

Fabric

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What is it?

- *Fabric is a Python (2.5 or higher) library and command-line tool for streamlining the use of SSH for application deployment or systems administration tasks*
- Or a simple way to run Python and shell commands on your local machine or across many remote machines

Quick Example

```
from fabric.api import run

def host_type():
    run('uname -s')
```

Diving Deeper

- Uses Paramiko SSH library for interacting with hosts
- Provides *fab* cli tool for interacting with Fabric files
 - *fabfile.py* contains tasks, which run on a host
 - *fabfile.py* is Python, do anything you want in there
- Provides an API for interacting with remote hosts
 - *get()*, *put()* for files
 - *append()*, *contains()*, *exists()* for files
 - *run()*, *sudo()* for commands

Why is this useful?

- Repeat-able
- Share-able
- Version-able

- Main focus is around hosts, even localhost
 - *local()*

- Use it for both

Real Example

Blogofile (static blog generator) deploy

```
def clean():
    local("rm -rf _site/")
def build():
    local("blogofile build")
def package():
    with lcd('_site/'):
        local("tar zcvf ../_blog.tgz --exclude 'fabfile*' *") @hosts
('askedrelic@asktherelic.com')
def deploy():
    clean()
    build()
    package()
    put("_blog.tgz", "asktherelic.com/private/blog.tgz")
    with cd("public_html/asktherelic.com/private/"):
        run("tar -C ../public/ -xvzf blog.tgz"))
```

Best Practices

- Modern Python dev environment

<http://www.clemesha.org/blog/modern-python-hacker-tools-virtualenv-fabric-pip>

- virtualenv
- pip
- fabric

Other Uses

- Built-in Django integration
- Linode API

Mods

- parallel deployment, decorators to define tasks vs global namespace, many other ideas
 - <http://tav.espians.com/fabric-python-with-cleaner-api-and-parallel-deployment-support.html>
- Dynamic Fabric Commands
 - <http://askthereleic.com/2011/02/17/dynamic-fabric-commands-for-managing-cloud-servers>

History/Future

- Fabric still in active development
- 0.9.1 - May 2010
- 0.9.3 - Nov 2010
- 1.0.0 - March 2010
- 1.1 in dev

References

- <http://docs.fabfile.org/en/1.0.1/index.html>
- <https://github.com/bitprophet/fabric>
- <http://code.fabfile.org/projects/show/fabric>