



Release Notes for Dovecot Pro Minor release 2.2.29.1

1. Shipped Products and Versions

Dovecot Pro 2.2.29.1

Including Object Storage Plug-In, Full Text Search Plug-in, Pigeonhole Sieve, Zimbra Compatibility Sieve Plug-in and Dovemon

2. Important Changes and Bugs fixed since previous Public Release

2.1. Important new settings

Below is a list of new settings that may be useful to enable, including their suggested values. Please read the settings' descriptions before enabling them.

- dovecot.conf:
 - `imap_id_retain = yes`
 - `plugin {
 obox_fs = ...:dictmap:...&bucket-deleted-days=11
}`
 - `plugin {
 obox_fs = ...:sproxyd:...&reason_header_max_length=200
}`
 - `plugin {
 quota_max_mail_size = 100M
}`
 - `plugin {
 # Set this only after upgrading the entire Dovecot cluster. Downgrading to an old
 # Dovecot version is no longer possible afterwards without FTS index data loss.
 #fts_dovecot_filename_sizes = yes
}`

2.2. Dovecot Pro Core

- **NEW FEATURE:** Unified Quota plugin
 - Uses the “count” backend to keep track of the authoritative Dovecot quota. This quota is flushed out to a configured dict, similar to how the quota_clone plugin works.
 - Supports reading quota usage for multiple other components from dict (for example Cassandra or SQL). When calculating the user’s current quota usage, the authoritative Dovecot quota is summed up together with the other components’ quota.
- **CHANGE:** Add plugin { quota_max_mail_size } setting, which controls the maximum message size that is allowed to be saved (e.g. by LMTP, IMAP APPEND or doveadm save). The default is 0, which is unlimited.
 - Setting this is especially useful with obox, because a single huge mail could eat all of the fscache causing problems in the server globally.
 - This should likely be set to about the same size as the maximum allowed incoming and/or outgoing mail size on on the MTA, e.g. quota_max_mail_size=100M
- **CHANGE:** mail_log plugin: Differentiate autoexpunges from regular expunges
 - Log them as “autoexpunge” instead of “expunge”
- **CHANGE:** imap: When disconnecting due to FETCH failure, include "FETCH" in the log message.
- **CHANGE:** imap/pop3-login: All forward_* extra fields returned by passdb are sent to the next hop when proxying using ID/XCLIENT commands. On the receiving side these fields are imported and sent to auth process where they're accessible via %{passdb:forward_*}. This is done only if the sending IP address matches login_trusted_networks.
- **CHANGE:** imap-login: If imap_id_retain=yes, send the IMAP ID string to auth process. %{client_id} expands to it in auth process. The ID string is also sent to the next hop when proxying.
 - This allows passing the ID string to auth-policy requests
- **CHANGE:** When Dovecot encounters an internal error, it logs the real error and usually logs another line saying what function failed. Previously the second log line's error message was a rather uninformative "Internal error occurred. Refer to server log for more information." Now the real error message is duplicated in this second log line.
- **CHANGE:** director: Log info line for any director backend change: up/down state changes, vhost count changes
- **CHANGE:** config: Don't stop the process due to idling. Otherwise the configuration is reloaded when the process restarts.
- **CHANGE:** imapc: Use LOGOUT to cleanly disconnect from server.
- **CHANGE:** imapc: Add imapc_features=delay-login. If set, connecting to the remote IMAP server isn't done until it's necessary.
- **CHANGE:** imapc: Add imapc_connection_retry_count and imapc_connection_retry_interval settings. Fix problems related to reconnections.
- **CHANGE:** lib-http: Internal status codes (>9000) are no longer visible in logs

- **CHANGE:** imap, pop3, indexer-worker: Add (deinit) to process title before autoexpunging runs.
- **CHANGE:** Added %{encrypt} and %{decrypt} variables
- **CHANGE:** imap/pop3 proxy: Log proxy state in errors as human-readable string.
- **CHANGE:** passdb imap: Use ssl_client_ca_* settings for CA validation.
- **CHANGE:** Cassandra: Add number of slow queries to the metrics file.
- **BUG 51590:** Username gets changed to an earlier cached value when "Class of Service" passdb/userdb lookups were done via auth workers
 - **FIX:** auth: passdb/userdb lookups via auth-worker cached too much of the replies
 - Only the fields returned by the lookup itself were supposed to be cached. This was especially problematic if the lookup via auth-worker didn't uniquely identify the user. For example doing a passdb lookup for an attribute shared by multiple users could have caused the reply to contain the previous cached user's all extra fields.
 - **FIX:** auth: Auth workers shouldn't return username if it wasn't changed
 - This continues the previous fix where username was always added to passdb/userdb cache, even if the username wasn't changed. That could have resulted in wrongly changing usernames if the cache key didn't uniquely identify the user.
- **BUG 52308:** auth process signal 11 crash with oauth2
 - **FIX:** lib-oauth2: Don't free oauth2_request too early.
- **BUG 52304:** doveadm force-resync resets \Recent flags
 - **FIX:** lib-storage: Don't reset \Recent flags when rebuilding index
 - The recent flags are tracked with first_recent_uid in the header. If the first_recent_uid is valid in the old index, preserve it. This way all mails don't show as having \Recent flag.
- **BUG 52585:** blocking userdb lookup can't change username
 - **FIX:** auth: Do not cache username unless it was changed by lookup
 - This could've caused usernames to be unexpectedly changed because they were cached by a lookup that did not include username in the cache key.
- **BUG 51695:** ACLs are not applied to autocreated folders that don't exist yet
 - **FIX:** lib-storage: Add and use default mailbox iterator
- **BUG 51360:** imap-hibernate doesn't support %{userdb} in mail_log_prefix
 - **FIX:** imap-hibernate: Support userdb in var_expand
- **BUG 50409:** Cassandra write that was returned as failed actually succeeded, causing "Object exists in dict, but not in storage" errors with obox.
 - **FIX:** cassandra: Treat CASS_ERROR_SERVER_UNAVAILABLE as "write success is uncertain"
- **BUG 52154:** Cassandra fallback consistency level handling doesn't work right
 - **FIX:** cassandra: Fallback consistency fix - it wasn't used permanently
 - Because the "do I want to retry using primary consistency?" check was done using the first failure timestamp, after 60 seconds that check always returned TRUE. We should instead be checking the last timestamp for a query that was sent with the primary consistency.
 - **FIX:** cassandra: Fallback consistency fix - max retry interval was set wrong
 - The maximum msec is _MAX_RETRY_MSECS, not

`_FIRST_RETRY_MSECS`

- **BUG 52120:** Imap: Long autoexpunge run can run too early. This causes LMTP client to timeout between the DATA replies, resulting in duplicate mail deliveries.
 - **FIX:** Imap: Run autoexpunging only after all mail deliveries are done. This causes it to be run for the last recipient, and possibly also the first one.
- **BUG 52503:** Segfault parsing message header
 - **FIX:** lib-mail: Fix read overflow / crash in `message_header_decode()`
 - If the input string was `"=?charset?Q|B?text?"`, the code attempted to look up the character after it. And if it was `"="`, the callback was called with `size=-1`, which ends up in a crash.
- **BUG 50670:** Module is for different ABI version: Dovecot upgrade does not stop old dovecot before start installing new version
 - **FIX:** Dovecot is now stopped before start unpacking file. `doveconf/doveadm` commands are called after new file are in place so no ABI version conflicts no more.
 - **FIX:** Triggers are now `noawait` type triggers, so all packages are configured without triggering `dovecot-ee-core` multiple times.
- **BUG 52812:** `/var/lib/dovecot/reboots` file is not created/updated properly
 - **FIX:** `/var/lib/dovecot/reboots` file is now updated always, even if `obox` not installed.
- **BUG 52868:** `virtual_attachments` plugin: Corrupted MIME/BODYSTRUCTURE in UID 2: `message_part` hierarchy doesn't match BODYSTRUCTURE
 - **FIX:** lib-`imap`: `imap_bodystructure`: Fixed handling of a multipart part without children in `imap_bodystructure_parse()`.
 - In `imap_bodystructure_write()`, an empty multipart part is addressed by generating an empty text/plain part. However, when parsing that back with `imap_bodystructure_parse()` against a parsed `message_part` tree, this case needs to be considered explicitly. Otherwise, it will not be able to match the message part hierarchies
- **BUG 52212:** Upgrading to `dovecot-ee-cassandra-plugin 2.2.28.2-1` fails if Cassandra driver is version `<2.5.0`
 - **FIX:** `dovecot-ee.spec`: Changed `cassandra-cpp-driver` dependency to `>=2.5.0`
- **BUG 52417:** `ipc`: file `ostream.c`: line 59 (`o_stream_close_full`): assertion failed
 - **FIX:** lib: Add missing error handling to `o_stream_cork()`
 - With `ostream-file` the corking could have called `buffer_flush()`, which could have failed and set `stream_errno`, but nothing would set `last_failed_errno`.
- **BUG 52337:** `doveadm`: Exit codes weren't preserved when proxying commands via `doveadm-server`. Almost all errors used exit code 75 (`tempfail`).
 - **FIX:** `doveadm`: Add exit code/string conversion functions
 - **FIX:** `doveadm`: Send and receive exit codes correctly
- **BUG 52499:** Panic: file `cmd-idle.c`: line 182 (`idle_hibernate_timeout`): assertion failed: (`ctx->sync_ctx == NULL`)
 - **FIX:** `imap`: Fix assert-crash when hibernation triggers during IDLE syncing
- **BUG 52768:** **documentation missing from many packages**
 - **FIX:** Added documentation files to packages
- **BUG 52446:** `last_login` LDAP - killed with signal 11 (core dumped)
 - **FIX:** lib-`dict`: Ensure all iterations and transactions are done in `deinit`

- **FIX:** lib-dict: Track transaction counts
- **FIX:** lib-dict: Fix test-dict linkage
- **FIX:** lib-dict: Use dict-fail iterator and transaction when missing from dict driver
- **FIX:** dict: Update correct counter in dict_iterate_init
- **FIX:** lib-dict: Add dict-fail driver
- **BUG 52139:** Doveadm http API panics with invalid input for "save"
 - **FIX:** doveadm: Do not crash doveadm-server if input file missing
 - save commands expects valid input file for it to work, if we are not running for cli, and input file is not provided, provide EINVAL error to caller via i_stream_error.
- **BUG 52467:** net_connect_ip() failed: Cannot assign requested address
 - **FIX:** lib: Increase net_connect*() EADDRNOTAVAIL retries to 20
- **BUG 51915:** mail index update day first uid unit test fails with TZ='Australia/ACT'
 - **FIX:** lib-index: Fix test-mail-index-transaction-update
 - **FIX:** lib-index: Minor fix to day_first_uid updating
- **BUG 52014:** passdb/userdb dict: Don't double-expand %variables in keys. If dict was used as the authentication passdb, using specially crafted %variables in the username could be used to cause DoS (CVE-2017-2669)
 - **FIX:** auth: Do not double-expand key in passdb dict when authenticating
- **BUG:** doveadm director status <user>: "Initial config" was always empty
- **BUG:** OX push notification plugin crashes at deinit
 - **FIX:** push-notification-driver-ox: Wait for http requests to finish in deinit

2.3. Object Storage Plug-in

- **CHANGE:** Log a warning slow object storage accesses, including the reason why the access is being done (if available). By default any lookup taking more than 5 seconds is logged. This is configurable with slow_warn_msecs=n parameter in obox_fs.
- **CHANGE:** obox_fetch_lost_mails_as_empty=yes: When failed mail is returned as empty mail, log it differently.
 - This allows determining whether the "Object exists in dict, but no in storage" error showed an error or empty mail to user.
- **CHANGE:** sproxyd: Added reason_header_max_length=n parameter. If enabled, X-Dovecot-Reason HTTP header is added to GET and HEAD requests where the value (truncated to reason_header_max_length) contains a reason string for why the request is being done. For example this can include the the IMAP command.
 - **NOTE:** Currently this parameter is supported only for fs-sproxyd.
- **BUG 51102:** Large user_mailbox_objects partitions when user writes+deletes a lot of mails
 - **FIX:** fs-dictmap: Implement tracking Cassandra tombstones in buckets.cache. When counting bucket's current size include the tombstones in the size as well. Only after the tombstones have expired the bucket can be reused for storing more mails. This tombstone tracking works only within the same server while the user exists in metacache. If the user is moved to another server or gets cleaned, the tombstone history is lost. This should still work well enough to prevent highly excessive bucket sizes by abusive users.
 - This tombstone tracking is enabled by adding "bucket-deleted-days=n" fs-dictmap parameter (to obox_fs), which should be one day longer than gc_grace_seconds

for the `user_mailbox_objects` table. By default this is 10 days, so in that case `bucket-deleted-days=11` should be used.

- **BUG 52143:** Panic: file `metacache-get.c`: line 546 (`metacache_bundle_unpack_with_bundle`): assertion failed: (`file->exists_as_file`)
 - **FIX:** `lib-metacache`: Fix assert-crash when accessing very old local metacache.
- **BUG 52142:** Panic: file `metacache-get.c`: line 1296 (`metacache_check_file_errors`): assertion failed: (`request->error == NULL`)
 - **FIX:** `lib-metacache`: Make sure errors during bundle downloads won't recurse to invalid state
- **BUG 52403:** `obox_fetch_lost_mails_as_empty` shouldn't cache the mail permanently as empty
 - **FIX:** `obox`: Don't cache empty mails with `obox_fetch_lost_mails_as_empty=yes`
- **BUG 52561:** Copying mails unnecessarily changes upload state to "important"
 - **FIX:** `lib-index`: Don't increase `modseq` for backend/dirty flag changes
 - These flags are used only for internal changes and they shouldn't be triggering any `modseq` changes.
 - To avoid `modseqs` from unexpectedly shrinking, the new `modseq` counting behavior is enabled only for newly rotated transaction log files that have a new `minor_version`.
- **BUG 52424:** failed `dsync` merge causes mangled mailbox names
 - **FIX:** `obox`: Fail at init if duplicate namespace locations are found without `alias_for`
- **BUG 51492:** Duplicate mailbox GUID
 - **FIX:** `obox`: Add `LISTINDEX` when setting `dsync-merge` namespace's location
 - **FIX:** `obox`: Skip alias namespaces when `dsync-merging`
- **BUG 52615:** `doveadm metacache clean` doesn't notify metacache about disk space usage
 - **FIX:** `lib-metacache`: `metacache_user_clean()` needs to notify metacache of disk space changes.
- **BUG 52232:** `sproxyd`: `X-Scality-Path` header is wrong
 - **FIX:** `fs-dictmap`: Set `FS_METADATA_ORIG_PATH` correctly to parent `fs`
 - **FIX:** `fs-sproxyd`: Fix setting `X-Scality-Path` using `FS_METADATA_ORIG_PATH`
 - **FIX:** `fs-server`: Don't send internal metadata to clients
- **BUG: 53113:** FTS unable to init file-cache: -2: FTS file-cache init failed: Failed to iterate FTS indexes: `fs-fts-cache` filesystem used for non-metacache `fs`
 - **FIX:** `obox`: Set `metacache_user` to all `mailbox_lists` of a storage.
 - Previously only the first one was set. This caused `fs-fts-cache` to fail when using multiple namespaces that shared the same storage: `fs-fts-cache` filesystem used for non-metacache `fs`
- **BUG 52613:** `read/write/delete_timeout_msecs` settings didn't work correctly to override the default `timeout_msecs` parameter.
 - **FIX:** `lib-http`: `http_client_request_delay_from_response()` should use per-request timeout as max
 - **FIX:** `lib-http`: client: Fixed request-specific attempt timeout.
- **BUG 53150:** `imap` core dump when running `stresstest`
 - **FIX:** `obox`: Don't double-free file if copy fails.

2.4. Full Text Search Plug-in

- **NEW FEATURE:** Implement fts_stats plugin
 - **Added:**
 - fts_read
 - fts_write
 - fts_iter
 - fts_cached_read
 - fts_wbytes
- **CHANGE:** fts-cache now stores object IDs in cache.log. This avoids unnecessary object ID lookups (from Cassandra).
- **CHANGE:** FTS shouldn't be fs_stat()ing so much
 - Store file sizes directly into filenames. For backwards compatibility this is disabled by default for now. To enable it, set plugin { fts_dovecot_filename_sizes=yes } after the entire Dovecot cluster has been upgraded. It's not possible to downgrade afterwards without losing the newly created FTS indexes.
 - lib-fs: Added FS_METADATA_WRITE_FNAME to allow renaming a file being written.
- **BUG 52439:** Too many FTS triplets uploaded to object storage
 - **FIX:** fs-fts-cache: Fix logic to decide when to upload a "large index".
 - The "large index" should be such a triplet that when a new mail is delivered, the newly built tiny triplet wouldn't be merged with it. Otherwise every new mail delivery could trigger triplet upload to object storage.
 - We're now mainly fixing a case where fts.W file was larger than 256 kB and fts.L smaller than 128 kB. fts_index_merge_sizes_ok() doesn't consider fts.W file, so this caused unnecessary repeated uploads.
- **BUG 52401:** doveadm metacache flush doesn't flush fts indexes
 - **FIX:** plugin: Make sure fs-fts-cache gets initialized.
 - Fixes doveadm metacache flush to actually flush fts indexes.
- **BUG 50062:** Couldn't read max UID: (-2) Unexpected EOF when reading DIDX header (0 bytes available)
 - **FIX:** fts-index: index* - set failed flag on error when merging
 - **FIX:** fts-index: wtrie/merge - let iterator initialisation fail

2.5. Pigeonhole Sieve

- **BUG 51773:** Copying/moving many mails to a Spam folder with imapsieve rule can take a long time, resulting in the client aborting the copy/move and retrying it over and over again.
 - **FIX:** imapsieve plugin: Implemented the copy_source_after rule action. This can be used to change the imapsieve script so that it marks the source mails as having been successfully copied to Spam and on the next copy it would skip the Spam handling.
 - When this is enabled for a mailbox rule, the specified Sieve script is executed for the message in the source mailbox during a "COPY" event.
 - This happens only after the Sieve script that is executed for the corresponding message in the destination mailbox finishes running successfully.

2.6. Zimbra Compatibility Sieve Plug-in

- **BUG 52158:** dict lookups get aborted too early: sieve: Open-Xchange: line 4: Failed to lookup address `user@domain' from dict: Deinit
 - **FIX:** addressbook test: Fixed spurious error occurring when parallel dict lookups are performed and one lookup succeeds while others are still pending.

2.7. Dovemon

- **BUG 52121:** LMTP/IMAP polling rapidly bringing host up/down
 - **FIX:** make backend DOWN and backend UP service dependent. Previously UP was done when a single backend service was found to be successful. Now UP won't be done unless all the backend service checks are successful.
 - **FIX:** added rapid poll mechanism to verify that backend is really down. Added new rapid_rounds and rapid_fails_needed settings to configure this.
- **BUG 51999:** Dovemon.py refers to imap_poll_results where it should be pop3_poll_results.
 - **FIX:** fix incorrect poll result check imap -> pop3
- **BUG 52000:** When multiple protocols are monitored by dovemon, false results might be gotten.
 - **FIX:** fix incorrect status handling with multiple protocols

3. Tests

The Dovecot QA team has successfully verified all bug 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.