



Release Notes for OX Dovecot Pro

Minor Release v2.3.18

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1. Shipped Products and Versions

OX Dovecot Pro v2.3.18

Built on Dovecot Community Edition Core v2.3.18

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

Supported OS Distributions:

- [Amazon Linux 2](#)
- [CentOS 7.9](#)
- [RHEL 7.4, 8.2](#)
- [Debian buster \(10\), bullseye \(11\)](#)
- [Ubuntu 18.04 LTS \(bionic\), 20.04 LTS \(focal\)](#)

Apache Cassandra Driver: [v2.16.0](#)

2. Release Highlights

This is a maintenance release of OX Dovecot Pro v2.3 branch, which contains optimizations, bug fixes, and minor feature additions.

CPU Optimizations

Various optimizations that significantly reduce CPU usage with certain configurations:

- Reduced CPU usage significantly for some operations that accessed lots of emails (e.g. fetching all flags in a folder, SORT, ...)
- Removed expensive events that provided minimal informational benefit.
- Initialize the textcat language detection library only once per process.
- Dovecot FTS: reduce CPU usage when reading fts.W files.

FTS Indexing Improvements

Inline base64 encoded content is no longer indexed using the generic FTS tokenizer. This reduces the FTS index sizes by removing input that is very unlikely to be searched for. See https://doc.dovecot.org/configuration_manual/fts/tokenization for details on how base64 is detected.

Additionally, added `fts_header_excludes` and `fts_header_includes` settings to specify which headers to index. This can significantly reduce resources needed. See: https://doc.dovecot.org/settings/plugin/fts-plugin/#plugin_setting-fts-fts_header_excludes.

Events: Reason Codes

Events now have a "reason_code" field, which can provide a list of reasons why the event is happening. See: https://doc.dovecot.org/admin_manual/event_reasons/.

Distribution Support Changes

This release adds support for Debian Bullseye (11).

This release drops support for Debian Stretch (9) and CentOS 8.

See

https://oxpedia.org/wiki/index.php?title=Dovecot:Version_Support_Commitment#OS_Distribution_Support for details on OS Distribution support.

Summary of Highlights

- Various CPU usage optimizations.
- FTS indexing: ignore inline base64 content when FTS indexing; allow headers to be excluded from indexing.
- Add reason codes to events.
- Add support for Debian Bullseye (11) and drop support for Debian Stretch (9) and CentOS 8.

3. Upgrade Information

Added events (see https://doc.dovecot.org/admin_manual/list_of_events/):

- `http_server_request_started`
- `http_server_request_finished`
- `proxy_session_started`
- `proxy_session_established`
- `proxy_session_finished`

Changed events:

- `smtp_server_command_started`
 - Includes a `cmd_args` field that contains the SMTP command's arguments
- `smtp_server_command_finished`
 - Includes a `cmd_args` field that contains the SMTP command's arguments

Removed events:

- `mail_cache_lookup_finished`

New settings:

- `lmtp_verbose_replies`
 - See: https://doc.dovecot.org/settings/core/#core_setting-lmtp_verbose_replies
- `fts_header_excludes`
 - See: https://doc.dovecot.org/settings/plugin/fts-plugin/#plugin_setting-fts-fts_header_includes
- `fts_header_includes`
 - See: https://doc.dovecot.org/settings/plugin/fts-plugin/#plugin_setting-fts-fts_header_excludes

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-4225:** Events now have a "reason_code" field, which can provide a list of reasons why the event is happening. See: https://doc.dovecot.org/admin_manual/event_reasons/.
- **IMPROVEMENT DOV-4717:** New events added for HTTP server operations: `http_server_request_started` and `http_server_request_finished`.
- **IMPROVEMENT DOV-4729:** LMTP session IDs are now preserved through proxied connections, so LMTP sessions can be tracked. This slightly changes the LMTP session ID format by appending ":Tn" (transaction), ":Pn" (proxy connection), and ":Rn" (recipient) counters after the session ID prefix.
- **IMPROVEMENT DOV-4736:** Added events for imap/pop3/managesieve/submission proxy connections: `proxy_session_started`, `proxy_session_established`, and `proxy_session_finished`.
- **IMPROVEMENT DOV-4785:** Don't index inline base64 encoded content in FTS indexes using the generic tokenizer. This reduces the FTS index sizes by removing input that is very unlikely to be searched for.
- **IMPROVEMENT DOV-4844:** The `smtp_server_command_started` and `smtp_server_command_finished` events now include a `cmd_args` field that contains the SMTP command's arguments.
- **IMPROVEMENT DOV-4845:** Support implicit SASL EXTERNAL with `submission_client_workarounds=implicit-auth-external`. This allows automatically logging in when SSL client certificate is present.
- **IMPROVEMENT DOV-4914:** Added new `lmtp_verbose_replies` setting that makes errors sent to the LMTP client much more verbose with details about why exactly backend proxy connections or commands are failing.
- **IMPROVEMENT DOV-4934:** Reduced CPU usage significantly for some operations that accessed lots of emails (e.g., fetching all flags in a folder, SORT, ...). v2.3 regression.

- **IMPROVEMENT DOV-4951:** Added `fts_header_excludes` and `fts_header_includes` settings to specify which headers to index.
- **IMPROVEMENT DOV-4957:** Initialize the textcat language detection library only once per process. This can reduce CPU usage if `fts_languages` setting has multiple languages listed and `service indexer-worker { service_count }` isn't 1.
- **CHANGE DOV-4946:** Removed `mail_cache_lookup_finished` event. This event wasn't especially useful, but it increased CPU usage significantly.
- **ISSUE DOV-4528:** Searching headers in virtual folders didn't always use full-text search indexes if `fts_enforced=no` or `body`.
- **ISSUE DOV-4594:** Mailbox vsize calculation crashed with `imapc`.
 - *Fixes:* Panic: file `index-mailbox-size.c`: line 344 (`index_mailbox_vsize_hdr_add_missing`): assertion failed: (`mails_left > 0`)
- **ISSUE DOV-4671:** Unnamed events were wrongly filtered out for event/metric filters like `"event=abc OR something_independent_of_event_name"`.
- **ISSUE DOV-4745:** Using email-address `fts` tokenizer could result in excessive memory usage with garbage email input. This could cause the `indexer-worker` processes to fail due to reaching the VSZ memory size limit.
- **ISSUE DOV-4749:** Fixed crash if `zlib_save_level` setting was specified, but `zlib_save` was unset. v2.3.15 regression.
- **ISSUE DOV-4763:** `imap`: LIST-EXTENDED doesn't return STATUS for all folders. Sending `"LIST .. RETURN (SUBSCRIBED STATUS (...))"` did not return STATUS for folders that are not subscribed when they have a child folder that is subscribed as mandated by IMAP RFCs.
- **ISSUE DOV-4782:** A SEARCH IMAP command timing out while `fts` returns indexes may timeout returning `"NO [SERVERBUG]"`, while it should return `"NO [INUSE]"` instead.
- **ISSUE DOV-4820:** `submission-login` process can crash if HELO is pipelined with an invalid domain.
- **ISSUE DOV-4823:** `old_stats` plugin kept increasing memory usage, which became noticeable with long-running `imap` sessions.
- **ISSUE DOV-4838:** If virtual mailbox opening fails, the backend mailbox is leaked and process crashes when client disconnects.
 - *Fixes:* Panic: file `mail-user.c`: line 232 (`mail_user_deinit`): assertion failed: (`(*user)->refcount == 1`).

- **ISSUE DOV-4848:** Ima/Imtp: Envelope sender string may become corrupted when Sieve scripts are using `vnd.dovecot.filter`. This could end up corrupting mbox's From line and return wrong envelope sender string in Sieve tests
- **ISSUE DOV-4860:** HAProxy header parsing has read buffer overflow if provided header size is invalid. This happens only if `inet_listener { haproxy=yes }` is configured and only if the remote IP address is in `haproxy_trusted_networks`.
- **ISSUE DOV-4900:** With `auth_cache_verify_password_with_worker=yes`, `passdb` extra fields in the auth cache got lost.
- **ISSUE DOV-4903:** Dovecot submission service would crash if relay server authentication failed.
- **ISSUE DOV-4910:** “`doveadm stats add --group-by <parameter>`” didn't work.
- **ISSUE DOV-4936:** “`doveadm sync`” `-a`, `-e`, `-O`, and `-l` parameters were accidentally removed. Also, `dsync` wrapper didn't work. v2.3.17 regression.
- **ISSUE DOV-4944:** Authentication master user login fails with SCRAM-* SASL mechanisms.
- **ISSUE DOV-5058:** `doveadm` proxying can panic when flushing print output. v2.3.17 regression.
 - *Fixes:* Panic: file `ioloop.c`: line 865 (`io_loop_destroy`): assertion failed: (`ioloop == current_ioloop`)
- **ISSUE DOV-5061:** `indexer` process was slowly leaking memory for each indexing request.
- **ISSUE DOV-5151:** Proxying OAUTH2 login with `submission-proxy` failed due to too long line.

5.2. Object Storage (obox) Plug-in

- **IMPROVEMENT DOV-4882:** Include `fts` expunged log (`fts.Y*`), `fts` stats file (`fts.S*`) and `dovecot-acl-list` in user root bundle. These may help to optimize performance by avoiding the need to recreate the files the slow way.
- **ISSUE DOV-4727:** Delete `cache/index/log` files that are too small to be valid. This removes repeating “Index file ... is too small” errors.

5.3. Full Text Search (fts) Plug-in

- **ISSUE DOV-4215:** A corrupted FTS.L file causes panic during index merging and prevents further attempts to recover.
 - *Fixes:* Panic: file fts-file-cache.c: line 363 (fts_cache_make_file_path): assertion failed: (size != FTS_STATS_UNKNOWN)
- **ISSUE DOV-4975:** Reduce CPU usage when reading fts.W files.

5.4. Pigeonhole (sieve) Plug-in

- **ISSUE DOV-4783:** Sieve interpreter crashes when a Sieve script uses zero number as the :index tag.
- **ISSUE DOV-4877:** ManageSieve proxy didn't support forwarding the `forward_*` passdb fields.
- **ISSUE DOV-4915:** Users without a home directory can crash with Sieve when using duplicate database. v2.3.17 regression.

5.5. Intercept (intercept) Plug-in

No Changes

5.6. Virtual Attachments (virtual_attachments) Plug-in

No Changes

5.7. Unified Quota (unified_quota) 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/.