ZeroInstall Tutorials

Release 0.1

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This is a collection of How-To tutorials for Zero Install.

Who is this for?

For anyone who wants to package software with ZeroInstall.

CHAPTER 1

Contents

How To Setup A Repository

Follow the tutorial here.

How To Publish Source Packages

To publish feeds, you need to setup a repository with 0repo. To do this, first complete the tutorial for how to *setup your repository.*.

Start with a empty feed template xml

```
<?xml version="1.0"?>
<interface xmlns="http://zero-install.sourceforge.net/2004/injector/interface">
<name>NAME</name>
<summary>ONE LINE SUMMARY</summary>
<description>MULTI-LINE DESCRIPTION</description>
<homepage>URL TO PROJECT HOMEPAGE</homepage>

<feed-for interface="INTERFACE_URL"/>
<group released="DATE_STRING" stability="STABILITY_STRING" license="LICENSE_STRING">
  <command name="compile" shell-command="COMPILE_CMD_HERE">
    <compile:implementation xmlns:compile="http://zero-install.sourceforge.net/2006/
↪namespaces/0compile"></compile:implementation>
  </command>
  <implementation arch="*-src" version="{version}">
    <manifest-digest/>
    <archive href="URL_TO_SOURCE_TARBALL"/>
  </implementation>
</group>
</interface>
```

For example, for the snappy library you would create a feed template file `snappy.xml.template`

```
<?xml version="1.0"?>
<interface xmlns="http://zero-install.sourceforge.net/2004/injector/interface">
<name>snappy</name>
<summary>A fast compressor/decompressor</summary>
<description>
  Snappy is a compression/decompression library. It does not aim for maximum␣
↪compression, or compatibility with any other compression library; instead, it aims␣
↪for very high speeds and reasonable compression. For instance, compared to the␣
↪fastest mode of zlib, Snappy is an order of magnitude faster for most inputs, but␣
↪the resulting compressed files are anywhere from 20% to 100% bigger. On a single␣
↪core of a Core i7 processor in 64-bit mode, Snappy compresses at about 250 MB/sec␣
↪or more and decompresses at about 500 MB/sec or more.
</description>
<homepage>https://code.google.com/p/snappy</homepage>
<feed-for interface="http://zeroinstall.dasgizmo.net/snappy.xml"/>
<group released="2013-02-05" stability="stable" license="OSI Approved :: BSD License">
  <command name="compile" shell-command="&quot;$SRCDIR/configure&quot; --prefix=&quot;
↪$DISTDIR&quot; &amp;&amp; make install">
    <compile:implementation xmlns:compile="http://zero-install.sourceforge.net/2006/
↪namespaces/0compile">
    </compile:implementation>
  </command>
  <implementation arch="*-src" version="{version}">
    <manifest-digest/>
    <archive href="http://zeroinstall.dasgizmo.net/archives/snappy-{version}.tar.gz"/>
  </implementation>
</group>
</interface>
```

Create a source feed file from the template file

```
0template snappy.xml.template version=1.1.0
```

This produces the file `snappy-1.1.0.xml`

Test that you can successfully build from source.

```
0compile -c setup snappy-1.1.0.xml
cd snappy-1.1.0
0compile -c setup
0compile build
```

Add as a new feed using 0repo.

Copy the feed file to the `incoming` directory of your 0repo install.

```
cp snappy-1.1.0.xml  $HOME/repo/incoming
cd $HOME/repo
0repo update
```

Now check that your feed catalog includes the new source package.

http://<your_0repo_base_url>/catalog.xml

TODO: include screenshot here

What to do next

At this point, you may want to package up the binary you compiled from source to provide others with a binary version for your platform. See the publish a binary package.

How To Publish Binary Packages

First, publish a source package by following the tutorial for how to *publish a source package*.

Test that you can successfully build from source.

```
0compile -c setup http://zeroinstall.dasgizmo.net/snappy.xml
cd snappy
0compile -c setup
0compile build
```

Create the binary package to be uploaded to the server and the xml snippet to add to the feed.

```
0compile publish http://zeroinstall.dasgizmo.net/archives
```

Copy the tarball to the server

```
  cp snappy-linux-x86_64-1.1.0.tar.bz2 /var/www/zeroinstall/archives/

Next we need to update the repository feed file to include the new implementation.

Copy the "implementation" portion from the ``snappy-1.1.0.xml`` created when you ran␣
↪the ``0compile publish`` command.
```

```
<group arch="Linux-x86_64">
  <implementation id="sha1new=06c387ae0fafc56bf4d682dd8a7d7f4e49d6d274" released=
↪"2013-08-07" version="1.1.0">
    <manifest-digest sha256new="VNEAOHELYHO74ZB4GGYLVK6PDHLGN46WODKEC5RSQAF2HZP23HFQ"/
↪>
    <archive extract="snappy-linux-x86_64-1.1.0" href="http://zeroinstall.dasgizmo.
↪net/archives/snappy-linux-x86_64-1.1.0.tar.bz2" size="140408"/>
  </implementation>
</group>
```

Next paste this snippet into the `snappy.xml` feed in the feeds directory of your 0repo server (this assumes you followed the previous tutorial and a source feed already exists).

```
cd $HOME/repo/feeds
vim snappy.xml
# now paste the snippet you copied above so the file looks like this
```

```
 <?xml version="1.0" ?>
 <interface uri="http://zeroinstall.dasgizmo.net/snappy.xml" xmlns="http://zero-
↪install.sourceforge.net/2004/injector/interface">
<name>snappy</name>
<summary>A fast compressor/decompressor</summary>
<description>
```

```
 Snappy is a compression/decompression library. It does not aim for maximum␣
↪compression, or compatibility with any other compression library; instead, it aims␣
↪for very high speeds and reasonable compression. For instance, compared to the␣
↪fastest mode of zlib, Snappy is an order of magnitude faster for most inputs, but␣
↪the resulting compressed files are anywhere from 20% to 100% bigger. On a single␣
↪core of a Core i7 processor in 64-bit mode, Snappy compresses at about 250 MB/sec␣
↪or more and decompresses at about 500 MB/sec or more.
</description>

<homepage>https://code.google.com/p/snappy</homepage>

<group license="OSI Approved :: BSD License" released="2013-02-05" stability="stable">
  <command name="compile" shell-command="&quot;$SRCDIR/configure&quot; --prefix=&quot;
↪$DISTDIR&quot; &amp;&amp; make install">
    <compile:implementation xmlns:compile="http://zero-install.sourceforge.net/2006/
↪namespaces/0compile"></compile:implementation>
  </command>

  <implementation arch="*-src" id="sha1new=5e1616a6cc21024d1bb35957d9fabe55a2b79b83"␣
↪version="1.1.0">
    <manifest-digest sha256new="HPZOI5ZC5L6TJW5GENQUVXI2G57LUL2XACXKFOXRLTRJZ4QUVAZA"/
↪>
    <archive extract="snappy-1.1.0" href="http://zeroinstall.dasgizmo.net/archives/
↪snappy-1.1.0.tar.gz" size="1719945"/>
  </implementation>

  <group arch="Linux-x86_64">
  <implementation id="sha1new=06c387ae0fafc56bf4d682dd8a7d7f4e49d6d274" released=
↪"2013-08-07" version="1.1.0">
    <manifest-digest sha256new="VNEAOHELYHO74ZB4GGYLVK6PDHLGN46WODKEC5RSQAF2HZP23HFQ"/
↪>
    <archive extract="snappy-linux-x86_64-1.1.0" href="http://zeroinstall.dasgizmo.
↪net/archives/snappy-linux-x86_64-1.1.0.tar.bz2" size="140408"/>
  </implementation>
  </group>

</group>
</interface>
```

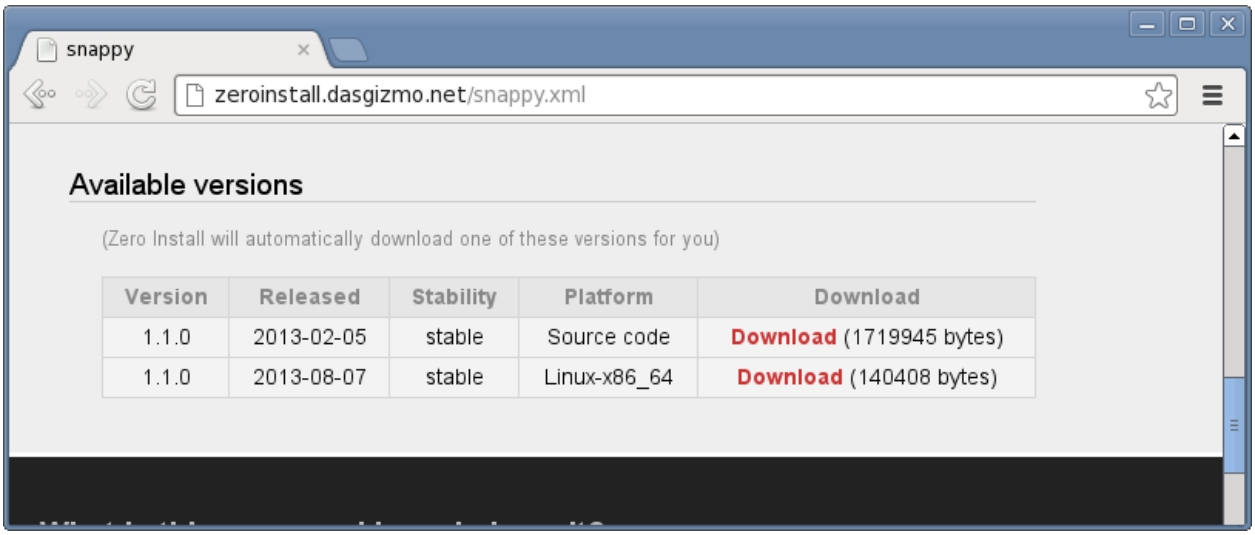
Next tell 0repo you modified the feed by committing the changes to the internal git repository.

```
git commit -a
```

Next tell 0repo to update the catalog

```
cd $HOME/repo
0repo update
```

Now if you check the feed url, you'll see the source AND binary packages.


snappy
zeroinstall.dasgizmo.net/snappy.xml
Available versions
(Zero Install will automatically download one of these versions for you)
Version
Released
Stability
Platform
Download
1.1.0
2013-02-05
stable
Source code
Download (1719945 bytes)
1.1.0
2013-08-07
stable
Linux-x86_64
Download (140408 bytes)