



# Release Notes for OX Dovecot Pro

## Minor Release v2.3.17

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# 1. Shipped Products and Versions

OX Dovecot Pro v2.3.17

Built on Dovecot Community Edition Core v2.3.17

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

Supported OS Distributions:

- [Amazon Linux 2](#)
- [CentOS 7.9, 8.4](#)
- [RHEL 7.4, 8.2](#)
- [Debian stretch \(9.13\)](#), [buster \(10\)](#), [bullseye \(11\)](#)
- [Ubuntu 18.04 LTS \(bionic\)](#), [20.04 LTS \(focal\)](#)

Apache Cassandra Driver: [v2.15.3](#)

## 2. Release Highlights

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

### **“doveadm stats add/remove”**

Doveadm commands now allow you to dynamically add/remove metrics to a running instance.

Metrics can be added without needing to restart Dovecot – e.g., when debugging a specific issue – and they can be removed once they are no longer needed. Alternatively, this can be used to test out new metrics during production load.

### **“lazy expunge exclude” Setting Added**

Added `lazy_expunge_exclude` setting to disable `lazy_expunge` plugin for specific mailboxes.

This can be used to remove mailboxes where there is expected temporary message churn (e.g., “\Drafts” mailbox) to prevent excessive population of expunged messages that likely will never need to be recovered.

### **Obox Optimized for Virtual Plugins**

Obox metacache has been optimized for use with the virtual and virtual-attachments plugins.

See “Upgrade Information” section for configuration requirements.

### **Debian Bullseye (11) Supported**

This release adds support for Debian Bullseye (11). Support for Debian Stretch (9) will be dropped in a future release.

See

[https://oxpedia.org/wiki/index.php?title=Dovecot:Version\\_Support\\_Commitment#OS\\_Distribution\\_Support](https://oxpedia.org/wiki/index.php?title=Dovecot:Version_Support_Commitment#OS_Distribution_Support) for details on OS Distribution support.

### **Summary of Highlights**

- "doveadm stats add/remove" commands added to support changing the metrics configuration on runtime.
- Added `lazy_expunge_exclude` setting to disable lazy\_expunge plugin for specific mailboxes.
- Obox metacache has been optimized when used with the virtual and virtual-attachments plugins.
- Added support for Debian Bullseye (11).

## **3. Upgrade Information**

"doveadm stats add" and "doveadm stats remove" commands have been added. See: [https://doc.dovecot.org/configuration\\_manual/stats/#modifying-statistics-dynamically](https://doc.dovecot.org/configuration_manual/stats/#modifying-statistics-dynamically).

For optimized obox behavior with virtual/virtual-attachments plugins, the namespace locations must be configured to be in "virtual" and "virtual-attachments" directories in the obox root directory, otherwise they are not stored in object storage. See [https://doc.dovecot.org/configuration\\_manual/virtual\\_plugin/index.html#storage-location-with-obox](https://doc.dovecot.org/configuration_manual/virtual_plugin/index.html#storage-location-with-obox) and [https://doc.dovecot.org/configuration\\_manual/virtual\\_attachments\\_plugin/index.html#storage-location-with-obox](https://doc.dovecot.org/configuration_manual/virtual_attachments_plugin/index.html#storage-location-with-obox).

Shared mailboxes: Support storing imapc INDEXPVT private indexes in metacache and in user root bundle. The imapc INDEXPVT location must be configured to `~/shared-pvt/`. See: [https://doc.dovecot.org/configuration\\_manual/shared\\_mailboxes/cluster\\_setup/#mailbox-sharing-in-cluster](https://doc.dovecot.org/configuration_manual/shared_mailboxes/cluster_setup/#mailbox-sharing-in-cluster).

For Lua scripting, best practices to prevent pollution of the global namespace is to call the `dovecot.restrict_global_variables()` function in the script. See: [https://doc.dovecot.org/admin\\_manual/lua/#dovecot.restrict\\_global\\_variables](https://doc.dovecot.org/admin_manual/lua/#dovecot.restrict_global_variables).

Added configuration options:

- `login_proxy_rawlog_dir` (See: <https://doc.dovecot.org/settings/core/#login-proxy-rawlog-dir>)

Added plugin settings:

- `lazy_expunge_exclude` (See: [https://doc.dovecot.org/configuration\\_manual/lazy\\_expunge\\_plugin/#configuration](https://doc.dovecot.org/configuration_manual/lazy_expunge_plugin/#configuration))

Logging changes:

- Lines logged by the dict process now contain the dict name as the prefix.

`mail_cache_fields`, `mail_always_cache_fields`, and `mail_never_cache_fields` now verifies that the listed header names are valid. Invalid header names will cause a configuration parsing error on Dovecot startup.

## 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

- **CHANGE DOV-4627:** Confirm the new password by asking twice when setting a new password for cryptokeys with "doveadm mailbox cryptokey password" command.
- **CHANGE DOV-4654:** Lines logged by the dict process now contain the dict name as the prefix.
- **CHANGE DOV-4664:** Dovecot now logs a warning if time seems to jump forward at least 100 milliseconds.
- **CHANGE DOV-4731:** Dovemon now uses Python 3 on the distributions Debian Stretch, Debian Buster, Debian Bullseye, Ubuntu 18.04, Ubuntu 20.04, Red Hat Enterprise Linux 8, and CentOS 8. Python 2 is still used on CentOS 7 and Amazon Linux 2.
- **IMPROVEMENT DOV-4460:** "doveadm stats add/remove" commands added to support changing the metrics configuration on runtime.
- **IMPROVEMENT DOV-4611:** Added `login_proxy_rawlog_dir` setting to capture rawlogs between proxy and backend.
- **IMPROVEMENT DOV-4612:** Add support for not authenticating to next hop in submission proxying.
- **IMPROVEMENT DOV-4620:** The dict server process now keeps the last 10 idle dict backends cached for maximum of 30 seconds. Practically this acts as a connection pool for dict-redis and dict-ldap. Note that this doesn't affect dict-sql because it already had its own internal cache.
- **IMPROVEMENT DOV-4652:** Added `lazy_expunge_exclude` settings to disable lazy\_expunge for specific folders. "\Special-use" flags can be used as folder names. Multiple folders can be specified by adding a number after the setting name (i.e. `lazy_expunge_exclude`, `lazy_expunge_exclude2`, ...)

- **IMPROVEMENT DOV-4718:** Lua: Added a new helper function `dovecot.restrict_global_variables()` to disable or enable defining new global variables.
- **ISSUE DOV-4243:** `mail_cache_fields`, `mail_always_cache_fields`, and `mail_never_cache_fields` now verifies that the listed header names are valid. Especially the UTF8 "-" character has sometimes been wrongly used instead of the ASCII "-".
- **ISSUE DOV-4307:** There was no limit on how large an email header name could be. This could lead to increased memory usage. Processable header names are now limited to 1000 bytes.
- **ISSUE DOV-4579:** Setting the "master" `passdb` field to empty value would cause proxying to fail with an authentication error. Now an empty "master" field is ignored.
- **ISSUE DOV-4603:** Dovecot disallowed JWT tokens if their validity time was older than token creation time (`nbft < iat`).
- **ISSUE DOV-4610:** Two fixes:
  - Dovecot did not detect duplicate GUIDs with `LAYOUT=INDEX`.
  - Dovecot did not rebuild list index with `LAYOUT=INDEX` with `sdbx` or `mdbx`.
- **ISSUE DOV-4614:** Logs written by `doveadm-server` were often missing log prefixes, especially `mail_log_prefix` for mail commands. Logs sent to `doveadm` TCP client were also missing log prefixes.
- **ISSUE DOV-4615:** `doveadm-server` sent duplicate error lines for failed commands. This didn't normally cause visible problems, except when using wildcards in usernames or `-A` parameter to go through multiple users.
- **ISSUE DOV-4619:** `doveadm` batch command always crashes. v2.3 regression.
  - *Fixes:* Panic: file `mail-storage.c`: line 942 (`mailbox_set_reason`): assertion failed: (`reason != NULL`)
- **ISSUE DOV-4627:** Fix `"-O"` argument for `"doveadm mailbox cryptokey password"` command to be a boolean, and not expect a string.
- **ISSUE DOV-4631:** Virtual mailboxes do not correctly detect underlying mailboxes getting re-created even though they have a different `UIDVALIDITY` or `GUID`.
- **ISSUE DOV-4656:** `doveadm` failed to start if `ssl_cert` or `ssl_key` files weren't readable by the user running `doveadm`, even though `doveadm` didn't use these settings. v2.3.11 regression.
- **ISSUE DOV-4667:** `imapc`: Copying nonexistent mail via `imapc` could have crashed.
  - *Fixes:* Panic: file `mail-storage.c`: line 2385 (`mailbox_transaction_commit_get_changes`): assertion failed: (`ret`

```
< 0 || seq_range_count(&changes_r->saved_uids) == save_count
|| array_count(&changes_r->saved_uids) == 0)
```

- **ISSUE DOV-4687:** Reading lz4 compressed mbox mails may crash.
  - *Fixes:* Panic: file istream.c: line 345 (i\_stream\_read\_memarea): assertion failed: (!stream->blocking)
- **ISSUE DOV-4706:** FTS indexing may have crashed with old mails objects that were missing size metadata if their cached size was also wrong.
  - *Fixes:* Panic: file index-mail.c: line 1290 (index\_mail\_parse\_body): assertion failed: (data->parser\_ctx != NULL)
- **ISSUE DOV-4713:** Using `imap_fetch_failure=no-after` can cause assert-crash with some IMAP commands if reading the mail fails (e.g. wrong cached mail size).
  - *Fixes:* Panic: file index-mail-headers.c: line 198 (index\_mail\_parse\_header\_init): assertion failed: (!mail->data.header\_parser\_initialized)
- **ISSUE DOV-4716:** indexer-worker logged event leak warnings on some error handling code paths. v2.3.15 regression.
- **ISSUE DOV-4732:** indexer process may have crashed in some situations. v2.3.15.1 regression.
- **ISSUE DOV-4733:** indexer-worker processes may not have reached the `process_limit` in some situations, possibly even using just one indexer-worker process even though there were many indexing requests queued. v2.3.15.1 regression.
- **ISSUE DOV-4814:** If indexer-worker crashes, the request it was processing gets stuck in the indexer process. This stops indexing for the folder until indexer process is restarted. v2.3.14 regression.
- **ISSUE DOV-4816:** LMTP can cause out-of-memory issues when proxying large messages to LMTP backend servers that accept the message data too slow.
- **ISSUE DOV-4842:** FTS search in a virtual folder could crash if there are duplicate mailbox GUIDs. This mainly happened when user had both "INBOX" and "INBOX/INBOX" folders and the namespace prefix was "INBOX".
  - *Fixes:* Panic: file hash.c: line 252 (hash\_table\_insert\_node): assertion failed: (opcode == HASH\_TABLE\_OP\_UPDATE)
- **ISSUE DOV-4843:** 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-4887:** Fix buggy OpenSSL error handling without assert-crashing. If there is no error available, log it as an error instead of crashing. The previous fix for this in v2.3.11 was incomplete.

- *Fixes*: Panic: file istream-openssl.c: line 51  
(i\_stream\_ssl\_read\_real): assertion failed: (errno != 0)

## 5.2. Object Storage (obox) Plug-in

- **IMPROVEMENT DOV-4590**: When using the virtual or virtual-attachments plugin, obox adds the corresponding index files to the user root bundle.
- **IMPROVEMENT DOV-4668**: Support storing imapc INDEXPVT private indexes in metacache and in user root bundle. The imapc INDEXPVT location must be configured to `~/shared-pvt/`. See: [https://doc.dovecot.org/configuration\\_manual/shared\\_mailboxes/cluster\\_setup/#mailbox-sharing-in-cluster](https://doc.dovecot.org/configuration_manual/shared_mailboxes/cluster_setup/#mailbox-sharing-in-cluster).
- **ISSUE DOV-4449**: Dovecot would not free memory between folder deletions in “doveadm obox user delete” or when doing a metacache rescan. If the user had a lot of folders, this could result in excessive memory usage or even failing due to running out of memory.
- **ISSUE DOV-4626**: “doveadm mailbox update” didn't upload the folder bundle afterwards.
- **ISSUE DOV-4690**: Fixed potential crash at deinit. v2.3.14 regression.
  - *Fixes*: Panic: file metacache-user.c: line 285  
(metacache\_user\_unref): assertion failed: (array\_is\_empty(&user->bundle\_changes)).
- **ISSUE DOV-4711**: Update mailbox's bundle filename in dovecot.list.index after flushing it. This ensures dovecot.list.index can be trusted and the mailbox will not be unnecessarily downloaded back to metacache in case it was cleaned before.
- **ISSUE DOV-4752**: ACL inheritance was broken: parent ACL wasn't copied to a newly created folder.
- **ISSUE DOV-4780**: Dovecot metacache flushall service was not enabled by default on RHEL7.

## 5.3. Full Text Search (fts) Plug-in

No Changes

## 5.4. Pigeonhole (sieve) Plug-in

- **ISSUE DOV-4254**: The Sieve duplicate test is prone to false negatives when the user receives many e-mails concurrently, meaning that duplicate deliveries can still occur.
- **ISSUE DOV-4618**: The CPU limits on Sieve execution added by v2.3.15 are too easily exceeded in IMAP context (the IMAPSieve and

FILTER=SIEVE capabilities). Changed the default to unlimited CPU time for IMAP context, since similar excessive resource usage can be caused by other means as well. The CPU limits on Sieve scripts executed at LDA/LMTP delivery are still enforced by default.

- **ISSUE DOV-4695:** With certain Sieve scripts, if redirect fails due to temporary failure, the lmtp process may crash after the delivery. v2.3.16 regression.
  - *Fixes:* Panic: file mail-user.c: line 229 (mail\_user\_deinit): assertion failed: ((\*user)->refcount == 1)
- **ISSUE DOV-4890:** Sieve would crash if redirect after keep-equivalent action failed.

## 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

- **ISSUE DOV-4149:** quota-unified plugin lost errors, causing `(null)` to be logged.

## 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/](https://doc.dovecot.org/installation_guide/dovecot_pro_releases/repository_guide/).