

RAILS-HOSTING.CH

by

Linux·Unix·FOSS



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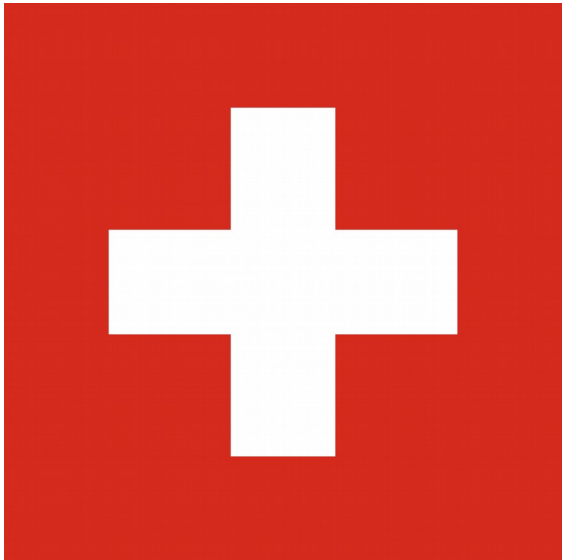
Switzerland

<http://rails-hosting.ch>

What is it?

- (Un-)Managed Hosting
- Hosting Ready for Ruby On Rails
- Developer Friendly Hosting
- Any Ruby Version

Locations



Locations



How to use?

How to use

`(bundle exec) cap deploy:setup`

`(bundle exec) cap deploy:migrations`

What has happened before?

VM Creation / Deployment

- `cdist`¹ + Qemu/KVM
 - Configures VM-Host(s)
 - Simple, Reliable (Sysadmin friendly)
- `cdist` + OpenNebula²
 - `cdist` prepares VM-Hosts
 - `cdist` prepares Management Host
 - Clickable (Non-Sysadmin friendly)
 - CLI (Sysadmin friendly)

¹<http://www.nico.schottelius.org/software/cdist/>

²<http://opennebula.org/>

cdist: Configuration Management

- ~~Usable~~ Awesome Configuration Management
- Core Python, Configurations in Shell
- Zero Dependency, Idempotent
- Can **configure** and **install** computers

cdi.st 
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OpenNebula

- Simple Framework for Virtualisation
- Supports one to N hosts
- Clusters, Networks, Datastores, ...
- Powerful and simple



- Dashboard
- System
- Virtual Resources
- Infrastructure
- Marketplace
- OneFlow

Support
Not connected

Sign in

Virtual Machines

16	TOTAL
16	ACTIVE
0	PENDING
0	FAILED

13%
REAL CPU USAGE
114 / 820

106%
REAL MEMORY USAGE
43.1GB / 40.5GB

Hosts

4	TOTAL
4	ON
0	OFF
0	ERROR

23%
ALLOCATED CPU
820 / 3600

24%
ALLOCATED MEMORY
40.5GB / 171.6GB

4%
REAL CPU
148 / 3600

0%
REAL MEMORY
0KB / 171.6GB

Storage

20 IMAGES
3.8TB USED

Users

6 USERS
3 GROUPS

Network

3 VNETS
16 USED IPs

OpenNebulaConf 2015

- Barcelona
- October 20-22



Optional: HA-Setup

- Hot Standby VM Server
- Shared Filesystem: GlusterFS
- Failover:
 - Manually
 - Hook triggered (consul, OpenNebula)



Operating System

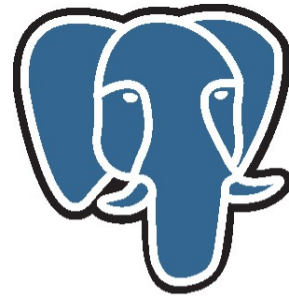
- Currently: **Debian 7**
- Soon: (partly on request)
 - Debian 8
 - Ubuntu 14.04
 - *CentOS 7*
 - *Arch Linux*
 - *OpenSuSE*
- No Gentoo, Slackware

Database

We support any database..

Database

... that is

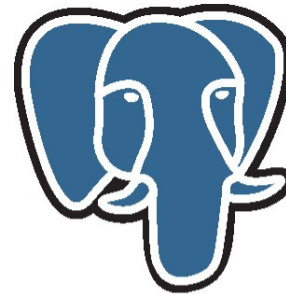


PostgreSQL
the world's most advanced open source database

Database

- PostgreSQL

- Debian 7: PostgreSQL 9.1
- Debian 8: PostgreSQL 9.4



PostgreSQL
the world's most advanced open source database

- MySQL

- On Request
- Who is still using MySQL in a new project?

Any Ruby Version

- Prepare OS with cdist
 - Various requirements
- Using rbenv locally and remote
 - Consistency FTW!
 - Recommended by RoR
- Can have different Ruby versions
 - Confusing, but possible
 - Freedom over Consistency

How to use any Ruby version?

Install rbenv

Create .ruby-version

2.1.2

Add to Gemfile

```
gem 'capistrano-rbenv', '>= 1.0.0'
```

Add to config/deploy.rb

```
require 'capistrano-rbenv'

set :rbenv_install_dependencies, false

set :rbenv_ruby_version, "2.1.2"

# OR

set :rbenv_ruby, open(File.expand_path('../../.ruby-version', __FILE__)).read.strip
```

Run bundle

Deploy

`(bundle exec) cap deploy:setup`

`(bundle exec) cap deploy:migrations`

Webserver: nginx

- Reliable
- Easy
- Extendible

The logo for NGINX, featuring the word "NGINX" in a bold, green, sans-serif font. The letters are stylized with a slight shadow effect, giving them a three-dimensional appearance. The 'N' and 'G' are particularly prominent, with the 'G' having a unique shape where the bottom curve is open on the right side.

Nginx with Ruby On Rails

- Rails: unicorn
- Unix Socket
 - Easy dispatching
 - No unnecessary tcp port
 - No unneeded firewall

Nginx configuration

```
location @appserver {
    proxy_pass http://unix:/home/app/app/current/unicorn.sock;

    proxy_set_header Host $host;
    proxy_set_header SERVER_NAME $server_name;
    proxy_set_header SERVER_ADDR $server_addr;
    proxy_set_header X-Forwarded-For $remote_addr;
    proxy_set_header X-Forwarded-Scheme $scheme;
    proxy_set_header X-Forwarded-Proto $scheme;
    proxy_set_header X-Accel-Mapping /home/app/app/releases/[\d]+/protected/=/protected/;
}
```

Nginx X-Accel

```
location ^~ /protected/ {  
    internal;  
    root /home/app/app/shared;  
}
```

Unicorn

- Configured via cdist
- Configuration in `~app/.unicorn-config`
 - Developer can change on her own
- `unicorn_wrapper`
 - Small shell script to wrap start/stop/restart

unicorn_wrapper

```
case $1 in
  start)
    "$@" pidfile-remove-if-not-unicorn
    ${unicorn} --daemonize --config ~/.unicorn-config
    ;;

  foreground)
    ${unicorn} --config ~/.unicorn-config
    ;;

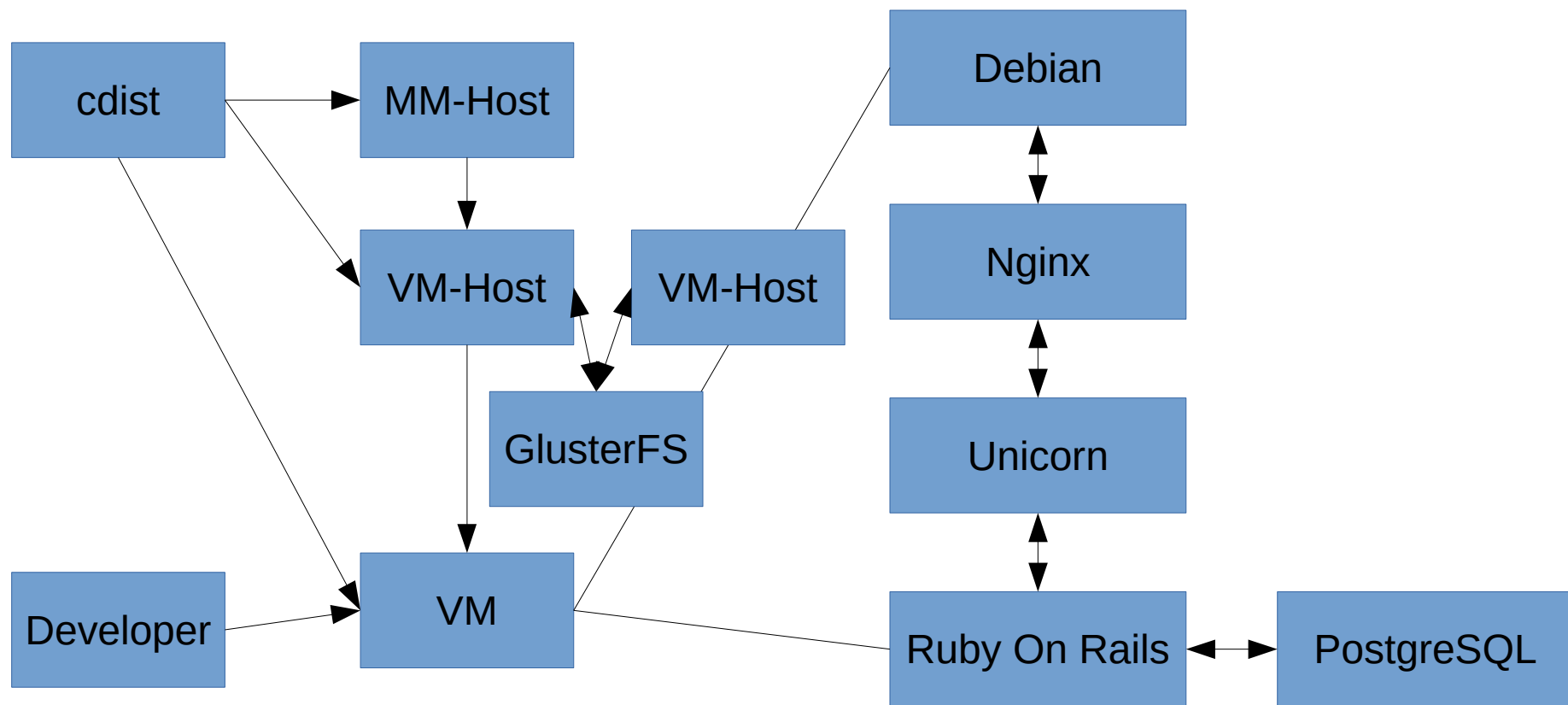
  debug)
    ${unicorn} --debug --config ~/.unicorn-config
    ;;

  debug-direct)
    ${unicorn} --debug --listen 0.0.0.0:3000 --config ~/.unicorn-
config
    ;;

  stop)
    pkill -f "$unicorn_process"
    ;;

  graceful-stop)
    pkill -QUIT -f "$unicorn_process"
    ;;
```

The stack



The Future

- Docker
 - Maybe
- Other Frameworks
 - Python/Django
 - NodeJS
- Spot/Short Time VMs
 - Currently: 1 Months
 - Future: 1 Moment

Credits



- Many thanks goes to
 - Experiences for this hosting
 - Making cdist types FOSS
- Steven Armstrong
 - Making cdist possible
- OpenNebula
 - Scale out
- Sanghee Kim
 - Design

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