:mod:`ensurepip` --- Bootstrapping the `pip` installer

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main) (Doc) (library)ensurepip.rst`, line 1); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main) (Doc) (library)ensurepip.rst`, line 4)

Unknown directive type "module".

```
.. module:: ensurepip
   :synopsis: Bootstrapping the "pip" installer into an existing Python
              installation or virtual environment.
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main) (Doc) (library)ensurepip.rst`, line 8)

Unknown directive type "versionadded".

```
.. versionadded:: 3.4
```

The :mod:`ensurepip` package provides support for bootstrapping the `pip` installer into an existing Python installation or virtual environment. This bootstrapping approach reflects the fact that `pip` is an independent project with its own release cycle, and the latest available stable version is bundled with maintenance and feature releases of the CPython reference interpreter.

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main) (Doc) (library)ensurepip.rst`, line 12); *backlink*

Unknown interpreted text role "mod".

In most cases, end users of Python shouldn't need to invoke this module directly (as `pip` should be bootstrapped by default), but it may be needed if installing `pip` was skipped when installing Python (or when creating a virtual environment) or after explicitly uninstalling `pip`.

Note

This module *does not* access the internet. All of the components needed to bootstrap `pip` are included as internal parts of the package.

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main) (Doc) (library)ensurepip.rst`, line 31)

Unknown directive type "seealso".

```
.. seealso::

   :ref:`installing-index`
      The end user guide for installing Python packages

   :pep:`453`: Explicit bootstrapping of pip in Python installations
      The original rationale and specification for this module.
```

Command line interface

The command line interface is invoked using the interpreter's `-m` switch.

The simplest possible invocation is:

```
python -m ensurepip
```

This invocation will install `pip` if it is not already installed, but otherwise does nothing. To ensure the installed version of `pip` is at least as recent as the one available in `ensurepip`, pass the `--upgrade` option:

```
python -m ensurepip --upgrade
```

By default, `pip` is installed into the current virtual environment (if one is active) or into the system site packages (if there is no active virtual environment). The installation location can be controlled through two additional command line options:

- `--root <dir>`: Installs `pip` relative to the given root directory rather than the root of the currently active virtual environment (if any) or the default root for the current Python installation.
- `--user`: Installs `pip` into the user site packages directory rather than globally for the current Python installation (this option is not permitted inside an active virtual environment).

By default, the scripts `pipX` and `pipX.Y` will be installed (where X.Y stands for the version of Python used to invoke `ensurepip`). The scripts installed can be controlled through two additional command line options:

- `--altinstall`: if an alternate installation is requested, the `pipX` script will *not* be installed.
- `--default-pip`: if a "default pip" installation is requested, the `pip` script will be installed in addition to the two regular scripts.

Providing both of the script selection options will trigger an exception.

Module API

:mod:`ensurepip` exposes two functions for programmatic use:

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System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main) (Doc) (library)ensurepip.rst`, line 87)

Unknown directive type "function".

```
.. function:: version()

   Returns a string specifying the available version of pip that will be
   installed when bootstrapping an environment.
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main) (Doc) (library)ensurepip.rst`, line 92)

Unknown directive type "function".

```
.. function:: bootstrap(root=None, upgrade=False, user=False, \
                        altinstall=False, default_pip=False, \
                        verbosity=0)

   Bootstraps ``pip`` into the current or designated environment.

   *root* specifies an alternative root directory to install relative to.
   If *root* is ``None``, then installation uses the default install location
   for the current environment.

   *upgrade* indicates whether or not to upgrade an existing installation
   of an earlier version of ``pip`` to the available version.

   *user* indicates whether to use the user scheme rather than installing
   globally.

   By default, the scripts ``pipX`` and ``pipX.Y`` will be installed (where
   X.Y stands for the current version of Python).

   If *altinstall* is set, then ``pipX`` will *not* be installed.

   If *default_pip* is set, then ``pip`` will be installed in addition to
   the two regular scripts.

   Setting both *altinstall* and *default_pip* will trigger
   :exc:`ValueError`.

   *verbosity* controls the level of output to :data:`sys.stdout` from the
   bootstrapping operation.

   .. audit-event:: ensurepip.bootstrap root ensurepip.bootstrap

   .. note::
      The bootstrapping process has side effects on both ``sys.path`` and
      ``os.environ``. Invoking the command line interface in a subprocess
      instead allows these side effects to be avoided.

   .. note::

      The bootstrapping process may install additional modules required by
      ``pip``, but other software should not assume those dependencies will
      always be present by default (as the dependencies may be removed in a
      future version of ``pip``).
```