:mod:`sysconfig` --- Provide access to Python's configuration information

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

Unknown directive type "module".

```
.. module:: sysconfig
   :synopsis: Python's configuration information
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 7)

Unknown directive type "moduleauthor".

```
.. moduleauthor:: Tarek ZiadÃ© <tarek@ziade.org>
```

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

Unknown directive type "sectionauthor".

```
.. sectionauthor:: Tarek ZiadÃ© <tarek@ziade.org>
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 10)

Unknown directive type "versionadded".

```
.. versionadded:: 3.2
```

Source code: :source:`Lib/sysconfig.py`

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

Unknown interpreted text role "source".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 14)

Unknown directive type "index".

```
.. index::
   single: configuration information
```

The :mod:`sysconfig` module provides access to Python's configuration information like the list of installation paths and the configuration variables relevant for the current platform.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 19); *backlink*

Unknown interpreted text role "mod".

Configuration variables

A Python distribution contains a :file:`Makefile` and a :file:`pyconfig.h` header file that are necessary to build both the Python binary itself and third-party C extensions compiled using :mod:`distutils`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 26); *backlink*

Unknown interpreted text role "file".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 26); *backlink*

Unknown interpreted text role "file".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 26); *backlink*

Unknown interpreted text role "mod".

:mod:`sysconfig` puts all variables found in these files in a dictionary that can be accessed using :func:`get_config_vars` or :func:`get_config_var`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 30); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 30); *backlink*

Unknown interpreted text role "func".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 30); *backlink*

Unknown interpreted text role "func".

Notice that on Windows, it's a much smaller set.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 35)

Unknown directive type "function".

```
.. function:: get_config_vars(*args)

   With no arguments, return a dictionary of all configuration variables
   relevant for the current platform.

   With arguments, return a list of values that result from looking up each
   argument in the configuration variable dictionary.

   For each argument, if the value is not found, return ``None``.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 46)

Unknown directive type "function".

```
.. function:: get_config_var(name)

   Return the value of a single variable *name*. Equivalent to
   ``get_config_vars().get(name)``.

   If *name* is not found, return ``None``.
```

Example of usage:

```
>>> import sysconfig
>>> sysconfig.get_config_var('Py_ENABLE_SHARED')
0
>>> sysconfig.get_config_var('LIBDIR')
'/usr/local/lib'
>>> sysconfig.get_config_vars('AR', 'CXX')
['ar', 'g++']
```

Installation paths

Python uses an installation scheme that differs depending on the platform and on the installation options. These schemes are stored in :mod:`sysconfig` under unique identifiers based on the value returned by :const:`os.name`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 68); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 68); *backlink*

Unknown interpreted text role "const".

Every new component that is installed using :mod:`distutils` or a Distutils-based system will follow the same scheme to copy its file in the right places.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 72); *backlink*

Unknown interpreted text role "mod".

Python currently supports nine schemes:

- *posix_prefix*: scheme for POSIX platforms like Linux or macOS. This is the default scheme used when Python or a component is installed.
- *posix_home*: scheme for POSIX platforms used when a *home* option is used upon installation. This scheme is used when a component is installed through Distutils with a specific home prefix.
- *posix_user*: scheme for POSIX platforms used when a component is installed through Distutils and the *user* option is used. This scheme defines paths located under the user home directory.
- *posix_venv*: scheme for :mod:`Python virtual environments <venv>` on POSIX platforms; by default it is the same as *posix_prefix* .

  System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 86); *backlink*

  Unknown interpreted text role "mod".

- *nt*: scheme for NT platforms like Windows.
- *nt_user*: scheme for NT platforms, when the *user* option is used.
- *nt_venv*: scheme for :mod:`Python virtual environments <venv>` on NT platforms; by default it is the same as *nt* .

  System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 90); *backlink*

  Unknown interpreted text role "mod".

- *venv*: a scheme with values from ether *posix_venv* or *nt_venv* depending on the platform Python runs on
- *osx_framework_user*: scheme for macOS, when the *user* option is used.

Each scheme is itself composed of a series of paths and each path has a unique identifier. Python currently uses eight paths:

- *stdlib*: directory containing the standard Python library files that are not platform-specific.

- *platstdlib*: directory containing the standard Python library files that are platform-specific.
- *platlib*: directory for site-specific, platform-specific files.
- *purelib*: directory for site-specific, non-platform-specific files.
- *include*: directory for non-platform-specific header files for the Python C-API.
- *platinclude*: directory for platform-specific header files for the Python C-API.
- *scripts*: directory for script files.
- *data*: directory for data files.

:mod:`sysconfig` provides some functions to determine these paths.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 112); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 114)

Unknown directive type "function".

```
.. function:: get_scheme_names()

   Return a tuple containing all schemes currently supported in
   :mod:`sysconfig`.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 120)

Unknown directive type "function".

```
.. function:: get_default_scheme()

   Return the default scheme name for the current platform.

   .. versionchanged:: 3.10
      This function was previously named ``_get_default_scheme()`` and
      considered an implementation detail.

   .. versionchanged:: 3.11
      When Python runs from a virtual environment,
      the *venv* scheme is returned.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 132)

Unknown directive type "function".

```
.. function:: get_preferred_scheme(key)

   Return a preferred scheme name for an installation layout specified by *key*.

   *key* must be either ``"prefix"``, ``"home"``, or ``"user"``.

   The return value is a scheme name listed in :func:`get_scheme_names`. It
   can be passed to :mod:`sysconfig` functions that take a *scheme* argument,
   such as :func:`get_paths`.

   .. versionadded:: 3.10

   .. versionchanged:: 3.11
      When Python runs from a virtual environment and ``key="prefix"``,
      the *venv* scheme is returned.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 149)

Unknown directive type "function".

```
.. function:: _get_preferred_schemes()
```

```
   Return a dict containing preferred scheme names on the current platform.
   Python implementers and redistributors may add their preferred schemes to
   the ``_INSTALL_SCHEMES`` module-level global value, and modify this function
   to return those scheme names, to e.g. provide different schemes for system
   and language package managers to use, so packages installed by either do not
   mix with those by the other.

   End users should not use this function, but :func:`get_default_scheme` and
   :func:`get_preferred_scheme()` instead.

   .. versionadded:: 3.10
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 164)

Unknown directive type "function".

```
.. function:: get_path_names()

   Return a tuple containing all path names currently supported in
   :mod:`sysconfig`.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 170)

Unknown directive type "function".

```
.. function:: get_path(name, [scheme, [vars, [expand]]])

   Return an installation path corresponding to the path *name*, from the
   install scheme named *scheme*.

   *name* has to be a value from the list returned by :func:`get_path_names`.

   :mod:`sysconfig` stores installation paths corresponding to each path name,
   for each platform, with variables to be expanded.  For instance the *stdlib*
   path for the *nt* scheme is: ``{base}/Lib``.

   :func:`get_path` will use the variables returned by :func:`get_config_vars`
   to expand the path.  All variables have default values for each platform so
   one may call this function and get the default value.

   If *scheme* is provided, it must be a value from the list returned by
   :func:`get_scheme_names`.  Otherwise, the default scheme for the current
   platform is used.

   If *vars* is provided, it must be a dictionary of variables that will update
   the dictionary return by :func:`get_config_vars`.

   If *expand* is set to ``False``, the path will not be expanded using the
   variables.

   If *name* is not found, raise a :exc:`KeyError`.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 198)

Unknown directive type "function".

```
.. function:: get_paths([scheme, [vars, [expand]]])

   Return a dictionary containing all installation paths corresponding to an
   installation scheme. See :func:`get_path` for more information.

   If *scheme* is not provided, will use the default scheme for the current
   platform.

   If *vars* is provided, it must be a dictionary of variables that will
   update the dictionary used to expand the paths.

   If *expand* is set to false, the paths will not be expanded.
```

```
If *scheme* is not an existing scheme, :func:`get_paths` will raise a
:exc:`KeyError`.
```

Other functions

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 218)

Unknown directive type "function".

```
.. function:: get_python_version()

   Return the ``MAJOR.MINOR`` Python version number as a string.  Similar to
   ``'%d.%d' % sys.version_info[:2]``.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 224)

Unknown directive type "function".

```
.. function:: get_platform()

   Return a string that identifies the current platform.

   This is used mainly to distinguish platform-specific build directories and
   platform-specific built distributions.  Typically includes the OS name and
   version and the architecture (as supplied by 'os.uname()'), although the
   exact information included depends on the OS; e.g., on Linux, the kernel
   version isn't particularly important.

   Examples of returned values:

   - linux-i586
   - linux-alpha (?)
   - solaris-2.6-sun4u

   Windows will return one of:

   - win-amd64 (64bit Windows on AMD64, aka x86_64, Intel64, and EM64T)
   - win32 (all others - specifically, sys.platform is returned)

   macOS can return:

   - macosx-10.6-ppc
   - macosx-10.4-ppc64
   - macosx-10.3-i386
   - macosx-10.4-fat

   For other non-POSIX platforms, currently just returns :data:`sys.platform`.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 255)

Unknown directive type "function".

```
.. function:: is_python_build()

   Return ``True`` if the running Python interpreter was built from source and
   is being run from its built location, and not from a location resulting from
   e.g. running ``make install`` or installing via a binary installer.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 262)

Unknown directive type "function".

```
.. function:: parse_config_h(fp[, vars])
```

```
        Parse a :file:`config.h`\-style file.

        *fp* is a file-like object pointing to the :file:`config.h`\-like file.

        A dictionary containing name/value pairs is returned.  If an optional
        dictionary is passed in as the second argument, it is used instead of a new
        dictionary, and updated with the values read in the file.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 273)

Unknown directive type "function".

```
   .. function:: get_config_h_filename()

      Return the path of :file:`pyconfig.h`.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 277)

Unknown directive type "function".

```
   .. function:: get_makefile_filename()

      Return the path of :file:`Makefile`.
```

Using :mod:`sysconfig` as a script

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 282); *backlink*

Unknown interpreted text role "mod".

You can use :mod:`sysconfig` as a script with Python's *-m* option:

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 285); *backlink*

Unknown interpreted text role "mod".

```
$ python -m sysconfig
Platform: "macosx-10.4-i386"
Python version: "3.2"
Current installation scheme: "posix_prefix"

Paths:
        data = "/usr/local"
        include = "/Users/tarek/Dev/svn.python.org/py3k/Include"
        platinclude = "."
        platlib = "/usr/local/lib/python3.2/site-packages"
        platstdlib = "/usr/local/lib/python3.2"
        purelib = "/usr/local/lib/python3.2/site-packages"
        scripts = "/usr/local/bin"
        stdlib = "/usr/local/lib/python3.2"

Variables:
        AC_APPLE_UNIVERSAL_BUILD = "0"
        AIX_GENUINE_CPLUSPLUS = "0"
        AR = "ar"
        ARFLAGS = "rc"
        ...
```

This call will print in the standard output the information returned by :func:`get_platform`, :func:`get_python_version`, :func:`get_path` and :func:`get_config_vars`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst, line 311); *backlink*

Unknown interpreted text role "func".

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst`, **line 311**); *backlink*

Unknown interpreted text role "func".

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst`, **line 311**); *backlink*

Unknown interpreted text role "func".

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]sysconfig.rst`, **line 311**); *backlink*

Unknown interpreted text role "func".