

# “树协作”协作项目管理 微信小程序 [部署文档]

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## 1. 引言

### 1.1 编写目的

本文档旨在为小程序系统管理员提供系统安装，部署帮助，以便使用者可独立完成系统的安装部署，使系统正常运行。

### 1.2 背景

作为学生活动中的一个重要环节，“树协作”会给需要规范合作流程、需要外界帮助的同学们提供一个良好的交流平台。在实际的交流中，受到时间、地域以及朋友圈的限制，学生之间往往不能有很多的交流，同时也难以在同学都处于远程协作环境的时候进行流程的规范，用传统的面对面的交流方式，也存在很大的局限性，因此需要一个基于网络的平台来更好协助同学们之间的合作。

“树协作”平台就是为了解决这样一个问题而生的。“树协作”平台的宗旨是方便项目成员之间的进度检查。平台中包含的个人主页、发现广场、个人项目等，很好地涵盖了项目开发中的主要部分，能为项目提供便利的条件。

### 1.3 定义

无

### 1.4 参考资料

- [1] 吕云翔.软件工程使用教程.北京：清华大学出版社，2015
- [2] 《软件开发计划书》
- [3] 《软件设计说明书》
- [4] 《需求规格说明书》
- [5] 《用户使用说明书》

## 2. 系统配置

### 2.1 运行环境

#### 2.1.1 服务器运行环境

- (1) 操作系统：Ubuntu 16.04.6 LTS (GNU/Linux 4.4.0-142-generic x86\_64)
- (2) Web 服务器：JFinal-undertow
- (3) 数据库：mysql Ver 14.14 Distrib 5.7.26, for Linux (x86\_64)

### 2.2 系统安装部署图

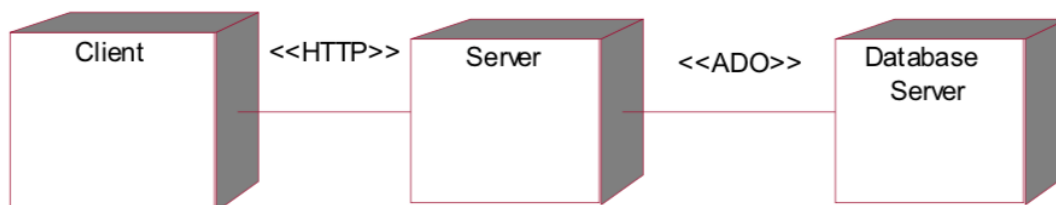


图 2-1 “树协作”的部署图

### 2.3 系统硬件配置

租用云端服务器进行后端部署发布，本例中使用的云服务器硬件配置如下：

- (1) CPU：Intel(R) Xeon(R) CPU E5-2680 v4 @ 2.40GHz
- (2) 内存大小：1GB
- (3) 磁盘空间容量：40GB

## 2.4 系统应用服务器软件安装与配置

### 2.4.1 云服务器搭建

在华为云上选择相应配置申请云服务器空间，申请成功后连接管理终端，输入密码登录，如图 2-2 和 2-3 所示。

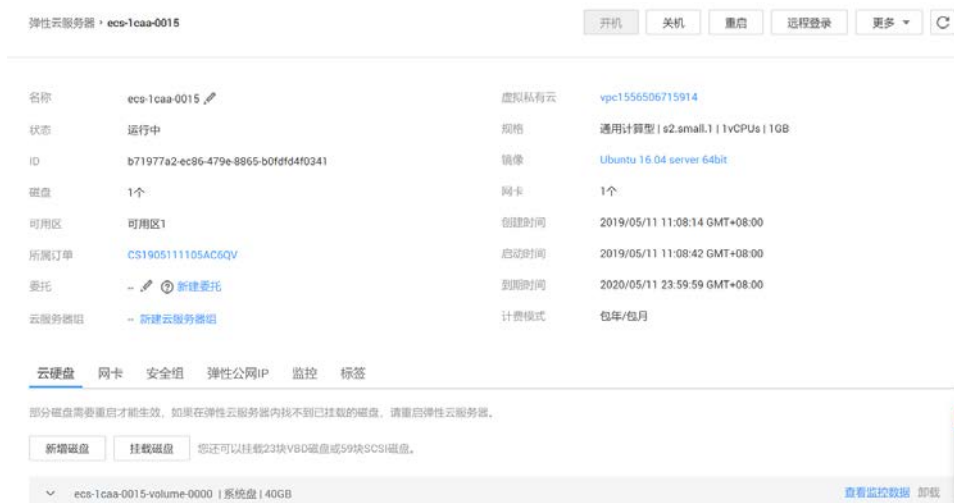


图 2-2 云服务器空间

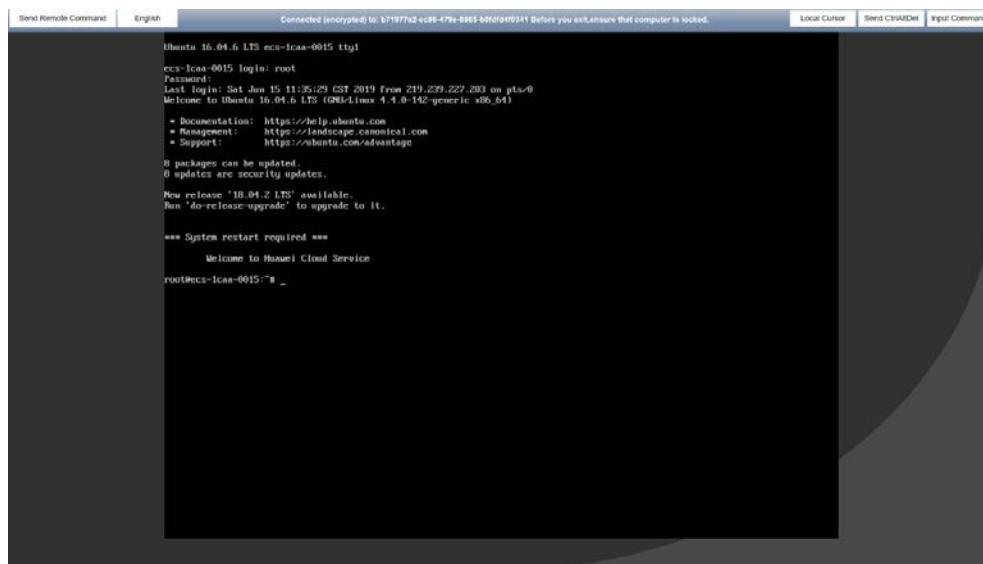


图 2-3 登录终端

### 2.4.2 安装 MySQL

使用终端命令来安装 MySQL。

```
sudo apt-get install mysql-server  
apt-get install mysql-client  
sudo apt-get install libmysqlclient-dev
```

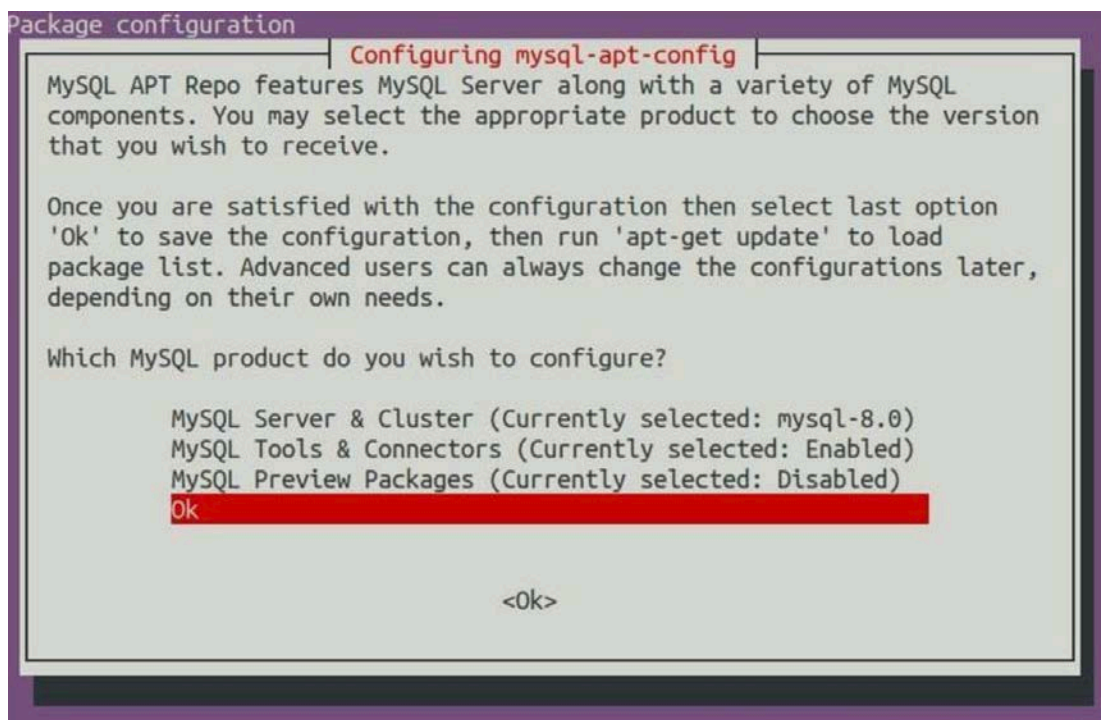


图 2-4 选择 MySQL 的设置

选择 OK。

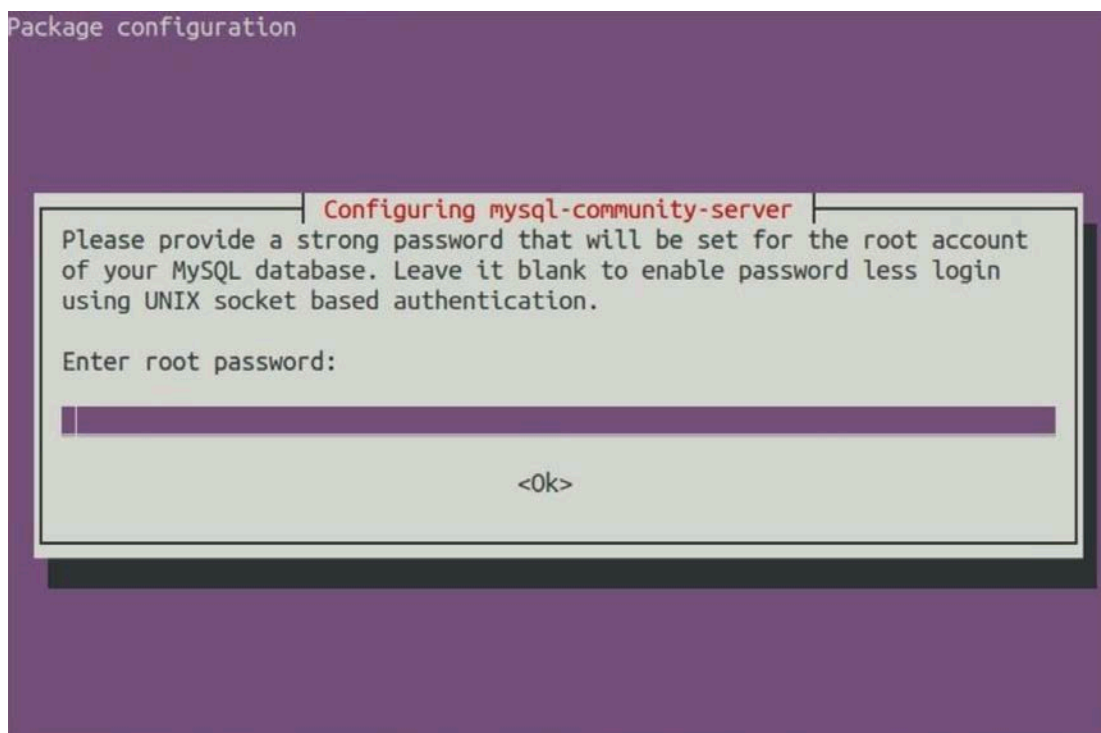


图 2-5 设置 MySQL 密码

输入密码。

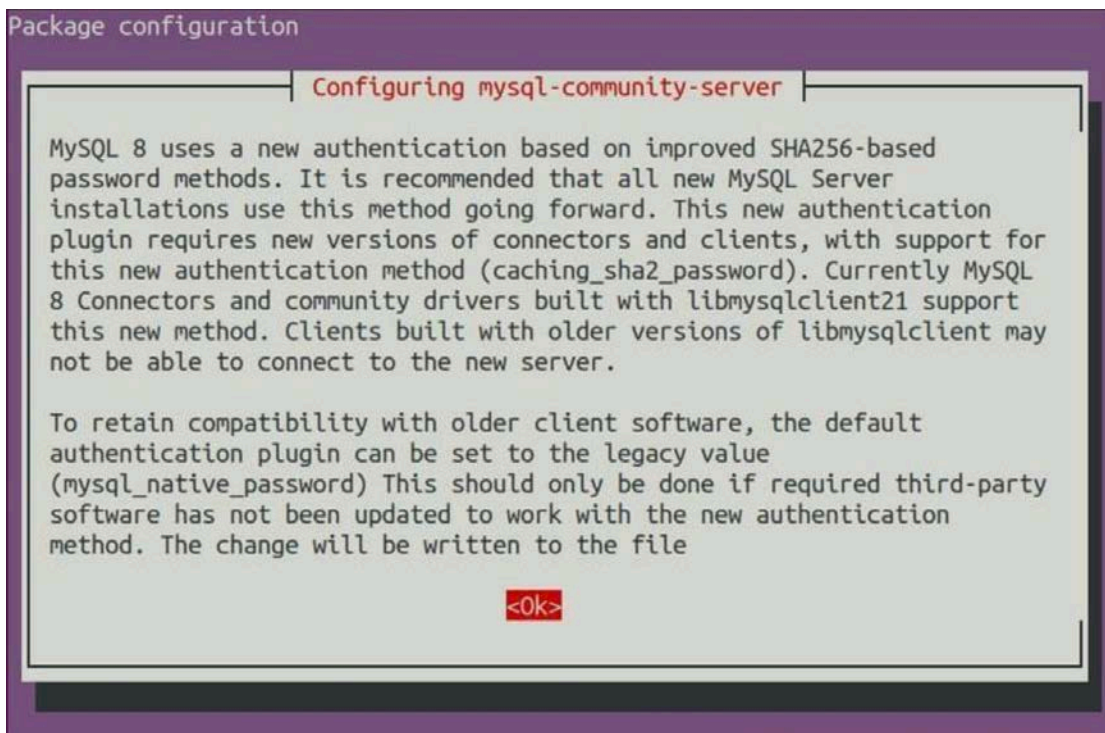


图 2-6 告知服务器设置

选择 ok

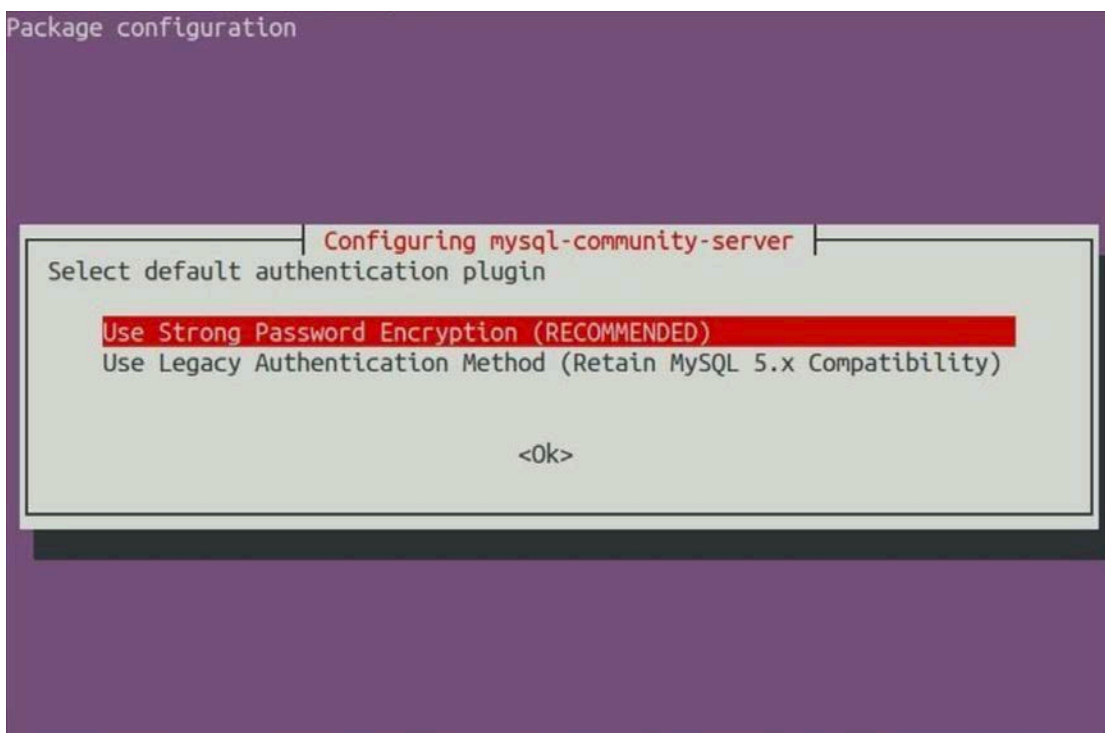


图 2-7 选择验证方式

选择第一项。

这样子就成功安装了 MySQL。

要验证 MySQL 已经成功安装，使用如下命令：

```
sudo systemctl status mysql.service
```

这将展示一些关于 MySQL 服务的信息。

```
ubuntu@ubuntu-VirtualBox:~$ systemctl status mysql.service
● mysql.service - MySQL Community Server
   Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor preset: en
   Active: active (running) since Thu 2019-04-11 19:30:11 EEST; 1h 54min ago
     Docs: man:mysqld(8)
           http://dev.mysql.com/doc/refman/en/using-systemd.html
   Main PID: 869 (mysqld)
    Status: "SERVER_OPERATING"
     Tasks: 38 (limit: 2339)
    CGroup: /system.slice/mysql.service
            └─869 /usr/sbin/mysqld

apr 11 19:30:00 ubuntu-VirtualBox systemd[1]: Starting MySQL Community Server...
apr 11 19:30:11 ubuntu-VirtualBox systemd[1]: Started MySQL Community Server.
lines 1-13/13 (END)
```

图 2-8 MySQL 服务信息

### 3. 程序部署

#### 3.1 修改数据库连接

在 MySQL 数据库中添加一个远程连接的用户。

user set host='%' where user='root';

grant all privileges on \*.\* to 'root'@'%' identified by 'mypassword' with grant option

flush privileges

```
mysql> select Host,User from user;
+-----+-----+
| Host      | User          |
+-----+-----+
| %         | root          |
| localhost | debian-sys-maint |
| localhost | mysql.session |
| localhost | mysql.sys     |
| localhost | root          |
+-----+-----+
5 rows in set (0.01 sec)
```

图 3-1 显示添加用户成功



### 3.2 部署 ifinal 代码

使用命令 `mvn clean package`，将源代码编译打包。

```

[INFO] Scanning for projects...
[WARNING]
[WARNING] Some problems were encountered while building the effective model for com.damof:final_demo_for_maven:jar:3.8
[WARNING] 'dependencies.dependency.scope' for org.slf4j:slf4j-nop:jar must be one of [provided, compile, runtime, test, system] but is 'provided'. @ line 105, column 18
[WARNING]
[WARNING] It is highly recommended to fix these problems because they threaten the stability of your build.
[WARNING]
[WARNING] For this reason, future Maven versions might no longer support building such malformed projects.
[WARNING]
[INFO]
[INFO] -----< com.damof:final_demo_for_maven >-----
[INFO] Building final_demo_for_maven 3.8
[INFO] [jar] -----
[WARNING] The POM for com.alibaba:druid:jar:1.0.29 is invalid, transitive dependencies (if any) will not be available, enable debug logging for more details
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ final_demo_for_maven ---
[INFO] Deleting /Users/enderferna/eclipse-workspace/software-engineering-backend/target
[INFO]
[INFO] --- maven-resources-plugin:1.6:resources (default-resources) @ final_demo_for_maven ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Copying 5 resources
[INFO]
[INFO] --- maven-compiler-plugin:3.6.2:compile (default-compile) @ final_demo_for_maven ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 34 source files to /Users/enderferna/eclipse-workspace/software-engineering-backend/target/classes
[INFO] 编译开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/join/JoinController.java]]
[INFO] 编译分析完成, 耗时 1 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/common/model/MoppingKit.java]]
[INFO] 编译分析完成, 耗时 1 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/user/UserController.java]]
[INFO] 编译分析完成, 耗时 2 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/common/model/Task.java]]
[INFO] 编译分析完成, 耗时 1 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/common/model/Collection.java]]
[INFO] 编译分析完成, 耗时 1 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/common/model/Base/BaseJudge.java]]
[INFO] 编译分析完成, 耗时 2 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/common/model/Message.java]]
[INFO] 编译分析完成, 耗时 1 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/common/model/Base/BaseProject.java]]
[INFO] 编译分析完成, 耗时 1 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/task/TaskController.java]]
[INFO] 编译分析完成, 耗时 2 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/common/model/FindDemoGenerator.java]]
[INFO] 编译分析完成, 耗时 1 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/common/model/Base/BaseMessage.java]]
[INFO] 编译分析完成, 耗时 1 毫秒]]
[INFO] 编译分析开始时间: SimpleFileObject/Users/enderferna/eclipse-workspace/software-engineering-backend/src/main/java/com/damof/common/model/Join.java]]
[INFO] 编译分析完成, 耗时 1 毫秒]]

```

图 3-2 执行命令 mvn clean package

将 target 文件夹中的 jfinal demo for maven-release.zip 包传送到服务器端。

```
(base) endinf@endinfnodeMacBook-Pro:~/eclipse-workspace/software-engineering-backend/target$ scp final_demo_for_maven-release.zip root@114.115.151.96:/home
root@114.115.151.96's password:
final_demo_for_maven-release.zip 100% 12MB 4.1MB/s 00:03
```

图 3-3 传送包到服务器端

登录服务器端，并在服务器端解压包。

```
[root@root114 115.151.96% ssh root@114.115.151.96]
Welcome to Ubuntu 16.04.6 LTS (GNU/Linux 4.4.0-142-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

8 packages can be updated.
8 updates are security updates.

New release '18.04.2 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

*** System restart required ***

Welcome to Huawei Cloud Service

Last login: Sat Jun 15 11:34:36 2019 from 219.239.227.203
root@ecs-1c0a-0015:~# cd /home
root@ecs-1c0a-0015:~/www# unzip jfinal_demo_for_maven-release.zip
Archive: jfinal_demo_for_maven-release.zip
  creating: jfinal_demo_for_maven/
  creating: jfinal_demo_for_maven/config/
  creating: jfinal_demo_for_maven/webapp/
  creating: jfinal_demo_for_maven/webapp/META-INF/
  creating: jfinal_demo_for_maven/webapp/blog/
  creating: jfinal_demo_for_maven/webapp/project/
  creating: jfinal_demo_for_maven/webapp/common/
  creating: jfinal_demo_for_maven/webapp/task/
  creating: jfinal_demo_for_maven/webapp/index/
  creating: jfinal_demo_for_maven/webapp/assets/
  creating: jfinal_demo_for_maven/webapp/assets/css/
  creating: jfinal_demo_for_maven/webapp/assets/js/
  creating: jfinal_demo_for_maven/webapp/assets/img/
  creating: jfinal_demo_for_maven/lib/
  inflating: jfinal_demo_for_maven/config/demo.pfx
  inflating: jfinal_demo_for_maven/webapp/blog/edit.html
  inflating: jfinal_demo_for_maven/webapp/common/_layout.html
  inflating: jfinal_demo_for_maven/webapp/index/index.html
  inflating: jfinal_demo_for_maven/webapp/assets/css/manage.css
  inflating: jfinal_demo_for_maven/jfinal.sh
  extracting: jfinal_demo_for_maven/lib/servlet-2.4-jdk15.jar
  extracting: jfinal_demo_for_maven/lib/commons-lang-2.5.jar
  extracting: jfinal_demo_for_maven/lib/javassist-3.21.0-GA.jar
  extracting: jfinal_demo_for_maven/lib/undercore-2.8.19-final.jar
  inflating: jfinal_demo_for_maven/config/logging.properties
  inflating: jfinal_demo_for_maven/webapp/favicon.ico
  inflating: jfinal_demo_for_maven/webapp/META-INF/MANIFEST.MF
  inflating: jfinal_demo_for_maven/webapp/blog/form.htm
```

图 3-4 将部署文件放到服务器端

## 执行文件夹中的 jfinal.sh

```
root@ecs-1caa-0015:/home/jfinal_demo_for_maven# ./jfinal.sh start
root@ecs-1caa-0015:/home/jfinal_demo_for_maven# Starting JFinal 3.8 -> http://0.0.0.0:8080
Info: jfinal-undertow 1.6, undertow 2.0.19, Jvm 9.0.4
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.xnio.nio.NioXnioS2 (file:/home/jfinal_demo_for_maven/lib/xnio-nio-3.3.8.Final.jar) to constructor sun.nio.ch.EPollSelectorProvider()
WARNING: Please consider reporting this to the maintainers of org.xnio.nio.NioXnioS2
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
Starting GooJete in 1.4 seconds. Welcome To The JFinal World (^_^)
```

图 3-5 显示部署成功