

apache / airflow Public[Code](#) [Issues](#) 1.2k [Pull requests](#) 475 [Discussions](#) [Actions](#) [Projects](#)

Validate SMTP server certificate on STARTTLS upgrade #65346



Merged

potiuk merged 2 commits into apache:main from

potiuk:validate-cert-on-smtp-star... 2 weeks ago

Conversation 4Commits 2Checks 94Files changed 5potiuk commented [2 weeks ago](#)

Member

Summary

`smtpplib.SMTP.starttls()` does not validate the server certificate unless an SSL context is passed. `airflow.utils.email.send_mime_email` and the SMTP provider's `SmtplibHook` (both sync `get_conn` and async `aget_conn`) were calling `starttls()` without a context, so the STARTTLS upgrade skipped certificate validation.

This PR passes the existing SSL-context machinery to `starttls()` at all three call sites:

- `airflow-core/src/airflow/utils/email.py` — factored the SSL-context lookup out of `_get_smtp_connection` into a helper `_get_ssl_context()`, driven by the existing `email.ssl_context` config. The helper is now called by both the `SMTP_SSL` path and the new STARTTLS path.
- `providers/smtp/src/airflow/providers/smtp/hooks/smtp.py` — factored the SSL-context lookup into `_build_ssl_context()`, driven by the existing `ssl_context` connection extra. The helper is called for `SMTP_SSL` (sync), for `aiosmtplib.SMTP` construction (async), and for the explicit `starttls()` calls in both `get_conn` and `aget_conn`.

Default behaviour change

The default SSL context is now `ssl.create_default_context()`, which validates against the system's trusted CAs. Environments that intentionally use self-signed or otherwise non-validating SMTP servers can opt out:

- Core: set `email.ssl_context = "none"` in `airflow.cfg`
- Provider: set `ssl_context: "none"` in the SMTP connection extras

The opt-out already existed for the SMTP_SSL path; it now applies to the STARTTLS path too.

Test plan

- ✓ airflow-core/tests/unit/utils/test_email.py — 25/25 pass
- ✓ providers/smtp/tests/unit/smtp/hooks/test_smtp.py — 34/34 pass (including sync test_ehlo_called_after_starttls and async test_async_connection updated to verify starttls is invoked with an ssl.SSLContext)

Was generative AI tooling used to co-author this PR?

- ✓ Yes — Claude Opus 4.6 (1M context)

Generated-by: Claude Opus 4.6 (1M context) following the guidelines at https://github.com/apache/airflow/blob/main/contributing-docs/05_pull_requests.rst#gen-ai-assisted-contributions



potiuk added 2 commits [2 weeks ago](#)

[Validate SMTP server certificate on STARTTLS upgrade](#) ... [0d51559](#)

[Add newsfragment and SMTP provider changelog for STARTTLS cert default](#) ... ✓ [39eed0](#)

potiuk requested a review from **hussein-awala** as a [code owner](#) [2 weeks ago](#)

boring-cyborg Bot added [area:providers](#) [kind:documentation](#) [provider:smtp](#) labels [2 weeks ago](#)

potiuk added the [backport-to-v3-2-test](#) label [2 weeks ago](#)

eladkal reviewed [2 weeks ago](#)

View reviewed changes

> airflow-core/newsfragments/65346.significant.rst

Show resolved

 **eladkal** approved these changes [2 weeks ago](#)

[View reviewed changes](#)




 **potiuk** merged commit **06981d4** into `apache:main` [2 weeks ago](#)


95 checks passed

[View details](#)



 **potiuk** deleted the `validate-cert-on-smtp-starttls` branch [2 weeks ago](#)



 **github-actions** (Bot) added this to the **Airflow 3.2.2** milestone [2 weeks ago](#)

github-actions (Bot) commented [2 weeks ago](#)

Contributor

Hi maintainer, this PR was merged without a milestone set. We've automatically set the milestone to [Airflow 3.2.2](#) based on: backport label targeting v3-2-test. If this milestone is not correct, please update it to the appropriate milestone.

This comment was generated by [Milestone Tag Assistant](#).



github-actions (Bot) pushed a commit that referenced this pull request [2 weeks ago](#)

 [\[v3-2-test\] Validate SMTP server certificate on STARTTLS upgrade \(#65346\)](#)   [ffa8d9b](#)


github-actions (Bot) commented [2 weeks ago](#)

Contributor

Backport successfully created: v3-2-test

Note: As of [Merging PRs targeted for Airflow 3.X](#) the committer who merges the PR is responsible for backporting the PRs that are bug fixes (generally speaking) to the maintenance branches.

In matter of doubt please ask in [#release-management](#) Slack channel.

Status	Branch	Result
	v3-2-test	PR 65364



github-actions (Bot) pushed a commit to aws-mwaa/upstream-to-airflow that referenced this pull request 2 weeks ago

 [v3-2-test] [Validate SMTP server certificate on STARTTLS upgrade \(apa...](#) ... [37bb431](#)

 **karenbraganz** pushed a commit to karenbraganz/airflow that referenced this pull request 2 weeks ago

 [Validate SMTP server certificate on STARTTLS upgrade \(apache#65346\)](#) ... [7af0518](#)

 **shahar1** mentioned this pull request last week

Status of testing Providers that were prepared on April 21, 2026 #65702

🕒 Open

📄 60 tasks

 **vatsrahul1001** pushed a commit that referenced this pull request last week

 [v3-2-test] [Validate SMTP server certificate on STARTTLS upgrade \(#65346\)](#) ... ✖ [6e80de5](#)

 **potiuk** added a commit that referenced this pull request 4 days ago

 [v3-2-test] [Validate SMTP server certificate on STARTTLS upgrade \(#65346\)](#) ... ✔ [3a121b9](#)

 **potiuk** added a commit that referenced this pull request 4 days ago

 [v3-2-test] [Validate SMTP server certificate on STARTTLS upgrade \(#65346\)](#) ... ✖ [9497dac](#)

 **vatsrahul1001** pushed a commit that referenced this pull request 3 days ago

 [v3-2-test] [Validate SMTP server certificate on STARTTLS upgrade \(#65346\)](#) ... [f23baf0](#)

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Reviewers

 **eladkal**



 **hussein-awala**



Assignees

No one assigned

Labels

area:providers backport-to-v3-2-test kind:documentation provider:smtp

Projects

None yet

Milestone



Airflow 3.2.2

Development

Successfully merging this pull request may close these issues.

None yet

2 participants

