

Increased performance of string search operations (`str.find`, `str.index`, `str.count`, the `in` operator, `str.split`, `str.partition`) with arguments of different kinds (UCS1, UCS2, UCS4).

Python doesn't support anymore platforms without `stat()` or `fstat()`, these functions are always required.

The `-b` option now affects comparisons of bytes with `int`.

Memoryviews now allow tuple indexing (including for multi-dimensional memoryviews).

Fixed generator lambdas. Patch by Bruno Cauet.

Fix the default `__sizeof__` implementation for variable-sized objects.

The `groupindex` attribute of regular expression pattern object now is non-modifiable mapping.

Ignore `KeyboardInterrupt` when the `pydoc` pager is active. This mimics the behavior of the standard unix pagers, and prevents `pipepager` from shutting down while the pager itself is still running.

`pprint()` of `OrderedDict` now outputs the same representation as `repr()`.

Removed `IsBadStringPtr` calls in `ctypes`.

Improved some re error messages using regex for hints.

`ntpath.expandvars()` no longer loses unbalanced single quotes.

The `zipfile.ZipFile.open` function now supports `'x'` (exclusive creation) mode.

The reader in `BufferedRWPair` now is closed even when closing writer failed in `BufferedRWPair.close()`.

Unknown escapes in regular expressions that consist of `'\ '` and ASCII letter now raise a deprecation warning and will be forbidden in Python 3.6.

`string.Template` now allows specifying the `"self"` parameter as a keyword argument. `string.Formatter` now allows specifying the `"self"` and the `"format_string"` parameters as keyword arguments.

The `pprint` module now supports mapping proxies.

`pprint` now wraps long bytes objects and bytearray's.

Fixed some corner cases in breaking words in `textwrap`. Got rid of quadratic complexity in breaking long words.

The `copy` module now uses pickle protocol 4 (PEP 3154) and supports copying of instances of classes whose `__new__` method takes keyword-only arguments.

Added a `zipapp` module to support creating executable zip file archives of Python code. Registered `".pyz"` and `".pyzw"` extensions on Windows for these archives (PEP 441).

Avoid explicit checks for `str` in `zipapp`, adding support for `pathlib.Path` objects as arguments.

Added support of arbitrary bytes-like objects and avoided unnecessary copying of memoryview in `gzip.GzipFile.write()`. Original patch by Wolfgang Maier.

Added support for writing ZIP files to unseekable streams.

Increase `imaplib`'s `MAXLINE` to accommodate modern mailbox sizes.

If `body` is `None`, `http.client.HTTPConnection.request` now sets `Content-Length` to 0 for `PUT`, `POST`, and `PATCH` headers to avoid 411 errors from some web servers.

The `ntplib.NNTP` constructor no longer leaves the connection and socket open until the garbage collector cleans them up. Patch by Martin Panter.

`collections.deque()` objects now support methods for `index()`, `insert()`, and `copy()`. This allows deques to be registered as a `MutableSequence` and it improves their substitutability for lists.

`:func:`signal.sigwaitinfo`` and `:func:`signal.sigtimedwait`` are now retried when interrupted by a signal not in the `sigset` parameter, if the signal handler does not raise an exception. `signal.sigtimedwait()` recomputes the timeout with a monotonic clock when it is retried.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.0a3.rst, line 283); [backlink](#)

Unknown interpreted text role "func".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.0a3.rst, line 283); [backlink](#)

Unknown interpreted text role "func".

Few functions in modules `mmap`, `ossaudiodev`, `socket`, `ssl`, and `codecs`, that accepted only read-only bytes-like object now accept writable bytes-like object too.

If `time.sleep()` is interrupted by a signal, the sleep is now retried with the recomputed delay, except if the signal handler raises an exception (PEP 475).

`_strptime` now uniformly handles all days in week 0, including Dec 30 of previous year. Based on patch by Jim Carroll.

Iterator of `NamedTemporaryFile` now keeps a reference to `NamedTemporaryFile` instance. Patch by Bohuslav Kabrda.

The fake test case created by `unittest.loader` when it fails importing a test module is now picklable.

On Linux, `os.urandom()` now uses the new `getrandom()` syscall if available, syscall introduced in the Linux kernel 3.17. It is more reliable and more secure, because it avoids the need of a file descriptor and waits until the kernel has enough entropy.

Updated the implementation of the `http.cookies.Morsel` class. Setting attributes `key`, `value` and `coded_value` directly now is deprecated. `update()` and `setdefault()` now transform and check keys. Comparing for equality now takes into account attributes `key`, `value` and `coded_value`. `copy()` now returns a `Morsel`, not a dict. `repr()` now contains all attributes. Optimized checking keys and quoting values. Added new tests. Original patch by Demian Brecht.

Allow selection of output units in `timeit`. Patch by Julian Gindi.

Fix `traceback.format_list` when a traceback has been mutated.

Add `rdivmod` support to `MagicMock()` objects. Patch by Håkan Ljungdahl.

Add `charset` parameter to `HtmlDiff.make_file()`.

Support `os.truncate` and `os.ftruncate` on Windows.

Fixed parsing cookies with absent keys or values in `cookiejar`. Patch by Demian Brecht.

`multiprocessing.Pool` methods `imap()` and `imap_unordered()` now handle exceptions raised by an iterator. Patch by Alon Diamant and Davin Potts.

Add `matmul` support to `MagicMock`. Patch by Håkan Ljungdahl.

`enable()`, `register()`, `dump_traceback()` and `dump_traceback_later()` functions of `faulthandler` now accept file descriptors. Patch by Wei Wu.

Disabled HTTP header injections in `http.client`. Original patch by Demian Brecht.

Modules `bz2`, `tarfile` and `tokenize` now can be reloaded with `imp.reload()`. Patch by Thomas Kluyver.

`os.walk()` now calls `os.scandir()` instead of `os.listdir()`. The usage of `os.scandir()` reduces the number of calls to `os.stat()`. Initial patch written by Ben Hoyt.

`make_patchcheck` will ensure the interpreter is built.

Added tests for standard IO streams in `IDLE`.

Prevent `test_urllib2net` failures due to ftp connection timeout.

The result of `open()` in `Tools/freeze/bkfile.py` is now better compatible with regular files (in particular it now supports the context management protocol).