

Build a simple RPM that packages a single file

Article Number: 133 | Rating: Unrated | Last Updated: Sat, Jun 2, 2018 8:57 AM

Build a simple RPM that packages a single file

```
# Tested on RHEL 6 & 7

# The 'rpmbuild' command is used to build a binary RPM from source
code, as configured
# with a .spec file.

# Install the necessary packages: rpm-build and rpmdevtools:

yum install rpm-build rpmdevtools

# If possible, avoid creating packages as 'root' as this is quite
dangerous because we
# could delete or overwrite OS existing files.

# Set up the folder structure. Placed on the HOME folder of a user
without admin privileges,
# run following command:

user@myhost:/home/user#> rpmdev-setuptree

# This will create rpmbuild structure where we will work on building
packages:

    rpmbuild/SRPMS
    rpmbuild/SPECS
    rpmbuild/SOURCES
    rpmbuild/RPMS
```

```
rpmbuild/BUILD
```

```
# This can be alternatively done by running these commands:
```

```
user@myhost:/home/user#> mkdir -p
```

```
~/rpmbuild/{BUILD,BUILDROOT,RPMS,SOURCES,SPECS,SRPMS}
```

```
user@myhost:/home/user#> echo '%_topdir %(echo $HOME)/rpmbuild' >
```

```
~/rpmmacros
```

```
# Under rpmbuild/SOURCES create a folder with source file(s). Do not forget to provide
```

```
# a revision number. For instance, our source file will be a script named 'HelloWorld.sh'
```

```
user@myhost:/home/user/rpmbuild/SOURCES#> cd ~/rpmbuild/SOURCES
```

```
user@myhost:/home/user/rpmbuild/SOURCES#> mkdir HelloWorld-1.0
```

```
user@myhost:/home/user/rpmbuild/SOURCES#> vi
```

```
HelloWorld-1.0/HelloWorld.sh
```

```
    echo "Hello world!"
```

```
user@myhost:/home/user/rpmbuild/SOURCES#> chmod 755
```

```
HelloWorld-1.0/HelloWorld.sh
```

```
user@myhost:/home/user/rpmbuild/SOURCES#> touch
```

```
HelloWorld-1.0/configure
```

```
user@myhost:/home/user/rpmbuild/SOURCES#> chmod 755
```

```
HelloWorld-1.0/configure
```

```
user@myhost:/home/user/rpmbuild/SOURCES#> tar czvf
```

```
HelloWorld-1.0.tar.gz HelloWorld-1.0
```

```
# Create the spec file: This is the hard part - configuring the RPM
on what to build,
# install, and configure. A sample spec file can be created by
running:
```

```
user@myhost:/home/user/rpmbuild/SOURCES#> cd
```

```
user@myhost:/home/user#> rpmdev-newspec
```

```
rpmbuild/SPECS/HelloWorld-1.0.spec
```

```
Skeleton specfile (minimal) has been created to
"rpmbuild/SPECS/HelloWorld-1.0.spec".
```

```
# But there is still a lot to add and remove to make this work. This
is a spec file
# created using the sample file.
```

```
# Edit spec file and add/modify necessary parameters (my setup in
bold letters)
```

```
user@myhost:/home/user#> vi ~/rpmbuild/SPECS/HelloWorld-1.0.spec
```

```
Name: HelloWorld
```

```
Version: 1.0      <--- Version must be the same as the name of the
      folder containing the package file(s)
```

```
Release: 1%{?dist}    <--- Release number, added to package's name
```

```
Summary: Hello World Script
```

```
Group: Miscellaneous    <--- For general purposes use
'Miscellaneous'
```

```
License: License text
```

```
# URL:
```

```
Source0: HelloWorld-1.0.tar.gz      <--- Pay attention to the name of
tar file

BuildArch: noarch      <--- If nothing specified, current architecture
      is used [ i386 | x86_64 | noarch ]

BuildRoot: %{_tmppath}/%{name}-%{version}-%{release}-root-%(%{__id_u}
-n)

# BuildRequires:      <--- Required packages to build this one

# Requires:          <--- Required packages for installing this one

%description
This is a text describing what the Package is meant for

%prep

%setup -q

%build
# %configure      <--- We have nothing to configure or compile
# make %{?_smp_mflags}      so we comment these two lines out

%install

rm -rf $RPM_BUILD_ROOT

# make install DESTDIR=$RPM_BUILD_ROOT      <--- We have nothing to
compile

install -d -m 0755 $RPM_BUILD_ROOT/opt/HelloWorld
install -m 0755 HelloWorld.sh
$RPM_BUILD_ROOT/opt/HelloWorld/HelloWorld.sh

^ These two directives indicate where folders and files will be
created/installed and their effective rights
```

```
%clean
```

```
rm -rf $RPM_BUILD_ROOT
```

```
%files
```

```
%defattr(-,root,root,-)
```

```
# %doc
```

```
/opt/HelloWorld/HelloWorld.sh    <--- We confirm the file(s) to  
install
```

```
%changelog
```

```
# Once the spec file is complete, build the package with:
```

```
user@myhost:/home/user#> rpmbuild -ba  
rpmbuild/SPECS/HelloWorld-1.0.spec
```

```
# Assuming no errors occurred, new package is under the RPMS folder  
ready to be installed.
```

```
user@myhost:/home/user#> cd ~/rpmbuild/RPMS/noarch
```

```
user@myhost:/home/user/rpmbuild/RPMS/noarch#> ll
```

```
total 4
```

```
-rw-rw-r-- 1 user user 2104 Sep 26 16:53
```

```
HelloWorld-1.0-1.el6.noarch.rpm
```

```
user@myhost:/home/user/rpmbuild/RPMS/noarch#> rpm -qpl
```

```
HelloWorld-1.0-1.el6.noarch.rpm
```

```
/opt/HelloWorld/HelloWorld.sh
```

```
# Let's install our new package (as 'root')

root@myhost:/root#> rpm -ihv
/home/user/rpmbuild/RPMS/noarch/HelloWorld-1.0-1.el6.noarch.rpm
Preparing...
##### [100%]
 1:HelloWorld
##### [100%]

root@myhost:/root#> rpm -qa HelloWorld
HelloWorld-1.0-1.el6.noarch

root@myhost:/root#> /opt/HelloWorld/HelloWorld.sh
Hello world!
```

Posted - Sat, Jun 2, 2018 8:57 AM. This article has been viewed 9789 times.

Online URL: <http://kb.ictbanking.net/article.php?id=133>