

pyinstaller



What is it?

- "PyInstaller freezes (packages) Python applications into stand-alone executables, under Windows, GNU/Linux, Mac OS X, FreeBSD, Solaris and AIX."

<https://www.pyinstaller.org/>

- cross-platform, not cross-compiler

How?

- Install pyinstaller in your virtual env
`pip install pyinstaller`
- Execute on your script/project
`pyinstaller MYSCRIPT.py`
- *dist/* directory contains sub-directory MYSCRIPT with executable and libraries
- Use `--clean` flag to ensure building from scratch
- Remove all output:
`rm -Rf build/ dist/ __pycache__/* .spec`

Mini cross-compile?

- Generate Windows distribution under Linux
 - install Wine
 - wine32
 - download Python installer for Win32
 - [wine INSTALLER.exe](#)
 - custom install, for all users, with pip
 - install pyinstaller
 - [wine cmd](#)
 - [pip install pyinstaller](#)
 - apply pyinstaller to project under Wine
 - [cd ...](#)
 - [pyinstaller MYSCRIPT.py](#)

Entry script

- When using setup.py and packages
- Requires script outside package structure
- Simply import *main()* method of script to run

Hidden imports

- Doesn't discover all necessary libraries (doesn't inspect setup.py?)
- Use *--hidden-import ...* option
- Dependencies and pyinstaller must be part of the same Python environment (virtual or otherwise)

Adding non-code

- Add additional files:
 - Non-binary: `--add-data SRC:DST`
 - Binary: `--add-binary SRC:DST`

Output

- One dir (default, `-D/--onedir`)
 - can be zipped and shipped
- One file (`-F/--onefile`)
 - unpacks file before execution
 - may leave temporary files behind
 - bit slower than "one dir"
- Output name:
 - based on script name
 - use `--name NAME` to set one

GTK?

- Yes, but...
 - Packs all themes and icons as well
 - 100s of Mbs!
 - Requires pruning before shipping