Knappsack Open Source Edition - Deployment Guide

Use the following steps to deploy the Open Source Edition of Knappsack locally on a mac or linux machine.

Prerequisites:

1. Apache Tomcat or other web application server is already installed. This guide will assume you are deploying to Tomcat-7.
2. You must have a valid SMTP host. This guide will use Gmail smtp service as an example and requires that you have a valid Gmail account to use for authentication.

Build Steps:

1. Fetch the source from GitHub

```
# cd /tmp
# git clone git@github.com:sparcedge/knappsack.git
Cloning into 'knappsack'...
remote: Counting objects: 1728, done.
remote: Compressing objects: 100% (1007/1007), done.
remote: Total 1728 (delta 736), reused 1518 (delta 526)
Receiving objects: 100% (1728/1728), 1.50 MiB | 1.50 MiB/s, done.
Resolving deltas: 100% (736/736), done.
# cd knappsack
```

Note: if the “git clone” fails, you can use:

```
# git clone git://github.com/sparcedge/knappsack.git
# cd knappsack
```

2. Update the mail exchanger properties to provide a SMTP host, port, username, password and email address to be used to send out notifications.

```
# vi knappsack-core/src/main/resources/properties/mail.properties
```

Here is a sample configuration using Gmail’s free SMTP endpoint:

```
dev.mail.server.host=smtp.gmail.com
dev.mail.server.port=587
dev.mail.server.protocol=smtp
dev.mail.server.username=Your Gmail account  (ex: someone@gmail.com)
dev.mail.server.password=Your Gmail password
NotificationEmailAddress=Your Gmail account  (ex: someone@gmail.com)
```

If you have 2-step authentication enabled for your Gmail account then you will have to generate and use an application specific password. The below URL provided by google should guide you through the process of creating these application specific passwords. Once generated, copy the generated password into the "dev.mail.server.password" field in the mail.properties.

http://support.google.com/accounts/bin/answer.py?hl=en&answer=185833

3. Setup database

By default, Knappsack uses the in memory database HSQLDB. This is okay for development purposes, but if you are setting up a Knappsack server for non-development use, then you should enable MySQL support. In order to do this, you should comment out the HSQLDB lines and uncomment the MySQL lines in the jdbc.properties file. You should then change the value of the dev.jdbc.url to that of your MySQL server.

PLEASE NOTE!!!

If you are using the dev profile and you wish for your Knappsack MySQL database to be compatible with future release you should change the jpa-context.xml file to use the Flyway data migration framework. In order to do this uncomment the following lines in the jpa-context.xml file.

```
    <!--<beans:bean id="entityManagerFactory"
class="org.springframework.orm.jpa.LocalContainerEntityManagerFactoryBean"
depends-on="flyway">-->
        <!--p:packagesToScan="com.sparc.knappsack.components.entities">-->
        <!--p:jpaDialect-ref="jpaDialect">-->
        <!--p:dataSource-ref="dataSource">-->
        <!--p:jpaVendorAdapter-ref="jpaVendorAdapter">-->
        <!--p:persistenceUnitName="ComposerJPA">-->
        <!--p:jpaPropertyMap-ref="jpaPropertyMap"/>-->

    <!--<beans:bean id="flyway" class="com.googlecode.flyway.core.Flyway"
init-method="migrate">-->
        <!--<beans:property name="dataSource" ref="dataSource"/>-->
    <!--</beans:bean>-->

    <!--<util:map id="jpaPropertyMap">-->
        <!--<beans:entry key="hibernate.hbm2ddl.auto" value="none"/>-->
        <!--<beans:entry key="hibernate.dialect" value="${dev.jdbc.dialect}"/>-->
        <!--<beans:entry key="hibernate.show_sql" value="true"/>-->
        <!--<beans:entry key="hibernate.enable_lazy_load_no_trans" value="true"/>-->
```

```
        <!--<beans:entry key="hibernate.cache.use_second_level_cache"
value="true"/>-->
        <!--<beans:entry key="hibernate.cache.use_query_cache" value="true"/>-->
        <!--<beans:entry key="hibernate.cache.region.factory_class"
value="com.sparc.knappsack.components.cache.KnappsackCacheRegionFactory"/>-->
    <!--</util:map>-->
```

and comment out the two sections below it:

```
        <beans:bean id="entityManagerFactory"
class="org.springframework.orm.jpa.LocalContainerEntityManagerFactoryBean"
            p:packagesToScan="com.sparc.knappsack.components.entities"
            p:jpaDialect-ref="jpaDialect"
            p:dataSource-ref="dataSource"
            p:jpaVendorAdapter-ref="jpaVendorAdapter"
            p:persistenceUnitName="ComposerJPA"
            p:jpaPropertyMap-ref="jpaPropertyMap"/>

    <util:map id="jpaPropertyMap">
        <beans:entry key="hibernate.hbm2ddl.auto" value="update"/>
        <beans:entry key="hibernate.dialect" value="${dev.jdbc.dialect}"/>
        <beans:entry key="hibernate.show_sql" value="true"/>
        <beans:entry key="hibernate.enable_lazy_load_no_trans" value="true"/>
        <!--<beans:entry key="hibernate.generate_statistics" value="true"/>-->
        <beans:entry key="hibernate.cache.use_second_level_cache" value="true"/>
        <beans:entry key="hibernate.cache.use_query_cache" value="true"/>
        <beans:entry key="hibernate.cache.region.factory_class"
value="com.sparc.knappsack.components.cache.KnappsackCacheRegionFactory"/>
    </util:map>
```

4. Build the WAR file: (we use maven-2.2.1 and java 1.6)

```
# mvn clean install
```

if you have issues with tests failing, you can build it as:

```
# mvn -Dmaven.test.skip=true clean install
```

Deploy Steps:

1. Copy the WAR file to your deployment directory. For example, the webapps directory of Tomcat. Let's assume it is installed at /usr/local/tomcat and the webapps directory is /usr/local/tomcat/libexec/webapps

```
# cp knappsack-web/target/knappsack-*.war  /usr/local/tomcat/libexec/webapps/knappsack.war
```

2. Start or restart Tomcat and the app will be deployed to http://localhost:8080/knappsack
Note that whatever you name the war file is what the path will be in in Tomcat. If you name the warfile knappsack-web-2.2.1-SNAPSHOT.war then you would access the app at http://localhost:8080/knappsack-web-2.2.1-SNAPSHOT

Additional Setup Steps:

1. The first user to login to Knappsack will become the Knappsack Admin. This user has full control over the system. Login with your Google account or register a new account. An email will be sent to the address you register with a link in it to activate your account. Click the link in that email.

Hello, Jose Smith!

Your account has been successfully created, however, it must be activated before you can use it. Please navigate to the below url to activate your account or log in and enter the activation code when prompted.

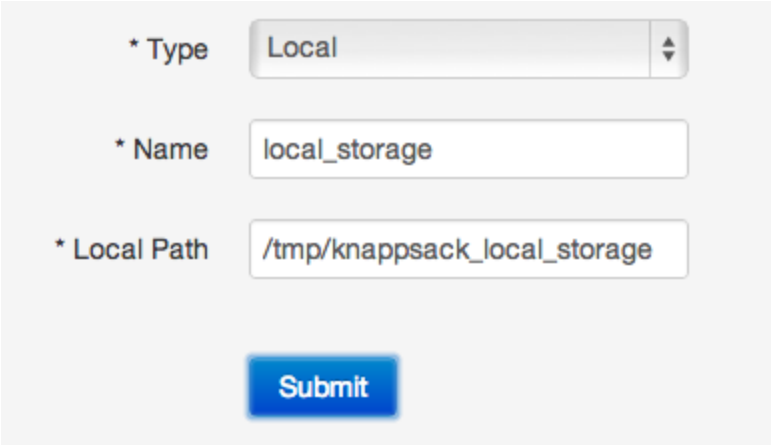
http://localhost:8080/knappsack/activate/b5460914-c771-431a-b7ee-1a47eef9755e

Activation Code: b5460914-c771-431a-b7ee-1a47eef9755e

Regards,
The Knappsack Team

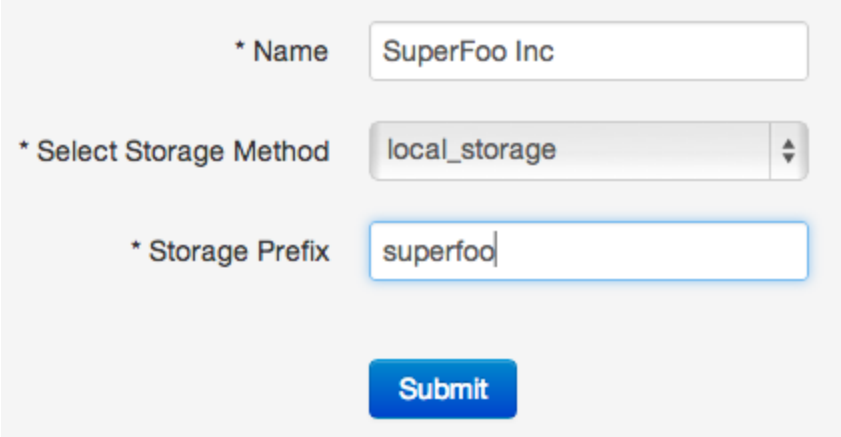
Once you click the link, your account will be verified and you're the Knappsack Admin!

2. Setup your local storage for organizations. This is accomplished by clicking the "Storage Configurations" link on the left sidebar. Next, click the button to add a new storage configuration. Set the type to "Local", give it a name, and a path on your local filesystem, such a the following:



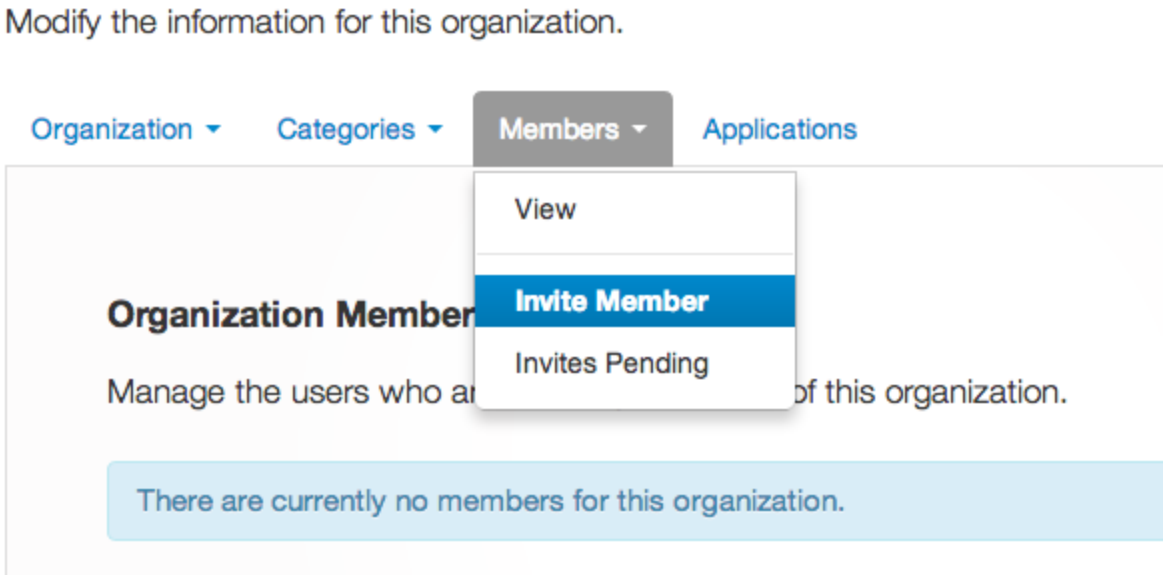
Click the Submit button and your storage configuration will be setup.

3. Add an organization to use within Knappsack. Click the “Add Organization” link on the left sidebar. Now, specify the Organization Name, storage method (local_storage, which you just got done creating in the previous step) and a storage prefix as shown below:

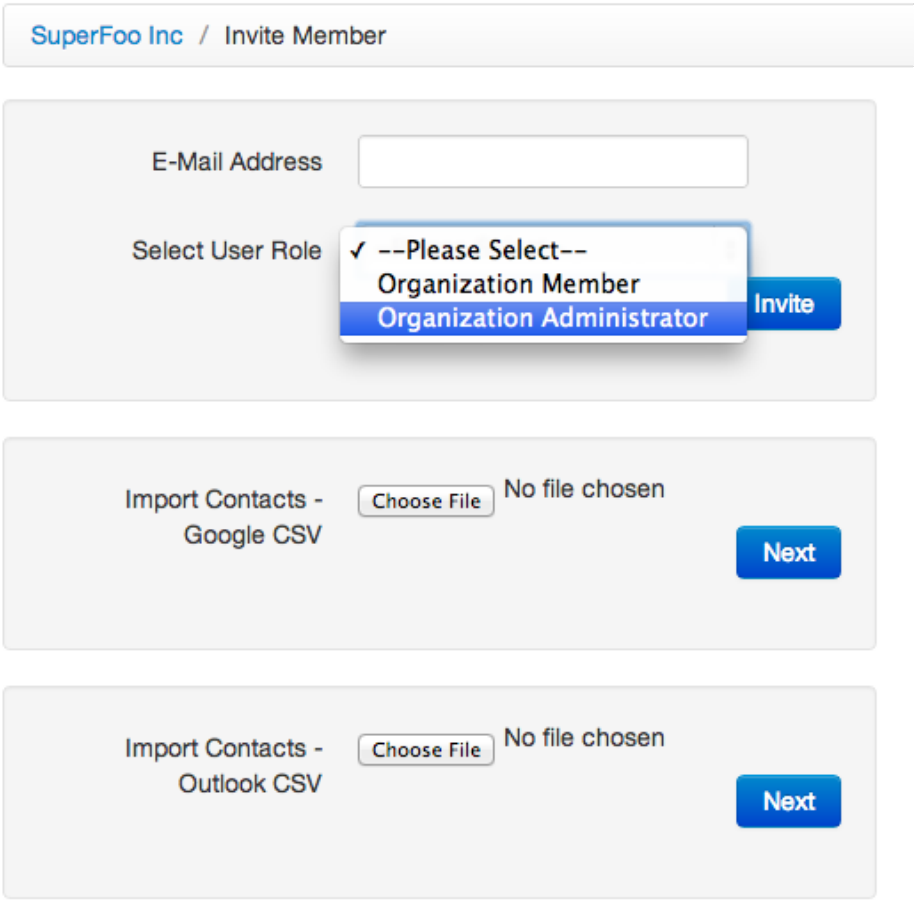


Click the Submit button and your new organization will be almost ready to go.

4. Add yourself to the organization, as well as anyone else you want to invite as an Organization Admin or Organization Member. To do so, click the “invite users” link at the top of the page or click on “Edit Organization” on the left sidebar and click on “Members” tab and select “Invite Member”.



Here you can specify your email address or do bulk member adds.



5. Once your organization is created, you can perform the normal Knappsack Org Admin functions as described in the [Knappsack Quick Start Guide].