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# Plan de la présentation

- Tour d'horizon de Capistrano
- Démo
- Configuration
- Extension
- Retour sur expérience

# Capistrano: c'est quoi ?

Un outil de déploiement d'applications web

django



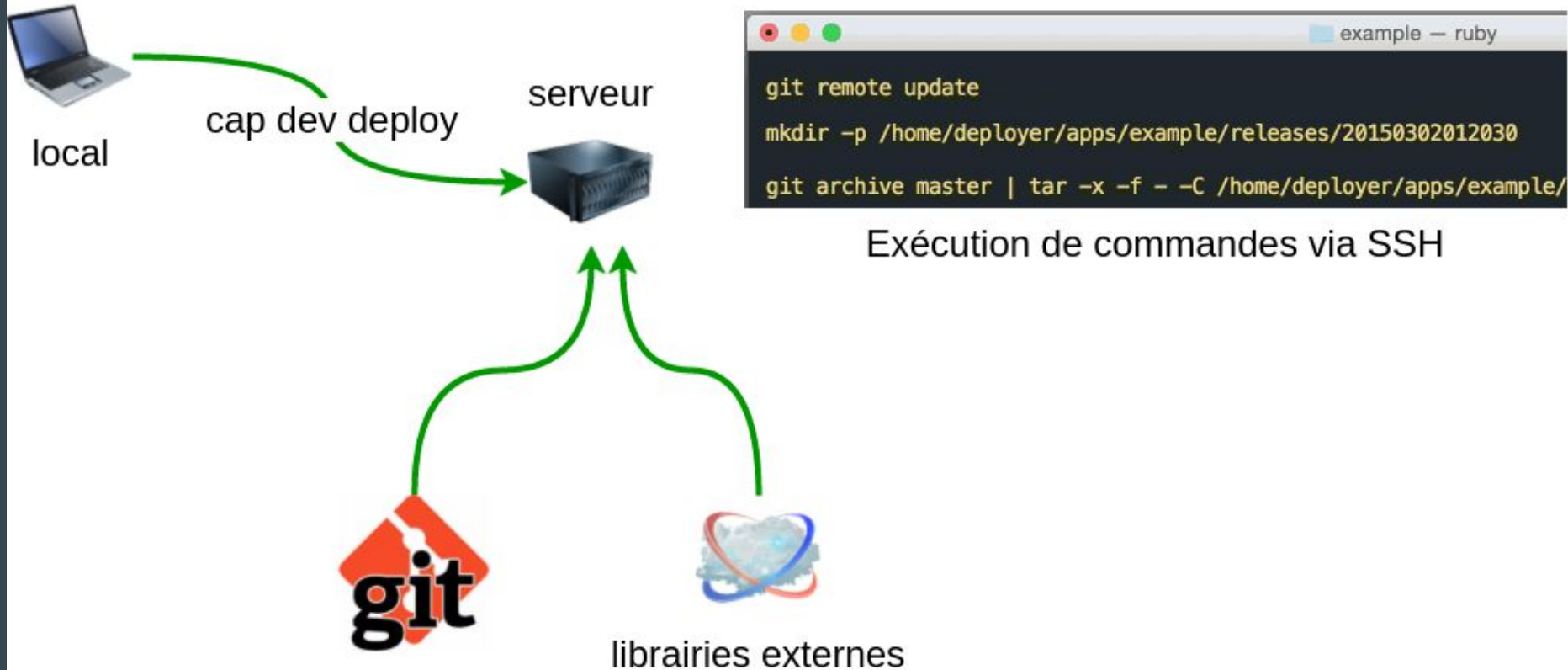
# Capistrano: principes de base

- S'installe uniquement sur son poste de travail

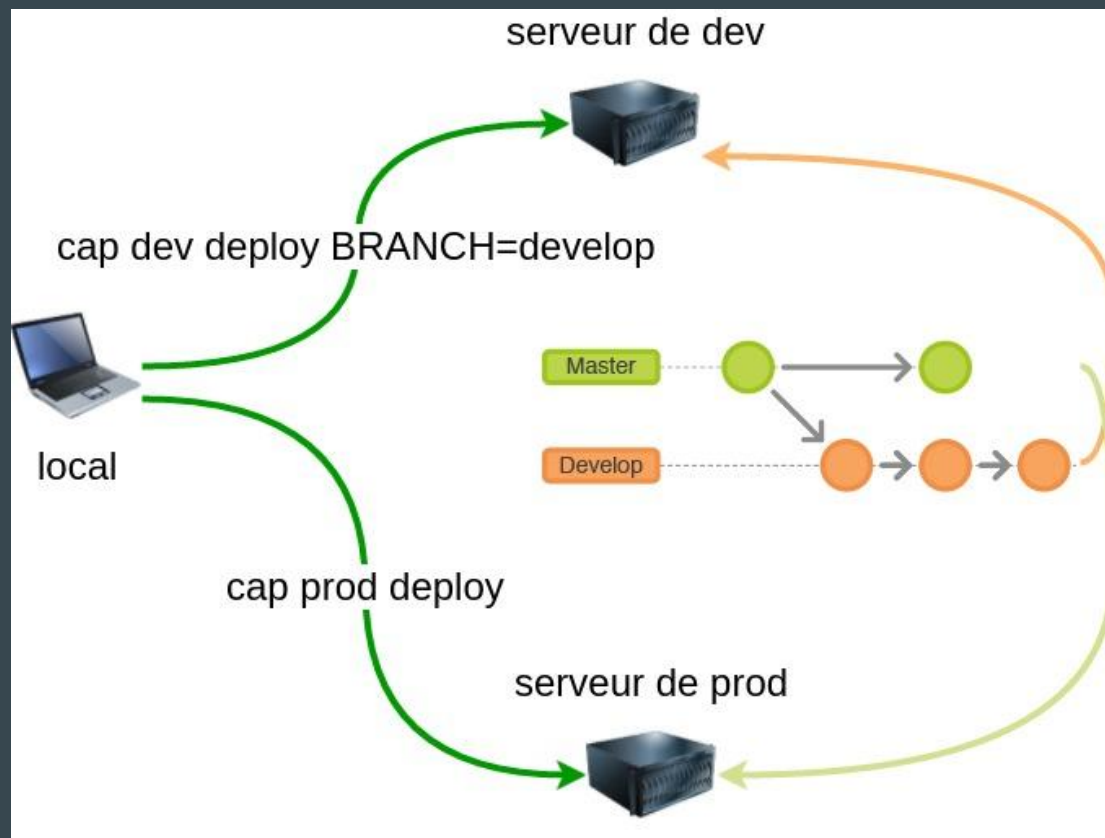
Outil écrit en ruby

- Exécute des commandes sur les serveurs via ssh

# Capistrano: workflow



# Capistrano: workflow



**Capistrano: démo**

# Capistrano: démo

## cap dev deploy

1. Récupération du dépôt
2. Nouveau dossier release
3. Fichiers partagés
4. Pour python: virtualenv et installation des librairies
5. Pour Django: migrations
6. Mise à jour du lien current

```
(myenv) labbeo@mathdoc-mojave:~/git/ptf$ cap dev deploy
00:00 git:wrappe
01 mkdir -p /tmp
✓ 01 deployer@numdam-dev.ujf-grenoble.fr 0.467s
Uploading /tmp/git-ssh-numdam-dev-labbeo.sh 100.0%
02 chmod 700 /tmp/git-ssh-numdam-dev-labbeo.sh
✓ 02 deployer@numdam-dev.ujf-grenoble.fr 0.011s
00:00 git:check
01 git ls-remote git@mathdoc-infra:/home/depots/ptf/ptf.git HEAD
01 277e05e1479a8966ee6f475630b0b0638de6106e HEAD
✓ 01 deployer@numdam-dev.ujf-grenoble.fr 1.086s
00:01 deploy:check_directories
01 mkdir -p /var/www/numdam/shared /var/www/numdam/releases
✓ 01 deployer@numdam-dev.ujf-grenoble.fr 0.010s
00:01 deploy:check_make_linked_dirs
01 mkdir -p /var/www/numdam/shared/ptf_sites/bibnum/sites/numdam/numdam
✓ 01 deployer@numdam-dev.ujf-grenoble.fr 0.010s
00:02 git:clone
The repository mirror is at /var/www/numdam/repo
00:02 git:update
01 git remote set-url origin git@mathdoc-infra:/home/depots/ptf/ptf.git
✓ 01 deployer@numdam-dev.ujf-grenoble.fr 0.015s
02 git remote update --prune
02 Récupération de origin
✓ 02 deployer@numdam-dev.ujf-grenoble.fr 0.810s
00:02 git:create_release
01 mkdir -p /var/www/numdam/releases/20170223143329
✓ 01 deployer@numdam-dev.ujf-grenoble.fr 0.011s
02 git archive master | /usr/bin/env tar -x -f - -C /var/www/numdam/releases/20170223143329
✓ 02 deployer@numdam-dev.ujf-grenoble.fr 0.542s
00:03 deploy:set_current_revision
01 echo "277e05e1479a8966ee6f475630b0b0638de6106e" >> REVISION
✓ 01 deployer@numdam-dev.ujf-grenoble.fr 0.011s
00:03 deploy:symlink_linked_files
01 mkdir -p /var/www/numdam/releases/20170223143329/ptf_sites/bibnum/sites/numdam/numdam
✓ 01 deployer@numdam-dev.ujf-grenoble.fr 0.010s
02 ln -s /var/www/numdam/shared/ptf_sites/bibnum/sites/numdam/numdam/settings_local.py /var/www/numdam/releases/20170223143329/ptf_sites/bibnum/sites/numdam/numdam/settings_local.py
✓ 02 deployer@numdam-dev.ujf-grenoble.fr 0.013s
00:03 python:create_virtualenv
01 virtualenv /var/www/numdam/releases/20170223143329/virtualenv
01 New python executable in /var/www/numdam/releases/20170223143329/virtualenv/bin/python
01 Installing setuptools, pip, wheel...
01 done.
✓ 01 deployer@numdam-dev.ujf-grenoble.fr 4.559s
02 /var/www/numdam/releases/20170223143329/virtualenv/bin/pip install -r /var/www/numdam/releases/20170223143329/config/pip_requirements.txt
02 Collecting Django<1.10 (from -r /var/www/numdam/releases/20170223143329/config/pip_requirements.txt (line 1))
02 Using cached Django-1.9.12-py2.py3-none-any.whl
02 Collecting pycopg2 (from -r /var/www/numdam/releases/20170223143329/config/pip_requirements.txt (line 2))
02 Collecting requests (from -r /var/www/numdam/releases/20170223143329/config/pip_requirements.txt (line 3))
02 Using cached requests-2.13.0-py2.py3-none-any.whl
02 Collecting lxml<3.7, >=3.6.4 (from -r /var/www/numdam/releases/20170223143329/config/pip_requirements.txt (line 4))
02 Using cached lxml-3.6.4-cp27-cp27mu-manylinux1_x86_64.whl
02 Collecting django-sendfile>=0.3.10 (from -r /var/www/numdam/releases/20170223143329/config/pip_requirements.txt (line 5))
02 Collecting unicodecode (from -r /var/www/numdam/releases/20170223143329/config/pip_requirements.txt (line 6))
02 Using cached Unicodecode-0.04.20-py2.py3-none-any.whl
02 Collecting python-dateutil (from -r /var/www/numdam/releases/20170223143329/config/pip_requirements.txt (line 7))
02 Using cached python_dateutil-2.6.0-py2.py3-none-any.whl
02 Collecting pytz (from -r /var/www/numdam/releases/20170223143329/config/pip_requirements.txt (line 8))
02 Using cached pytz-2016.10-py2.py3-none-any.whl
02 Requirement already satisfied: stx>=1.5 in /var/www/numdam/releases/20170223143329/virtualenv/lib/python2.7/site-packages (from -r /var/www/numdam/releases/20170223143329/config/pip_requirements.txt (line 9))
02 Installing collected packages: Django, pycopg2, requests, lxml, django-sendfile, unicodecode, python-dateutil, pytz
```



# Capistrano: démo

Sur le serveur

```
Labbeo@numdam-dev: /var/www/numdam$ ls
current releases repo revisions.log shared
Labbeo@numdam-dev: /var/www/numdam$ ls releases/
20170222081512 20170222105131 20170222125528 20170223142952 20170223143329
Labbeo@numdam-dev: /var/www/numdam$ █
```

- releases: les 5 derniers déploiements (par défaut)
- current: lien vers la release courante
- shared: fichiers partagés entre les releases (secret)
- repo: dépôt (git, ...)

# Capistrano: configuration

- config/deploy.rb

```
set :repo_url, 'git@mathdoc-infra:/home/depots/ptf/ptf.git'
```

```
set :deploy_to, '/var/www/numdam'
```

```
set :user, 'deployer'
```

```
set :linked_files, fetch(:linked_files, []).push("#{fetch(:django_settings_dir)}/settings_local.py")
```

- config/deploy/dev.rb

```
server 'numdam-dev.ujf-grenoble.fr'
```

# Capistrano: extensions

- Inclure des Plugins existants (Ruby on Rails, Symfony, Drupal...)

```
# Capfile  
require 'capistrano/rails'
```

- Ecrire ses propres extensions (Django)

# Capistrano: Flow

- Capistrano est basé sur Rake (Ruby Make)

```
task :test do
  ruby "test/unittest.rb"
end
```

- cap deploy lance les tâches:

<b>deploy:starting</b>	- start a deployment, make sure everything is ready
<b>deploy:started</b>	- started hook (for custom tasks)
<b>deploy:updating</b>	- update server(s) with a new release
<b>deploy:updated</b>	- updated hook
<b>deploy:publishing</b>	- publish the new release
<b>deploy:published</b>	- published hook
<b>deploy:finishing</b>	- finish the deployment, clean up everything
<b>deploy:finished</b>	- finished hook

# Capistrano: écriture d'une tâche

lib/capistrano/tasks/django.rake

```
namespace :python do
  task :create_virtualenv do
    ...
    execute "#{virtualenv_path}/bin/pip install -r #{release_path}/#{fetch(:pip_requirements)}"
    ...
    invoke 'django:setup'
  end

  after 'deploy:updating', 'python:create_virtualenv'
end

namespace :django do
  task :setup do
    ...
  end
end
```

# Capistrano: retour sur expérience

- Très facile à utiliser, à configurer, à étendre
- Moyennement facile à installer si Ruby n'est pas là (rvm, gem, gemfile)

# Capistrano: retour sur expérience

- Quelques difficultés rencontrées
  - Proxy

```
labbeo@numdam-dev: /home/deployer/.ssh
```

```
labbeo@numdam-dev: /home/deployer/.ssh$ cat authorized_keys  
command=" ~/.profile; if [ -n \"$SSH_ORIGINAL_COMMAND\" ]; then eval \"$SSH_ORIGINAL_COMMAND\"; else exec \"$SHELL\"  
1vc2EAAAADA0ABAAABAOC8hC9Pir/XXbFW8iMrk2fetci8b7CLkkSadVwEf12KfbCOSVGFIn+kt0ZHxctMRH6v4c6e0k0k2SIWFKnFlhNAGoxIktP/d
```

- SSH agent forwarding

```
set :ssh_options, { :forward_agent => true }
```

<http://capistranorb.com/documentation/getting-started/authentication-and-authorisation/>