

## Navigation

- [index](#)
- [modules](#) |
- [next](#) |
- [previous](#) |
- [Python v2.6.4 documentation](#) »
- [The Python Standard Library](#) »
- [36. Unix Specific Services](#) »

## 36.1. posix — The most common POSIX system calls¶

Platforms: Unix

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

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

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

### 36.1.1. Large File Support¶

Several operating systems (including AIX, HP-UX, Irix and Solaris) provide support for files that are larger than 2 GB from a C programming model where `int` and `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 *large files*.

Large file support is enabled in Python when the size of an `off_t` is larger than a `long` and the `long long` type is available and is at least as large as an `off_t`. Python longs are then used to represent file sizes, offsets and other values that can exceed the range of a Python `int`. It may be necessary to configure and compile Python with certain compiler flags to enable this mode. For example, it is enabled by default with recent versions of Irix, but with Solaris 2.6 and 2.7 you need to do something like:

```
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
```

### 36.1.2. Notable Module Contents¶

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

`posix.environ`¶

A dictionary representing the string environment at the time the interpreter was started. For example, `environ['HOME']` 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 `execv()`, `popen()` or `system()`; if you need to change the environment, pass `environ` to `execve()` or add variable assignments and export statements to the command string for `system()` or `popen()`.

Note

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

## Table Of Contents

### [36.1. posix — The most common POSIX system calls](#)

- [36.1.1. Large File Support](#)
- [36.1.2. Notable Module Contents](#)

Previous topic

[36. Unix Specific Services](#)

## Next topic

[36.2. pwd — The password database](#)

## This Page

- [Show Source](#)

## Navigation

- [index](#)
- [modules](#) |
- [next](#) |
- [previous](#) |
- [Python v2.6.4 documentation](#) »
- [The Python Standard Library](#) »
- [36. Unix Specific Services](#) »

© [Copyright](#) 1990-2010, Python Software Foundation.

The Python Software Foundation is a non-profit corporation. [Please donate.](#)

Last updated on Feb 26, 2010. Created using [Sphinx](#) 0.6.3.