Release Notes for OX Dovecot Pro Minor Release v2.3.9.2

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1. Shipped Products and Versions

OX Dovecot Pro v2.3.9.2
Including Object Storage (obox) and Full Text Search (FTS) Plug-ins

Supported OS Distributions:
- Amazon Linux 2
- CentOS 6.9, 7.7
- RHEL 6.9, 7.4
- Debian stretch (9), buster (10)
- Ubuntu 16.04 LTS (xenial), 18.04 LTS (bionic)

2. Release Highlights

This release primarily focuses on hardening and stability of the Dovecot 2.3.x branch.

NOTE: Dovecot Community Edition v2.3.9 contained a security vulnerability (CVE-2019-19722). This vulnerability does not affect **any** version of Dovecot Pro.

License Checking

As of this release, Dovecot Pro processes no longer check the local license file for validity. It is no longer necessary to install and maintain the license file on Dovecot Pro machines.

Removal of the license checks does not change any terms of the Dovecot Pro software license agreement.

Note that different automated license checks may be implemented in a future version of Dovecot Pro.

Repository Changes

This release is distributed from a new repository location. The change of location was made for the convenience of licensed users of all Open-Xchange software and enables a unified experience of repository access credentials

The new repository location for supported distributions is listed at
https://doc.dovecot.org/installation_guide/dovecot_pro_releases/dovecot-2.3.9.2-rev1/.

For any questions or difficulties in accessing the new repositories, please visit
https://www.open-xchange.com/customer-portal/.

Summary of Highlights

- Libunwind support (provides more complete backtraces on aborts for debugging purposes)
- Re-use Cassandra prepared statements across all users
- Scality CDMI listing improvements for large mailboxes
- "special-use" Sieve extension implemented (RFC 8579)
- Support SSL/STARTTLS for proxied doveadm connections

- Upgraded Kuromoji library (significantly decreases memory usage when parsing Japanese text)

3. Upgrade Instructions

- Dovemon delay settings [core; see DOV-2942]
    - o Added `use_delayed_down`, `delayed_down_delay`, and `delayed_down_limit` settings.
- Scality CDMI use_listing setting [obox; see DOV-3442]
    - o Added `use_listing` URL parameter
- LMTP client workaround settings [core; see DOV-3487]
    - o Added `lmtp_client_workarounds` setting.
- Logging service:name filter [core; see DOV-3534]
- Various event parameters changed [core; see DOV-2898, DOV-3567, DOV-3641, DOV-3654 for specific details]
    - o See http://doc.dovecot.net/admin_manual/list_of_events.html for an updated list of available events.
- Lua push notification changes [core; see DOV-3642]
    - o "subject" field is now decoded to UTF-8.
    - o Added "`from_address`", "`from_display_name`", "`to_address`" and "`to_display_name`" fields (UTF-8).

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.   Dovecot Pro Core

- **IMPROVEMENT DOV-2767**: Removed dependency on license product.

- **IMPROVEMENT DOV-2942**: Add new feature for Dovemon to delay marking backends as down.
    - When enabled, if Dovemon detects that a backend is down it puts the backend into down-queue instead of marking it down immediately. Then after duration specified by `delayed_down_delay` setting (in seconds) it will perform a check: if number of backends queued down and number of backends already down is more than `delayed_down_limit` then only log backend failure. Otherwise, mark backend down.
    - Added configuration options (with default settings):
        - `use_delayed_down`: false
        - `delayed_down_delay`: 120 (seconds)
        - `delayed_down_limit`: 2

- **IMPROVEMENT DOV-3040**: Use libunwind to get abort backtraces with function names where available.

- **IMPROVEMENT DOV-3286**: dict-sql wasn't sharing SQL prepared statements between sessions. This resulted in creating a lot of prepared statements, which was especially inefficient when using Cassandra backend with a lot of Cassandra nodes.
    - Fixed by moving the prepared statements cache to the generic SQL code, so it could be used outside dict-sql as well.

- **ISSUE DOV-3369**: Submission service could be configured to allow anonymous authentication mechanism and anonymous user access.

- **IMPROVEMENT DOV-3393**: Add `lmtp_add_received_header` setting. It can be used to prevent LMTP from adding "Received:" headers.

- **CHANGE DOV-3443**: Drop Postfix socketmap support from auth. It hasn't been working with recent Postfix versions for a while now.

- **ISSUE DOV-3485**: Dovecot lda/lmtp rejected invalid MAIL FROM addresses too aggressively. Now mails from addresses with unicode characters are delivered, but their Return-Path header will be <> instead of the given MAIL FROM address.

- **IMPROVEMENT DOV-3487**: Add `lmtp_client_workarounds` setting to implement workarounds for clients that send MAIL and RCPT commands with additional spaces before the path and for clients that omit <> brackets around the path. See `example-config/conf.d/20-lmtp.conf`.

- **IMPROVEMENT DOV-3512**: Dovecot Submission Server binaries have been split into dovecot-ee-submissiond package on Debian/Ubuntu distributions.

  - Starting from 2.3.9 files related to Dovecot Submission Server are moved to new dovecot-ee-submissiond sub-package to match Community Edition release packages.
  - When upgrading to version 2.3.9, dovecot-ee-submissiond package will be installed automatically as dependency of dovecot-ee-core to make upgrade work smoothly.
  - Starting from 2.3.10 dovecot-ee-submissiond dependency will be removed.

- **ISSUE DOV-3531**: imap-hibernate process crashed when client got destroyed while it was attempted to be unhibernated, and the unhibernation fails.

- **IMPROVEMENT DOV-3534**: Log filters now support "`service:<name>`", which matches all events for the given service. It can also be used as a category.
  - Example: "`log_debug = service:auth`" logs all debug messages by the auth process.

- **ISSUE DOV-3535**: When login processes are flooded with authentication attempts it starts logging errors about "Authentication server sent unknown id". This is still expected. However, it also caused the login process to disconnect from auth server and potentially log some user's password in the error message.

- **ISSUE DOV-3542**: `auth_request_finished` event didn't have `success=yes` parameter set for successful authentications.

- **ISSUE DOV-3543**: userdb dict: Trying to list users crashes with Panic: file userdb-dict.c: line 123 (userdb_dict_get_user): assertion failed: (strncmp(key, ctx->key_prefix, ctx->key_prefix_len) == 0).

- **IMPROVEMENT DOV-3546**: Added "`passdb_id`" parameter to `auth_passdb_request_finished` and `auth_userdb_request_finished` events.

- **ISSUE DOV-3546**: When using multiple passdbs, only the first passdb's `auth_passdb_request_finished` had `result=ok`. The others were returning `result=password_mismatch` even though they were successfully used.

- **ISSUE DOV-3547**: IMAP FILTER command had various bugs in error handling: Errors may have been duplicated for each email; errors may have been missing entirely; command tag and ERRORS/WARNINGS parameters were swapped.

- **ISSUE DOV-3548**: Several "input streams" had a bug that in some rare situations might cause it to access freed memory. This could lead to crashes or corruption.
  - The only currently known effect of this is that using zlib plugin with external mail attachments (`mail_attachment_dir`) could cause fetching the mail to return a few bytes of garbage data at the beginning of the header. Note that the mail wasn't saved corrupted, but fetching it caused corrupted mail to be sent to the client.

- **ISSUE DOV-3558**: Corrupted dovecot.list.index with LAYOUT=index can cause folder creation to Panic: file mailbox-list-index-backend.c: line 312 (index_list_mailbox_create_selectable): assertion failed:

(guid_128_is_empty(rec.guid)).

- **ISSUE DOV-3562**: If TLS handshake to next server failed during proxying, login process could crash due to invalid memory access.

- **IMPROVEMENT DOV-3566**: When the LMTP proxy changed the username (from passdb lookup), add an appropriate ORCPT parameter.

- **ISSUE DOV-3567**: `imap_command_finished` event's "`args`" and "`human_args`" parameters were always empty.

- **CHANGE DOV-3567**: Added "`cmd_`" prefix for IMAP command event's parameters: `cmd_tag`, `cmd_name`, `cmd_args`, `cmd_human_args`.

- **ISSUE DOV-3578**: v2.3 regression: Using SASL authentication without initial response may have caused SSL connections to hang. This happened often at least with PHP's IMAP library.

- **ISSUE DOV-3580**: Seeking in zlib and bzip2 compressed input streams didn't work correctly.
    - o   Fixes at least opening compressed mbox files.

- **ISSUE DOV-3581**: Login proxying may have crashed if SSL handshake to the backend failed immediately. This was unlikely to happen in normal operation.

- **IMPROVEMENT DOV-3583**: Support SSL/STARTTLS for proxied doveadm connections based on `doveadm_ssl` setting and proxy ssl/tls settings.

- **ISSUE DOV-3601**: The `lmtp_hdr_delivery_address` setting is ignored by the lmtp service.

- **ISSUE DOV-3606**: Remote dsync started hanging if the initial doveadm "dsync-server" command was sent in the same TCP packet as the following dsync handshake.
    - o   This started happening often since v2.3.8 due to ostream corking changes, but it might have been possible earlier as well.

- **ISSUE DOV-3609**: stats: received duplicate category's registration triggers an assertion: Panic: file lib-event.c: line 553 (event_category_register): assertion failed: (event_category_find_registered(category->name) == NULL).

- **ISSUE DOV-3611**: Copying mails didn't copy the "vsize" record in the dovecot.index to the destination folder. With quota enabled this could have caused opening each copied mail's body to get its size.
    - o   Usually this didn't happen because there are other ways to get the mail's size from dovecot.index.cache.

- **ISSUE DOV-3614**: If a mail only has quoted content, use the quoted text for generating message snippet (IMAP PREVIEW) instead of returning empty snippet.

- **ISSUE DOV-3619**: When vsize header was rebuilt, newly calculated message sizes were added to dovecot.index.cache instead of being directly saved into vsize records in dovecot.index.

- **ISSUE DOV-3625**: doveadm HTTP server crashes if request target starts with double "/", e.g. "//index.html".

- **ISSUE DOV-3637**: JSON generator was escaping UTF-8 characters unnecessarily.
    - o Escaping of U+2028 and U+2029 characters was kept to avoid conflicts with some parsers which interpret them as CR-LF.

- **CHANGE DOV-3641**: Changed several event field names for consistency and to avoid conflicts in parent-child event relationships:
    - o SMTP server command events: Renamed "name" to "`cmd_name`"
    - o Events inheriting from a mailbox: Renamed "name" to "`mailbox`"
    - o Server connection events have only "`remote_ip`", "`remote_port`", "`local_ip`" and "`local_port`". Removed duplicate "`client_ip`", "`ip`" and "`port`".
    - o Mail storage events: Removed "`service`" field. Use "`service:<name>`" category instead. (see DOV-3534)
    - o HTTP client connection events: Renamed "`host`" to "`dest_host`" and "`port`" to "`dest_port`"

- **IMPROVEMENT DOV-3641**: Added various new fields to existing events. See http://doc.dovecot.org/admin_manual/list_of_events/.

- **CHANGE DOV-3642**: Lua push-notifications: The "subject" field is now decoded to UTF8 instead of kept as MIME-encoded.

- **IMPROVEMENT DOV-3642**: Lua push-notifications: Added new "`from_address`", "`from_display_name`", "`to_address`" and "`to_display_name`" fields. The display names are decoded to UTF-8.

5.2.   Object Storage (obox) Plug-in

- **ISSUE DOV-2944**: Introduce '?' as indicator for failed bucket-iteration in buckets.cache and ensure that these marked buckets do not grow further.

- **IMPROVEMENT DOV-3442**: fs-scality: Support using the "listing" API instead of "readdir" API. This is enabled by adding `use_listing` URL parameter to the obox_fs setting.
    - o Example: `obox_fs = scality:http://127.0.0.1:800/? use_listing`

- **ISSUE DOV-3532**: Adding missing folders during folder list rebuild to the index was unnecessary slow, because each added folder caused two index bundle uploads. Now the user's root bundle is uploaded only once after the rebuild is completed.

- **ISSUE DOV-3595**: If metacache upload took more than 10 minutes, it would timeout, but the internal state would not be updated. This causes that user's metacache to no longer to be uploaded to object storage.
    - o These users can be found from logs with: metacache: Error: Metacache worker command timed out in 600 secs: UPLOAD username

- **ISSUE DOV-3597**: Deleting a mailbox that is open might have crashed with: Panic: file bundle-state.c: line 576 (bundle_export_state_header): assertion failed: (!guid_128_is_empty(state->refresh_guid))
    - o   This fix replaces the crash with an error message.

- **ISSUE DOV-3603**: If metacache rescan took longer than 10 minutes, it timed out. When this happened, the rescan didn't forget users that didn't anymore exist in the filesystem.

- **CHANGE DOV-3604**: fs-dictmap: When mail object exists in Cassandra but not in object storage it usually logs "Object exists in dict, but not in storage" error. However, when the mail wasn't yet written to the dovecot.index this was only logged as "Warning: obox ...: Rescanned index in ... , N assumed temporarily lost". This also caused the email objects to be rescanned every 30 minutes. This wasn't obvious, so now Dovecot also logs a separate error message for each such mail to allow cleanup scripts to find them easily. In a future version these errors will also cause the folder opening to fail.

- **ISSUE DOV-3604**: When there were "temporarily lost" emails, saving a mail could have caused duplicate mail deliveries.
    - o   This was logged as: Error: Mailbox INBOX: Mail with OID=... was already added by another process to UID=... - leaving it and aborting transaction.

- **ISSUE DOV-3630**: v2.3.7 regression: fs-s3, fs-swift, fs-scality, fs-azure operations used a lot more CPU.
    - o   This was fixed earlier for fs-dictmap, but the bug was slightly different, so it wasn't thought to affect other fs drivers.

5.3.   Full Text Search (fts) Plug-in

- **IMPROVEMENT DOV-3627**: Added version 20190906 of Kuromoji library. This version significantly reduces the memory footprint of processes (e.g. IMAP, LMTP, indexer-worker) using FTS tokenization for the Japanese language.

5.4.   Pigeonhole (sieve) Plug-in

- **IMPROVEMENT DOV-2898**: Add new events for sieve actions. See documentation (https://doc.dovecot.org/admin_manual/list_of_events/) for more information.

- **ISSUE DOV-3369**: ManageSieve service could be configured to allow anonymous authentication mechanism and anonymous user access.

- **ISSUE DOV-3483**: Duplicate test only compared the handles which would cause different values to be cached as the same duplicate test. Fix to also compare the actual hashes.

- **IMPROVEMENT DOV-3486**: ManageSieve commands, and Sieve script storage manipulations in general (e.g. using doveadm sieve), now produce events for statistics.

- **IMPROVEMENT DOV-3515**: Implement the Sieve "special-use" extension described in RFC 8579.

- **ISSUE DOV-3579**: zimbra-compat plugin: When using the "addressbook" extension, it crashes if the checked header contains the same address but in different case-sensitivity: Panic: file hash.c: line 251 (hash_table_insert_node): assertion failed: (opcode == HASH_TABLE_OP_UPDATE).

- **IMPROVEMENT DOV-3654**: Removed "`sieve_`" and "`managesieve_`" prefixes from pigeonhole events' field names.

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

No Changes

5.6.   Chat Over Imap (coi) Plug-in [beta]

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/.