I’m still fascinated with the Jekyll approach to website management, and am working on converting one of my blogs (not Unix Tutorial just yet!) to Jekyll website. This short post shows how to install Jekyll on a Linux Mint system.

**Install Ruby and Bundler**

First things first: you need to install Ruby:

```
greys@xps:~/.proj$ sudo apt install ruby
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following package was automatically installed and is no longer required:
libssh-4
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
libruby2.5 rake ruby-test-unit ruby2.5
Suggested packages:
ri ruby-dev
Recommended packages:
fonts-lato libjs-jquery
The following NEW packages will be installed:
```

```
greys@xps:~/proj$ bundle exec jekyll serve
Configuration file: /home/greys/proj/glebreys.com/_config.yml
    Source: /home/greys/proj/glebreys.com
    Destination: /home/greys/proj/glebreys.com/_site
    Incremental build: disabled. Enable with --incremental
    Generating...
    Jekyll Feed: Generating feed for posts
done in 0.614 seconds.
    Auto-regeneration: enabled for '/home/greys/proj/glebreys.com'
    Server address: http://127.0.0.1:4000/
    Server running... press ctrl-c to stop.
```
libruby2.5 rake ruby ruby-test-unit ruby2.5
0 upgraded, 5 newly installed, 0 to remove and 317 not upgraded.
Need to get 3,227 kB of archives.
After this operation, 14.8 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu bionic-updates/main
amd64 ruby2.5 amd64 2.5.1-1ubuntu1.1 [48.6 kB]
Get:2 http://archive.ubuntu.com/ubuntu bionic/main amd64 ruby
amd64 1:2.5.1 [5,712 B]
Get:3 http://archive.ubuntu.com/ubuntu bionic/main amd64 rake
all 12.3.1-1 [45.1 kB]
Get:4 http://archive.ubuntu.com/ubuntu bionic/main amd64 ruby-test-unit all 3.2.5-1 [61.1 kB]
Get:5 http://archive.ubuntu.com/ubuntu bionic-updates/main
amd64 libruby2.5 amd64 2.5.1-1ubuntu1.1 [3,066 kB]
Fetched 3,227 kB in 1s (3,576 kB/s)
Selecting previously unselected package ruby2.5.
(Reading database ... 272296 files and directories currently
installed.)
Preparing to unpack .../ruby2.5_2.5.1-1ubuntu1.1_amd64.deb ...
Unpacking ruby2.5 (2.5.1-1ubuntu1.1) ...
Selecting previously unselected package ruby.
Preparing to unpack .../ruby_1%3a2.5.1_amd64.deb ...
Unpacking ruby (1:2.5.1) ...
Selecting previously unselected package rake.
Preparing to unpack .../archives/rake_12.3.1-1_all.deb ...
Unpacking rake (12.3.1-1) ...
Selecting previously unselected package ruby-test-unit.
Preparing to unpack .../ruby-test-unit_3.2.5-1_all.deb ...
Unpacking ruby-test-unit (3.2.5-1) ...
Selecting previously unselected package libruby2.5:amd64.
Preparing to unpack .../libruby2.5_2.5.1-1ubuntu1.1_amd64.deb ...
Unpacking libruby2.5:amd64 (2.5.1-1ubuntu1.1) ...
Processing triggers for libc-bin (2.27-3ubuntu1) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Setting up rake (12.3.1-1) ...
Setting up ruby2.5 (2.5.1-1ubuntu1.1) ...
Setting up ruby (1:2.5.1) ...
Setting up ruby-test-unit (3.2.5-1) ...
Setting up libruby2.5:amd64 (2.5.1-1ubuntu1.1) ...
Processing triggers for libc-bin (2.27-3ubuntu1) ...

... and now use the gem command to install bundler gem:

greys@xps:~/proj$ sudo gem install bundler
Successfully installed bundler-2.0.1
Parsing documentation for bundler-2.0.1
Done installing documentation for bundler after 1 seconds
1 gem installed

Install the Jekyll gem

Excellent, we’re really close to getting this working.

Only small problem: when installing the jekyll gem, there’s an error:

greys@xps:~/proj$ sudo gem install jekyll
Building native extensions. This could take a while...
ERROR: Error installing jekyll:
ERROR: Failed to build gem native extension.

current directory:
/var/lib/gems/2.5.0/gems/ffi-1.10.0/ext/ffi_c
/usr/bin/ruby2.5 -r ./siteconf20190329-23694-7cpq9s.rb extconf.rb
mkmf.rb can't find header files for ruby at
/usr/lib/ruby/include/ruby.h

extconf failed, exit code 1

Gem files will remain installed in
/var/lib/gems/2.5.0/gems/ffi-1.10.0 for inspection.

Results logged to /var/lib/gems/2.5.0/extensions/x86_64-linux/2.5.0/ffi-1.10.0/gem_make.out

I first thought I did something wrong or that I have an old version of Ruby (2.5.0 as you can see). But now, it seems the minimal required version for Jekyll is Ruby 2.1.0 so it should
all work.
The hint is in the error message:

    mkmf.rb can't find header files for ruby at /usr/lib/ruby/include/ruby.h

This include file is indeed missing, because previously we simply installed Ruby binaries, but not the development packages.
Once we install ruby-dev package:

greys@xps:~/proj$ sudo apt install ruby-dev
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following package was automatically installed and is no longer required:
libssh-4
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
ruby2.5-dev
Recommended packages:
ruby2.5-doc
The following NEW packages will be installed:
ruby-dev ruby2.5-dev
0 upgraded, 2 newly installed, 0 to remove and 317 not upgraded.
Need to get 68.3 kB of archives.
After this operation, 351 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 ruby2.5-dev amd64 2.5.1-1ubuntu1.1 [63.7 kB]
Get:2 http://archive.ubuntu.com/ubuntu bionic/main amd64 ruby-dev amd64 1:2.5.1 [4,604 B]
Fetched 68.3 kB in 0s (198 kB/s)
Selecting previously unselected package ruby2.5-dev:amd64.
(Reading database ... 273441 files and directories currently installed.)
Preparing to unpack .../ruby2.5-dev_2.5.1-1ubuntu1.1_amd64.deb ...
Unpacking ruby2.5-dev:amd64 (2.5.1-1ubuntu1.1) ...
Preparing to unpack .../ruby-dev_1%3a2.5.1_amd64.deb ...  
Unpacking ruby-dev:amd64 (1:2.5.1) ...  
Setting up ruby2.5-dev:amd64 (2.5.1-1ubuntu1.1) ...  
Setting up ruby-dev:amd64 (1:2.5.1) ...  

The header files for Ruby should appear now (although in a slightly different path):  
/usr/include/ruby-2.5.0/ruby/ruby.h  
/usr/include/ruby-2.5.0/ruby.h  

and the Jekyll gem install will complete:  

greys@xps:~/proj$ sudo gem install jekyll  
Building native extensions. This could take a while...  
Successfully installed ffi-1.10.0  
Fetching: rb-inotify-0.10.0.gem (100%)  
Successfully installed rb-inotify-0.10.0  
Fetching: rb-fsevent-0.10.3.gem (100%)  
Successfully installed rb-fsevent-0.10.3  
Fetching: listen-3.1.5.gem (100%)  
Successfully installed listen-3.1.5  
Fetching: jekyll-watch-2.2.1.gem (100%)  
Successfully installed jekyll-watch-2.2.1  
Fetching: sass-listen-4.0.0.gem (100%)  
Successfully installed sass-listen-4.0.0  
Fetching: sass-3.7.3.gem (100%)  

Ruby Sass is deprecated and will be unmaintained as of 26 March 2019.  

* If you use Sass as a command-line tool, we recommend using Dart Sass, the new primary implementation: https://sass-lang.com/install  

* If you use Sass as a plug-in for a Ruby web framework, we recommend using the sassc gem: https://github.com/sass/sassc-ruby#readme  

* For more details, please refer to the Sass blog: http://sass.logdown.com/posts/7081811  

Successfully installed sass-3.7.3
Fetching: jekyll-sass-converter-1.5.2.gem (100%)
Successfully installed jekyll-sass-converter-1.5.2
Fetching: concurrent-ruby-1.1.5.gem (100%)
Successfully installed concurrent-ruby-1.1.5
Fetching: i18n-0.9.5.gem (100%)
Successfully installed i18n-0.9.5
Fetching: http_parser.rb-0.6.0.gem (100%)
Building native extensions. This could take a while...
Successfully installed http_parser.rb-0.6.0
Fetching: eventmachine-1.2.7.gem (100%)
Building native extensions. This could take a while...
Successfully installed eventmachine-1.2.7
Fetching: em-websocket-0.5.1.gem (100%)
Successfully installed em-websocket-0.5.1
Fetching: colorator-1.1.0.gem (100%)
Successfully installed colorator-1.1.0
Fetching: public_suffix-3.0.3.gem (100%)
Successfully installed public_suffix-3.0.3
Fetching: addressable-2.6.0.gem (100%)
Successfully installed addressable-2.6.0
Fetching: jekyll-3.8.5.gem (100%)
Successfully installed jekyll-3.8.5
Parsing documentation for ffi-1.10.0
Installing ri documentation for ffi-1.10.0
Parsing documentation for rb-inotify-0.10.0
Installing ri documentation for rb-inotify-0.10.0
Parsing documentation for rb-fsevent-0.10.3
Installing ri documentation for rb-fsevent-0.10.3
Parsing documentation for listen-3.1.5
Installing ri documentation for listen-3.1.5
Parsing documentation for jekyll-watch-2.2.1
Installing ri documentation for jekyll-watch-2.2.1
Parsing documentation for sass-listen-4.0.0
Installing ri documentation for sass-listen-4.0.0
Parsing documentation for sass-3.7.3
Installing ri documentation for sass-3.7.3
Parsing documentation for jekyll-sass-converter-1.5.2
Installing ri documentation for jekyll-sass-converter-1.5.2
Parsing documentation for concurrent-ruby-1.1.5
Installing ri documentation for concurrent-ruby-1.1.5
Parsing documentation for i18n-0.9.5
Installing ri documentation for i18n-0.9.5
Parsing documentation for http_parser.rb-0.6.0
Installing ri documentation for http_parser.rb-0.6.0
Parsing documentation for http_parser.rb-0.6.0
Installing ri documentation for eventmachine-1.2.7
Parsing documentation for eventmachine-1.2.7
Installing ri documentation for em-websocket-0.5.1
Parsing documentation for em-websocket-0.5.1
Installing ri documentation for colorator-1.1.0
Parsing documentation for colorator-1.1.0
Installing ri documentation for public_suffix-3.0.3
Parsing documentation for public_suffix-3.0.3
Installing ri documentation for addressable-2.6.0
Parsing documentation for addressable-2.6.0
Parsing documentation for jekyll-3.8.5
Installing ri documentation for jekyll-3.8.5
Done installing documentation for ffi, rb-inotify, rb-fsevent, listen, jekyll-watch, sass-listen, sass, jekyll-sass-converter, concurrent-ruby, i18n, http_parser.rb, eventmachine, em-websocket, colorator, public_suffix, addressable, jekyll after 26 seconds
17 gems installed

Great stuff! Now we can serve my project and browse to the Jekyll page (I skip the jekyll steps for starting new website because they’re described in my Jekyll website with GitHub Pages article):

greys@xps:~/.proj/glebreys.com$ bundle exec jekyll serve
Configuration file: /home/greys/proj/glebreys.com/_config.yml
Source: /home/greys/proj/glebreys.com
Destination: /home/greys/proj/glebreys.com/_site
Incremental build: disabled. Enable with --incremental
Generating...
Jekyll Feed: Generating feed for posts
done in 0.614 seconds.
Auto-regeneration: enabled for '/home/greys/proj/glebreys.com'
Server address: http://127.0.0.1:4000/
Server running... press ctrl-c to stop.

That’s it for today!
See Also

- Unix Tutorial Projects: GitHub Pages with Jekyll