Keep up with openSUSE Packaging
News in Packaging
About us
About us

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    - Maintaining crypto libraries (openssl, gnutls)
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  - SUSE Software Engineer (Pack team)
    - Maintaining MariaDB, sudo, archiving packages, …
    - Python development (spec-cleaner, rpmlint)
What is this talk about?
Motivation

• Packaging is not static knowledge

• Rules, macros, paths and principles change over time

• Changes can be hard to track
Content 1/2

1) Oldies
2) systemd macros
3) `%_libexecdir` macro
4) `%license` macro
5) Configuration files in `/etc` and `/usr/etc/`
1) \texttt{%autopatch} and \texttt{%autosetup}

2) File triggers

3) Multibuild

4) Boolean dependencies

5) News in \texttt{osc}
More information

• We wrote a comprehensive article

• Contains more news, details and examples

• Visit https://packageninjas.github.io/ (direct link)
Essential News
Oldies

• PreReq is now Requires(pre)

• Use /run, not /var/run

• /bin, /sbin, /lib and /lib64 were merged into their counterpart directories under /usr

• SysV is dead, use systemd
systemd Macros

- Used in packages with systemd support

- **In the past** *(hard dependency)*
  - %{?systemdRequires}
  - BuildRequires: systemd-rpm-macros

- **Now** *(soft dependency)*
  - %{?systemdOrdering}
%_libexecdir Macro

- Binaries that shouldn’t be executed directly by users
- **In the past**
  - Historically defined
  - `/usr/lib`
- **Now**
  - FHS 3.0 standardizes dedicated location now
  - `/usr/libexec`
%license

- Macro used for installing licence files

**In the past**
- %doc LICENCE
- Licence file in /usr/share/doc/packages

**Now**
- %license LICENCE
- Licence file in /usr/share/licenses
Configuration files in /etc and /usr/etc

• **In the past**
  - All configuration files in /etc

• **Now**
  - Distribution provided configuration files in /usr/etc
  - Configuration files changed by administrator in /etc

• **New macro**
  - %_distconfdir /usr/etc
Additional News
%autopatch and %autosetup

- Macros for easier patch application

- %autopatch
  - Automatically applies all available patches

- %autosetup
  - Combines %setup and %autopatch
%autosetup example

Patch1: openssl-1.1.0-html.patch
Patch2: openssl-truststore.patch
Patch3: openssl-pkgconfig.patch
Patch4: openssl-no-date.patch
Patch5: openssl-cipher.patch

%prep
%setup -q
%patch1 -p1
%patch2 -p1
%patch3 -p1
%patch4 -p1
%patch5 -p1

Patch1: openssl-1.1.0-html.patch
Patch2: openssl-truststore.patch
Patch3: openssl-pkgconfig.patch
Patch4: openssl-no-date.patch
Patch5: openssl-cipher.patch

%prep
%autosetup -p1
RPM File Triggers

- Scriplets executed when a file is installed in a specific location
- Used for package post processing
- Can replace cache-updating macros (e.g. glib schemas, icons, desktop files)
- Example (glib2)

```bash
%filetriggerin -- /usr/share/glib-2.0/schemas
/usr/bin/glib-compile-schemas /usr/share/glib-2.0/schemas
```
Multibuild

- Allows building one spec file with different flavors
- *Example:* `libssh` and `libssh-test` (libssh.spec)

```
%global flavor @BUILD_FLAVOR@{%nil}
%if "{%flavor}" == "test"
%bcond_without test
%endif
```

- `_multibuild` file lists flavors

```
<multibuild>
   <package>test</package>
</multibuild>
```
Boolean (Rich) Dependencies

- Logical expressions simplifying dependencies
- For Requires, Recommends, Conflicts, etc.
- Operators: and, or, if, if-else, with, without, unless, unless-else

Example:
- Recommends: (gdm or lightdm or sddm)
- Requires: (grub2-snapper-plugin if snapper)
- Conflicts: (python2 without python2_split_startup)
New osc Commands

- blame
  - Similar to git blame

- comment
  - Add comments from command line

- checkconstraints, workerinfo
  - Information about workers matching the constraints

- browse
  - Open the package in the OBS Web UI in your browser
New osc Commands’ Options

- **maintained --version**
  - Print versions of the package in various codestreams

- **rdiff --issues-only**
  - Print diff of the list of the fixed bugs or CVEs

- **request --incoming**
  - Print only incoming request for the specified project

- **deleterequest --all**
  - Delete entire project
Automatic cleaning
spec-cleaner

- Cleans RPM spec file according to the style guide
  - https://github.com/rpm-software-management/spec-cleaner

- How to use it?
  - $ spec-cleaner -i mypackage.spec
  - $ spec-cleaner -d mypackage.spec
Thank you for your attention.

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