

# MySQL (standalone)



This documentation has not been updated for Release 4.0.0 yet. Please see the one host (all-in-one) [Manual Installation Instructions](#).



This documentation is for Release 3.0.0. For the Release 1 version of this page, see [v.81](#). For the Release 2 version of this page, see [v.87](#).

Intended as guidance for production environments with different hosts for most tasks, these instructions provide a recipe for building only the **MySQL** piece of an Avalon system from scratch on CentOS or Red Hat Enterprise Linux. Recipes for the other components for Avalon may be found here. [Fedora \(standalone\)](#), [Web \(standalone\)](#), [Solr \(standalone\)](#), [Red5 \(standalone\)](#), and [Matterhorn \(standalone\)](#).

Instructions for building every component on one host (all-in-on) please see here: [Manual Installation Instructions](#).

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## Ready the Installation Environment

### Install EPEL

```
rpm -ivh http://linux.mirrors.es.net/fedora-epel/6/i386/epel-release-6-8.noarch.rpm
```

This package has libyaml-devel which is required by ruby and not provided by Redhat.

### Make sure a valid hostname is resolvable

The default hostname is "avalon.dev", so name the machine this and enter it into /etc/hosts

```
# hostname
avalon.dev
# cat /etc/hosts
127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4 avalon.dev
```

### Configure iptables

The Avalon Media System requires several ports to be open to client browsers.

Here are the port settings that will need to be configured:

Port	Purpose	External?
3306	MySQL	No

The preferred method is to create a shell script that will do the work for you. Here is an example script that you should look through and customize as needed: [avalon-iptables-config.sh](#)

If you're connected over ssh, it might kick you off.

Save your script to `/etc/sysconfig/avalon-iptables-config.sh`, make it executable and run it.

```
chmod +x /etc/sysconfig/avalon-iptables-config.sh
/etc/sysconfig/avalon-iptables-config.sh
```

If you run into connection issues you can disable the iptables, by running "service iptables stop". This will completely drop your firewall. When finished troubleshooting run "service iptables start".

### Disable SELinux

```
echo 0 > /selinux/enforce
vim /etc/selinux/config #change the value of `SELINUX` from `enforcing` to `permissive`
```

### Add the NUL repository

Create the NUL repository config file:

```
vim /etc/yum.repos.d/nul-public.repo
```

Append the following code:

```
[nul_public]
name=NUL Library Public RHEL repository
baseurl=http://yumrepo-public.library.northwestern.edu/x86_64
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-nul
cost=150
```

Install and place the NUL GPG key in the proper location:

```
curl http://yumrepo-public.library.northwestern.edu/RPM-GPG-KEY-nul -o /etc/pki/rpm-gpg/RPM-GPG-KEY-nul
```

Install development libraries and packages for building Ruby

```
yum groupinstall "Development Tools"
yum install readline-devel zlib-devel libyaml-devel libffi-devel openssl-devel libxml2-devel libxslt-devel
```

## MySQL

Avalon uses MySQL for storing search queries, user data and roles, and as a back end for asynchronously sending requests to Matterhorn.

### Install MySQL server

```
yum install mysql-server
service mysqld start
```

### Create databases and users

Enter the mysql monitor

```
#mysql
Welcome to the MySQL monitor. Commands end with ; or \g.
...etc...
mysql>
```

### Create a database for the Fedora Commons Repository software and add a user to it

```
create database fedora3;
create user 'fcrepo'@'localhost' identified by 'fcrepo';
grant all privileges on fedora3.* to 'fcrepo'@'localhost';
flush privileges;
```

### Create a database for the Avalon web application and add a user to it

```
create database rails;
create user 'rails'@'localhost' identified by 'rails';
grant all privileges on rails.* to 'rails'@'localhost';
flush privileges;
```

### Check your work and exit

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| fedora3 |
| mysql |
| rails |
| test |
+-----+
5 rows in set (0.00 sec)
mysql> select user, host from mysql.user;
+-----+-----+
| user | host |
+-----+-----+
| root | 127.0.0.1 |
| root | 129.79.32.87 |
| root | 129.79.32.87 |
| fcrepo | localhost |
| rails | localhost |
| root | localhost |
+-----+-----+
7 rows in set (0.00 sec)

mysql> exit;
Bye
```

See documentation for your version of MySQL Server for detailed syntax (<http://dev.mysql.com/doc/refman/5.1/en/create-database.html> )

#### Using the System

You can find specific information about using the system in the [Collection Manager's Guide](#). Upload items individually or via batch. [Batch demo content](#) is available for your convenience, which includes the media files and an excel document necessary to run a batch. You can submit a batch directly via SFTP using the avalondrop account you created above.

[Known Issues](#) - a list of bugs, workarounds, and cautions.

## Restarting the Server

Before you restart your Avalon server, you'll want to make sure all of the services necessary to run Avalon will start automatically after the restart. Run these commands once and you should be set:

```
chkconfig --level 345 mysqld on
chkconfig --level 345 sshd on
```