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fix: exclude JWT token from workload repr to prevent log exposure #62964

Merged [kaxil](#) merged 14 commits into [apache:main](#) from [SibtainOcn:fix/redact-token-from-...](#) on Mar 7

[Conversation](#) 18 [Commits](#) 14 [Checks](#) 73 [Files changed](#) 3



SibtainOcn commented on Mar 5 • edited by eladkal

Contributor

What

Prevents JWT tokens from leaking into task logs by setting `repr=False` on the `token` field in `BaseWorkloadSchema`.

Closes: [#62428](#)

Closes: [#62773](#)

Why

When workload objects are logged (e.g. `log.info('Executing workload', workload=workload)` in `execute_workload.py`), Pydantic's auto-generated `__repr__` includes all fields — including the raw JWT token. This is a security concern since tokens grant API access and should never appear in log output.

The log output currently looks like:

```
ExecuteTask(token='eyJhbGciOi...full_token_here', ti=TaskInstance(...), ...)
```

How

Uses Pydantic's built-in `Field(repr=False)` on the `token` field in `BaseWorkloadSchema` (the base class for all workload DTOs). This:

1. **Excludes** the token from `repr()` / `str()` output — so it never appears in logs
2. **Preserves** full access via `workload.token` — no functional change

3. **Fixes all executors** at the model level — KubernetesExecutor, CeleryExecutor, ECS, etc.

After the fix, log output shows:

```
ExecuteTask(ti=TaskInstance(...), dag_rel_path=..., type='ExecuteTask')
```

Comparison with #62782

PR [#62782](#) takes a different approach: it modifies the logging call sites to log individual fields and adds a structlog regex redactor. Our approach fixes the **root cause** at the model level (1 line change vs 4 files), ensuring the token is hidden from repr regardless of where or how the workload object is logged.

Both approaches are valid and complementary — `Field(repr=False)` prevents the leak at the source, while a structlog redactor provides defense-in-depth.



Changes

- `airflow-core/src/airflow/executors/workloads/base.py` : Add `Field` import; set `repr=False` on `token` field
- `airflow-core/tests/unit/executors/test_workloads.py` : Add regression test verifying token is excluded from repr
- `airflow-core/newsfragments/62428.bugfix.rst` : Changelog entry

Testing

- Added unit test `test_token_excluded_from_workload_repr` that creates an `ExecuteTask` with a fake JWT and asserts `repr()` does not contain it
- Verified locally with Pydantic 2.12.5

  [fix: exclude JWT token from workload repr to prevent log exposure](#)   [faa0c0e](#)

  SibtainOcn requested review from [XD-DENG](#), [ashb](#), [dheerajturaga](#), [hussein-awala](#), [o-nikolas](#) and [pierrejeambrun](#) as [code owners last month](#)

boring-cyborg  commented on [Mar 5](#)

Congratulations on your first Pull Request and welcome to the Apache Airflow community! If you have any issues or are unsure about anything please check our Contributors' Guide (<https://github.com/apache/airflow/blob/main/contributing-docs/README.rst>)

Here are some useful points:

- Pay attention to the quality of your code (ruff, mypy and type annotations). Our [prek-hooks](#) will help you with that.
- In case of a new feature add useful documentation (in docstrings or in `docs/` directory). Adding a new operator? Check this short [guide](#) Consider adding an example DAG that shows how users should use it.
- Consider using [Breeze environment](#) for testing locally, it's a heavy docker but it ships with a working Airflow and a lot of integrations.
- Be patient and persistent. It might take some time to get a review or get the final approval from Committers.
- Please follow [ASF Code of Conduct](#) for all communication including (but not limited to) comments on Pull Requests, Mailing list and Slack.
- Be sure to read the [Airflow Coding style](#).
- Always keep your Pull Requests rebased, otherwise your build might fail due to changes not related to your commits.

Apache Airflow is a community-driven project and together we are making it better 🚀.

In case of doubts contact the developers at:

Mailing List: dev@airflow.apache.org

Slack: <https://s.apache.org/airflow-slack>

 **boring-cyborg** Bot added the `area:Executors-core` label on Mar 5

 **kaxil** reviewed on Mar 5

View reviewed changes

> `airflow-core/src/airflow/executors/workloads/base.py`

 Show resolved

 **kaxil** reviewed on Mar 5

View reviewed changes

> `airflow-core/tests/unit/executors/test_workloads.py`

Outdated

 Show resolved

 **kaxil** requested a review from **Copilot** last month

 **kaxil** approved these changes on Mar 5

View reviewed changes


 **kaxil** added this to the **Airflow 3.2.0** milestone [on Mar 5](#)

 **Copilot** [started reviewing](#) on behalf of **kaxil** [last month](#)

[View session](#)

 **Copilot** (AI) reviewed [on Mar 5](#)

[View reviewed changes](#)

 **Copilot** (AI) left a comment

[Contributor](#)

Pull request overview

This PR fixes a security issue where JWT tokens were being exposed in task logs via Pydantic's auto-generated `__repr__` output. When workload objects are logged (e.g., `log.info("Executing workload", workload=workload)`), the full JWT token was visible in structured log output. The fix uses Pydantic's `Field(repr=False)` on the `token` field in `BaseWorkloadSchema`, the base class for all workload DTOs.

Changes:

- Set `repr=False` on the `token` field in `BaseWorkloadSchema` to prevent JWT tokens from appearing in `repr/str` output
- Added a regression test to verify the token is excluded from `repr()` while remaining accessible as an attribute
- Added a changelog newsfragment for the bugfix

Reviewed changes

Copilot reviewed 3 out of 3 changed files in this pull request and generated 2 comments.

File	Description
<code>airflow-core/src/airflow/executors/workloads/base.py</code>	Added <code>Field</code> import and set <code>repr=False</code> on the <code>token</code> field in <code>BaseWorkloadSchema</code>
<code>airflow-core/tests/unit/executors/test_workloads.py</code>	Added regression test <code>test_token_excluded_from_workload_repr</code> verifying token exclusion from <code>repr</code>
<code>airflow-core/newsfragments/62428.bugfix.rst</code>	Changelog entry for the bugfix

You can also share your feedback on Copilot code review. [Take the survey.](#)



> airflow-core/tests/unit/executors/test_workloads.py Outdated Show resolved

> airflow-core/tests/unit/executors/test_workloads.py Outdated Show resolved

SibtainOcn added 2 commits [last month](#)

[fix: move imports to top of file and simplify docstring per review](#) ✓ [ec00988](#)

[Merge branch 'main' into fix/redact-token-from-workload-repr](#) ✗ [498bb4d](#)

eladkal previously requested changes [on Mar 5](#)

[View reviewed changes](#)

> test_fix_verification.py Outdated Show resolved

SibtainOcn added 2 commits [last month](#)

[fix: remove local verification script from PR](#) [fe488e2](#)

[Merge branch 'fix/redact-token-from-workload-repr' of https://github...](#) ... ✓ [567aeec](#)

SibtainOcn requested a review from **eladkal** [last month](#)

[Merge branch 'main' into fix/redact-token-from-workload-repr](#) ✓ [42b22e2](#)

XD-DENG requested changes [on Mar 6](#)

[View reviewed changes](#)

> airflow-core/newsfragments/62964.bugfix.rst Show resolved

 **SibtainOcn** added 2 commits [last month](#)

  [fix: rename newsfragment to use PR number per review](#) [5d341f8](#)

  Merge branch '[fix/redact-token-from-workload-repr](#)' of <https://github.com/apache/airflow/pull/62964> ...  [9496980](#)

 **XD-DENG** approved these changes [on Mar 6](#)

[View reviewed changes](#)

  [style: fix assert formatting to match Airflow linter](#)  [9c7ed28](#)

 **tirkarathi** approved these changes [on Mar 6](#)

[View reviewed changes](#)

  **XD-DENG** mentioned this pull request [on Mar 6](#)

Add CI workflow to validate newsfragment PR numbers #62975

 Merged

 1 task

7 hidden items
[Load more...](#)

  **eladkal** added the type:bug-fix label [on Mar 6](#)

  **eladkal** mentioned this pull request [on Mar 6](#)

Fix JWT tokens appearing in task logs #62782

 Closed

 1 task

  **eladkal** dismissed their [stale review](#) [last month](#)

stale

 eladkal added the **backport-to-v3-1-test** label on Mar 6

 eladkal modified the milestones: **Airflow 3.2.0**, **Airflow 3.1.9** on Mar 6

 SibtainOcn added 2 commits last month

 Merge branch 'main' into fix/redact-token-from-workload-repr ✖ [5a75072](#)

 Merge branch 'main' into fix/redact-token-from-workload-repr ✖ [a6c9985](#)

SibtainOcn commented on Mar 6

Contributor Author

Hey, all the review comments have been addressed and pushed. Just waiting on CI workflow approval whenever someone gets a chance.

 SibtainOcn added 3 commits last month

 style: remove trailing blank lines per pre-commit hook [1629990](#)

 Merge branch 'fix/redact-token-from-workload-repr' of <https://github.com/apache/airflow> ✖ [3c975cb](#)

 style: remove trailing blank line to pass static checks ✖ [46bb29f](#)

SibtainOcn commented on Mar 6

Contributor Author

I done fix for the trailing blank line that keeps failing the static checks. Verified locally with pre-commit and trailing-whitespace, end-of-file checks pass now. Hope this goes through, if it still fails, could use some help understanding what the hook expects ?

 1



kaxil merged commit **b196cf3** into `apache:main` on Mar 7

74 checks passed

[View details](#)

boring-cyborg Bot commented on Mar 7

Awesome work, congrats on your first merged pull request! You are invited to check our [Issue Tracker](#) for additional contributions.

github-actions Bot commented on Mar 7

Contributor

Backport failed to create: v3-1-test. View the failure log [Run details](#)

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
✘	v3-1-test	Commit <code>b196cf3</code>

You can attempt to backport this manually by running:

```
cherry_picker b196cf3 v3-1-test
```



This should apply the commit to the v3-1-test branch and leave the commit in conflict state marking the files that need manual conflict resolution.

After you have resolved the conflicts, you can continue the backport process by running:

```
cherry_picker --continue
```



If you don't have cherry-picker installed, see the [installation guide](#).



SibtainOcn deleted the `fix/redact-token-from-workload-repr` branch [last month](#)

Member

pierrejeambrun commented on Mar 9

@kaxil needs manual backport

Member

kaxil commented on Mar 9

@kaxil needs manual backport

@vatsrahul1001 Can you do it?

 **vatsrahul1001** pushed a commit that referenced this pull request on Mar 11

 [fix: Exclude JWT token from workload repr to prevent log exposure \(#6...](#)   [d336be1](#)

Contributor

vatsrahul1001 commented on Mar 11

@kaxil needs manual backport


@vatsrahul1001 Can you do it?

backport PR [#63328](#)

 **vatsrahul1001** added a commit that referenced this pull request on Mar 11

 [fix: Exclude JWT token from workload repr to prevent log exposure \(#6...](#)   [56c28a5](#)

 **dominikhei** pushed a commit to dominikhei/airflow that referenced this pull request on Mar 11

 [fix: Exclude JWT token from workload repr to prevent log exposure \(ap...](#)  [6168ee4](#)

 **vatsrahul1001** added a commit that referenced this pull request last month

 [fix: Exclude JWT token from workload repr to prevent log exposure \(#6...](#)  [bd3d855](#)

 **pierrejeambrun** modified the milestones: **Airflow 3.1.9**, **Airflow 3.2.0** 2 weeks ago

 **pierrejeambrun** mentioned this pull request 2 weeks ago

JWT tokens appearing in task logs #62428

Closed

2 tasks

nixpkgs-security-tracker (Bot) mentioned this pull request 5 days ago

Apache Airflow: JWT token appearing in logs NixOS/nixpkgs#510874

Open

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Reviewers

- Copilot
- tirkarathi
- kaxil
- XD-DENG
- ashb ●
- o-nikolas ●
- pierrejeambrun ●
- hussein-awala ●
- dheerajturaga ●
- eladkal ●

Assignees

No one assigned

Labels

- area:Executors-core type:bug-fix

Projects

None yet

Milestone

Airflow 3.2.0

Development

Successfully merging this pull request may close these issues.

- ✔ **JWT tokens appearing in logs**
 - ✔ **JWT tokens appearing in task logs**
-

8 participants

