

Keep up with openSUSE

Packaging

News in Packaging

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The background features abstract geometric shapes. A large teal shape occupies the left and top portions, while a green shape is on the right. A white diagonal line separates them, and a white horizontal line is at the top.

About us

About us

- **Vítězslav Čížek**

- SUSE Software Engineer (Pack team)
 - Maintaining crypto libraries (openssl, gnutls)
 - openSUSE Maintenance Team

- **Kristýna Streitová**

- 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/`

ESSENTIAL



Content 2/2

- 1) %autopatch and %autosetup
- 2) File triggers
- 3) Multibuild
- 4) Boolean dependencies
- 5) News in osc



ADDITIONAL



More information

- We wrote a comprehensive article
- Contains more news, details and examples
- Visit <https://packageninjas.github.io/> (direct link)



Essential News

The background features abstract geometric shapes. A large teal shape occupies the left and top-left portions. To its right, a white diagonal line separates it from a green shape. Further right, another white diagonal line separates the green shape from a white area. The overall design is clean and modern.

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*)
 - `%{?systemd_requires}`
 - `BuildRequires: systemd-rpm-macros`
- **Now** (*soft dependency*)
 - `%{?systemd_ordering}`



%_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

The background features abstract geometric shapes. A large teal shape occupies the left and top portions, while a green shape is on the right. A white diagonal line separates the teal and green areas, creating a sense of depth and movement.

`%autopatch` and `%autoseup`

- Macros for easier patch application
- `%autopatch`
 - Automatically applies all available patches
- `%autoseup`
 - Combines `%setup` and `%autopatch`



%autoseup 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
```

```
%autoseup -p1
```



RPM File Triggers

- Scriptlets 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)*

```
%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
- **deleterequst --all**
 - Delete entire project



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Automatic cleaning

spec-cleaner

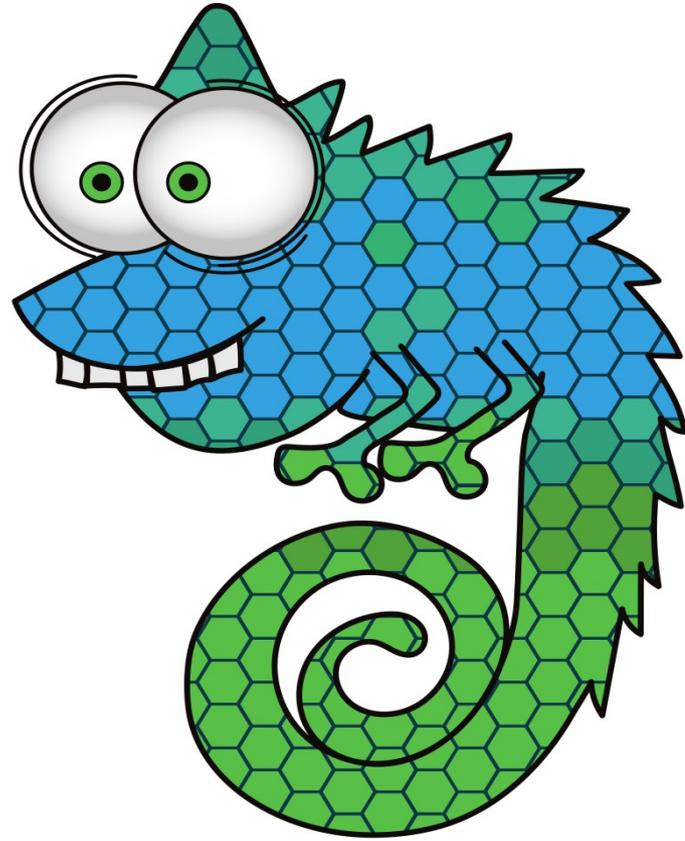
- Cleans RPM spec file according to the style guide
 - <https://github.com/rpm-software-management/spec-cleaner>
- How to use it?
 - `$ spec-cleaner -i mypackage.spec`
 - `$ spec-cleaner -d mypackage.spec`



Q&A

Thank you for your attention.
Are there any questions?





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