



Release Notes for OX Dovecot Pro

Minor Release v2.3.5

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1. Shipped Products and Versions

OX Dovecot Pro v2.3.5

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

Supported OS Distributions:

- [Amazon Linux 2](#)
- [CentOS/RHEL 6.9, 7.6](#)
- [Debian jessie \(8.11\), stretch \(9.7\)](#)
- [Ubuntu 16.04 LTS, 18.04 LTS](#)

2. Release Highlights

This release introduces Dovecot FTS prefix searching support. When enabled, search queries executed by Dovecot on FTS data will match the beginning of words.

Example: with prefix search enabled, searching for “cat” will match “cat” and “category” but not “tomcat”.

Enabling prefix search does not require the existing FTS indexes to be refreshed or re-indexed. However it is currently not supported nor recommended to use prefix search on indexes generated with the snowball stemming filter enabled. Prefix search remains off by default and can be enabled via the `fts_dovecot_prefix` plugin setting (see below).

Highlights:

- FTS prefix search added
- Eliminated unnecessary obox metacache uploads for unimportant changes in POP3
- FTS indexes can now be uploaded every N new emails, which helps to avoid excessive FTS reindexing when user changes the backend without flushing.
- Add support for Ubuntu 18.04 LTS; drop support for Ubuntu 14.04 LTS

3. Upgrade Instructions

- `fts_dovecot_prefix` plugin setting added [FTS; see DOV-2533]:

```
Specifies prefix search behavior. May not work with some filters. The possible values are:  
yes           Equivalent to "1-255"  
<num>- [<num>] Search strings with this length will be treated as prefixes (e.g. "4-", "3-10"); this SHOULD be 3+, as lower values will result in too many matches and increased CPU usage  
no           No prefix searching is performed (default)
```

- `fts_dovecot_mail_flush_interval` [FTS; see DOV-2579]
 - Recommend setting to 10
- Other plugin settings added:
 - `fts_dovecot_min_merge_1_file_size` [FTS; see DOV-2579].

- `imapsieve_expunge_discarded` [Pigeonhole; see DOV-2802].

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.
- HTTP storage connection problems can lead to panics (`http-client-queue.c: line 518 (http_client_queue_connection_failure): assertion failed: (queue->cur_peer == peer)`). [DOV-2786]

5. Detailed Changes

5.1. Dovecot Pro Core

- **IMPROVEMENT DOV-2545:** Submission server: Avoid forwarding 500 and 502 VRFY replies to client.
 - These are in fact non-standard for VRFY and indicate that VRFY support is disabled, which is not allowed by the specification. Instead, we now substitute the default 252 response.
- **IMPROVEMENT DOV-2547:** Implement support for submission plugins.
 - These plugins can access, modify and amend the SMTP protocol exchange, the SMTP transaction, and the submitted message itself.
- **IMPROVEMENT DOV-2654:** Multiple auth policy server improvements:
 - When `auth_policy_log_only=yes`, only log what the policy server response would do instead of sending request to the auth policy server.
 - Policy server decisions are always logged when `auth_verbose=yes`.
- **IMPROVEMENT DOV-2781:** Lua push notification driver: mail keywords and flags are provided in MessageNew and MessageAppend events.
- **ISSUE DOV-2648:** Login processes may have crashed when `login_proxy_max_disconnect_delay` setting was non-zero and client disconnected while the login process was still waiting to disconnect it. The crashes could have been visible in various ways, including:
 - Panic: `epoll_ctl(del, 18) failed: Bad file descriptor`
 - Panic: `file ioloop.c: line 86 (io_add): assertion failed: (fd >= 0)`
 - Panic: `io_add(0x1) called twice fd=17, callback=0x7fb039a122f0 -> 0x7fb039a0c8b0`
- **ISSUE DOV-2655:** Maildir does not finish output stream with zlib plugin if saving a mail has failed, which leads to assert crash: Panic: `file ostream-zlib.c: line 37 (o_stream_zlib_close): assertion failed: (zstream->ostream.finished || zstream->ostream.ostream.stream_errno != 0 || zstream->ostream.error_handling_disabled)`.

- **ISSUE DOV-2676:** Log output from doveadm log errors did not contain user/session information.
- **ISSUE DOV-2705:** HTTP client: When the DNS lookup for a hostname fails, the HTTP client sometimes crashes: Panic: file ./http-client-private.h: line 672 (http_client_host_get_ip): assertion failed: (idx < host->shared->ips_count).
- **ISSUE DOV-2706:** The submission service can issue XCLIENT command lines larger than 512 bytes to the relay MTA. This is prohibited in the specification of this non-standard protocol capability and Postfix rejects such commands. The XCLIENT is supposed to be split into several smaller commands in that case.
- **ISSUE DOV-2707:** lmtpl, submission: Parsing ORCPT parameter for RCPT TO could have caused crashes. Because Dovecot doesn't currently advertise the DSN extension, this could have happened only with custom client code that was forcibly using the ORCPT parameter.
- **ISSUE DOV-2708:** submission service: A second syntactically invalid BURL command causes a crash: Panic: Input stream <mail-file> unexpectedly has references.
- **ISSUE DOV-2710:** Segfault crash occurs when an SMTP client transaction times out. This applies to any situation in which Dovecot acts as an SMTP client, such as for LMTP proxying, Submission, and messages sent by Sieve using SMTP.
- **ISSUE DOV-2726:** If auth process had died/crashed just before login process exited, it may have caused login process to crash with Panic: Timeout leak: 0x55dd20160f40 (auth-server-connection.c:397).
- **ISSUE DOV-2807:** When process was directly logging to a file (dovecot-lda or using other services using -L parameter), the log prefix may have become slightly corrupted. This mainly meant that with debug logging enabled, the "Debug: " string could have been inserted in the middle of the text in the log prefix.
- **ISSUE DOV-2859:** LMTP proxying may sometimes crash with: Panic: file ostream-dot.c: line 208 (o_stream_dot_sendv): assertion failed: ((size_t)ret == sent + added).
- **ISSUE DOV-2893:** Fix doveadm force-resync command to restore folders missing from dovecot.index.list.
- **ISSUE DOV-2963:** Seekable istream was not set blocking after reaching EOF, which caused dovecot to assert crash for example when using a combination of imapsieve + vnd.dovecot report extension + zlib plugin + obox: Panic: file ostream.c: line 427 (o_stream_nsend_istream): assertion failed: (istream->blocking)

5.2. Object Storage (obox) Plug-in

- **IMPROVEMENT DOV-2878:** obox-user-iter.sh: Added optional storage username parameter, in case it differs from the userdb username.
- **ISSUE DOV-2785:** Fix event leak when failing to create storage.
- **ISSUE DOV-2788:** fs-azure: Fix copying mails. The copy PUT requests were failing with: 403 Server failed to authenticate the request. Make sure the value of Authorization header is formed correctly including the signature.
- **ISSUE DOV-2851:** For POP3, when mailbox size was \geq obox_max_rescan_mail_count any changes were marked as being important, causing unnecessary index bundle uploads.
 - Fixed by not marking changes as important unnecessarily.

5.3. Full Text Search (fts) Plug-in

- **IMPROVEMENT DOV-2533:** Add support for prefix search to dovecot FTS.
- **IMPROVEMENT DOV-2579:** Multiple fts-cache fixes:
 - Added `fts_dovecot_min_merge_l_file_size` plugin setting (default 128 kB). When the fts.L in local cache grows larger than this, the file is uploaded to object storage.
 - Added `fts_dovecot_mail_flush_interval` setting (default 0 = never). Upload locally cached FTS indexes to object storage every N new emails. This reduces the number of emails that must be read after backend failure to update the FTS indexes, but at the cost of doing more writes to object storage.
- **ISSUE DOV-2685:** After failed FTS triplet uploads FTS cache may have ended up in a state where triplets were being uploaded to object storage without being merged. This resulted in a lot of tiny triplets being stored to object storage.
- **ISSUE DOV-2685:** When FTS triplets were in a specific internal state, indexer-worker may have failed to merge the created new triplet: Fatal: pool_system_realloc(549755813888): Out of memory.

5.4. Pigeonhole (sieve) Plug-in

- **IMPROVEMENT DOV-2802:** Add new `imapsieve_expunge_discarded` plugin setting which causes messages discarded by an IMAPSIEVE script to be expunged immediately (value: `yes`), rather than only being marked as "Deleted" (value: `yes`; default behavior).
- **ISSUE DOV-2575:** Keywords were not changed when sieve script was supposed to delete all the mail's keywords.
- **ISSUE DOV-2657:** zimbra-compatible plugin: The zimbra "notify" sieve action copies the "Sender", "Date" and "Message-ID" headers when instructed to

copy all headers. Only provide default values when these headers are missing, rather than overriding them with new values always.

- **ISSUE DOV-2693:** The maximum size of Sieve variables is enforced by truncating the variable string content bluntly at the limit, but this does not consider UTF-8 code point boundaries. This results in broken UTF-8 strings. This problem also applies to variable modifiers, such as the ":encodeurl" modifier provided by the Sieve "enotify" extension. In that case, the resulting URI escaping can also be truncated inappropriately.
- **ISSUE DOV-2709:** IMAPSieve: When a COPY command copies messages from a virtual mailbox, a crash occurs when the source messages originate from more than a single real mailbox: Panic: file imap-sieve-storage.c: line 337 (imap_sieve_add_mailbox_copy_event): assertion failed: (ismt->src_box == NULL || ismt->src_box == src_mail->box).
- **ISSUE DOV-2802:** Sieve scripts running in IMAPSIEVE or IMAP FILTER=SIEVE context that modify the message, store the message a second time, rather than replacing the originally stored unmodified message.
 - Fixed by discarding the original unmodified message when Sieve script stores a modified version of the message.
- **ISSUE DOV-2834:** A symbol defined by the sieve_extprograms plugin (for the Sieve interpreter) clashes with the imap_filter_sieve plugin (for IMAP), which causes a segmentation fault at runtime when both these plugins are loaded.
 - Fixed by renaming several symbols by adding a prefix in sieve_extprograms to prevent this problem and any other potential symbol clashes.

5.5. OX Engage (imap-injection) Plug-in

- **ISSUE DOV-2823:** Using the "firstsaved" or "all" field for doveadm mailbox status on a folder with imap-injection enabled failed with BUG: Unknown internal error.

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.