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# Jekyll, Amazon S3, Vagrant And Puppet

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Recently I moved my blog from Scriptogram to static site generated by [Jekyll](#) and hosted on Amazon S3. I am a big fan of Vagrant and I really like the way it keeps clean separation between various development environments without affecting host operating system. This post will explain how you can set-up a Vagrant instance for Jekyll based blogging supported by S3 hosting.

## Vagrantfile

In my [last post](#) I have already described how to setup Vagrant on your machine. You can use following [Vagrantfile](#) configuration for running your vagrant instance using `vagrant up` (assumes `precise64` base box is already installed). Place this [Vagrantfile](#) in your `Blogs` folder.

```
# -*- mode: ruby -*-
# vi: set ft=ruby :

# Vagrantfile API/syntax version. Don't touch unless you know what you're
# doing!
VAGRANTFILE_API_VERSION = "2"

Vagrant.configure(VAGRANTFILE_API_VERSION) do |config|
  # All Vagrant configuration is done here. The most common configuration
  # options are documented and commented below. For a complete reference,
  # please see the online documentation at vagrantup.com.

  # Every Vagrant virtual environment requires a box to build off of.
  # We have already installed base box precise64 by running following
  # vagrant box add precise64 http://files.vagrantup.com/precise64.box
  config.vm.box = "precise64"

  # Create a forwarded port mapping which allows access to a specific port
  # within the machine from a port on the host machine. In the example
  # below,
  # accessing "localhost:4000" will access port 4000 on the guest machine.
  config.vm.network :forwarded_port, guest: 4000, host: 4000

  # Create a private network, which allows host-only access to the machine
  # using a specific IP.
  config.vm.network :private_network, ip: "33.33.33.10"

  # Share an additional folder to the guest VM. The first argument is
  # the path on the host to the actual folder. The second argument is
  # the path on the guest to mount the folder. And the optional third
  # argument is a set of non-required options.
  config.vm.synced_folder ".", "/vagrant", nfs: true

  # Enable provisioning with Puppet stand alone. Puppet manifests
  # are contained in a directory path relative to this Vagrantfile.
  # You will need to create the manifests directory and a manifest in
  # the file precise64.pp in the manifests_path directory.
```

```
config.vm.provision "puppet" do |puppet|
  puppet.options      = "--verbose --debug"
  puppet.manifests_path = "../Manifests"
  puppet.module_path   = "../Modules"
  puppet.manifest_file = "blog_site.pp"
end
end
```

## Puppet Provisioner

`Vagrantfile` requires Puppet modules and manifests to set-up the `Jekyll`. Both Puppet `Modules` and `Manifests` are available at same level as `Blogs`.



**Figure 1:** Puppet modules and manifests for Jekyll setup

Your manifest file `blog_site.pp` will look like ,

---

```

include ubuntu::apt
include ubuntu::bashrc
include ubuntu::basic
include jekyll::jekyll
class { 'ubuntu::s3cmd':
    my_access_key => 'YOUR-AC-KEY',
    my_secret_key => 'YOUR-SE-KEY',
}

Class[ubuntu::apt] -> Class[ubuntu::bashrc] -> Class[ubuntu::basic] ->
    Class[ubuntu::s3cmd] -> Class[jekyll::jekyll]

# Set default path for Exec calls
Exec {
    path => [ '/bin/', '/sbin/' , '/usr/bin/', '/usr/sbin/', '/usr/local/
        sbin/', '/usr/local/bin' ]
}

```

In `blog_site.pp` we include,

## Apt

`ubuntu::apt` for running `apt` related commands mainly updating the `apt-get`,

```

class ubuntu::apt {
    # Downloads the package lists from the repositories and "updates" them
    exec { "apt-update":
        command => "sudo apt-get update"
    }
}

```

## Bashrc

`ubuntu::bashrc` for creating `.bashrc` profile for `vagrant` user to setup default ssh folder as shared folder

```

class ubuntu::bashrc ($owner = 'vagrant', $group = 'vagrant',
    $shared_folder='/vagrant') {
    # resources
    if $owner == 'root' {
        $uhome = "/${owner}"
    }
    else {
        $uhome = "/home/${owner}"
    }
    file {"${uhome}/.bashrc":
        ensure => present,
        owner   => $owner,
    }
}

```

```
    group => $group,
    mode  => '0644',
    # content or source or target
    content => template('ubuntu/bashrc.erb'),
  }
}
```

Above requires `.bashrc.erb` template

```
#!/bin/bash

#Source global definitions
if [ -f /etc/bashrc ]; then
    . /etc/bashrc
fi

cd /<%= shared_folder %>
```

## Essentials

This will make sure `build-essential` is available,

```
class ubuntu::basic {
  # Install build essential
  package { ["build-essential"]:
    ensure => present,
  }
}
```

## Jekyll

Installing Jekyll and required dependencies,

```
class jekyll::jekyll {
  # resources
  package { ["rubygems"]:
    ensure => present,
  }
  package { ["ruby1.9.1-dev"]:
    ensure => present,
  }
  package { ["ruby1.8-dev"]:
    ensure => present,
  }
  package { 'jekyll':
    ensure      => latest,
    provider    => 'gem',
    require     => Package[["rubygems", "ruby1.8-dev", "ruby1.9.1-dev",
      "build-essential"]],
  }
}
```

```
}
package { "activesupport":
  ensure => '3.1.0',
  provider => 'gem',
  require => Package['jekyll'],
}
package { "kramdown":
  ensure => present,
  provider => 'gem',
  require => Package['jekyll'],
}
package { "thor":
  ensure => present,
  provider => 'gem',
  require => Package['activesupport']
}
}
```

### s3cmd

s3cmd is used to sync the static site generated by Jekyll and stored in `_site` folder.

```
class ubuntu::s3cmd ($my_access_key, $my_secret_key, $owner = 'vagrant') {
  # resources
  package { "s3cmd":
    ensure => present,
  }
  # resources
  if $owner == 'root' {
    $uhome = "/${owner}"
  }
  else {
    $uhome = "/home/${owner}"
  }
  file {"${uhome}/.s3cfg":
    ensure => present,
    owner => $owner,
    group => $group,
    mode => '0644',
    # content or source or target
    content => template('ubuntu/s3cfg.erb'),
  }
}
```

s3cmd will require AWS API access key and secret key with sufficient access privilege to add, remove and update files in your S3 bucket. Access key and secret key should be provided as parameter value when declaring `ubuntu::s3cmd` class in `blog_site.pp`.

## Setting Up Amazon S3 Bucket And Root Domain

You can use [this guide](#) for setting up a S3 bucket with name `your-domain.com` for hosting your Jekyll generated static blog content and mapping your root domain to the bucket. This requires switching to Amazon Route 53 as your DNS Provider.

## Building Your Jekyll Site

Once Jekyll setup is ready you can create your own Jekyll site and content. You can do this by cloning an existing [Jekyll site](#) or build [one from scratch](#).

## Sync Jekyll Generated Content To S3 Bucket

Once blog content is generated using `jekyll --server`, you can upload content of `_site` directory to your S3 bucket `your-domain.com` using,

```
s3cmd sync _site/ s3://your-domain.com
s3cmd sync --delete-removed _site/ s3://your-domain.com --verbose
```

And that's all. We are now blogging like hacker.