

git_comments:

1. The cache manager per user-defined pipeline is lazily initiated the first time accessed. It is owned by `interactive_environment` module. This shortcut reference will be initialized when the user pipeline associated to the given pipeline is identified.
2. Check if the user defined pipeline contains any source to cache. If so, during the check, the cache manager is converted into a streaming cache manager, thus re-assign the reference.
3. Retrieve a reference to the cache manager for the user defined pipeline instance.

git_commits:

1. **summary:** Make tracking/cleanup of cache and in-environment states per pipeline (#12249)
message: Make tracking/cleanup of cache and in-environment states per pipeline (#12249) Make tracking/cleanup of cache and in-environment states per pipeline (#12249) Co-authored-by: Ning Kang <ningk@google.com>

github_issues:**github_issues_comments:****github_pulls:**

1. **title:** Make tracking/cleanup of cache and in-environment states per pipeline
body: 1. Interactive Beam now creates 1 cache manager for each user defined pipeline. 2. Cache managers are created lazily when they are used. 3. Cleanup of cache and states are carried out independently for each pipeline. 4. The source recording/capture size limit is applied to the total capture size of all pipelines. ----- Thank you for your contribution! Follow this checklist to help us incorporate your contribution quickly and easily: - [x] **Choose reviewer(s)****[(https://beam.apache.org/contribute/#make-your-change)] and mention them in a comment (`R: @username`). - [] Format the pull request title like `[BEAM-XXX] Fixes bug in ApproximateQuantiles`, where you replace `BEAM-XXX` with the appropriate JIRA issue, if applicable. This will automatically link the pull request to the issue. - [] Update `CHANGES.md` with noteworthy changes. - [] If this contribution is large, please file an Apache [Individual Contributor License Agreement](https://www.apache.org/licenses/icla.pdf). See the [Contributor Guide](https://beam.apache.org/contribute) for more tips on [how to make review process smoother](https://beam.apache.org/contribute/#make-reviewers-job-easier). Post-Commit Tests Status (on master branch) -----
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github_pulls_comments:

1. Run Python2_PVR_Flink PreCommit
2. R: @davidyan74 R: @aaltay PTAL, thx!
3. Run Python2_PVR_Flink PreCommit
4. Reported BEAM-10483
5. Run Python PreCommit
6. Run Portable_Python PreCommit
7. Run Python2_PVR_Flink PreCommit

github_pulls_reviews:

1. Do you need to call `cleanup` for evicted cache manager(s) ?
2. Do you need this? You can change L569 to use `create_if_absent=True` instead.
3. Do you need to check that `cache_manager` is not `None`?
4. Thanks! Yes, I'll add a `cleanup` here.
5. That is not needed since PipelineResult takes in the PipelineInstrument in the constructor. The cache manager must have been initialized during the instrumenting.
6. L569 might not get executed at all if the `background_caching_job` does not `has_source_to_cache`. This line makes sure the cache manager is initialized (if never initialized before) in either conditions.
7. Does it matter though, because then there will be L577 to initialize? Is there a case `if not self._user_pipeline:` would not be true in the first run?
8. This line is the "official" way within the module to initialize the cache manager. (Outside the module, each time a user appends a PTransform, a cache manager will be created_if_absent for the user defined pipeline) TL;DR: L577 is only a

fallback when the user defined pipeline cannot be identified from the given pipeline. It might not get executed either. There are 2 scenarios that the user defined pipeline can not be identified: - The given pipeline is empty without any PCollection in it. - The given pipeline is the user defined pipeline (would not happen internally except tests). In either scenarios, use the given pipeline as the user pipeline as a fallback last resort.

jira_issues:

jira_issues_comments: