



Release Notes for OX Dovecot Pro

Minor Release v2.3.12

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1. Shipped Products and Versions

OX Dovecot Pro v2.3.12

Built on Dovecot Community Edition Core v2.3.12

Including Object Storage (obox) and Full Text Search (FTS) Plug-ins

Supported OS Distributions:

- [Amazon Linux 2](#)
- [CentOS 6.9, 7.8, 8.2](#)
- [RHEL 6.9, 7.4, 8.2](#)
- [Debian stretch \(9.13\), buster \(10\)](#)
- [Ubuntu 16.04 LTS \(xenial\), 18.04 LTS \(bionic\)](#)

Apache Cassandra Driver: [v2.13](#)

2. Release Highlights

Add support for [Zstandard](#) compression algorithm (RFC 8478)

This implementation is based on the IETF's RFC 8478. Support for Zstandard provides improved compression ratios for more efficient storage utilization. For more information see: https://doc.dovecot.org/configuration_manual/zlib_plugin/

Note: compression auto-detection support has also been added, allowing the compression algorithm to be changed in configuration on the fly and not requiring any kind of data migration.

Note: this feature adds a dependency on the zstd library. The library can be installed from OX Dovecot Pro 3rd party repositories or via your Linux distribution.

Metric and Global Event Filtering

Metric filter and global event filter variable syntax changed to a SQL-like format. Full documentation and upgrade information can be found at: https://doc.dovecot.org/configuration_manual/event_filter/

Note: old filter syntax is no longer valid and will cause Dovecot to error at start. Event filtering must be converted to the new format.

Summary of Highlights

- Support Zstandard (zstd) compression.
- Metric filter and global event filter variable syntax changed to a SQL-like format.
- Introduce a new dictmap setting (`cleanup-uncertain`) that tells Dovecot to attempt to handle uncertain writes to Cassandra.

3. Upgrade Information

Added settings:

- `login_proxy_max_reconnects` (Default: 3)
 - <https://doc.dovecot.org/settings/core/#login-proxy-max-reconnects>
- `login_proxy_timeout`
 - <https://doc.dovecot.org/settings/core/#setting-login-proxy-timeout>

Added fs-dictmap setting:

- `cleanup-uncertain`
 - https://doc.dovecot.org/configuration_manual/mail_location/obox/dictmap/

Added log categories:

- `fts`
- `fts-dovecot`

Removed settings:

- `fts_dovecot_filename_sizes`
- `obox_mailbox_list_quick_lookups`

New event filter string format (not backwards compatible):

https://doc.dovecot.org/configuration_manual/event_filter/

The init script for obox fscache cleaning was improved. See DOV-4139.

4. Known Issues

- Not all Dovecot 2.2.x logging has been converted to Dovecot 2.3.x events, so newer logging/metrics configuration will not work on these older log entries.

5. Detailed Changes

5.1. OX Dovecot Pro Core

- **IMPROVEMENT DOV-3803:** Add support for ZStandard compression algorithm (RFC 8478).
- **IMPROVEMENT DOV-3922:** imap/pop3/submission/managesieve proxying now supports reconnection retrying on more than just connect failure. Any error except a non-temporary authentication failure will result in reconnect attempts. Added `login_proxy_max_reconnects` setting (default 3) to control how many reconnections are attempted.

- **IMPROVEMENT DOV-3922:** Add `login_proxy_timeout` setting, which is the default if it is not overridden by the `proxy_timeout` `passdb` extra field.
- **IMPROVEMENT DOV-3925:** Support forwarding `passdb forward_*` fields from proxy to backend in LMTP. Since backend LMTP does not perform `passdb` lookup, the fields are added also to the `userdb` lookup.
- **IMPROVEMENT DOV-3928:** Metric filter and global event filter variable syntax changed to a SQL-like format. See https://doc.dovecot.org/configuration_manual/event_filter/
- **IMPROVEMENT DOV-3951:** Added "fts" and "fts-dovecot" log categories. Use them for `fts_dovecot` logging.
- **IMPROVEMENT DOV-4024:** `fs-compress` will now automatically detect used compression scheme when decompressing data.
- **ISSUE DOV-3803:** Fix various small issues in `lib-compression` algorithms.
- **ISSUE DOV-3867:** Dovecot v2.3 moved signal handlers around in `ioloops`, causing more CPU usage than in v2.2.
- **ISSUE DOV-3959:** When mail's size is different from the cached one (in `dovecot.index.cache` or Maildir `S=size` in the filename), this is handled by logging "Cached message size smaller/larger than expected" error. However, in some situations this also ended up crashing with: `Panic: file istream.c: line 315 (i_stream_read_memarea): assertion failed: (old_size <= _stream->pos - _stream->skip)`.
- **ISSUE DOV-3967:** IMAP NOTIFY can crash with a segmentation fault due to a bad configuration that causes errors. Sending the error responses to the client can cause the segmentation fault. This can for example happen when several namespaces use the same mail storage location.
- **ISSUE DOV-3968:** IMAP NOTIFY used on a shared namespace that doesn't actually exist (e.g. `public` namespace for a nonexistent user) can crash with a panic: `Panic: Leaked view for index /tmp/home/asdf/mdbox/dovecot.list.index: Opened in (null):0`.
- **ISSUE DOV-3986:** `dict` process used too much CPU when iterating keys, because each key used a separate `write()` syscall.
- **ISSUE DOV-3987:** v2.3 regression: Copying/moving mails was taking much more memory than before. This was mainly visible when copying/moving thousands of mails in a single transaction.
- **ISSUE DOV-4001:** `dict` client could have crashed in some rare situations when iterating keys.
- **ISSUE DOV-4011:** HTTP client connections: A race condition between connections becoming idle and new connections being set up could result in a panic.

- Panic: file http-client-queue.c: line 373
(http_client_queue_connection_attempt): assertion failed:
(http_client_peer_addr_cmp (&(*peer_idx)->shared->addr, addr) != 0)
- **ISSUE DOV-4018:** Auth-worker can crash with signal 11 when stopping Dovecot.
- **ISSUE DOV-4021:** fs-compress: Mitigate crashes when configuring a not compiled in compression. Errors with compression configuration now distinguish between not supported and unknown.
- **ISSUE DOV-4027:** Lua passdb/userdb leaks stack elements per call, eventually causing the stack to become too deep and crashing the auth or auth-worker process.
- **ISSUE DOV-4030:** POP3 login would fail with "Input buffer full" if the initial response for SASL was too long.
- **ISSUE DOV-4057:** Successive AUTH attempts fail in POP3 login.
- **ISSUE DOV-4099:** Fix deadlock with dovecot.index.cache / dovecot.index.log when mails are being expunged at the same time as lots of new content is being saved to the cache (e.g. cache file was lost and is being re-filled). v2.3.11 regression.
- **ISSUE DOV-4107:** Using xz/lzma compression in v2.3.11 could have written truncated output in some situations. This would result in "Broken pipe" read errors when trying to read it back.
- **ISSUE DOV-4143:** dovecot.index.cache file was being purged (rewritten) too often when it had a field that hadn't been accessed for over 1 month, but less than 2 months. Every cache file change caused a purging in this situation. v2.3.11 regression.

5.2. Object Storage (obox) Plug-in

- **IMPROVEMENT DOV-3889:** fs-dictmap (obox/Cassandra): Introduce a new dictmap setting (`cleanup-uncertain`) that tells Dovecot to attempt to handle uncertain writes to Cassandra by reverting them.
 - If a newly written file is uncertainly written to Cassandra, attempt to delete it. If that succeeds, delete the object from object storage.
 - If a Cassandra write during copying a file fails uncertainly, try to delete the newly written Cassandra keys. Copying never attempts to delete anything from object storage.
- **IMPROVEMENT DOV-4139:** Improved fscache cleanup in init scripts. Cleaning happens during Dovecot startup, if the shutdown was not done cleanly, e.g. the server crashed. Without cleaning the cache might contain partially written, corrupted files.
 - The script now detects fscache path definitions from `obox_fs` and `fts_dovecot_fs` in a more reliable way.

- Paths using %variable are truncated and then wildcarded, to find all possible directories.
 - Directories are only removed if they contain a fscache.log file.
- **CHANGE DOV-3842:** Removed `obox_mailbox_list_quick_lookups` setting. It never worked the way it was intended to work.
- **ISSUE DOV-3857:** Fix a crash if an empty object name is returned while listing objects. It should log a warning instead.
- **ISSUE DOV-4007:** fs-[aws-]s3: Fixed bulk deletion with S3 which did not work if the URL contained a non-empty prefix (i.e. [http://s3.example.com/prefix/]). This mainly happened in the `fts_dovecot_fs` setting and caused FTS objects not to be deleted.
- **ISSUE DOV-4127:** Metacache rescan (by default done once a day) changed all disk usage tracked by metacache to priority 0. This caused metacache cleaning algorithm to work inefficiently.
- **ISSUE DOV-4132:** Metacache rescanning on background (`metacache_rescan_interval`) was unnecessarily refreshing each user's indexes when opening them. This caused the rescan to take longer time than necessary and use more object storage or Cassandra operations.

5.3. Full Text Search (fts) Plug-in

- **CHANGE DOV-3952:** Removed `fts_dovecot_filename_sizes` setting. It is now always "yes".

5.4. Pigeonhole (sieve) Plug-in

- **ISSUE DOV-3972:** The "duplicate" test is handled badly in a multiscript (`sieve_before`, `sieve_after`) scenario in which an earlier script in the sequence with a duplicate test succeeds, while a later script causes a runtime failure. In that case, the message is recorded for duplicate tracking, while the message may not actually have been delivered in the end. The "duplicate" test should not record the duplicate until the whole script sequence executed successfully. This may cause duplicate encounters to be ignored erroneously, but will prevent loss of deliveries, which is more important.
- **ISSUE DOV-4046:** For some Sieve commands the provided mailbox name is not properly checked for UTF-8 validity, which can cause assert crashes at runtime when an invalid mailbox name is encountered. This can be caused by the user by writing a bad Sieve script involving the affected commands ("`mailboxexists`", "`specialuse_exists`"). This can be triggered by the remote sender only when the user has written a Sieve script that passes message content to one of the affected commands.

- **ISSUE DOV-4048:** Sieve interpreter enters infinite loop at startup when the "editheader" configuration lists an invalid header name. This problem can only be triggered by the administrator.
- **ISSUE DOV-4049:** The Sieve relational extension can cause a segfault at compile time. This is triggered by invalid script syntax. The segfault happens when this match type is the last argument of the test command. This situation is not possible in a valid script; positional arguments are normally present after that, which would prevent the segfault.

5.5. Intercept (intercept) Plug-in

No Changes

6. Tests

The QA team has successfully verified all issue fixes that could be reproduced within a lab environment.

To avoid side effects, the shipped packages have gone through automated regression test on both, a Continuous Integration System and a dedicated server setup for system and integration testing.

All changes have been checked for potential side-effects and effect on behavior. Unless explicitly stated within this document, we do not expect any side-effects.

7. Repository Information

For details of how to install and update OX Dovecot Pro, please refer to the instructions at:

https://doc.dovecot.org/installation_guide/dovecot_pro_releases/repository_guide/.