

Fixed `SystemError` if a custom opener (for `open()`) returns a negative number without setting an exception.

Fixed `TypeError` when `frame.f_trace` is set to `None`. Patch by Xavier de Gaye.

Fixed possible reflinks in failing `Py_BuildValue()` with the "N" format unit.

Fix possible reflink when creating a function with annotations.

Fixed `bytearray.remove()` for values greater than 127. Patch by Joe Jevnik.

`int.from_bytes()` no longer bypasses constructors for subclasses.

`gc.get_objects()` no longer contains a broken tuple with `NULL` pointer.

Use `RawConfigParser` for `.pyirc` parsing, removing support for interpolation unintentionally added with move to Python 3. Behavior no longer does any interpolation in `.pyirc` files, matching behavior in Python 2.7 and `Setuptools` 19.0.

Make the builtin slice type support cycle collection.

`super.__init__` no longer leaks memory if called multiple times. NOTE: A direct call of `super.__init__` is not endorsed!

`PYTHONIOENCODING` now has priority over locale in setting the error handler for `stdin` and `stdout`.

Fixed crash on iterating exhausting iterators. Affected classes are generic sequence iterators, iterators of `str`, `bytes`, `bytearray`, `list`, `tuple`, `set`, `frozenset`, `dict`, `OrderedDict`, corresponding views and `os.scandir()` iterator.

If coding cookie is specified multiple times on a line in Python source code file, only the first one is taken to account.

Fix `str.translate()` when string is ASCII and first replacements removes character, but next replacement uses a non-ASCII character or a string longer than 1 character. Regression introduced in Python 3.5.0.

Ensure exception reports from `PyErr_Display()` and `PyErr_WriteUnraisable()` are sensible even when formatting them produces secondary errors. This affects the reports produced by `sys.__excepthook__()` and when `__del__()` raises an exception.

Correct behavior to reject comma as a legal character for cookie names.

Avoid masking the original `TypeError` exception when using star (\*) unpacking in function calls. Based on patch by Hagen Fürstenau and Daniel Urban.

Fix the doc comment for `FileFinder.find_spec()`.

Add a new private `_PyThreadState_UncheckedGet()` function to get the current Python thread state, but don't issue a fatal error if it is `NULL`. This new function must be used instead of accessing directly the `_PyThreadState_Current` variable. The variable is no more exposed since Python 3.5.1 to hide the exact implementation of atomic C types, to avoid compiler issues.

`Deque.insert()` gave odd results for bounded deques that had reached their maximum size. Now an `IndexError` will be raised when attempting to insert into a full deque.

When compiling code, don't merge constants if they are equal but have a different types. For example, `f1, f2 = lambda: 1, lambda: 1.0` is now correctly compiled to two different functions: `f1()` returns `1 (int)` and `f2()` returns `1.0 (int)`, even if `1` and `1.0` are equal.

[UPDATE] Comment out the one of the pickleability tests in `_PyObject_GetState()` due to regressions observed in Cython-based projects.

Disallowed null characters in the type name.

Fix segfault when an invalid nonlocal statement binds a name starting with two underscores.

Instances of extension types with a state that aren't subclasses of `list` or `dict` and haven't implemented any pickle-related methods (`__reduce__`, `__reduce_ex__`, `__getnewargs__`, `__getnewargs_ex__`, or `__getstate__`), can no longer be pickled. Including `memoryview`.

Massive replacing unsafe attribute setting code with special macro `Py_SETREF`.

Special method `__bytes__()` now works in `str` subclasses.

`__sizeof__` methods of builtin types now use dynamic basic size. This allows `sys.getsize()` to work correctly with their subclasses with `__slots__` defined.

Fixed problem with in-place string concatenation and utf-8 cache.

Mention [PEP 420](#) in the `importlib` docs.

Fixed crash in `object.__reduce__()` if slot name is freed inside `__getattr__`.

Fixed crash on converting objects with special methods `__bytes__`, `__trunc__`, and `__float__` returning instances of subclasses of `bytes`, `int`, and `float` to subclasses of `bytes`, `int`, and `float` correspondingly.

Fix semantic bugs when using binary operators with dictionary views and tuples.

Fix possible integer overflow and heap corruption in `zipimporter.get_data()`.

Fix TAB key behaviour in REPL with readline.

Raise a `RuntimeError` when a coroutine object is awaited more than once.

Update the `__aiter__` protocol: instead of returning an awaitable that resolves to an asynchronous iterator, the asynchronous iterator should be returned directly. Doing the former will trigger a `PendingDeprecationWarning`.

Update `expat` to 2.1.1, fixes CVE-2015-1283.

Fix TLS stripping vulnerability in `smtplib`, CVE-2016-0772. Reported by Team Oststrom

Implement missing `IPv4Address.is_global` property. It was documented since 07a5610bae9d. Initial patch by Roger Luethi.  
`distutils` register command now decodes HTTP responses correctly. Initial patch by ingrid.

A new version of `typing.py` provides several new classes and features: `@overload` outside stubs, `Reversible`, `DefaultDict`, `Text`, `ContextManager`, `Type[]`, `NewType()`, `TYPE_CHECKING`, and numerous bug fixes (note that some of the new features are not yet implemented in `mypy` or other static analyzers). Also classes for [PEP 492](#) (`Awaitable`, `AsyncIterable`, `AsyncIterator`) have been added (in fact they made it into 3.5.1 but were never mentioned).

Stop `http.server.BaseHTTPRequestHandler.send_error()` from sending a message body for 205 Reset Content. Also, don't send Content header fields in responses that don't have a body. Patch by Susumu Koshihara.

Fix the "platform" module to tolerate when `sys.version` contains truncated build information.

On Linux, `func:os.urandom` now calls `getrandom()` with `GRND_NONBLOCK` to fall back on reading `/dev/urandom` if the `urandom` entropy pool is not initialized yet. Patch written by Colm Buckley.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.2rc1.rst, line 458); [backlink](#)**

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In the `zlib` module, allow decompressing raw Deflate streams with a predefined `zdict`. Based on patch by Xiang Zhang.

Fix `wsgiref.simple_server.WSGIRequestHandler` to completely write data to the client. Previously it could do partial writes and truncate data. Also, `wsgiref.handler.ServerHandler` can now handle `stdout` doing partial writes, but this is deprecated.

Add `__all__` to `mod:string`. Patch by Emanuel Barry.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.2rc1.rst, line 491); [backlink](#)**

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`subprocess.Popen.communicate` now correctly ignores `BrokenPipeError` when the child process dies before `.communicate()` is called in more/all circumstances.

`distutils.upload` now correctly handles `HTTPError`. Initial patch by Claudiu Popa.

Fix `SSLContext.load_windows_store_certs` fails with `PermissionError`

Avoid creating duplicate filters when using `filterwarnings` and `simplefilter`. Based on patch by Alex Shkop.

Fix `os.set_inheritable()` on Android, `ioctl()` is blocked by SELinux and fails with `EACCESS`. The function now falls back to `fcntl()`. Patch written by Michał Bednarski.

Fix infinite recursion using `typing.py`. Thanks to Kalle Tuure!

Fix `urllib.request` redirect handling when the target only has a query string. Original fix by Ján Janech.

The "urllib.request" module now percent-encodes non-ASCII bytes found in redirect target URLs. Some servers send Location header fields with non-ASCII bytes, but "http.client" requires the request target to be ASCII-encodable, otherwise a `UnicodeEncodeError` is raised. Based on patch by Christian Heimes.

Honor `debuglevel` flag in `urllib.request.HTTPHandler`. Patch contributed by Chi Hsuan Yen.

In the `subprocess` module, allow `stderr` to be redirected to `stdout` even when `stdout` is not redirected. Patch by Akira Li.

`mock_open` 'files' no longer error on readline at end of file. Patch from Yolanda Robla.

Fixed leaking a `userptr` in `curses` panel destructor.

Removed unnecessary, and ignored, call to `sum` of squares helper in `statistics.pvariance`.

The `modulefinder` module now supports extended opcode arguments.

Fixed crashes related to directly created instances of types in `_tkinter` and `curses.panel` modules.

`weakref.ref()` no longer silently ignores keyword arguments. Patch by Georg Brandl.

`xmlrpc` now raises `ResponseError` on unsupported type tags instead of silently return incorrect result.

Fixed the comparison of `plistlib.Data` with other types.

Fix an uninitialized variable in `ctypes.util`. The bug only occurs on SunOS when the `ctypes` implementation searches for the `crle`

program. Patch by Xiang Zhang. Tested on SunOS by Kees Bos.

In `urllib.request`, change the proxy bypass host checking against `no_proxy` to be case-insensitive, and to not match unrelated host names that happen to have a bypassed hostname as a suffix. Patch by Xiang Zhang.

`recursive_repr()` now sets `__qualname__` of wrapper. Patch by Xiang Zhang.

`urllib.request` will prefer lower\_case proxy environment variables over UPPER\_CASE or Mixed\_Case ones. Patch contributed by Hans-Peter Jansen.

`assertSequenceEqual()` now correctly outputs non-stringified differing items (like bytes in the -b mode). This affects `assertListEqual()` and `assertTupleEqual()`.

Remove "will be removed in Python 3.7" from deprecation messages of `platform.dist()` and `platform.linux_distribution()`. Patch by Kumaripaba Miyurusara Athukorala.

`itemgetter`, `attrgetter` and `methodcaller` objects no longer silently ignore keyword arguments.

Disassembling a class now disassembles class and static methods. Patch by Xiang Zhang.

Fix error handling in `:func:`shutil.get_terminal_size``, catch `:exc:`AttributeError`` instead of `:exc:`NameError``. Patch written by Emanuel Barry.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.2rc1.rst, line 763); [backlink](#)**

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**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.2rc1.rst, line 763); [backlink](#)**

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**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.2rc1.rst, line 763); [backlink](#)**

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`tarfile`'s `ustar` and `gnu` formats now correctly calculate name and link field limits for multibyte character encodings like utf-8.

Fix directory traversal vulnerability with `http.server` on Windows. This fixes a regression that was introduced in 3.3.4rc1 and 3.4.0rc1. Based on patch by Philipp Hagemeister.

Stop encoding Latin-1-ized WSGI paths with UTF-8. Patch by Anthony Sottile.

Fix `:func:`os.urandom`` on Solaris 11.3 and newer when reading more than 1,024 bytes: call `getrandom()` multiple times with a limit of 1024 bytes per call.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.2rc1.rst, line 805); [backlink](#)**

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Add `.webm` to `mimetypes.types_map`. Patch by Giampaolo Rodola'.

Add `.csv` to `mimetypes.types_map`. Patch by Geoff Wilson.

Fixed Y2038 problem in loading binary PLists.

Handle terminal resizing with Readline 6.3+ by installing our own SIGWINCH handler. Patch by Eric Price.

In `http.server`, respond with "413 Request header fields too large" if there are too many header fields to parse, rather than killing the connection and raising an unhandled exception. Patch by Xiang Zhang.

Change `BufferedReader.writable()` and `BufferedWriter.readable()` to always return `False`.

Fix a regression in `mock.MagicMock`. `_Call` is a subclass of `tuple` (changeset 3603bae63c13 only works for classes) so we need to implement `__ne__` ourselves. Patch by Andrew Plummer.

Raise `ValueError` rather than `SystemError` when a negative length is passed to `SSLSocket.recv()` or `read()`.

Fix `SSL.recv(0)` and `read(0)` methods to return zero bytes instead of up to 1024.

Fixed a bug in `datetime.astimezone()` method.

`:func:`warnings.formatwarning`` now catches exceptions on `linecache.getline(...)` to be able to log `:exc:`ResourceWarning`` emitted late during the Python shutdown process.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.2rc1.rst, line 914); [backlink](#)**

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**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.2rc1.rst, line 914); [backlink](#)**

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Ctrl+C during Readline history search now cancels the search mode when compiled with Readline 7.

Avoid potential ValueError in BaseHandler.start\_response. Initial patch by Peter Inglesby.

ssl.py\_load\_windows\_store\_certs fails if windows cert store is empty. Patch by Baji.

Fix `:func:`pyclbr.readmodule`` and `:func:`pyclbr.readmodule_ex`` to support importing packages.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.2rc1.rst, line 956); [backlink](#)**

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**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Misc\NEWS.d\ [cpython-main] [Misc] [NEWS.d] 3.5.2rc1.rst, line 956); [backlink](#)**

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Account for remaining Content-Length in HTTPResponse.readline() and read1(). Based on patch by Silent Ghost. Also document that HTTPResponse now supports these methods.

Handle sockets in directories unittest discovery is scanning. Patch from Victor van den Elzen.

cookiejar.http2time() now returns None if year is higher than datetime.MAXYEAR.

Fixes platform module detection of Windows Server

Fixed parsing time in week 0 before Jan 1. Original patch by Tamás Bence Gedai.

Invoking Path.owner() and Path.group() on Windows now raise NotImplementedError instead of ImportError.

Fixed the keys() method for Canvas and Scrollbar widgets.

Got rid of excessive buffering in the fileinput module. The bufsize parameter is no longer used.

Fix UnboundLocalError in AbstractDigestAuthHandler.get\_algorithm\_impls. Initial patch by Mathieu Dupuy.

Fixed pickling and copying the accumulate() iterator with total is None.

Fixed debugging output for regular expressions with the (?x) flag.

Fixed the subnets() methods in IP network classes for the case when resulting prefix length is equal to maximal prefix length. Based on patch by Xiang Zhang.

Remove the file if the internal open() call in NamedTemporaryFile() fails. Patch by Silent Ghost.

Fix XML-RPC client to retry when the server shuts down a persistent connection. This was a regression related to the new http.client.RemoteDisconnected exception in 3.5.0a4.

Leading <~ is optional now in base64.a85decode() with adobe=True. Patch by Swati Jaiswal.

Remove an invalid type check in importlib.util.LazyLoader.

importlib.\_\_import\_\_() raises SystemError like builtins.\_\_import\_\_() when level is specified but without an accompanying package specified.

In the "socketserver" module, shut down the request (closing the connected socket) when verify\_request() returns false. Patch by Aviv Palivoda.

On Windows open the cert store readonly in ssl.enum\_certificates.

os.walk() no longer uses FDs proportional to the tree depth.

The os.scandir() iterator now closes file descriptor not only when the iteration is finished, but when it was failed with error.

Restored support of bytes paths in os.walk() on Windows.

Add UTF-8 suggestion to error message when posting a non-Latin-1 string with http.client.

Reset FancyURLopener's redirect counter even if there is an exception. Based on patches by Brian Brazil and Daniel Rocco.

Fixed a crash when unpickle the functools.partial object with wrong state. Fixed a leak in failed functools.partial constructor. "args" and "keywords" attributes of functools.partial have now always types tuple and dict correspondingly.

copy.deepcopy() now correctly copies range() objects with non-atomic attributes.

Path.glob() now raises a ValueError if it's called with an invalid pattern. Patch by Thomas Nyberg

Fixed possible integer overflows in zipimport.

On Windows, getnameinfo(), gethostbyaddr() and gethostbyname\_ex() functions of the socket module now decode the hostname from the ANSI code page rather than UTF-8.

xmlrpc now works with strings not encodable with used non-UTF-8 encoding.

Garbage collector now breaks reference loops with OrderedDict.

Fixed AttributeError in msilib.Directory.glob().

Added compatibility with broken protocol 2 pickles created in old Python 3 versions (3.4.3 and lower).

Use cross-compilation by default for 64-bit Windows.

Improve zipimport's support for namespace packages.

Fix sysconfig.\_parse\_makefile not expanding \${} vars appearing before \$() vars.

Fix mock.patch behavior when patching descriptors. Restore original values after patching. Patch contributed by Sean McCully.

In the ssl module, enable the SSL\_MODE\_RELEASE\_BUFFERS mode option if it is safe to do so.

Don't traverse into symlinks for \*\* pattern in pathlib.Path.[r]glob().

Ignore PermissionError when traversing a tree with pathlib.Path.[r]glob(). Patch by Ulrich Petri.

fileinput now uses sys.stdin as-is if it does not have a buffer attribute (restores backward compatibility).

Copying the lru\_cache() wrapper object now always works, independently from the type of the wrapped object (by returning the original object unchanged).

Fixed possible use after free in ElementTree.XMLPullParser.

os.fwalk() no longer skips remaining directories when error occurs. Original patch by Samson Lee.

Fixed and simplified OrderedDict.\_\_sizeof\_\_.

Fixed various refcount issues in ElementTree iteration.

Restore the previous behaviour of tolerating most fstat() errors when opening files. This was a regression in 3.5a1, and stopped anonymous temporary files from working in special cases.

Fix regression in number of arguments compileall accepts when '-d' is specified. The check on the number of arguments has been dropped completely as it never worked correctly anyway.

In the subprocess module, preserve any exception caused by fork() failure when preexec\_fn is used.

\_strptime's regexp cache now is reset after changing timezone with time.tzset().

When executing a package with the "python -m package" option, and package initialization fails, a proper traceback is now reported. The "runpy" module now lets exceptions from package initialization pass back to the caller, rather than raising ImportError.

Also in runpy and the "-m" option, omit the irrelevant message "... is a package and cannot be directly executed" if the package could not even be initialized (e.g. due to a bad \*.pyc file).

Fixed problem with the mean of very small and very large numbers. As a side effect, statistics.mean and statistics.variance should be significantly faster.

Fixed copying object with state with boolean value is false.

Fixed deep copying of minidom documents. Based on patch by Marian Ganisin.

Fixed a reference leak in pickle.loads() when unpickling invalid data including tuple instructions.

In the Readline completer, avoid listing duplicate global names, and search the global namespace before searching builtins.

Fixed file leak in ElementTree.iterparse() raising an error.

Fixed SystemError raised by unpickler on broken pickle data.

Fixed crash on deleting ElementTree.Element attributes.

ZipFile now always writes a ZIP\_STORED header for directory entries. Patch by Dingyuan Wang.

Skip getaddrinfo if host is already resolved. Patch by A. Jesse Jiryu Davis.

Add asyncio.StreamReader.readuntil() method. Patch by Марк Копенберг.

Avoid unnecessary serialization of getaddrinfo(3) calls on OS X versions 10.5 or higher. Original patch by A. Jesse Jiryu Davis.

Avoid unnecessary serialization of getaddrinfo(3) calls on current versions of OpenBSD and NetBSD. Patch by A. Jesse Jiryu Davis.

Fix `asyncio/subprocess.communicate()` to handle empty input. Patch by Jack O'Connor.

Add `loop.get_exception_handler` method

`asyncio`: Add `loop.create_future` method

`asyncio`: Fix `_read_ready` and `_write_ready` to respect `_conn_lost`. Patch by Łukasz Langa.

`asyncio`: Fix inconsistency cancelling `Condition.wait`. Patch by David Coles.

Paste with text selected now replaces the selection on X11. This matches how paste works on Windows, Mac, most modern Linux apps, and `tk` widgets. Original patch by Serhiy Storchaka.

Make `clear` in `idlelib.idle_test.__init__` that the directory is a private implementation of `test.test_idle` and tool for maintainers.

Stop 'ThemeChanged' warnings when running IDLE tests. These persisted after other warnings were suppressed in #20567. Apply Serhiy Storchaka's `update_idletasks` solution to four test files. Record this additional advice in `idle_test/README.txt`

Revise `idle_test/README.txt` with advice about avoiding `tk` warning messages from tests. Apply advice to several IDLE tests.

Make `colorizer htest` and `turtledemo` work with dark themes. Move code for configuring text widget colors to a new function.

When `tk` reports font size as 0, change to size 10. Such fonts on Linux prevented the configuration dialog from opening.

Add test for IDLE's percolator. Original patch by Saimadhav Heblkar.

Add test for IDLE's replace dialog. Original patch by Saimadhav Heblkar.

Add test for IDLE's search dialog. Original patch by Westley Martínez.

Add test for IDLE's undo delegator. Original patch by Saimadhav Heblkar .

Add `ConfigDialog.remove_var_callbacks` to stop memory leaks.

Add more asserts to `test_delegator`.

Add tests for `idlelib.configHelpSourceEdit`. Patch by Saimadhav Heblkar.

In the 'IDLE-console differences' section of the IDLE doc, clarify how running with IDLE affects `sys.modules` and the standard streams.

fix incorrect change in `IOBinding` that prevented printing. Augment `IOBinding htest` to include all major `IOBinding` functions.

Revert unwanted conversion of ' to ' RIGHT SINGLE QUOTATION MARK in `README.txt` and open this and `NEWS.txt` with 'ascii'. Re-encode `CREDITS.txt` to utf-8 and open it with 'utf-8'.

Moved the search box from the sidebar to the header and footer of each page. Patch by Ammar Askar.

Document the new [PEP 448](#) unpacking syntax of 3.5.

Used HTTPS for external links in the documentation if possible.

Rework the `Readline` module documentation to group related functions together, and add more details such as what underlying `Readline` functions and variables are accessed.

Adds note to `ctypes` documentation regarding `cdll.msvcr`.

Fix documentation to not claim that `__import__` is searched for in the global scope.

Update 3.x packaging documentation: \* "See also" links to the new docs are now provided in the legacy pages \* links to `setuptools` documentation have been updated

Added tests for the `turtle` module. Patch by ingrid, Gregory Loyse and Jelle Zijlstra.

The multiprocessing thread pool (`multiprocessing.dummy.Pool`) was untested.

Added new tests for pickling iterators of mutable sequences.

Added `test.support.check_no_resource_warning()` to check that no `ResourceWarning` is emitted.

Changed `test_ssl` to use self-signed.`pythontest.net`. This avoids relying on `svn.python.org`, which recently changed root certificate.

Tests for `OrderedDict` are extracted from `test_collections` into separate file `test_ordered_dict`.

Skip `test_timestamp_overflow` in `test_import` if bytecode files cannot be written.

Fix linking extension modules for cross builds. Patch by Xavier de Gaye.

Disable the rules for running `_freeze_importlib` and `pgen` when cross-compiling. The output of these programs is normally saved with the source code anyway, and is still regenerated when doing a native build. Patch by Xavier de Gaye.

Fix the cross-compiling `pgen` rule for in-tree builds. Patch by Xavier de Gaye.

Link `audioop`, `_datetime`, `_ctypes_test` modules to `libm`, except on Mac OS X. Patch written by Xavier de Gaye.

A `--with-lto` configure option has been added that will enable link time optimizations at build time during a `make profile-opt`. Some compilers and toolchains are known to not produce stable code when using LTO, be sure to test things thoroughly before relying on it. It can provide a few % speed up over `profile-opt` alone.



Adds validation of ucrtbase[d].dll version with warning for old versions.

Avoid error about nonexistent fileblocks.o file by using a lower-level check for st\_blocks in struct stat.

Fixing the build output folder for tix-8.4.3.6. Patch by Bjoern Thiel.

Update Windows builds to use OpenSSL 1.0.2g.

Compile Modules/\_math.c once, before building extensions. Previously it could fail to compile properly if the math and cmath builds were concurrent.

Added --pgo and --pgo-job arguments to PCbuild\build.bat for building with Profile-Guided Optimization. The old PCbuild\build\_pgo.bat script is now deprecated, and simply calls PCbuild\build.bat --pgo %\*.

Add support for building with ICC to configure, including a new --with-icc flag.

Fix installation of Python on UNIX with make -j9.

Update OS X 10.5+ 32-bit-only installer to build and link with OpenSSL 1.0.2h.

Update Windows builds to use OpenSSL 1.0.2f.

Support Apple Xcode 7's new textual SDK stub libraries.

Do not enable unreachable code warnings when using gcc as the option does not work correctly in older versions of gcc and has been silently removed as of gcc-4.5.

Updates make\_zip.py to correctly generate library ZIP file.

Update the prepare\_ssl.py script to handle OpenSSL releases that don't include the contents of the include directory (that is, 1.0.2e and later).

bdist\_wininst created binaries fail to start and find 32bit Python

Update the list of magic numbers in launcher

Excludes venv from library when generating embeddable distro.

Fix python-gdb.py: don't get C types once when the Python code is loaded, but get C types on demand. The C types can change if python-gdb.py is loaded before the Python executable. Patch written by Thomas Ilsche.

Fix the Freeze tool to properly use flags passed through configure. Patch by Daniel Shaulov.

Add dictionary unpacking support to Tools/parser/unparse.py. Patch by Guo Ci Teo.

Fix variable name typo in Argument Clinic.

Remove unused and outdated icons. (See also: <https://github.com/python/pythondotorg/issues/945>)