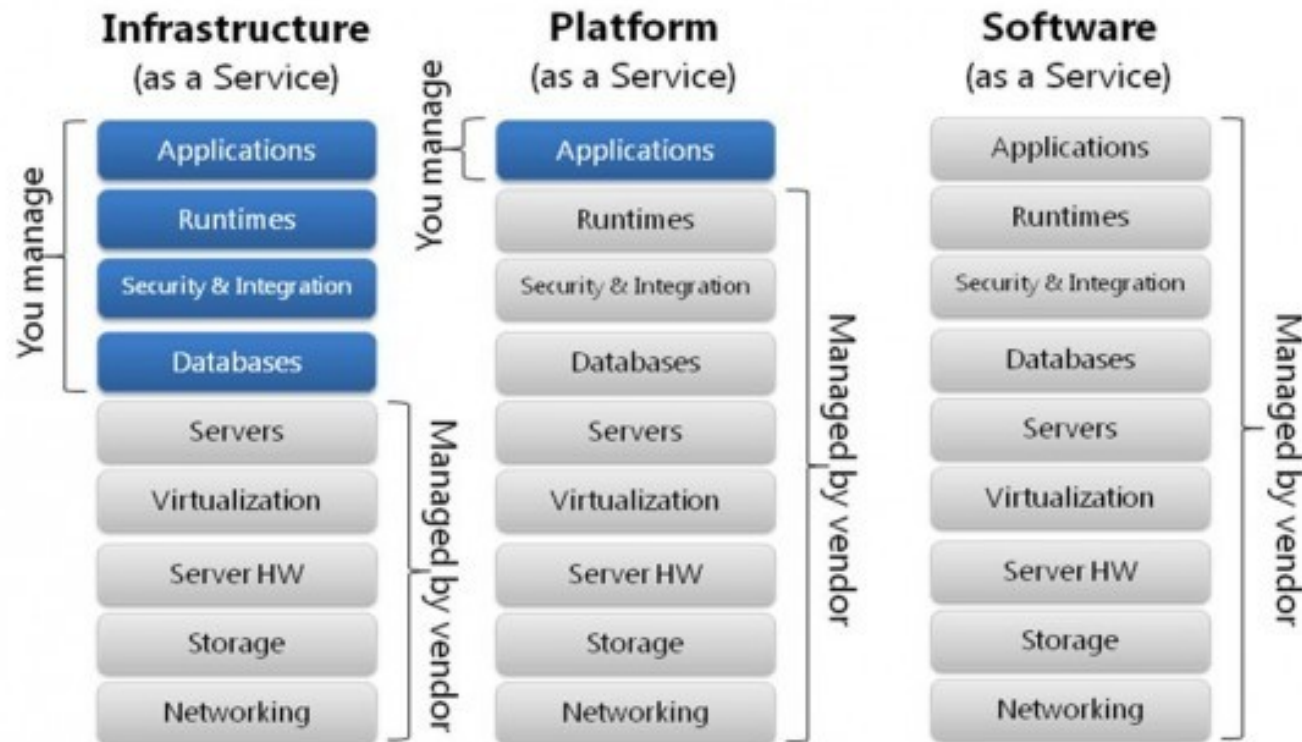
# Mas e o OpenStack?

Calma pequeno gafanhoto, chegaremos lá



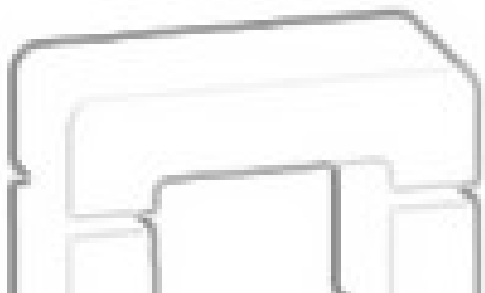
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## IaaS PaaS SaaS



# O que é o OpenStack?

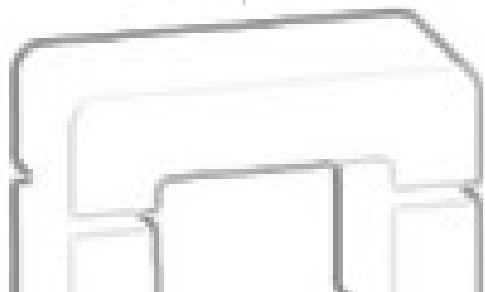
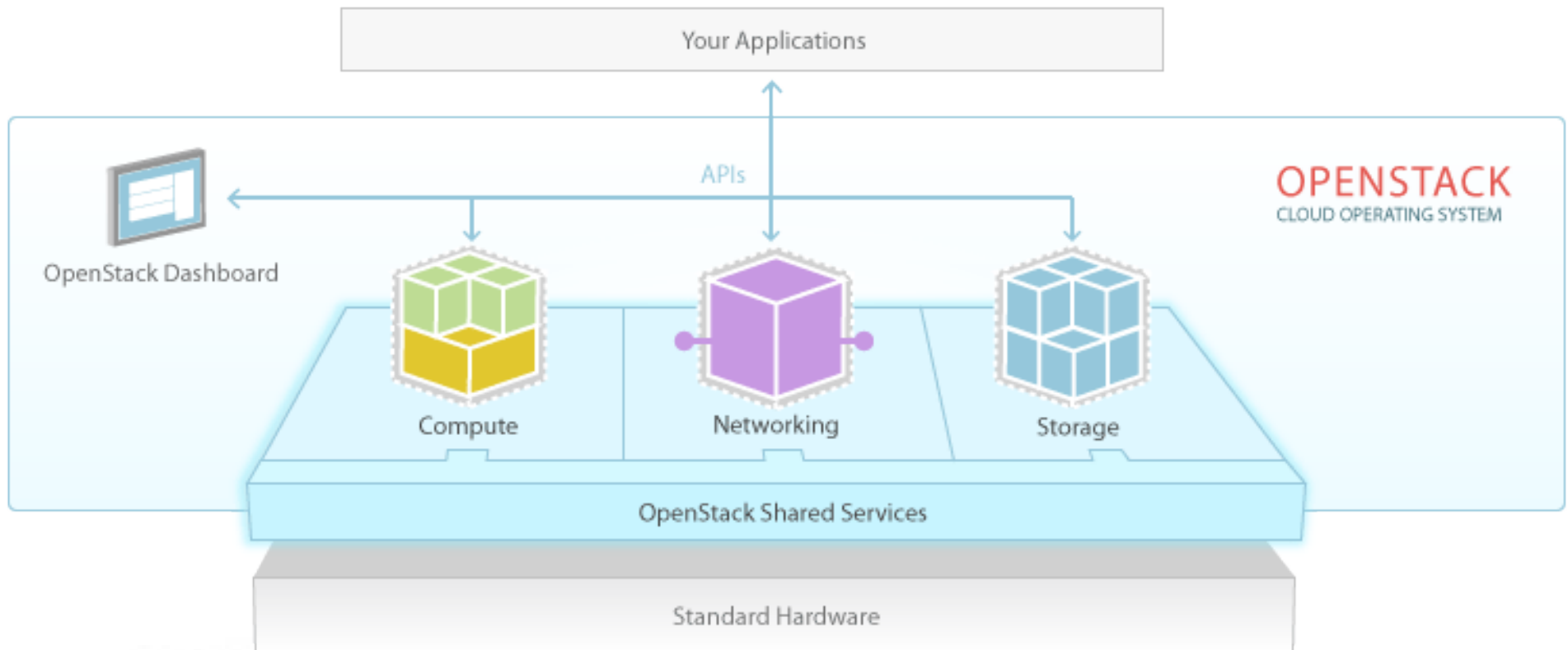
- Solução de IaaS públicas ou privadas
- Projeto Opensource
- Vários projetos
- Regido por uma fundação



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## O que é o OpenStack?



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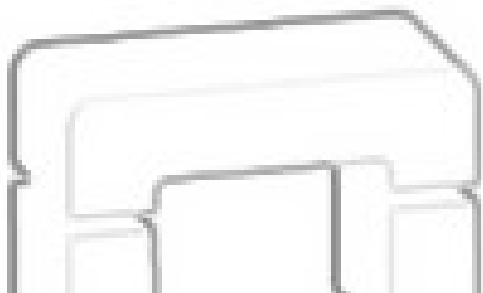
# História do OpenStack



## Tudo começou com...



- Vários nodes de virtualização para gestão
- A solução que era usada ficou insustentável
- Surgiu um projeto para melhor gestão dos recursos computacionais
- Daí surgiu o Nova!

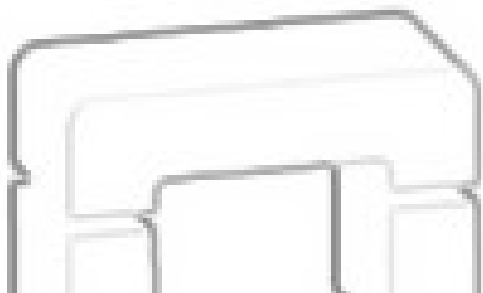


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# Tudo começou com...



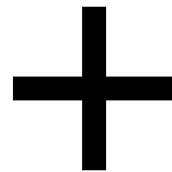
- Desenvolvendo uma solução similar ao S3 da Amazon AWS
- Armazenamento de objetos, arquivos
- Daí surgiu o Swift



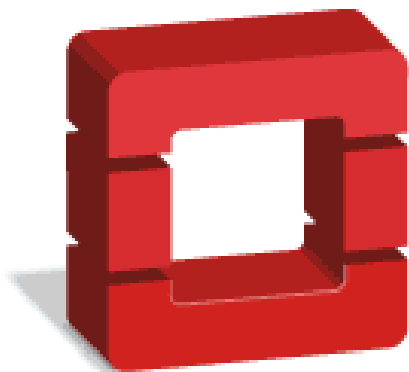
# Hora de calcular :)



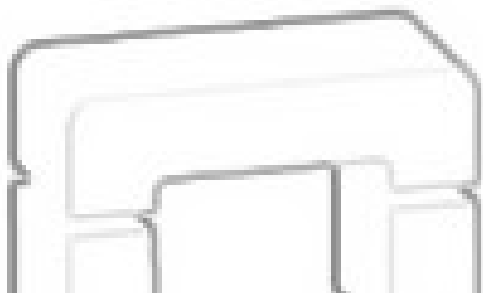
Nova



Swift



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CLOUD SOFTWARE



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# Cronologia

- Março de 2010 – Rackspace abre o Swift como projeto open source
- Maio de 2010 – Nasa abre o projeto Nova como projeto open source
- Junho de 2010 – Nasa e Rackspace iniciam o projeto Openstack
- Outubro de 2010 – Primeiro release do Openstack, Austin
- Fevereiro de 2011 – Segundo release do Openstack, Bexar

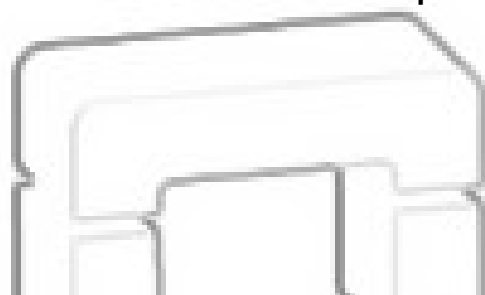
## E não parou mais!



# Fundação OpenStack



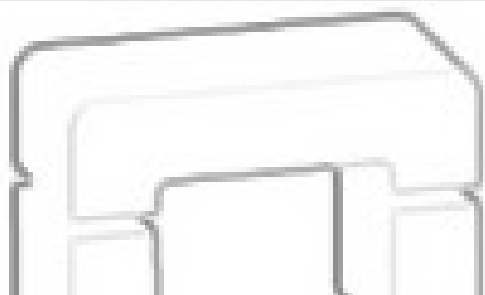
<https://www.openstack.org/foundation/companies/>



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## Releases OpenStack

Release	Estado	Projetos
Austin	Deprecated	Nova, Swift
Bexar	Deprecated	Nova, Glance, Swift
Cactus	Deprecated	Nova, Glance, Swift
Diablo	EOL	Nova, Glance, Swift
Essex	EOL	Nova, Glance, Swift, Horizon, Keystone
Folsom	EOL	Nova, Glance, Swift, Horizon, Keystone, Quantum, Cinder
Grizzly	EOL	Nova, Glance, Swift, Horizon, Keystone, Quantum, Cinder
Havana	EOL	Nova, Glance, Swift, Horizon, Keystone, Neutron, Cinder, Heat, Ceilometer



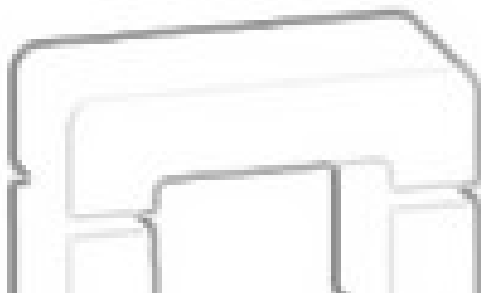
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## Releases OpenStack

Release	Estado	Projetos
Icehouse	EOL	Nova, Glance, Swift, Horizon, Keystone, Neutron, Cinder, Heat, Ceilometer, Trove
Juno	EOL	Nova, Glance, Swift, Horizon, Keystone, Neutron, Cinder, Heat, Ceilometer, Trove, Sahara
Kilo	EOL	Nova, Glance, Swift, Horizon, Keystone, Neutron, Cinder, Heat, Ceilometer, Trove, Sahara, Ironic
Liberty	Security-supported	Nova, Glance, Swift, Horizon, Keystone, Neutron, Cinder, Heat, Ceilometer, Trove, Sahara, Ironic, Zaqqar, Manila, Designate, Barbican
Mitaka	Current stable release, security-supported	Nova, Glance, Swift, Horizon, Keystone, Neutron, Cinder, Heat, Ceilometer, Trove, Sahara, Ironic, Zaqqar, Manila, Designate, Barbican, Aodh, CloudKitty, Congress, Freezer, Magnum, Mistral, Monasca, Murano, Searchlight, Senlin, Solum, Tacker
Newton	Under Development	Tudo acima e mais
Ocata	Future	E mais ainda virá no futuro

<http://releases.openstack.org/>

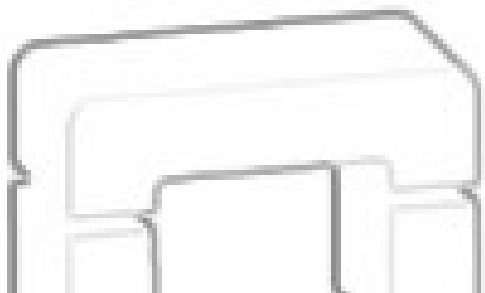


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## Projetos do release atual - Mitaka

### Nova

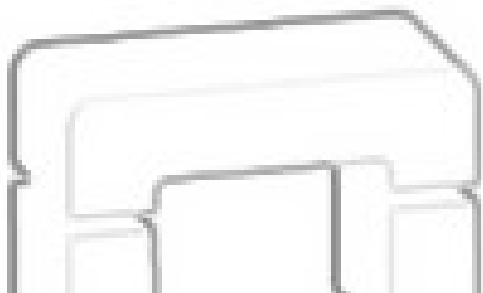
- Nome oficial é OpenStack Compute
- Responsável pela estrutura de virtualização
- Agnóstico ao hypervisor
- Suporta a maioria dos hypervisors existentes
- É equivalente ao Amazon EC2
- <https://wiki.openstack.org/wiki/Nova>



## Projetos do release atual - Mitaka

### Cinder

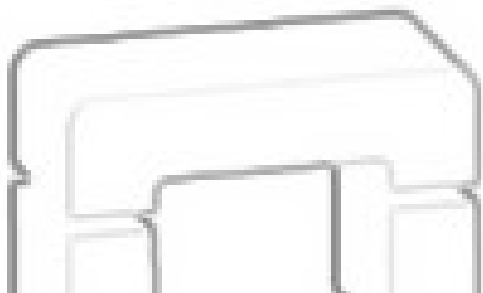
- Nome oficial é OpenStack Block Storage Cinder
- Responsável pela serviço de storage do OpenStack Nova
- É equivalente ao Elastic Block Store da Amazon EC2
- <https://wiki.openstack.org/wiki/Cinder>



## Projetos do release atual - Mitaka

### Swift

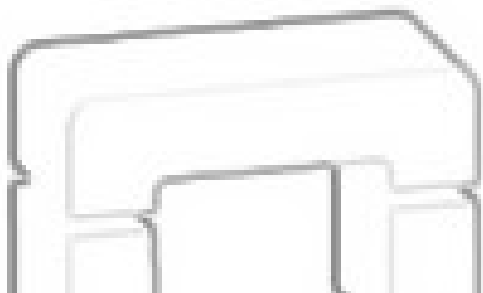
- Nome oficial é OpenStack Object Storage
- Responsável por armazenamento de objetos
- É equivalente ao Amazon AWS S3
- <https://wiki.openstack.org/wiki/Swift>



## Projetos do release atual - Mitaka

### Glance

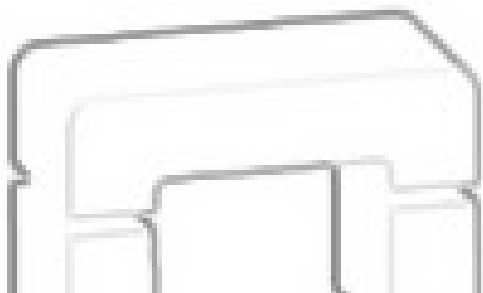
- Nome oficial é OpenStack Image service
- Responsável pelos recursos imagens de máquinas virtuais
- É equivalente ao Amazon Machine Image (AMI)
- <https://wiki.openstack.org/wiki/Glance>



## Projetos do release atual - Mitaka

### Neutron

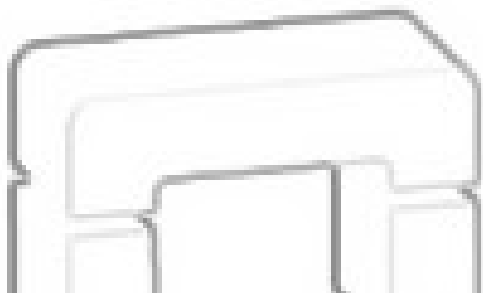
- Nome oficial é OpenStack Networking
- Responsável pelos recursos do serviço de rede para o OpenStack
- Seria equivalente ao Network & Security da Amazon EC2
- <https://wiki.openstack.org/wiki/Neutron>



## Projetos do release atual - Mitaka

### Keystone

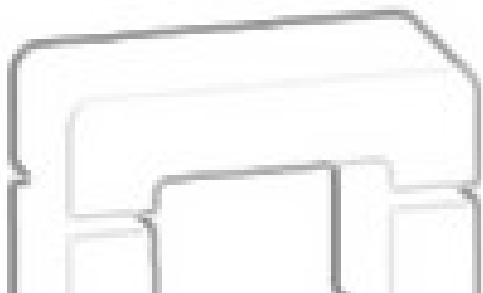
- Nome oficial é OpenStack Identity
- Responsável pela autenticação e autorização no OpenStack
- Define as regras para acesso aos recursos do OpenStack
- <https://wiki.openstack.org/wiki/Keystone>



## Projetos do release atual - Mitaka

### Horizon

- Nome oficial é OpenStack Dashboard
- Provê uma interface web para acesso aos serviços do OpenStack
- É possível acessar os recursos do Nova, Swift, Keystone e outros
- É equivalente ao console web da Amazon AWS
- <https://wiki.openstack.org/wiki/Horizon>

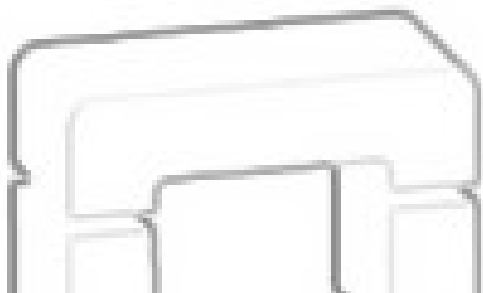




Projetos do release atual - Mitaka

## Ceilometer

- Nome oficial é OpenStack Telemetry
- Responsável pelas métricas de utilização dos recursos do OpenStack
- Integração com módulos de pagamento
- <https://wiki.openstack.org/wiki/Ceilometer>

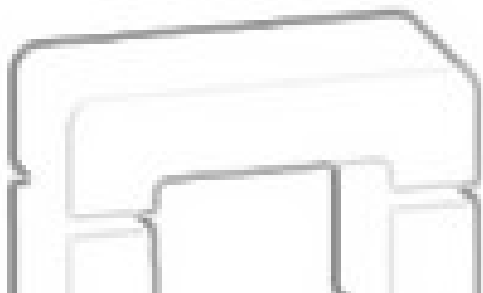


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## Projetos do release atual - Mitaka

### Trove

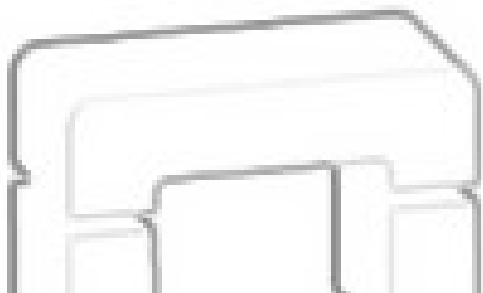
- Nome oficial é OpenStack Trove mesmo
- Responsável por prover banco de dados como serviço
- “DbaaS”, “Database as a service”
- É equivalente ao Amazon Relational Database Service (RDS)
- <https://wiki.openstack.org/wiki/Trove>



## Projetos do release atual - Mitaka

### Sahara

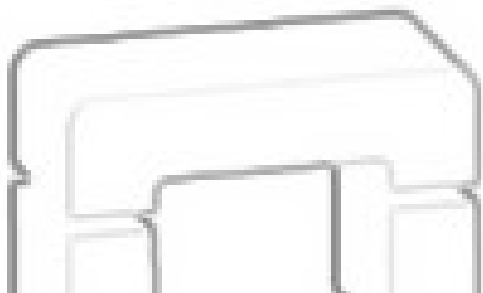
- Nome oficial é OpenStack Sahara mesmo
- Responsável por prover solução para Big Data
- É equivalente ao Amazon EMR
- <https://wiki.openstack.org/wiki/Sahara>



## Projetos do release atual - Mitaka

### Heat

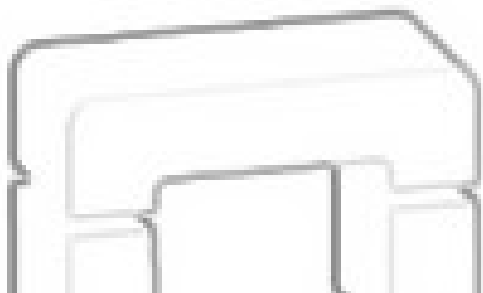
- Nome oficial é OpenStack Orchestration
- Orquestração de recursos dentro do OpenStack
- É equivalente ao Amazon CloudFormation
- <https://wiki.openstack.org/wiki/Heat>



Projetos do release atual - Mitaka

## Designate

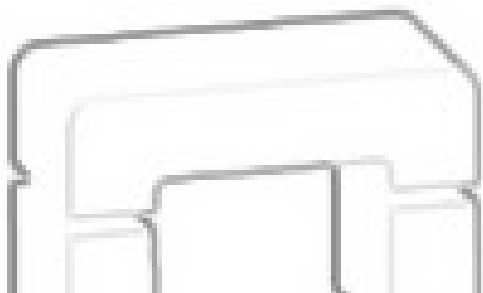
- Nome oficial é OpenStack Designate mesmo
- Responsável por prover DNS como serviço
- “DNSaaS”, “DNS as a service”
- É equivalente ao Amazon Route 53
- <https://wiki.openstack.org/wiki/Designate>



## Projetos do release atual - Mitaka

### Zaqar

- Nome oficial é OpenStack Zaqar mesmo
- Responsável por prover serviço de lista de mensagens
- É equivalente ao Amazon SQS
- <https://wiki.openstack.org/wiki/Zaqar>

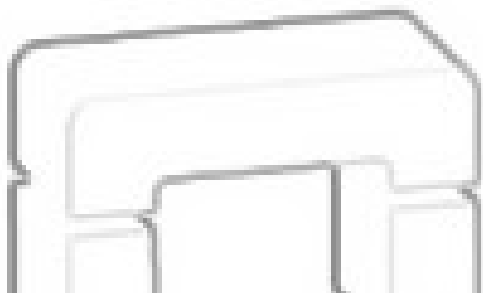


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## Projetos do release atual - Mitaka

### Barbican

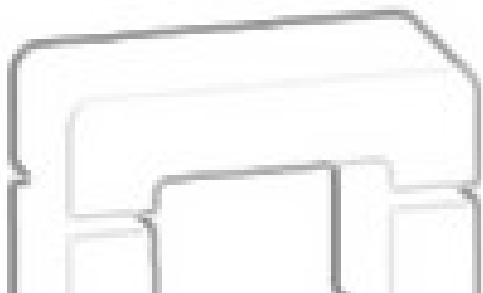
- Nome oficial é OpenStack Barbican mesmo
- Responsável por prover um serviço seguro para gestão de senhas, chaves criptográficas e certificados X.509
- <https://wiki.openstack.org/wiki/Barbican>



## Projetos do release atual - Mitaka

### Manila

- Nome oficial é OpenStack Manila mesmo
- Responsável por prover sistemas de arquivos compartilhados
- É equivalente ao Amazon Elastic File System
- <https://wiki.openstack.org/wiki/Manila>

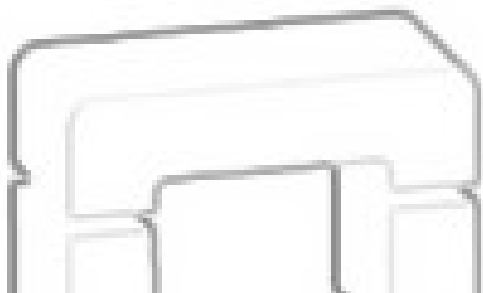




## E agora?



## Mãos na massa

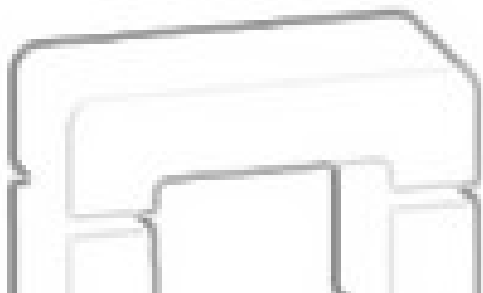


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# Hora do primeiro contato



<http://trystack.org>

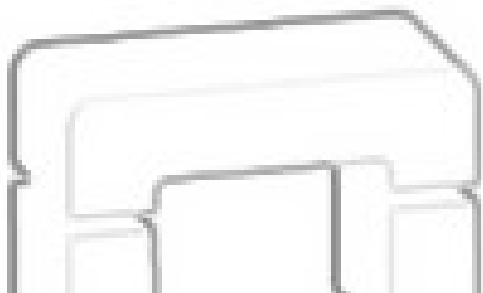


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# Hora do primeiro contato



<http://www.yellowcircle.net>

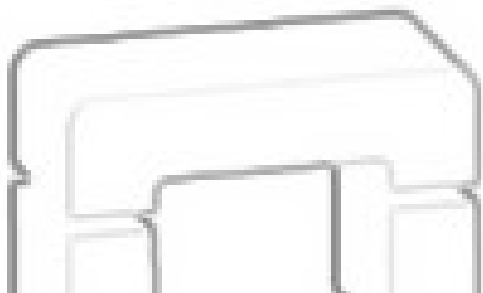


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Quero mais!



Tang?

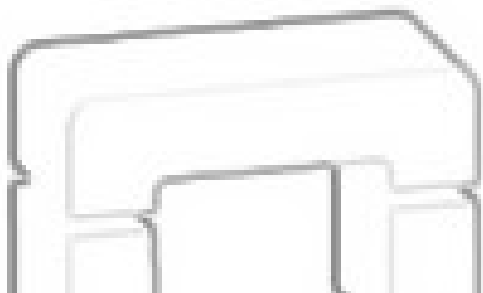


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## Não! Quero é mais OpenStack

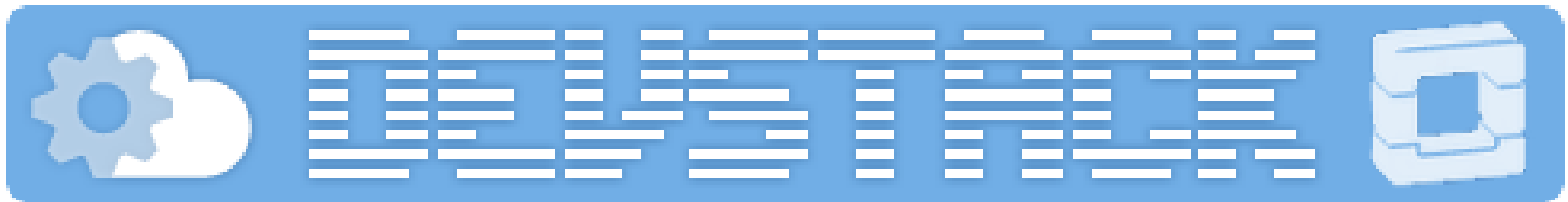


PS1: Deu trabalho colocar a logo do OpenStack na camisa  
PS2: Obrigado a pessoa anônima que serviu de modelo para a palestra

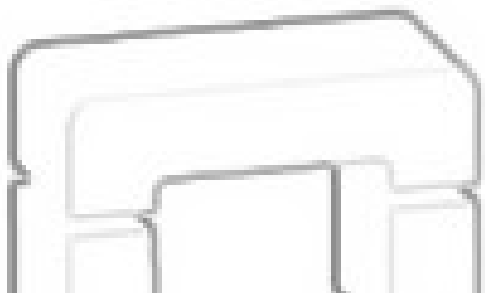


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## Hora do segundo contato



<http://devstack.org>

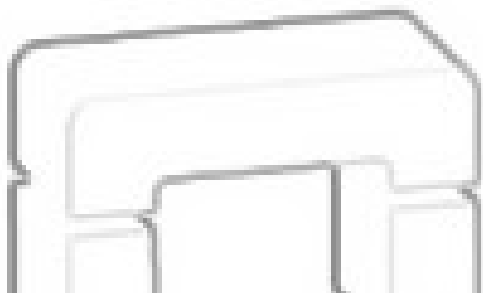


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## Hora do segundo contato



<http://www.ubuntu.com/cloud/ubuntu-openstack>

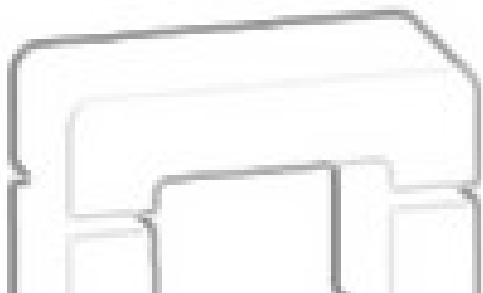


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## Hora do segundo contato



<https://www.rdoproject.org>



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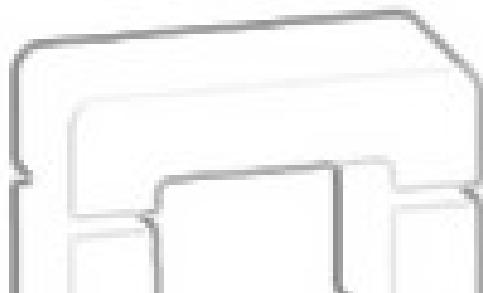


## Soluções Enterprise



E muitas outras

<http://www.openstack.org/marketplace/>



## Outros projetos?



EUCALYPTUS

OpenNebula



OpenNode

convirture

oVirt

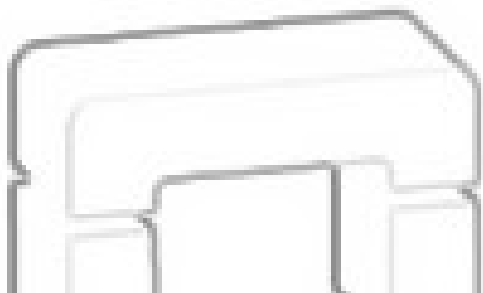
synnefo

CC1

openQRM  
ENTERPRISE

wakame  
Enlightened Enterprise Computing.

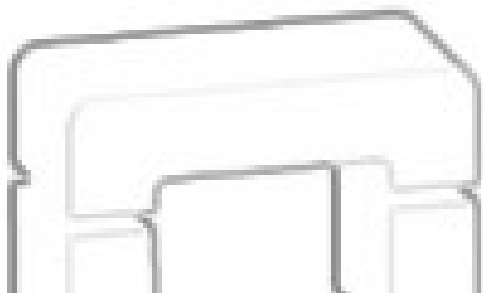
ZStack



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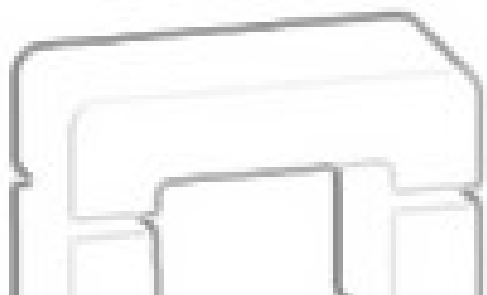
# Quer mais sobre o OpenStack?

- <http://www.openstack.org>
- <https://wiki.openstack.org/wiki/IRC>
- <https://ask.openstack.org>
- <http://www.openstackbr.com.br>
- <https://groups.google.com/forum/#!forum/openstack-br>



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# Agora é com você



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# Perguntas?

