



1 Introduction

This document describes how Ruby, RubyGems and Rails can be installed on a Debian operating system (etch).

2 Building a basic chroot area containing etch

The following commands can be used to build a chroot area containing etch.

```
sudo mkdir -p /var/chroots/rails-chroot
sudo debootstrap etch /var/chroots/rails-chroot \
    http://mirror.ox.ac.uk/debian
sudo mount -t proc /proc /var/chroots/rails-chroot/proc
```

A chroot command can then be used to get into the chroot area.

```
sudo chroot /var/chroots/rails-chroot
```

3 Installing some basic files and packages

We now install some basic files and packages.

```
cat >/etc/apt/sources.list <<%
deb http://mirror.ox.ac.uk/debian etch main contrib non-free
deb http://debian-security.oucs.ox.ac.uk/security etch/updates \
    main contrib non-free
deb http://debian.oucs.ox.ac.uk/sysdev/etch stable general
%
cat >/etc/hosts <<%
127.0.0.1 localhost
%
cat >/etc/resolv.conf <<%
search oucs.ox.ac.uk
nameserver 163.1.2.1
nameserver 129.67.1.180
%
apt-get update
apt-get install locales
echo en_US.UTF-8 UTF-8 >/etc/locale.gen
locale-gen
apt-get upgrade
apt-get install debhelper build-essential dnsutils devscripts less
```

4 Adding mysql to the chroot area

Rails needs to use a database server. By default, it uses SQLite3. However, I want to use MySQL. The following commands install MySQL.

I'm using an obscure port (8116) because I'm using 3306 elsewhere. Because of this change, MySQL has to be restarted.

I'm also changing root's MySQL password.

```
apt-get install mysql-server
ed /etc/mysql/my.cnf <<'%'
g/3306/s//8116/gp
```

```
w
q
%
/etc/init.d/mysql stop
/etc/init.d/mysql start
mysqladmin -P 8116 -u root password PW4root
mysql -P8116 -u root -p
PW4root
\q
```

5 Installing Ruby

Although there is a Debian package for Ruby 1.9, until recently 1.9 was not recommended. There is a Debian package called `ruby` contains Ruby 1.8. We install that and a number of other useful Ruby packages, including one that allows Ruby to access MySQL.

Besides installing a command called `ruby` that can be used to execute Ruby programs, the following commands are also established:

- `rdoc`: an application that produces documentation from Ruby source files;
- `ri`: an application that displays Ruby's documentation;
- `irb`: an interactive environment for trying bits of Ruby code.

For some reason, a link does not get created for `irb`. So I will create one. I'm also checking that the commands can be executed.

```
apt-get install ruby ri rdoc ruby1.8-examples libmysql-ruby
(cd /usr/bin; ln -s irb1.8 irb)
ruby -v; ri -v; rdoc -v; irb -v
# I got:
# ruby 1.8.5 (2006-08-25) [i486-1]
# ri v1.0.1 - 20041108
# RDoc V1.0.1 - 20041108
# irb 0.9.5(05/04/13)
```

6 Installing RubyGems

The Debian package called `rubygems` currently contains version 0.9.0-5.

```
apt-get install rubygems
gem -v
```

RubyGems can update itself to the latest version.

```
gem update --system
```

This command takes a long time to finish and produces a lot of scary output.

Fix another link and check the commands can execute.

```
ls -l /usr/bin/gem1.8
rm /usr/bin/gem
ln -s /usr/bin/gem1.8 /usr/bin/gem
gem -v; ri -v; rdoc -v
# I got:
# 1.1.1
# ri v1.0.1 - 20041108
# RDoc V1.0.1 - 20041108
```

7 Installing Rails

Rails is available as a RubyGem. The latest version is Rails 2.1 which got released on 1st June 2008.

```
gem install rails --include-dependencies
# I got:
# INFO: `gem install -y` is now default and will be removed
# INFO: use --ignore-dependencies to install only the gems you list
# Bulk updating Gem source index for: http://gems.rubyforge.org
# Bulk updating Gem source index for: http://gems.rubyforge.org
# Successfully installed rake-0.8.1
# Successfully installed activesupport-2.1.0
# Successfully installed activerecord-2.1.0
# Successfully installed actionpack-2.1.0
# Successfully installed actionmailer-2.1.0
# Successfully installed activereource-2.1.0
# Successfully installed rails-2.1.0
# ...
```

It did other things which took a very long time to complete.

You can now check that rails has been installed.

```
rails -v
# I got:
# Rails 2.1.0
```