# How does Enthought distribute packages?

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# Outline

- Python distribution tools

- What is Enstaller?

- Distribution format

- Package repositories

- Summary and Outlook

# Python distribution tools

- distribute (official tool)
- setuptools (widely used)
- pip (easy_install replacement)
- PyPM (ActiveState)
- Enstaller (Enthought)

# What is Enstaller?

- Enthought's distribution tool

- open source, BSD license

- new version 4 started last summer

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- egginst:

    install tool for egg-based packages

- enpkg:

    package managing / download tool

# Distribution format
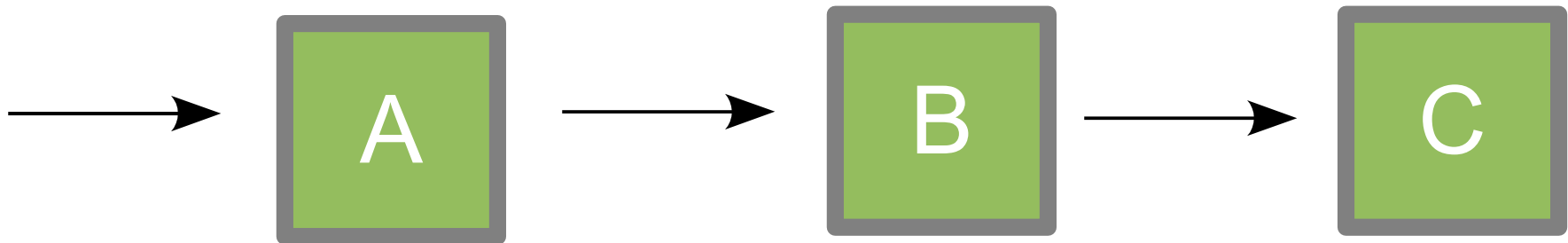## egg-based zip-file

```
code.py (copied to site-packages)
code.pyc
EGG-INFO/PKG-INFO (site-packages as .egg-info file)
        /entry_points.txt (creates scripts)
        /spec/depend (metadata used by enpkg)
        /inst/appinst.dat (creates icons)
             /files_to_install.txt
                  (creates links or proxy scripts)
             /targets.dat (used for placeholders)
        /scripts/... (copied to Scripts/bin)
        /post_egginst.py (post install code)
        /pre_egguninst.py (uninstall code)
        /usr/... (on Unix: <sys.prefix>)
            /bin/foo
            /lib/libfoo.so.1.4
        /prefix/... (always <sys.prefix>)
```

# Package Repositories

- can be local or remote http

- flat directory for each platform

- eggnames, e.g.: `numpy-1.4.0-4.egg`

- index file: `index-depend.bz2`

  content of `EGG-INFO/spec/depend`

  archives from all eggs in repository

- multiple repositories have a simple package

  resolution rule

# Configuration (enpkg)

- <sys.prefix>/.enstaller4rc (system wide)

- ~/.enstaller4rc (takes precedence)

- contains repository chain:

```
→ [ A ] → [ B ] → [ C ]
```

# Using enpkg

without options enpkg follows these step:
- determine packages needed
- download packages
- install packages

```
-> enpkg numpy
prefix: /Library/Frameworks/Python.framework/Versions/6.0.4
MKL-10.2-1.egg                                                [copying]
 24.65 MB [..................................................]
numpy-1.4.0-4.egg                                             [copying]
  2.71 MB [..................................................]
MKL-10.2-1.egg                                             [installing]
 76.99 MB [..................................................]
numpy-1.4.0-4.egg                                         [installing]
  9.11 MB [..................................................]
```

# Summary

Enstaller:

- is a (cross platform) package install and managing tool

- is <span style="color:red">not</span> a build tool

- uses a flexible egg-bases format

- is separated into egginst and enpkg

- uses indexed repositories