Get Me Started!
Setting up a development setup

November 1, 2011

Doron Fediuck
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Checklist

- Internet access
  - (Or internal distro repo and Maven2 repo)
  - Used to install needed packages and fetch Maven artifacts
- Git knowledge
- OpenID account (needed for next step).
- Gerrit user
  - If you wish to submit patches or help reviewing submitted patches.
- Lots of good will
  - *Where there's a will, there's a way!*
Linux Distro

- Tested Distro's
  - RHEL 6x
  - Fedora 14, 15

- Rumored distro's
  - Gentoo
    - Fully functional Backend, UI and API.

🎉 All other distro's
🎉 Patches and wiki's are welcomed!
DB: PostgreSQL

- Current developers use version >=8.4.7-2
  - Versions <8.4.7-2 require applying patches to fix row addition / deletion bug.
    - Versions >=9.x requires the relevant JDBC driver.
  - MySQL / Oracle / etc...
    - Untested and unsupported.

- Install with `yum install -y postgresql-server postgresql-contrib pgadmin3`

- Edit `/var/lib/pgsql/data/pg_hba.conf` to use 'trust'
  - **Note** this is for localhost, for external connection edit `postgres.conf`

- Restart postgres service.
Java

Current version is 1.6.0_X

Minimal for Sun is u22.

Install using `yum install [your jdk selection]`

If you have slotted (side-by-side) installation use alternatives to set the relevant JDK.

- `Alternatives --display javac`
- `Alternatives --set javac`
JBoss

- JBoss version Engine uses is 5.1.
  - Fetch using `wget` 
  - `unzip jboss-5.1.0.GA-jdk6.zip`
  - `mv jboss-5.1.0.GA /usr/local/jboss-5.1.0.GA`
  - Folder should be owned by the developer user, so you'll be able to deploy build products into JBoss.

- Test that JBoss is working
  - Run `/usr/local/jboss-5.1.0.GA/bin/run.sh`
JBoss

- Troubleshooting... when you're being attacked by exceptions, follow this list;
  - Verify folder owner....
  - Since JBoss binds to the hostname, your hostname should be resolvable, or you may add it to /etc/hosts for local resolution.
    - 127.0.0.1   localhost engine-dev
  - Used TCP ports: 8080/8443/8083/1090/4457/...
    - May be used by other applications. Either close other application or change JBoss configuration (check /usr/local/jboss-5.1.0.GA/server/default/deploy/jbossweb.sar/server.xml)
Developer tools

- Git
  - Install git, git-email and gitk.
- Patience
  - Upgrade to V2.0 (fix kernel-panic when waitfor > 30 sec's || cat same_question_again > `whoami`...)
    - Will make you a better developer!
- Eclipse
  - Use `yum install eclipse-platform` or download from site.
Developer tools

- Maven
  - Current version in use is 2.2.1
  - You can install the fc14 rpm
  - Alternatively, you may download a tarball
    - `tar -xvjf apache-maven-2.2.1-bin.tar.bz2`
    - `mv apache-maven-2.2.1 /usr/local/apache-maven-2.2.1`
    - Add to path
  - Add a profile (next slide).
Developer tools

- (continued) Add a `~/.m2/settings.xml` file:

```xml
<?xml version="1.0"?>

<settings xmlns="http://maven.apache.org/POM/4.0.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
    http://maven.apache.org/xsd/settings-1.0.0.xsd">

<!--**************************** PROFILES ****************************-->

<activeProfiles>
    <activeProfile>ovirtEnvSettings</activeProfile>
</activeProfiles>

<profiles>
    <profile>
        <id>ovirtEnvSettings</id>
        <properties>
            <jbossHome>/usr/local/jboss-5.1.0.GA/</jbossHome>
            <JAVA_1_6_HOME>/usr/lib/jvm/sun-jdk-1.6</JAVA_1_6_HOME>
        </properties>
    </profile>
</profiles>

</settings>
```
Sources

- Get the sources using
  - `git clone git://gerrit.ovirt.org/ovirt-engine`

- In order to submit patches you need to setup your gerrit account.
  - Please follow:
Building

- CD to the sources you got in previous step
- Setup jdbc driver setting by running: `cd ear && mvn clean install -P setup_postgres -D skipTests ; cd -`
- Create a DB instance running: `backend/manager/dbscripts_postgres/create_db_devel.sh`
- Build Backend and Frontend using: `mvn clean install -P gwt-user,gwt-admin,dep -D skipTests`
Run Forest, Run!

- Admire your work by running JBoss
  - `/usr/local/jboss-5.1.0.GA/bin/run.sh -b 0.0.0.0`
- We have a default internal user setup. So logging in is done with user **admin@internal** and password is **letmein**!
- Open Firefox, and browse to **http://localhost:8080/webadmin**
- RESTful API may be tested by browsing **http://localhost:8080/api**
Run Forest, Run!

- Advanced
  - Need to create a bridge called “engine”.
  - Installing VDSM (use RPM)- not now.
  - Use API to add a host:
    - `curl -v -u 'admin@internal:letmein!' -H "Content-type: application/xml" -d '<host>
      <name>sample-host</name>
      <address>{host's IP}</address>
      <cluster name="Default"/>
      <root_password>letmein!</root_password>
    </host>' http://localhost:8080/api/hosts`
Resources

- Devel setup wiki
- Gerrit wiki
THANK YOU !

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  <root_password>letmein!</root_password>
</host>' http://localhost:8080/api/hosts
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