

The zounds repository format

Author: Julien T. Letessier
Contact: mezis@users.sourceforge.net
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Abstract

This document presents the directory and file format used by repositories of software packages that can be used by zounds, the user-friendly package manager for Zoularis.

Repository structure

Zounds repositories are meant to be a medium of distribution for free software packages.

Directory structure

A repository is defined by a `file://`, `http://` or `ftp://` resource locator that points to a directory. This directory contains at least a file named `Repository.gz` (details below), which is a general description of the repository. Package files (with `.tgz` extension) are located in a subdirectory named `All`. Every other subdirectory contains exclusively symbolic links to these packages, and a file named `Files.list.gz` (described below), which give details about the available packages.

A repository contains binary packages for one given operating system, version, architecture combination, e.g. `SunOS-5.8/sparc`. If a repository is available from a server, the URL of the `All` directories should be:

```
<protocol>://<server>/<root>/<system>-<revision>/<arch>/
```

where `<system>` is given by the `uname -s` command, `<revision>` by `uname -r`, and `<arch>` by `uname -p`. These three fields correspond to the `OPSYS`, `OS_VERSION` and `MACHINE_ARCH` `pkgsrc` Makefile variables. Examples:

```
ftp://ftp.foo.com/bar/SunOS-5.8/sparc/  
file://localhost/usr/pkgsrc/packages/NetBSD-1.5.3/i386/
```

File syntax

These files share common properties: they are gzip-compressed ascii files, which are described by the following bnf grammar (in the spirit of Windows' `.ini` configuration files):

```

file      ::=      section*
section ::=      ignored* header (entry | ignored)*
header   ::=      <open> <alnum>+ <close> <lf>
ignored  ::=      (comment | <space>*) <lf>
comment  ::=      <comment> <char>*
entry    ::=      key <space>* <is> <space>* value
key      ::=      <alnum>+
value    ::=      (<alnum> | <space>)*

```

```

<open>    '['
<close>   ']'
<comment> ';' or '#'
<char>    any printable ASCII character
<alnum>   letter, digit, dot, dash or underscore
<is>      ':' or '='
<lf>      the ASCII linefeed character
<space>   ASCII space or tab character

```

The semantics are fairly simple:

- section names are unique within a file;
- keys are unique within a section.

The Repository file

section name : a path to a directory containing packages and the associated description files, relative to the directory containing the Repository file.

lastmodified: a timestamp, in UTC time, giving when the preceding directory was last modified. Timestamp are integers expressed in seconds since the Epoch. This entry must immediately follow a Directory entry.

The Files file

section name: the concatenation of the package field, a hyphen and the version field (i.e. the package filename with the extension stripped off).

package : the name of the associated package.the name of the described package. Can contain upper and lowercase letters, digits, dashes and periods.

shortdescription : a one-line description of the package.

longdescription: a long description of the package (e.g between 10 and 20 lines).

tags : a space-separated list of tags (short, lower-caps and digits only string). The first tag has to be the NetBSD category of the package (it's pkgsrc directory).

version: a version string, a la pkgsrc (e.g. 1.0.35nb2). Mustn't contain any hyphen (-).

predepends : a space-sparated list of package names, a la pkgsrc (whith means, versions and alternatives can be precised). This is the list of packages the currently described package depends upon.

realsize : the installed package size, in bytes.

packsize : the compressed package size, in bytes.

hashmethod: a hash method. Supported methods are those supported by the `digest(1)` utility; the `sha512` method is recommended.

hashkey : the file's hash key.