{^^}Thespian

Release Notes

Thespian

Python Actor System

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Thespian Project

TheDoc-06

PUBLIC DOCUMENT

Contents

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2.x

2.5

2.5.1 *<2015-12-16 Wed>*

- Fixed sourceload path handling: zipfiles use posix paths only, but running loaded sources on Windows with previous versions attempted to use Windows path specifications.

- Increased level of logging from sourceload failures to ERROR from INFO.

2.5.0 *<2015-12-16 Wed>*

- Allow value specification with the `@requireCapability` decorator.

- Add the `preRegisterRemoteSystem` and `deRegisterRemoteSystem` Actor API methods. These assist in identifying remote Actor Systems that might not normally have connectivity. These are most useful with the 'Outbound Only' capability (see below).

- Updated the TCP system base to persist and re-use open socket connections; previous versions would always close the socket after sending or recieving a single message. This change can increase network efficiency and reduce latency. This change is backward compatible with previous Thespian 2.x versions and will devolve into the older disconnecting-mode of operation.

- Added ~"Admin Routing": True~ capability specification (TCP system base only). The presence of this capability indicates that all traffic routed to any Actor on that Actor System must be forwarded via the Admin on that Actor System (Thespian handles the forwarding automatically when this capability is set). This configuration is useful when two Actor Systems are separated by firewalls that only allow a limited set of ports to communicate through the firewall; setting the Admin port to one of the firewall-allowed ports and setting the "Admin Routing" capability will route all traffic via the Admin (at a small performance penalty). Enabling this setting is *not* backward compatible with previous Thespian 2.x versions. This setting should be considered *Beta* functionality at this time.

- Added ~"Outbound Only": True~ capability specification (TCP system base only). The presence of this capability indicates that the current system cannot accept incoming connections. This setting implies ~"Admin Routing": True~ for this same system. This setting causes all Actor traffic to be routed through the Admin, and the Admin will open and leave open persistent connections to all remote Admins. This setting is useful where a firewall or VPN configuration will only allow outbound connections, but it incurs additional performance penalties and potential delays while an outbound connection is being re-established. Enabling this setting is *not* backward compatible with previous Thespian 2.x versions. This setting should be considered *Beta* functionality at this time.

- The "Thespian ActorSystem Version" for the TCP system base has been updated to "2" from "1" to indicate the above changes.

- All systems that have attempted to create an Actor will be remembered to avoid infinited creation loops.

- Logging updates and enhancements.

- Enhance shutdown by ensuring the exiting status is set before shutting down children to handle their responses appropriately and avoid race conditions.

- Show statistics values before labels in the status output for better readability.

- Design document updates.

- The simple system base now properly implements the `wakeupAfter()` delays. It will not hang if only wakeups are pending, but it will deliver them after at least the appropriate delay and relative to `tell()`, `ask()` and `listen()` timeouts.

- All `loadActorSource()` calls are ignored if there is no registered Source Authority. This changes the disposition of an Actor System to secure/protected by default.

2.4

2.4.4 *<2015-12-16 Wed>*

- Removed TCP connect timeout that overrode non-blocking mode.

- Fixed TCP address equality comparison when zero port specification compared. A port of zero matches any other port if the address portion is the same; previously this only worked for comparing to known local addresses, not arbitrary addresses when the port was 0.

- Fixed error text when using `tell()` with a bad Actor Address (previously identified the wrong call).

- Ensure Actor System `createActor()` calls are not aborted prematurely by leftover responses to previous operations (e.g. timeout-unclaimed `ask()` responses).

2.4.3 *<2015-11-18 Wed>*

- Ensured that PoisonMessage sending doesn't recurse indefinitely.

- Added a missing newline in status output formatting.

- Added a descriptive failure output messaging for IP-based address connection failures. This helps with common mistakes, such as specifying the "Admin Port" as a string instead of an integer.

- Fixed a bug where calling `ActorSystem().shutdown()` multiple times would throw an exception.

- Fixed a bug on multi-level import references (e.g. `import x.y.z`) in sources loaded by `loadActorSource()` operations.

- Fixed a bug where old actors checking in with a restarted ActorSystem caused exceptions.

- Fixed a TCP transport bug that caused transmits to be abandoned instead of being retried after the back-off timer expired.

- Updated default thespian.log logfile creation to honor `$TMPDIR` if it is set and only default to directing logging to `/tmp` if it is not set.

- Added internal `wait()` call for logger child process on shutdown to avoid defunct loggers.

- Removed a debug printf in the simpleSystemBase.

2.4.2 *<2015-10-26 Mon>*

- Delay thesplog location determination until usage to allow startup code to adjust location.

- Better daemonization of multiproc Admin on Unix.

- Ensure filenums to close is passed as a list not a Python3 iterator when creating multiproc children (bugfix).

2.4.1 *<2015-10-20 Mon>*

- Updated to allow packets not blocked on waiting for an address resolution to be sent even if previous packets are still waiting for that resolution.

- Fixed documentation uploads.

2.4.0 *<2015-10-18 Sun>*

- Add loadActorSource() and unloadActorSource() to Actor API (duplicating existing Actor System API functionality).

- Internal: use distributed importlib whenever possible.

- Fix stats response for Actor Systems for Python3.

- Allow optional error strings in reporting actor creation failures.

- Better capture and reporting of loaded source instantiation errors.

- Miscellaneous test and logging updates.

2.3

2.3.0 *<2015-10-04 Sun>*

- Added ActorTypeDispatcher enhanced base class to facilitate dispatching of received messages based on message type.

- Ensure exceptions occuring while writing to Thespian file log do not cause failures.

- Protect against exceptions occurring when comparing messages for equality.

- Updates to testActorSystemRestart.

- Update "Thespian Generation" common Capabilities to version (2,3). Previous 2.2.0 release erroneously did not update this value.

2.2

2.2.0 *<2015-09-27 Sun>*

- Fix internal links in Using Thespian document.

- Add support for multiple convention notification registrations.

- Allow ActorSystem logDefs to be specified as False to suppress any logging configuration; especially useful for test log capture modes.

- Better ActorSystem startup processing to distinguish between a re-specification of the current base and a new base, and added the transientUnique startup argument to get a plain instance (a non-global-singleton instance).

- Added missing description of the ActorSystem `shutdown()` operation in the Using Thespian document.

- Added ability to set the maximum thesplog logging file via the `THESPLOG_FILE_MAXSIZE` environment variable and changed the default to 50KB.

- Added Using Thespian documentation description of logging with the `THESPLOG_FILE` and `THESPLOG_FILE_MAXSIZE` environment variable controls.

2.1

2.1.6 *<2015-09-27 Sun>*

- Fix imports in tests and actors.py for multiple Python versions.

- Add missing timeout to test to prevent hang.

2.1.5 *<2015-09-20 Sun>*

- Adds support for Python 3.3 and Python 3.4 versions, including the use of the PyPy interpreter.

- Adds the `listen()` API call (`ask()` is `tell()` + `listen()`)

- Log Actor exception through normal logging channels as well as via Thespian internal logging output.

- The Thespian shell loads the TestActor via loadable sources.

- The simpleSystemBase will always apply default logging.

- The `loadActorSource()` call can now take a file-like object as well as a filename.

- Added the Thespian Developer's document.

- Added the Thespian In-Depth Introduction document.

- Added the Thespian Index (main pages) document.

- Added the Thespian Releases document.

- Internal updates to more gracefully handle shutdown scenarios and avoid impossible retransmits.

- Testing, documentation, and setup file updates.

2.1.4 Initial Public Release *<2015-08-31 Mon>*

The 2.1.4 Release represents the first publicly available release of Thespian. It includes the following features:

- System Bases: SimpleSystemBase, MultiprocTCPBase, MultiprocUDPBase, MultiprocQueueBase

- Support for Loadable Sources

2.0

The 2.0 Release was developed and used internally by GoDaddy.

1.x

The 1.x Release series was developed and used internally by GoDaddy