:mod:`posix` --- The most common POSIX system calls

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

Unknown directive type "module".

```
.. module:: posix
   :platform: Unix
   :synopsis: The most common POSIX system calls (normally used via module os).
```

This module provides access to operating system functionality that is standardized by the C Standard and the POSIX standard (a thinly disguised Unix interface).

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

Unknown directive type "index".

```
.. index:: module: os
```

Do not import this module directly. Instead, import the module :mod:`os`, which provides a *portable* version of this interface. On Unix, the :mod:`os` module provides a superset of the :mod:`posix` interface. On non-Unix operating systems the :mod:`posix` module is not available, but a subset is always available through the :mod:`os` interface. Once :mod:`os` is imported, there is *no* performance penalty in using it instead of :mod:`posix`. In addition, :mod:`os` provides some additional functionality, such as automatically calling :func:`~os.putenv` when an entry in `os.environ` is changed.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 16); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 16); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 16); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 16); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 16); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 16); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 16); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 16); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 16); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 16); *backlink*

Unknown interpreted text role "func".

Errors are reported as exceptions; the usual exceptions are given for type errors, while errors reported by the system calls raise :exc:`OSError`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 25); *backlink*

Unknown interpreted text role "exc".

Large File Support

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 34)

Unknown directive type "index".

```
.. index::
   single: large files
   single: file; large files
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 38)

Unknown directive type "sectionauthor".

```
.. sectionauthor:: Steve Clift <clift@mail.anacapa.net>
```

Several operating systems (including AIX, HP-UX and Solaris) provide support for files that are larger than 2 GiB from a C programming model where :c:type:`int` and :c:type:`long` are 32-bit values. This is typically accomplished by defining the relevant size and offset types as 64-bit values. Such files are sometimes referred to as :dfn:`large files`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 40); *backlink*

Unknown interpreted text role "c:type".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 40); *backlink*

Unknown interpreted text role "c:type".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 40); *backlink*

Unknown interpreted text role "dfn".

Large file support is enabled in Python when the size of an :c:type:`off_t` is larger than a :c:type:`long` and the :c:type:`long long` is at least as large as an :c:type:`off_t`. It may be necessary to configure and compile Python with certain compiler flags to enable this mode. For example, with Solaris 2.6 and 2.7 you need to do something like:

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 46); *backlink*

Unknown interpreted text role "c:type".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 46); *backlink*

Unknown interpreted text role "c:type".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 46); *backlink*

Unknown interpreted text role "c:type".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 46); *backlink*

Unknown interpreted text role "c:type".

```
CFLAGS="`getconf LFS_CFLAGS`" OPT="-g -O2 $CFLAGS" \
        ./configure
```

On large-file-capable Linux systems, this might work:

```
CFLAGS='-D_LARGEFILE64_SOURCE -D_FILE_OFFSET_BITS=64' OPT="-g -O2 $CFLAGS" \
        ./configure
```

Notable Module Contents

In addition to many functions described in the :mod:`os` module documentation, :mod:`posix` defines the following data item:

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 67); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 67); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\(cpython-main)(Doc)(library)posix.rst, line 70)

Unknown directive type "data".

```
.. data:: environ

   A dictionary representing the string environment at the time the interpreter
   was started. Keys and values are bytes on Unix and str on Windows. For
   example, ``environ[b'HOME']`` (``environ['HOME']`` on Windows) is the
   pathname of your home directory, equivalent to ``getenv("HOME")`` in C.

   Modifying this dictionary does not affect the string environment passed on by
   :func:`~os.execv`, :func:`~os.popen` or :func:`~os.system`; if you need to
   change the environment, pass ``environ`` to :func:`~os.execve` or add
   variable assignments and export statements to the command string for
   :func:`~os.system` or :func:`~os.popen`.

   .. versionchanged:: 3.2
      On Unix, keys and values are bytes.

   .. note::

      The :mod:`os` module provides an alternate implementation of ``environ``
      which updates the environment on modification. Note also that updating
      :data:`os.environ` will render this dictionary obsolete. Use of the
      :mod:`os` module version of this is recommended over direct access to the
      :mod:`posix` module.
```