



Release Notes for OX Dovecot Pro

Minor Release v2.3.6

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1. Shipped Products and Versions

OX Dovecot Pro v2.3.6

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

New obox Index Merge Algorithm

This release introduces a new mailbox index merging algorithm for use with obox installations. This algorithm replaces the old, dsync-based algorithm (originally designed for two-way syncing of mailbox data) with an obox-specific algorithm specifically designed to merge obox data structures. The new algorithm fixes all known problems and inefficiencies with the merging. The new algorithm has been tested internally over several months, but the old version remains the default for now.

To enable the new merge algorithm, use:

```
plugin {
  metacache_index_merging = v2
}
```

As a plugin setting, it allows the value to be set at a per session level. This enables the potential to selectively test the new merge algorithm within a Dovecot environment. The old (v1) and new (v2) algorithms change only the method of merging, not the merge results, so an admin can switch between the two options for a single account without fear of data loss.

OAUTH2 Password Grant

This release introduces authentication using OAUTH2 password grant mechanism. This allows, for example, a user to authenticate via their username/password to external proxy node; the proxy node would then contact the OAUTH2 server to obtain a token to allow access to the interior Dovecot nodes. This can replace master password authentication to allow for more secure connections within a Dovecot platform.

Example configuration can be found at https://wiki.dovecot.org/PasswordDatabase/oauth2#password_grant.

Summary of Highlights

- New obox index merge algorithm
- OAUTH2 password grant
- Multiple fixes for Imap/submission proxying
- Allow disabling TLS certificate validation for TLS client connections
- obox: clean metacache user information in the correct order

3. Upgrade Instructions

- `metacache_index_merging` plugin setting added [obox; see DOV-2808]
 - Setting options: `v1` (default, old algorithm), `v2` (new algorithm), `none` (same as `metacache_disable_merging=yes`)
- `metacache_merge_max_uid_renumbers` plugin setting added [obox; see DOV-2808]
 - Setting options: integer value (default: 100)
- `obox_allow_nonreproducible_uids` plugin setting added [obox; see DOV-2686]
 - This release fixes a problem where IMAP UIDs might not be preserved in case of backend crashes. However, this fix requires uploading folder index bundles more often than before. It depends on user behavior whether this increase is noticeable. If this setting is enabled, there will be fewer index bundle uploads, but this is at the cost of safety in case a backend crashes. Especially some caching IMAP clients may become confused if UIDs change for existing mails, and potentially cause wrong mails to be deleted.
 - Setting options: `yes` or `no` (default: `no`)
- `ssl_client_require_valid_cert` [Core; see DOV-2700]
 - Setting options: `yes` or `no` (default: `yes`)
- `fts-solr` options added [Core; see DOV-3214]
 - Documented at: <https://wiki2.dovecot.org/Plugins/FTS/Solr>

4. Known Issues

- `doveadm obox user delete` command doesn't forcibly refresh the list of folders or the list of mails inside folders. This means that in some situations it might not delete all data for the user. Usually this means that if there are still-to-be-found "recovered-lost-folders", they won't get deleted. [DOP-1131]
 - Workaround: Running `doveadm force-resync -u '*'` before `doveadm obox user delete` should make sure everything gets deleted.
- 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-2700:** Allow disabling TLS certificate validation for TLS client connections, via the new `ssl_client_require_valid_cert` setting.
- **IMPROVEMENT DOV-2828:** Provide example configuration files for Solr 7.7.0.

- **IMPROVEMENT DOV-2847:** Implemented authentication using oauth2 password grant mechanism. When used, proxy gets oauth2 token from oauth2 server using username and password and passes it to backend.
- **IMPROVEMENT DOV-3214:** fts-solr: Added configuration options.
 - `batch_size`: configure the number of emails sent in single requests to Solr.
 - `soft_commit=yes|no`: Control whether new mails are immediately searchable via Solr.
- **ISSUE DOV-2600:** `ssl_client_allow_invalid_cert=true` cannot be set without `ssl_client_ca_*` settings.
- **ISSUE DOV-2786:** A panic can occur at HTTP connection failure.
 - Panic: file `http-client-queue.c`: line 518 (`http_client_queue_connection_failure`): assertion failed: (`queue->cur_peer == peer`)
- **ISSUE DOV-2880:** Multiple Imtp/submission fixes:
 - The XCLIENT command is not always sent at the appropriate time, it can be sent several times (also when it is not longer than 512 bytes) and some of the available parameters are not always sent. Particularly, the LOGIN and PROTO parameters are omitted while values for these parameters are available.
 - In some configurations proxying starts looping XCLIENT commands infinitely, causing the Imtp or submission-login processes to hang.
- **ISSUE DOV-2826:** Dovecot crashes if MySQL connection is disconnected before deinitializing.
- **ISSUE DOV-2862:** The SMTP client does not guarantee that messages are sent with proper CRLF line endings when the CHUNKING extension is used. This is required by the specifications and some SMTP servers reject messages that violate this requirement.
- **ISSUE DOV-2864:** LMTP and Submission sometimes report spurious "Got unexpected reply" errors for proxy/relay client connections when the peer responds very quickly to the DATA/BDAT command.
- **ISSUE DOV-2865:** SMTP multi-line replies forwarded from an LMTP backend or Submission relay server are badly formatted by the server causing these to be interpreted as two separate replies by the client. This problem was encountered when the Submission service was used with Exim as relay server.
- **ISSUE DOV-2866:** Submission: The login proxy sends a syntactically incorrect XCLIENT command, causing the command to fail; it omits spaces between the command arguments.
- **ISSUE DOV-2925:** Dovecot SSL client hung with `imaptest`, and potentially elsewhere.
- **ISSUE DOV-2980:** HTTP client connection errors infrequently trigger a segmentation fault when the connection is idle and not used for a particular client instance. This problem rarely occurs, even though there are several different ways to trigger it.
- **ISSUE DOV-2996:** `pop3c` would crash when configured with immediate SSL.

- **ISSUE DOV-2997:** Dovecot JSON parser assert-crashes when attempting to skip arrays in JSON, causing problems parsing certain kinds of replies from oauth servers.
 - Panic: file json-parser.c: line 668 (json_parse_skip_next): assertion failed: (parser->state == JSON_STATE_OBJECT_COLON || parser->state == JSON_STATE_OBJECT_VALUE || parser->state == JSON_STATE_ARRAY_VALUE || parser->state == JSON_STATE_ARRAY_NEXT)
- **ISSUE DOV-3111:** auth: deinitialization of auth process was not done correctly, causing auth process to crash when multiple oauth passdbs are configured.

5.2. Object Storage (obox) Plug-in

- **IMPROVEMENT DOV-2808:** Implemented a new mailbox index merging algorithm to replace the dsync-based algorithm. The new algorithm fixes all known problems and inefficiencies with the merging. It's enabled by setting plugin {metacache_index_merging=v2}
 - The old "v1" merging algorithm is the default for now
 - Conflicting UIDs are no longer renumbered if there would be an excessive number of UID changes. `metacache_merge_max_uid_renumbers` setting controls this (default 100).
- **IMPROVEMENT DOV-2837:** Document obox related doveadm commands in man pages.
- **IMPROVEMENT DOV-2860:** Send X-Dovecot-Reason HTTP header to all object storage backends, not just sproxyd.
 - Requires `reason_header_max_length=N` setting to be enabled in `obox_fs` plugin setting.
- **IMPROVEMENT DOV-2986:** Added "doveadm metacache refresh" command: Force refreshing metacache for the given user(s) the next time it's opened. The refresh is done for the user root index and all the folders.
- **ISSUE DOV-2686:** Folder index bundles weren't always uploaded after expunging mails when they should have been. The index upload should happen when Dovecot determines that in case of a backend crash IMAP UIDs couldn't be preserved.
 - Note that this fix causes folder index bundles to be uploaded more often. It depends on user behavior how much more often. If the performance penalty is deemed to be too high, it's possible to disable this by the plugin setting `obox_allow_nonreproducible_uids=yes` (default: no).
- **ISSUE DOV-3236:** Metacache cleaning didn't free disk space for users in exactly the correct order. This could have resulted in inefficient metacache behavior, or even stop metacache cleaning entirely and cause it to exceed its maximum size.

5.3. Full Text Search (fts) Plug-in

No Changes

5.4. Pigeonhole (sieve) Plug-in

- **IMPROVEMENT DOV-2576:** The sieve redirect loop prevention is sometimes ineffective. Improve existing loop detection by also recognizing the X-Sieve-Redirected-From header in incoming messages and dropping redirect actions when it points to the sending account. This header is already added by the redirect action, so this improvement only adds an additional use of this header.
- **ISSUE DOV-2979:** Users received duplicate mails when temporary a failure occurred at runtime. Temporary runtime failures are not common in normal Pigeonhole execution; only the metadata extension and some proprietary plugins can currently trigger one. Temporary failures in the final action execution (after the script itself is evaluated) do not trigger this problem.

5.5. OX Engage (imap-injection) 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:

http://software.open-xchange.com/products/dovecot/doc/OX-Dovecot-Pro-repository-installation-manual_v2.4.pdf