Using OBS to Build Containerized Application Image

Learn How To Generate AppImage

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https://github.com/AppImage/AppImageKit/wiki/Using-Open-Build-Service

Using OBS to Build Containerized Application Image

- Introduction
- openSUSE Account and OBS Project
  - Hello World
  - AppImage Target
  - Native AppImage Build Support
  - Inspecting Results
  - Demo!

Introduction

Introduction

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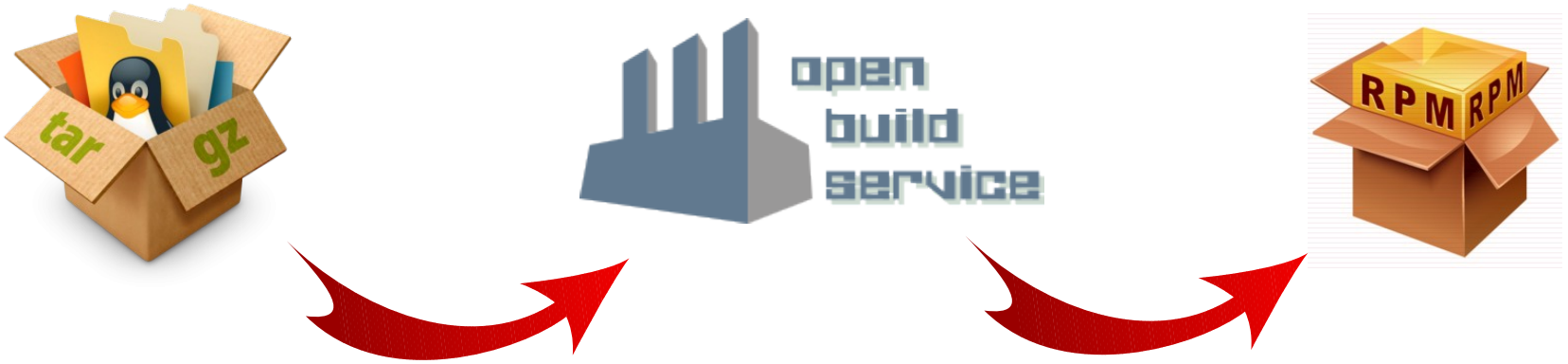
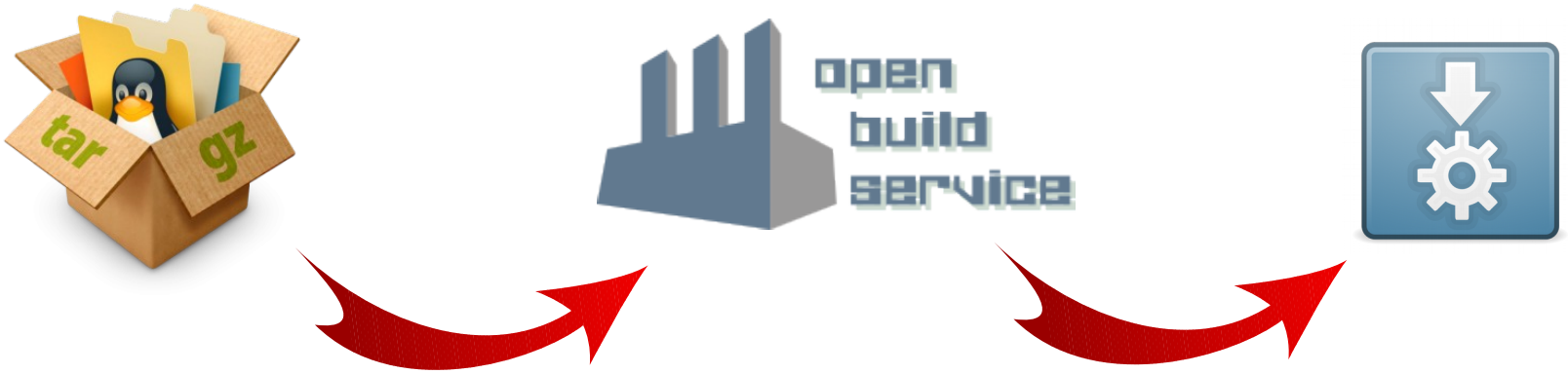
- AppImage Current State
- Open Build Service
- Differences to Other Methods

Current State

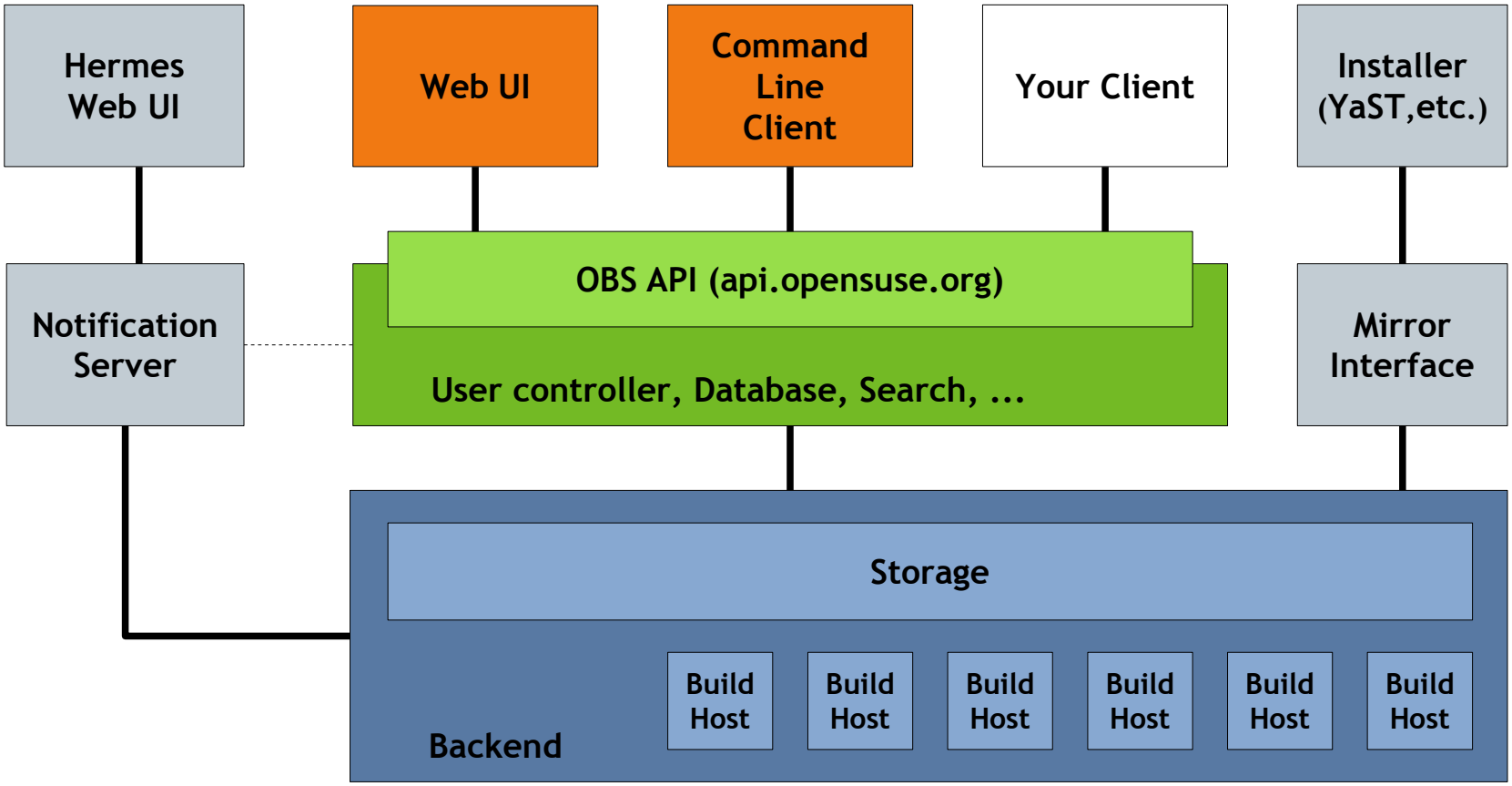
- What is an AppImage?
- How do I run an AppImage?
- How can I integrate AppImages with the system?
- Where can I download AppImages?
- Where do I store my AppImages?
- Where can I request AppImages?
- Where do I get support?


tar
gz
open
build
service
RPM
RPM

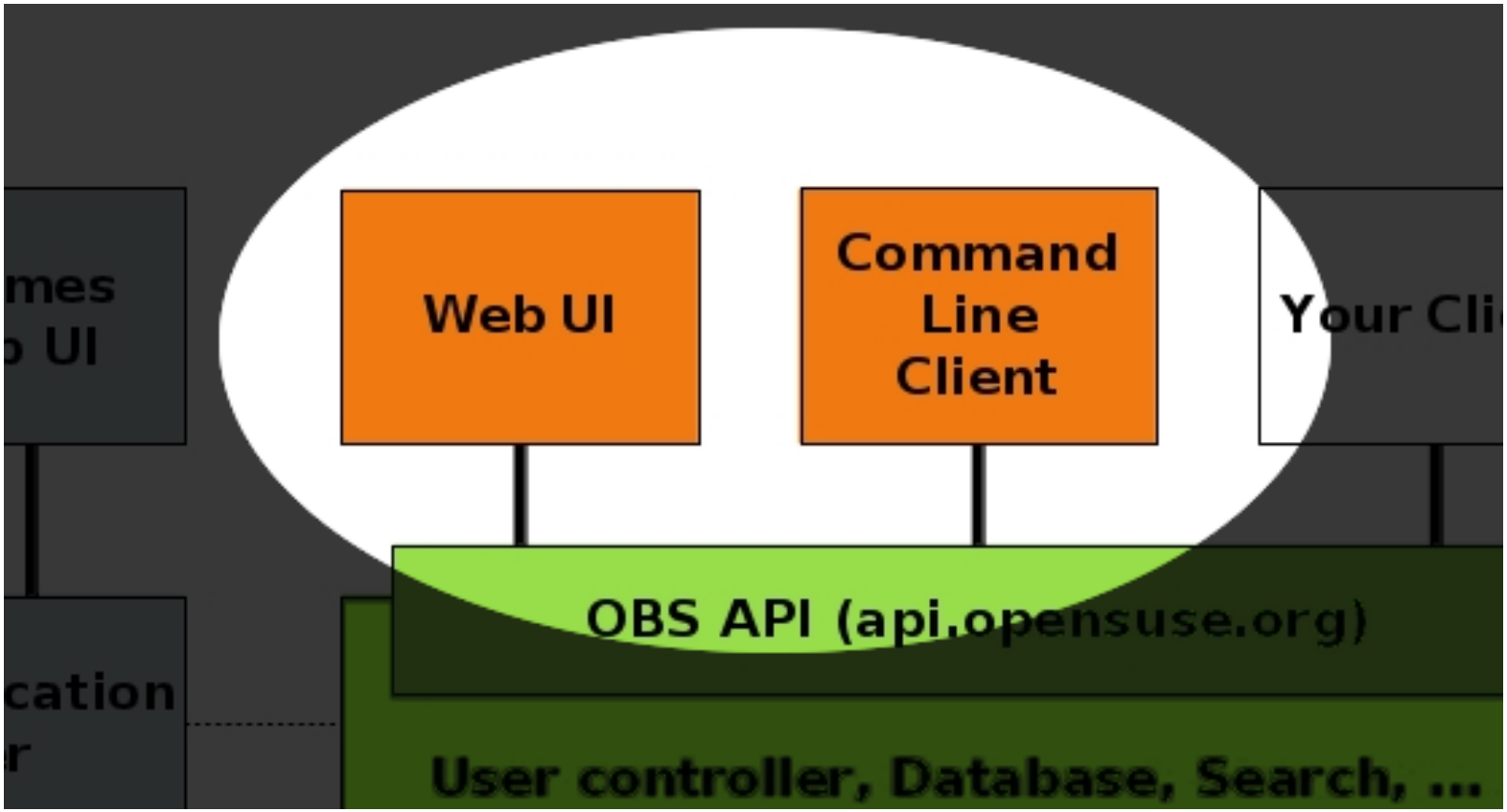
OBS - AppImage


tar
gz
open
build
service

OBS Components



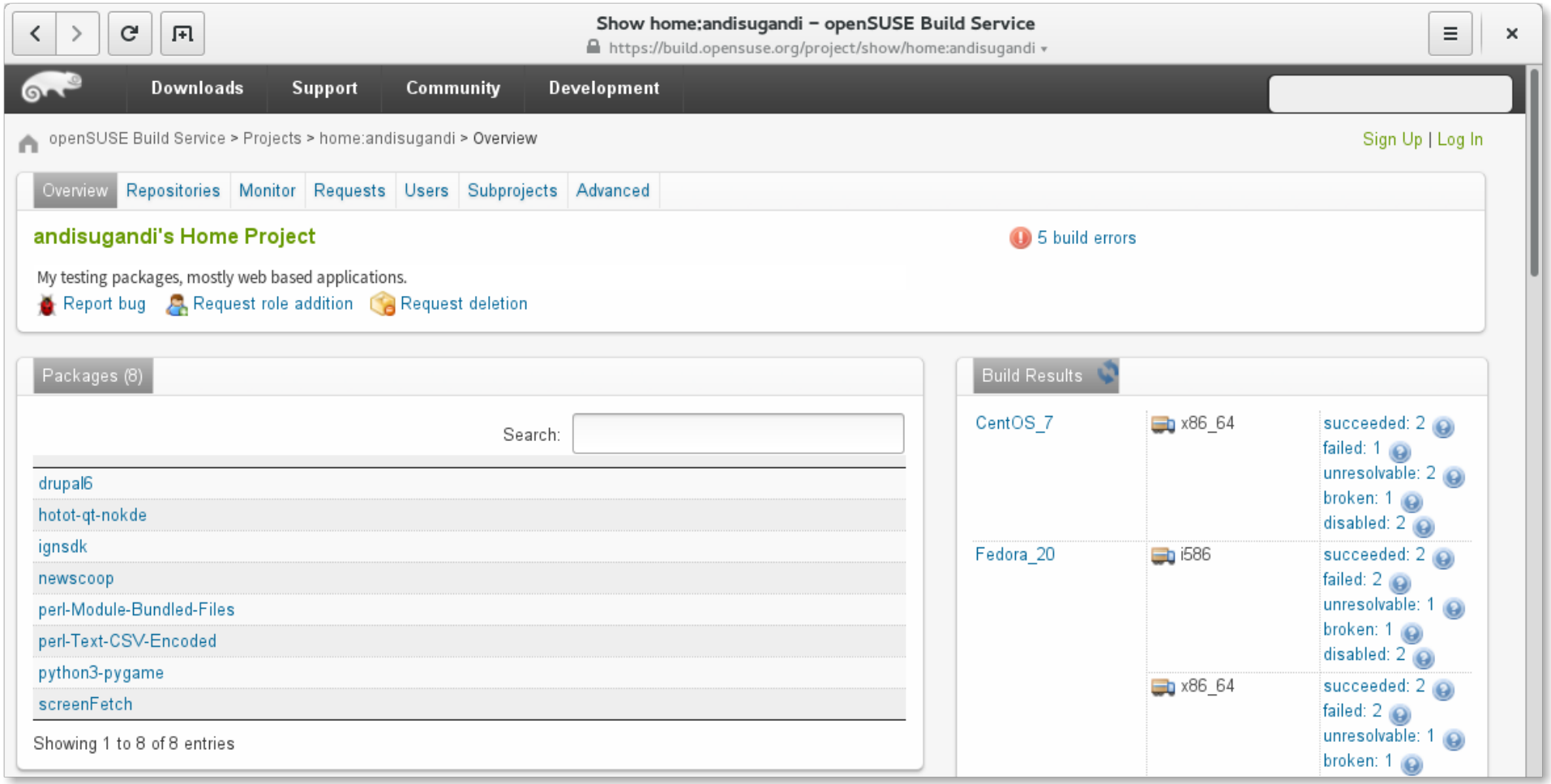
OBS Tools for Packagers



OBS Reference Server

build.opensuse.org

OBS Tools for Packagers (Web Client)



OBS Tools for Packagers (osc)

Differences to Other Methods (1)

- Straightforward
- Using OBS instance (public) & infrastructure to build and distribute AppImage
- Build AppImages in "automatic, consistent and reproducible way"

Differences to Other Methods (2)

- Keep the ingredients of your AppImage up-to-date all the time
- Automatically builds a new AppImage
- Automatically signs AppImages using the user's key on OBS
- Automatically embeds update information into AppImages to enable binary delta updates using AppImageUpdate

OBS Web Client

OBS Web Client

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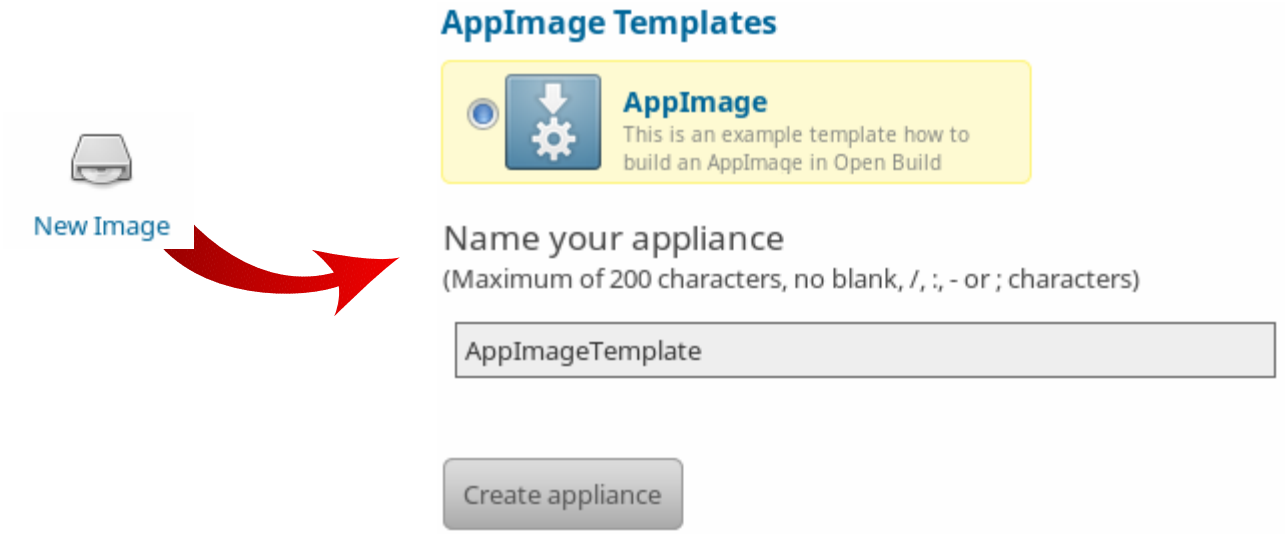
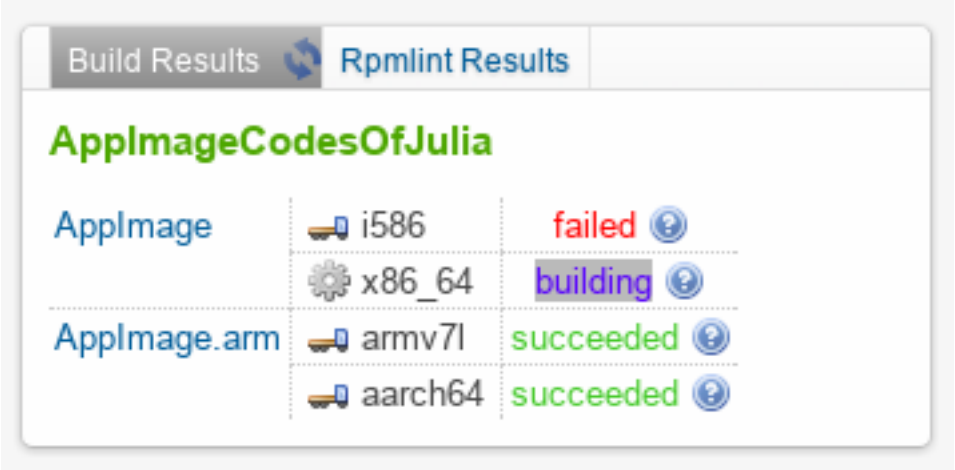
- openSUSE Account
- OBS Project

openSUSE Account & OBS Project

HelloWorld

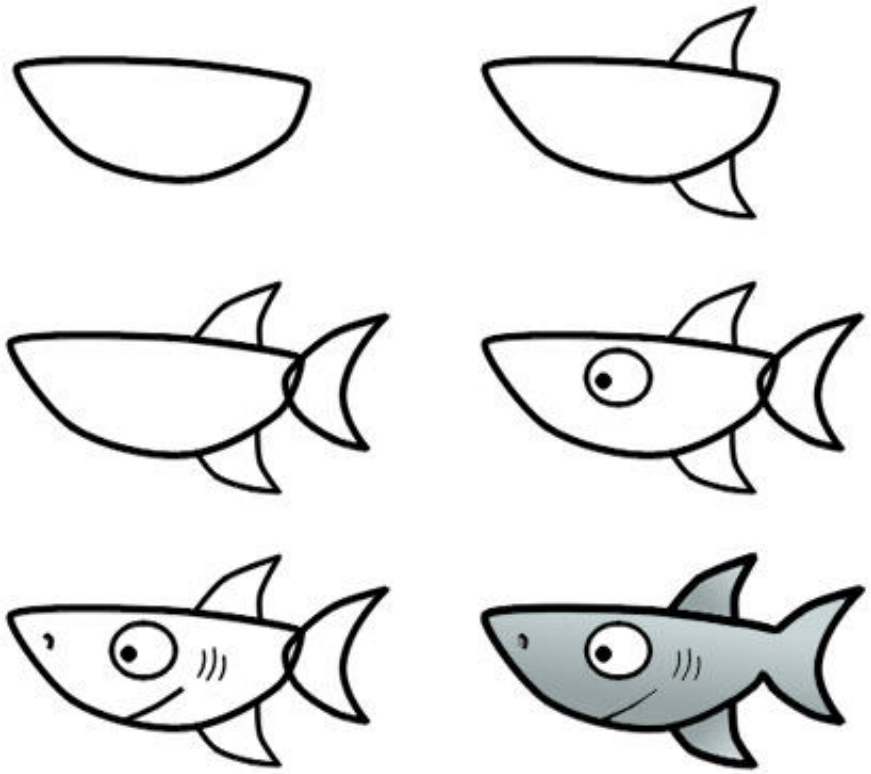

New Image
AppImage Templates
AppImage
This is an example template how to build an AppImage in Open Build
Name your appliance
(Maximum of 200 characters, no blank, /, :, - or ; characters)
AppImageTemplate
Create appliance

Find *Error* While Everything is OK?



Rebuilding AppImage Package in Open Build Service:

https://youtu.be/XuPECCjte2I



Let’s Do this *MANUALLY*.

AppImage Build Target

AppImage Build Target

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- osc Meta
- Meta Project

osc Meta

```
$ osc meta prj -e home:<username>
```

Meta Project (Web)

Home Project → Advanced → Meta :

```
<project name="home:andisugandi">
  <title>andisugandi</title>
  <description/>
  <person userid="andisugandi" role="maintainer"/>
  <publish>
    <enable/>
  </publish>
  <repository name="AppImage.arm">
    <path project="home:andisugandi" repository="openSUSE_13.1"/>
    <path project="OBS:AppImage" repository="AppImage.arm"/>
    <arch>armv7l</arch>
    <arch>aarch64</arch>
  </repository>

  <repository name="AppImage">
    <path project="home:andisugandi" repository="openSUSE_13.1"/>
    <path project="OBS:AppImage" repository="AppImage"/>
    <arch>x86_64</arch>
    <arch>i586</arch>
  </repository>
</project>
```

Native AppImage Build Support

Native AppImage Build Support

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- appimage.yml
- Example

appimage.yml

```
app: APPIMAGE_NAME
binpatch: true


ingredients:
  packages:
    - RPM_PACKAGE_NAME


script:
  - cd $BUILD_APPDIR/
  - cp $BUILD_APPDIR/usr/share/applications/NAME.desktop
$BUILD_APPDIR
  - cp $BUILD_APPDIR/usr/share/pixmaps/NAME.png $BUILD_APPDIR
```

appimage.yml (Example)

```
app: QtQuickApp

build:
  packages:
    - linuxdeployqt
    - pkgconfig(Qt5Quick)
  git:
    - https://github.com/probonopd/QtQuickApp.git

script:
  - cd $BUILD_SOURCE_DIR/QtQuickApp*
  - qmake-qt5 PREFIX=/usr
  - make INSTALL_ROOT=$BUILD_APPDIR install
  - unset QTDIR; unset QT_PLUGIN_PATH ; unset LD_LIBRARY_PATH
  - linuxdeployqt $BUILD_APPDIR/usr/share/applications/*.desktop \
          -qmldir=$BUILD_SOURCE_DIR/ -bundle-non-qt-libs -verbose=2
  - linuxdeployqt $BUILD_APPDIR/usr/share/applications/*.desktop \
          -qmldir=$BUILD_SOURCE_DIR/ -bundle-non-qt-libs -verbose=2
```

_service

```
<services>
  <service name="appimage"/>
</services>
```

Additional Package on *Private OBS

```
$ sudo zypper ar -r http://r.opensu.se/openSUSE:Tools
   ➥ /openSUSE_42.3/openSUSE:Tools.repo

$ sudo zypper ref

$ sudo zypper in obs-service-appimage
```

Additional Options on Build Section

```
build:
 packages:
     - [SINGLE BINARY PACKAGE NAME]


 git:   # can be also svn, cvs, hg, bzr
     - [URL TO SCM REPOSITORY]


 files:
     - [URL TO A RESOURCE]
```

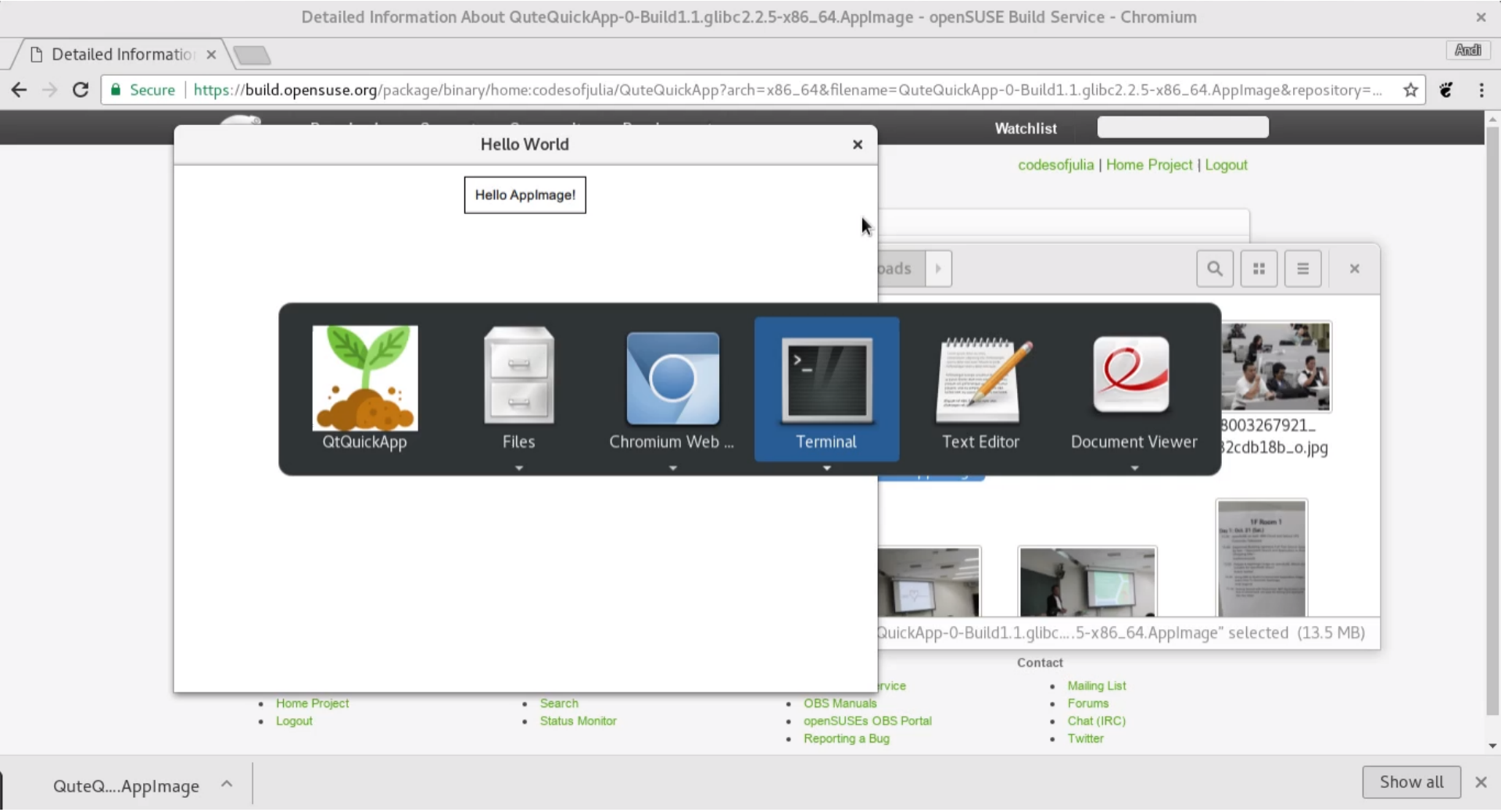
Inspecting Results

Inspecting AppImage Results

https://build.opensuse.org/package/binaries/home:probono/QtQuickApp?repository=AppImage
https://build.opensuse.org/package/binaries/home:probono/DSRemote?repository=AppImage
https://build.opensuse.org/package/binaries/home:probono/Qactus?repository=AppImage
https://build.opensuse.org/package/binaries/home:probono/leafpad?repository=AppImage

https://github.com/olav-st/screencloud/blob/master/deploy/linux/appimage.yml
https://build.opensuse.org/package/view_file/home:pbek:QOwnNotes/desktop/appimage.yml
https://build.opensuse.org/package/view_file/home:olav-st:branches:OBS:AppImage:Templates/ScreenCloud/appimage.yml

Demo!



Using OBS to Build Containerized Application Image:

https://youtu.be/rVj4hTdr72Y

Questions?

References

OBS-Packager-Workshop.odp

```
http://openbuildservice.org/files/workshops/OBS-Packager-
    ➥ Workshop.odp
```

Open Build Service Materials

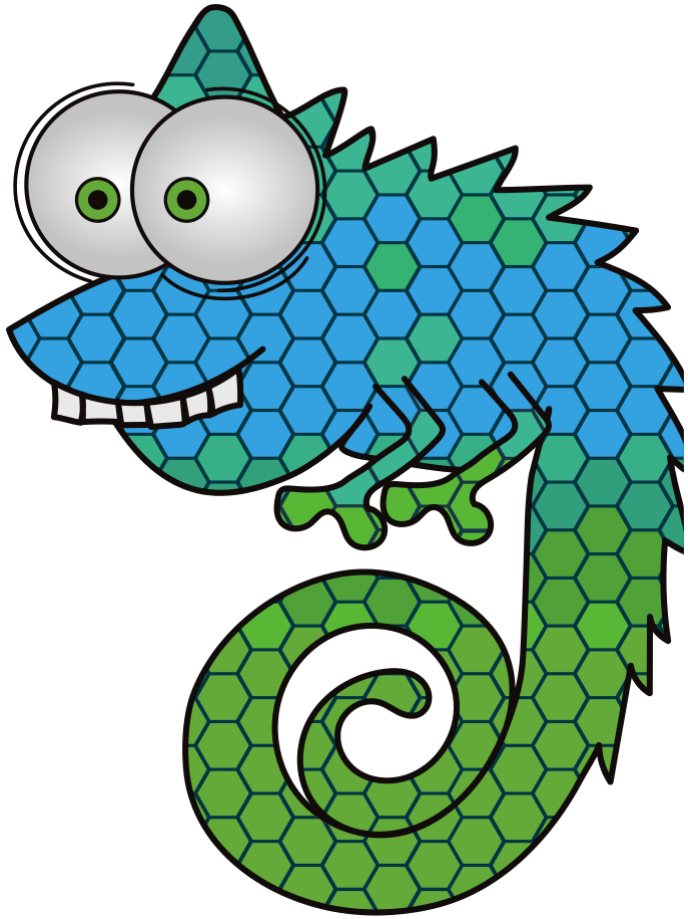
```
http://openbuildservice.org/help/materials
```

AppImage Project and Wiki

```
https://github.com/AppImage/AppImageKit
```

Join the conversation,
contribute & have a lot of fun!
www.opensuse.org

Thank you.



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