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## Problems with migrating to conan 2.0

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## Current status of conan

- Our CI currently runs with conan 1.55.0
- conan 2.0 has been released in February 
  - conan-center-index (source of conan recipes we use) for now supports conan 1.x and conan 2.x simultaneously
  - Therefore, we could stay with conan 1.x for now

## What is hindering us from updating to PROPOSAL 7.5.1

- The CORSIKA 8 master is using PROPOSAL 7.4.2
  - PROPOSAL 7.4.2 uses `cubicinterpolation` 0.1.4
    - The `cubicinterpolation` 0.1.4 recipe on conan-center-index is compatible with conan 1.55.0 ✓
- Now we would love to use to PROPOSAL 7.5.1 (or even 7.6.0) in CORSIKA 8
  - PROPOSAL 7.5.0 or later uses `cubic_interpolation` 0.1.5
    - The `cubicinterpolation` 0.1.5 recipe on conan-center-index requires conan 1.57.0 ✗
- This requirement changed when I have been upgrading the `cubicinteprolation` recipe in conan-center-index

*ConanCenter recipes are always the latest (minus a version).*

*– Chris Mc, conan-io developer*

## What is hindering us from updating to conan 2.0

- In principle, we would only need the `conanfile.txt`, which is trivial
  - Upgrading to conan 2.0 would also make the special treatment we currently do inside `conaninstall.sh` redundant
- A few weeks ago, I had at building CORSIKA 8 with conan 2.0, but I ran into 2 problems with the conan recipe of `arrow`

## 1. Recipe error when building arrow

```
ERROR: arrow/10.0.1: Error in package_id() method, line 549
      self.info.options.with_gflags = self._with_gflags()
while calling '_with_gflags', line 264
      if required or self.options.with_gflags == "auto":
      ConanException: 'self.options' access in 'package_id()' method is forbidden
```

→ Known issue, and currently being worked on (last activity of [corresponding MR](#): a few hours ago)

## 2. Version conflict when building arrow with `parquet=True`

```
ERROR: Version conflict: libevent/2.1.12->openssl/3.1.0, None->openssl/1.1.1s.
```

→ I've asked the conan developers on how to resolve version conflicts, and the answer was:

*[...] Try to bump the versions of your dependencies to the latest one the library supports. Once that is done, most version conflicts should hopefully be resolved. If any remain, [...] open an issue with the conflict.*

*— Rubén Rincón Blanco, conan-io developer*

→ Since this even happens with no other dependencies involved, I've opened [an issue](#) about this in conan-center-index, but got no response so far

## Summary

- While conan 2.0 is ready, it looks like not all packages are working flawlessly for now
  - We have to wait until these problems are resolved
  - This requires work by the conan developers or community members
- For the time being, it would be valid to stay with conan 1.x
  - When I updated the recipes, I introduced conan 1.57.0 as a new requirement
  - These breaking changes are annoying from a consumer point of view
  - Conan asks their users to use an up-to-date client for "best experience"
  - Still, conan provides measures to deal with such stability problem [here](#), e.g. in terms of CI and production