Appendix A

# Rails and MySQL/MariaDB

## Using MySQL or Mariadb with Rails

Out of the box, a new rails project will be set to use the sqlite3 database.

It is a relatively simple change to have your project use MySQL or MariaDB databases instead.

Before creating a new rails project the database server and relevant development libraries must be installed.

When creating the new rails project you simply define the required database by supplying a –d option with the rails new command line, at the moment rails does not differentiate between MySQL and MariaDB.

Example:

rails new company –d mysql

The most obvious difference is in the databse.yml file in the config directory.

### Using sqlite3:

# SQLite version 3.x

# gem install sqlite3

#

# Ensure the SQLite 3 gem is defined in your Gemfile

# gem 'sqlite3'

#

**default: &default**

**adapter: sqlite3**

**pool: 5**

**timeout: 5000**

development:

<<: \*default

database: db/development.sqlite3

# Warning: The database defined as "test" will be erased and

# re-generated from your development database when you run "rake".

# Do not set this db to the same as development or production.

test:

<<: \*default

database: db/test.sqlite3

production:

<<: \*default

database: db/production.sqlite3

### Using MySQL:

# MySQL. Versions 5.0 and up are supported.

#

# Install the MySQL driver

# gem install mysql2

#

# Ensure the MySQL gem is defined in your Gemfile

# gem 'mysql2'

#

# And be sure to use new-style password hashing:

# http://dev.mysql.com/doc/refman/5.7/en/old-client.html

# **default: &default**

**adapter: mysql2**

**encoding: utf8**

**pool: 5**

**username: root**

**password:**

**host: localhost**

development:

<<: \*default

database: company\_development

# Warning: The database defined as "test" will be erased and

# re-generated from your development database when you run "rake".

# Do not set this db to the same as development or production.

test:

<<: \*default

database: company\_test

# As with config/secrets.yml, you never want to store sensitive information,

# like your database password, in your source code. If your source code is

# ever seen by anyone, they now have access to your database.

#

# Instead, provide the password as a unix environment variable when you boot

# the app. Read http://guides.rubyonrails.org/configuring.html#configuring-a-database

# for a full rundown on how to provide these environment variables in a

# production deployment.

#

# On Heroku and other platform providers, you may have a full connection URL

# available as an environment variable. For example:

#

# DATABASE\_URL="mysql2://myuser:mypass@localhost/somedatabase"

#

# You can use this database configuration with:

#

# production:

# url: <%= ENV['DATABASE\_URL'] %>

#

production:

<<: \*default

database: company\_production

username: company

password: <%= ENV['COMPANY\_DATABASE\_PASSWORD'] %>

You are required to supply the access details for your database login, rails assumes the root user but leaves the password unset.

Rails still has the concepts of development, test and production databases as before.

When you run the **rake db:create** command rails will connect to the RDBMS and create the development and test databases prefixed with the project name.

The rake **db:migrate** command will then create the required tables and columns as defined in the migrate file(s).

An example is shown below of the result of the rake commands above using the relevant mysql commands:

**Show databases;**

+---------------------+

| Database |

+---------------------+

| information\_schema |

| company\_development |

| company\_test |

| mysql |

| performance\_schema |

| test |

|  |
| --- |
|  |

**Use company\_development;**

**Show tables;**

+-------------------------------------------+

| Tables\_in\_company\_development |

+-------------------------------------------+

| ar\_internal\_metadata |

| departments |

| employees |

| schema\_migrations |

+-------------------------------------------+

**Describe employees;**

+---------------+----------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+---------------+----------+------+-----+---------+----------------+

| id | int(11) | NO | PRI | NULL | auto\_increment |

| name | text | YES | | NULL | |

| phone | text | YES | | NULL | |

| department\_id | int(11) | YES | | NULL | |

| created\_at | datetime | NO | | NULL | |

| updated\_at | datetime | NO | | NULL | |

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