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2. Indicates that there have NOT been changes to the cell since last commit.
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23. For this test, any object can be a bundle
24. Licensed to the Apache Software Foundation (ASF) under one or more contributor license agreements. See the NOTICE file distributed with this work for additional information regarding copyright ownership. The ASF licenses this file to You under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0> Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.
25. pylint: disable=expression-not-assigned

#### git\_commits:

1. **summary:** Closes #1420  
**message:** Closes #1420

#### github\_issues:

#### github\_issues\_comments:

#### github\_pulls:

1. **title:** [BEAM-147] Adding Metrics API to Python SDK  
**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `<Jira issue #>` in the title with the actual Jira issue number, if there is one. - [ ] If this contribution is large, please file an Apache [Individual Contributor License Agreement](<https://www.apache.org/licenses/icla.txt>). ---  
**label:** requirement
2. **title:** [BEAM-147] Adding Metrics API to Python SDK  
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- [illegible]



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**label:** code-design

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**label:** code-design

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**label:** code-design

- [illegible]

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**label:** documentation

100. **title:** [BEAM-147] Adding Metrics API to Python SDK

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**label:** code-design

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**label:** requirement

- [illegible]

- [illegible]



- [illegible]





- [illegible]

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `` in the title with the actual Jira issue number, if there is one. - [ ] If this contribution is large, please file an Apache [Individual Contributor License Agreement](https://www.apache.org/licenses/icla.txt). ---

177. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

178. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

179. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

180. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

181. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

182. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

**label:** code-design

183. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

184. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

185. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

186. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `` in the title with the actual Jira issue number, if there is one. - [ ] If this contribution is large, please file an Apache [Individual Contributor License Agreement](https://www.apache.org/licenses/icla.txt). ---

187. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-[Jira issue #](#)] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`.



with the actual Jira issue number, if there is one. - [ ] If this contribution is large, please file an Apache [Individual Contributor License Agreement](https://www.apache.org/licenses/icla.txt). ---

199. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

200. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

201. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

202. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

203. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

204. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

205. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

206. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

207. **title:** [BEAM-147] Adding Metrics API to Python SDK

**body:** Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [ ] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `

## github\_pulls\_comments:

1. **body:** Note: Work in progress. Do not review yet.

**label:** requirement

2. r: @bjchambers, @charlesccychen Here is the first sketch of the Metrics API for Python. Let me know what you think. All comments are very welcome, and I'll incorporate all your suggestions as best I can. Things that need special review: \* `MetricName`, `MetricKey`, `MetricResult` are simple `namedtuple`s without any validation. Should we leave them be this way? \* `MetricsEnvironment` is used as a 'global' object that keeps global state. Its methods are a bit python-awkward (e.g. `set\_metrics\_supported`, `set\_current\_container`, `unset\_current\_container`). Should we rename/refactor them? The `@property` decorator doesn't work for class methods. \* `MetricsContainer` has the `get\_Counter`, and `get\_Distribution` methods. Should we rename them to `counter` and `distribution`? \* `MetricsAggregation` seemed a bit unnatural in `DirectMetrics`, so I moved it to the `cells.py` file. Should we also separate them in Java? (or should I move them to

- `DirectMetrics` in Python?) \* The class `MetricUpdate` does not exist. Instead, a metric update is of the basic data value of the metrics (e.g. `DistributionData`, or `int`). Does this seem fine? \* Is the documentation good enough? : ) I'll add more unit tests next week, to be sure that the code is safe and sound.
3. Also, quick description of the files: \* `base.py` - Contains basic types and classes. `MetricName`, `MetricKey`, `MetricResult`, `MetricUpdates`, `Metric`, `Counter`, `Distribution`. \* `metric.py` - Contains user-facing types and classes. `Metrics`, `MetricsFilter`, `MetricsResults`. \* `internal.py` - Contains internal classes `MetricsEnvironment` and `MetricsContainer`. \* `cells.py` - Contains the thread-safe classes to keep the metric data, and combine it `MetricCell`, `CounterCell`, `DistributionCell`, `MetricAggregation` (and subclasses), and `DistributionData`. \* `direct\_metrics.py` - Contains the implementation of `DirectMetrics` and `DirectMetric` classes. : )
  4. @charlesccychen @aaltay @bjchambers can you guys take a look ? : ) You can see a simple test case of the metrics API [in this function](https://github.com/apache/incubator-beam/pull/1420/files#diff-e09fc7b3e830d61b86119eaac26912ffR130). Do you think this makes sense? Is there something we'd rather do in a different way? (you can take a look at my earlier comments for some questions, and points to consider).
  5. Refer to this link for build results (access rights to CI server needed):  
https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5524/ --none--
  6. Refer to this link for build results (access rights to CI server needed):  
https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5539/<h2>Failed Tests: <span class='status-failure'>1</span></h2><h3><a name='beam\_PreCommit\_Java\_MavenInstall/org.apache.beam:beam-examples-java' /><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5539/org.apache.beam\$beam-examples-java/testReport'>beam\_PreCommit\_Java\_MavenInstall/org.apache.beam:beam-examples-java</a>: <span class='status-failure'>1</span></h3><ul><li><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5539/org.apache.beam\$beam-examples-java/testReport/org.apache.beam.examples.WindowedWordCountIT/testWindowedWordCountInStreaming/'><strong>org.apache.beam.examples.WindowedWordCountIT.testWindowedWordCountInStreaming</strong></a></li></ul> --none--
  7. R: @charlesccychen
  8. Refer to this link for build results (access rights to CI server needed):  
https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5676/<h2>Failed Tests: <span class='status-failure'>2</span></h2><h3><a name='beam\_PreCommit\_Java\_MavenInstall/org.apache.beam:beam-examples-java' /><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5676/org.apache.beam\$beam-examples-java/testReport'>beam\_PreCommit\_Java\_MavenInstall/org.apache.beam:beam-examples-java</a>: <span class='status-failure'>2</span></h3><ul><li><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5676/org.apache.beam\$beam-examples-java/testReport/org.apache.beam.examples.WordCountIT/testE2EWordCount/'><strong>org.apache.beam.examples.WordCountIT.testE2EWordCount</strong></a></li><li><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5676/org.apache.beam\$beam-examples-java/testReport/org.apache.beam.examples.WordCountIT/testE2EWordCount\_2/'><strong>org.apache.beam.examples.WordCountIT.testE2EWordCount</strong></a></li></ul> --none--
  9. @charlesccychen do you see any other problems with the changes? Is there something else you think I should test/check before trying to push for merging of the feature?
  10. Refer to this link for build results (access rights to CI server needed):  
https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5801/ --none--
  11. Thanks Pablo!
  12. Refer to this link for build results (access rights to CI server needed):  
https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5976/ --none--
  13. Refer to this link for build results (access rights to CI server needed):  
https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5979/<h2>Failed Tests: <span class='status-failure'>1</span></h2><h3><a name='beam\_PreCommit\_Java\_MavenInstall/org.apache.beam:beam-examples-java' /><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5979/org.apache.beam\$beam-examples-java/testReport'>beam\_PreCommit\_Java\_MavenInstall/org.apache.beam:beam-examples-java</a>: <span class='status-failure'>1</span></h3><ul><li><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/5979/org.apache.beam\$beam-examples-java/testReport/org.apache.beam.examples.WordCountIT/testE2EWordCount/'><strong>org.apache.beam.examples.WordCountIT.testE2EWordCount</strong></a></li></ul> --none--
  14. I've added simplified import of the `Metrics` class, which is the only class that users actually need to import to use metrics. Users can now import it as `from apache\_beam.metrics import Metrics`, instead of the whole `from apache\_beam.metrics.metric import Metrics`.
  15. Refer to this link for build results (access rights to CI server needed):  
https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/6012/ --none--
  16. Refer to this link for build results (access rights to CI server needed):  
https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/6027/ --none--
  17. **body:** Thanks! This LGTM modulo a few nits.  
**label:** code-design
  18. After discussing it with Charles, I'll go with returning `None`, and decide with Ben later if this is appropriate.
  19. Refer to this link for build results (access rights to CI server needed):  
https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/6176/<h2>Build result: FAILURE</span></h2> [...truncated 13031 lines...] at  
org.eclipse.aether.internal.impl.DefaultRepositorySystem.resolveDependencies(DefaultRepositorySystem.java:384) at  
org.apache.maven.project.DefaultProjectDependenciesResolver.resolve(DefaultProjectDependenciesResolver.java:205) ... 35

moreCaused by: org.eclipse.aether.resolution.ArtifactResolutionException: The following artifacts could not be resolved: org.apache.apex:apex-common:jar:3.5.0-SNAPSHOT, org.apache.apex:apex-engine:jar:3.5.0-SNAPSHOT: Could not find artifact org.apache.apex:apex-common:jar:3.5.0-SNAPSHOT in Nexus (<http://repository.apache.org/snapshots>) at org.eclipse.aether.internal.impl.DefaultArtifactResolver.resolve(DefaultArtifactResolver.java:444) at org.eclipse.aether.internal.impl.DefaultArtifactResolver.resolveArtifacts(DefaultArtifactResolver.java:246) at org.eclipse.aether.internal.impl.DefaultRepositorySystem.resolveDependencies(DefaultRepositorySystem.java:367) ... 36 moreCaused by: org.eclipse.aether.transfer.ArtifactNotFoundException: Could not find artifact org.apache.apex:apex-common:jar:3.5.0-SNAPSHOT in Nexus (<http://repository.apache.org/snapshots>) at org.eclipse.aether.connector.basic.ArtifactTransportListener.transferFailed(ArtifactTransportListener.java:39) at org.eclipse.aether.connector.basic.BasicRepositoryConnector\$TaskRunner.run(BasicRepositoryConnector.java:355) at org.eclipse.aether.util.concurrent.RunnableErrorForwarder\$1.run(RunnableErrorForwarder.java:67) ... 3 more2016-12-21T20:34:52.715 [ERROR] 2016-12-21T20:34:52.715 [ERROR] Re-run Maven using the -X switch to enable full debug logging.2016-12-21T20:34:52.715 [ERROR] 2016-12-21T20:34:52.715 [ERROR] For more information about the errors and possible solutions, please read the following articles:2016-12-21T20:34:52.715 [ERROR] [Help 1] <http://cwiki.apache.org/confluence/display/MAVEN/DependencyResolutionException>2016-12-21T20:34:52.715 [ERROR] 2016-12-21T20:34:52.716 [ERROR] After correcting the problems, you can resume the build with the command2016-12-21T20:34:52.716 [ERROR] mvn <goals> -rf :beam-runners-apexchannel stoppedSetting status of 681cc3b740987ec6816ce31257a807a3453cdc80 to FAILURE with url [https://builds.apache.org/job/beam\\_PreCommit\\_Java\\_MavenInstall/6176/](https://builds.apache.org/job/beam_PreCommit_Java_MavenInstall/6176/) and message: 'Build finished. 'Using context: Jenkins: Maven clean install --none--

20. Refer to this link for build results (access rights to CI server needed):

[https://builds.apache.org/job/beam\\_PreCommit\\_Java\\_MavenInstall/6177/](https://builds.apache.org/job/beam_PreCommit_Java_MavenInstall/6177/)<h2>Build result: FAILURE</span></h2> [...truncated 13030 lines...] at org.eclipse.aether.internal.impl.DefaultRepositorySystem.resolveDependencies(DefaultRepositorySystem.java:384) at org.apache.maven.project.DefaultProjectDependenciesResolver.resolve(DefaultProjectDependenciesResolver.java:205) ... 35 moreCaused by: org.eclipse.aether.resolution.ArtifactResolutionException: The following artifacts could not be resolved: org.apache.apex:apex-common:jar:3.5.0-SNAPSHOT, org.apache.apex:apex-engine:jar:3.5.0-SNAPSHOT: Could not find artifact org.apache.apex:apex-common:jar:3.5.0-SNAPSHOT in Nexus (<http://repository.apache.org/snapshots>) at org.eclipse.aether.internal.impl.DefaultArtifactResolver.resolve(DefaultArtifactResolver.java:444) at org.eclipse.aether.internal.impl.DefaultArtifactResolver.resolveArtifacts(DefaultArtifactResolver.java:246) at org.eclipse.aether.internal.impl.DefaultRepositorySystem.resolveDependencies(DefaultRepositorySystem.java:367) ... 36 moreCaused by: org.eclipse.aether.transfer.ArtifactNotFoundException: Could not find artifact org.apache.apex:apex-common:jar:3.5.0-SNAPSHOT in Nexus (<http://repository.apache.org/snapshots>) at org.eclipse.aether.connector.basic.ArtifactTransportListener.transferFailed(ArtifactTransportListener.java:39) at org.eclipse.aether.connector.basic.BasicRepositoryConnector\$TaskRunner.run(BasicRepositoryConnector.java:355) at org.eclipse.aether.util.concurrent.RunnableErrorForwarder\$1.run(RunnableErrorForwarder.java:67) ... 3 more2016-12-21T20:39:14.199 [ERROR] 2016-12-21T20:39:14.199 [ERROR] Re-run Maven using the -X switch to enable full debug logging.2016-12-21T20:39:14.199 [ERROR] 2016-12-21T20:39:14.199 [ERROR] For more information about the errors and possible solutions, please read the following articles:2016-12-21T20:39:14.199 [ERROR] [Help 1] <http://cwiki.apache.org/confluence/display/MAVEN/DependencyResolutionException>2016-12-21T20:39:14.199 [ERROR] 2016-12-21T20:39:14.199 [ERROR] After correcting the problems, you can resume the build with the command2016-12-21T20:39:14.199 [ERROR] mvn <goals> -rf :beam-runners-apexchannel stoppedSetting status of ca15721f7c0cbd76ce689769c158900977a7abf to FAILURE with url [https://builds.apache.org/job/beam\\_PreCommit\\_Java\\_MavenInstall/6177/](https://builds.apache.org/job/beam_PreCommit_Java_MavenInstall/6177/) and message: 'Build finished. 'Using context: Jenkins: Maven clean install --none--

21. @robertwb this is ready to be merged.

22. Refer to this link for build results (access rights to CI server needed):

[https://builds.apache.org/job/beam\\_PreCommit\\_Java\\_MavenInstall/6261/](https://builds.apache.org/job/beam_PreCommit_Java_MavenInstall/6261/)<h2>Build result: FAILURE</span></h2> [...truncated 11029 lines...] at java.util.concurrent.ThreadPoolExecutor\$Worker.run(ThreadPoolExecutor.java:617) at java.lang.Thread.run(Thread.java:745)Caused by: org.apache.maven.plugin.MojoExecutionException: Command execution failed. at org.codehaus.mojo.exec.ExecMojo.execute(ExecMojo.java:276) at org.apache.maven.plugin.DefaultBuildPluginManager.executeMojo(DefaultBuildPluginManager.java:134) at org.apache.maven.lifecycle.internal.MojoExecutor.execute(MojoExecutor.java:208) ... 31 moreCaused by: org.apache.commons.exec.ExecuteException: Process exited with an error: 1 (Exit value: 1) at org.apache.commons.exec.DefaultExecutor.executeInternal(DefaultExecutor.java:404) at org.apache.commons.exec.DefaultExecutor.execute(DefaultExecutor.java:166) at org.codehaus.mojo.exec.ExecMojo.executeCommandLine(ExecMojo.java:660) at org.codehaus.mojo.exec.ExecMojo.execute(ExecMojo.java:265) ... 33 more2016-12-27T18:51:24.669 [ERROR] 2016-12-27T18:51:24.669 [ERROR] Re-run Maven using the -X switch to enable full debug logging.2016-12-27T18:51:24.669 [ERROR] 2016-12-27T18:51:24.669 [ERROR] For more information about the errors and possible solutions, please read the following articles:2016-12-27T18:51:24.669 [ERROR] [Help 1] <http://cwiki.apache.org/confluence/display/MAVEN/MojoExecutionException>2016-12-27T18:51:24.670 [ERROR] 2016-12-27T18:51:24.670 [ERROR] After correcting the problems, you can resume the build with the command2016-12-27T18:51:24.670 [ERROR] mvn <goals> -rf :beam-sdks-pythonchannel stoppedSetting status of 2f2b7d07893460e88dc66d4b484c8bd1e08dd834 to FAILURE with url [https://builds.apache.org/job/beam\\_PreCommit\\_Java\\_MavenInstall/6261/](https://builds.apache.org/job/beam_PreCommit_Java_MavenInstall/6261/) and message: 'Build finished. 'Using context: Jenkins: Maven clean install --none--

23. Refer to this link for build results (access rights to CI server needed):

[https://builds.apache.org/job/beam\\_PreCommit\\_Java\\_MavenInstall/6267/](https://builds.apache.org/job/beam_PreCommit_Java_MavenInstall/6267/)<h2>Failed Tests: <span class='status-

failure'>1</span></h2><h3><a name='beam\_PreCommit\_Java\_MavenInstall/org.apache.beam:beam-runners-apex' /><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/6267/org.apache.beam\$beam-runners-apex/testReport'>beam\_PreCommit\_Java\_MavenInstall/org.apache.beam:beam-runners-apex</a>: <span class='status-failure'>1</span></h3><ul><li><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/6267/org.apache.beam\$beam-runners-apex/testReport/org.apache.beam.runners.apex.translation.ParDoBoundTranslatorTest/testMultiOutputParDoWithSideInputs/'><strong>org.apache.beam.runners.apex.translation.ParDoBoundTranslatorTest.testMultiOutputParDoWithSideInputs</strong></a></li></ul> --none--

24. Refer to this link for build results (access rights to CI server needed):

[https://builds.apache.org/job/beam\\_PreCommit\\_Java\\_MavenInstall/6269/](https://builds.apache.org/job/beam_PreCommit_Java_MavenInstall/6269/)<h2>Failed Tests: <span class='status-failure'>2</span></h2><h3><a name='beam\_PreCommit\_Java\_MavenInstall/org.apache.beam:beam-examples-java' /><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/6269/org.apache.beam\$beam-examples-java/testReport'>beam\_PreCommit\_Java\_MavenInstall/org.apache.beam:beam-examples-java</a>: <span class='status-failure'>2</span></h3><ul><li><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/6269/org.apache.beam\$beam-examples-java/testReport/org.apache.beam.examples.WindowedWordCountIT/testWindowedWordCountInBatch/'><strong>org.apache.beam.examples.WindowedWordCountIT.testWindowedWordCountInBatch</strong></a></li><li><a href='https://builds.apache.org/job/beam\_PreCommit\_Java\_MavenInstall/6269/org.apache.beam\$beam-examples-java/testReport/org.apache.beam.examples.WindowedWordCountIT/testWindowedWordCountInStreaming/'><strong>org.apache.beam.examples.WindowedWordCountIT.testWindowedWordCountInStreaming</strong></a></li></ul> --none--

25. Refer to this link for build results (access rights to CI server needed):

[https://builds.apache.org/job/beam\\_PreCommit\\_Java\\_MavenInstall/6271/](https://builds.apache.org/job/beam_PreCommit_Java_MavenInstall/6271/) --none--

26. @bjchambers if you think it's appropriate, could you merge? : )

27. Refer to this link for build results (access rights to CI server needed):

[https://builds.apache.org/job/beam\\_PreCommit\\_Java\\_MavenInstall/6326/](https://builds.apache.org/job/beam_PreCommit_Java_MavenInstall/6326/) --none--

## github\_pulls\_reviews:

1. Why is the `Metric` class visible. It seems like users won't be able to do anything useful with it. If its only visible so methods can be called, etc. maybe make it clear that none of these are intended to be sub-classed, rather they are created with the factory methods? And then document how to create each one.
2. Why not `(metric=<MetricKey>, committed=data, attempted=data)`
3. For people who know Python more, is there anything like an AtomicReference that supports lockless compare-and-swap? Given that metrics may be modified multiple times while processing each element, acquiring a lock each time can be problematic.
4. Maybe go further and say sub-classes must be thread safe?
5. Comment on why this doesn't need to get a lock?
6. **body:** May be worth having the dirty-bit also have the lock. That way we don't need to get two locks to do the dirty-bit setting within the update method. The downside is that getting metrics then has the same lock... Alternatively, is there an atomic long or anything like that that could be done via compare-and-swap?  
**label:** code-design
7. Pydoc? An immutable value holder for distribution metrics?
8. "used as to keep" -> "used to keep"
9. You may want to look at the recent java changes. The MetricsEnvironment now supports scoped updates, such as: `` with MetricsEnvironment.set\_current\_container(container): ... `` That automatically resets it to the previous container. May be useful.
10. I don't understand this comment.
11. **body:** Is this naming convention standard? Should it be either `snake\_case` or `camelCase`? This seems to mix the two.  
**label:** code-design
12. One thing to think about -- for the Java side, it is possible (although atypical) for the user to get the underlying distribution directly (eg., within the worker) and increment it without going through the delegation. Is that still possible here?
13. Is it worth mentioning that this doesn't include anything executable (such as a filter function) because the intention is that this could be used to construct the arguments to an RPC request?
14. Oops. Yes, that should not be there.
15. Done.
16. Nah. My bad : ). Fixed to normal snake\_case.
17. Added.
18. Humm that'd be a convenient syntactic feature. I'll work with the python guys to find the best way to make it work.
19. Duly noted as outstanding question.
20. **body:** We don't have this pattern of using namedtuples in lieu of API classes, so let's add a bit of boilerplate and expand these out into actual classes.  
**label:** code-design
21. Unfortunately, that does not exist: <http://stackoverflow.com/questions/25219326/does-python-have-compare-and-swap-operations>. If this really becomes an issue, we can use Cython to compile this file and be able to use C-based compare and swap routines.
22. Pydoc should be of the form without spaces throughout, preferring to not add newline for single-line docstrings: > """Base class of a metric object."""
23. **body:** Nit: periods at end of sentences.

- label:** code-design
24. pydoc format uses colons: "counters: Dictionary ..."
25. **body:** The name here can be improved; would something like CellCommitState better match the description?
- label:** code-design
26. Can you revise the description to emphasize that this is the metric state during pipeline execution?
27. Can you revise the description to emphasize that this is the metric state during pipeline execution?
28. add spaces, i.e. "self.sum / self.count"
29. What if self.min and other.min are both None? This code will fail with "ValueError: min() arg is an empty sequence".
30. Take a look at these: <http://effbot.org/zone/python-with-statement.htm> <https://jeffknupp.com/blog/2016/03/07/python-with-context-managers/> <http://preshing.com/20110920/the-python-with-statement-by-example/>
31. What do you think of the new phrasing on top?
32. Done.
33. Done.
34. Done.
35. Good call. Done.
36. Done.
37. Done.
38. Sounds good. Added ; ).
39. How about now?
40. Done.
41. Added. Also, isolated the internal variables from users.
42. You're correct. It needs a lock to be able to guarantee consistency.
43. We can see its effect on performance and decide afterwards?
44. Good catch. Fixed.
45. I think I'll do this just like in Java, by adding a `ScopedContainer`: with ScopedContainer('somename') as container: ... And having `ScopedContainer` keep track of the previous container. What do you think @charlesccychen?
46. I agree. Let me check quickly with Ben and I'll find a nicer name.
47. I've changed the name to `CellCommitState`.
48. Can we simplify the imports paths that users have to use by importing some of the classes here into the outer module (as in [https://github.com/apache/incubator-beam/blob/python-sdk/sdks/python/apache\\_beam/io/\\_\\_init\\_\\_.py](https://github.com/apache/incubator-beam/blob/python-sdk/sdks/python/apache_beam/io/__init__.py))? Alternatively, we can be more granular in what we expose directly in the apache\_beam.metrics interface (for example, we can selectively omit certain implementation detail classes in the public interface). Robert (@robertwb) may be able to give you more guidance here.
49. Please provide a pydoc, detailing the arguments and types too (the argument information can be removed from the module pydoc above).
50. Please provide a pydoc, detailing the arguments and types as well.
51. Please provide a pydoc, detailing the arguments and types as well.
52. Using "simple" in your pydoc titles is not informative; this can be be more explicit with something like: "Container for metrics updates."
53. Why is this class in this file? It seems that the intention of "base.py" is to contain the base classes for metrics objects. this class is unrelated to these classes and is more related to the ones in "internal.py".
54. "Base interface for an Apache Beam metric." -- you can omit "Provides very basic methods."
55. "Base interface for an Apache Beam metric."
56. Are there methods that all types of Metrics should implement? If so, you should define stubs here that raise NotImplementedError. If not, you should explicitly put "pass" here.
57. **body:** Can you revise this file to indicate that the classes here are \_interfaces\_ (not base classes) that are implemented by runners to add support for Apache Beam metrics? The confusion I had reading these is interfaces are expected to be used as mix-ins for other classes implementing, for example, Counter functionality, while "base class" gives the impression that there are going to be, for example, additional, specialized types of Counters that depend on this.
- label:** code-design
58. "Counter Metric interface. Allows a count to be incremented / decremented during pipeline execution."
59. "Distribution Metric interface. Allows statistics about the distribution of a variable to be collected during pipeline execution."
60. **body:** Can we rename this to "metricbase.py" to make it more clear that this is the internal counterpart of the public API in "metric.py"?
- label:** code-design
61. Please also adapt the corresponding explanation from Java: ``java /\*\* \* The name of a metric consists of a {@link #namespace} and a {@link #name}. The {@link #namespace} \* allows grouping related metrics together and also prevents collisions between multiple metrics \* with the same name. \*/ ``
62. "Counter Metric interface. Allows a count to be incremented / decremented during pipeline execution."
63. "Namespace and name used to refer to a Metric."
64. "Step and MetricName used to refer to a Metric during step execution."
65. This should is not really a base class for metrics; rather, it is used for execution and corresponds more to the classes defined in "internal.py".
66. "Distribution Metric interface. Allows statistics about the distribution of a variable to be collected during pipeline execution."
67. This should is not really a base class for metrics; rather, it is used for execution and corresponds more to the classes defined in "internal.py".
68. **body:** "This class is thread-safe."
- label:** requirement



69. Can you give a brief description of how this is used in the docstring, i.e. adapt the class comment from `sdk/java/core/src/main/java/org/apache/beam/sdk/metrics/DirtyState.java`?
70. I think we need to grab the lock here (?).
71. **body:** Can you add a comment as to why we start off as dirty? (this may also be clear once the description is adapted from `DirtyState.java` above).  
**label:** documentation
72. **body:** This method name is confusing--just reading the method name "modified()", it seems to imply that when called, it will return whether something has been modified. Ben's change in Java originally calls this "afterModification()"; is there a reason you want to change the style here? (cc:@bjchambers)  
**label:** code-design
73. Can you adapt the comments on the state enum from `sdk/java/core/src/main/java/org/apache/beam/sdk/metrics/DirtyState.java` and put them here?
74. Can you adapt the docstring from `DirtyState.java`?
75. Can you adapt the docstring from `DirtyState.java`?
76. Can you adapt the docstring from `DirtyState.java`?
77. Please add a module docstring describing what a Cell is (e.g., adapting from `MetricCell.java`): ````java /** * A {@link MetricCell} is used for accumulating in-memory changes to a metric. It represents a * specific metric name in a single context. * * @param <UserT> The type of the user interface for reporting changes to this cell. * @param <DataT> The type of metric data stored (and extracted) from this cell. */ ````
78. **body:** "Base class" is redundant; maybe something like "Accumulates in-memory changes to a metric.\n\nA MetricCell represents a specific metric name in a single context and bundle." (see corresponding doc for Java below). ````java /** * A {@link MetricCell} is used for accumulating in-memory changes to a metric. It represents a * specific metric name in a single context. * * @param <UserT> The type of the user interface for reporting changes to this cell. * @param <DataT> The type of metric data stored (and extracted) from this cell. */ ````  
**label:** code-design
79. **body:** "This class is thread-safe."  
**label:** requirement
80. Please adapt java docstring: ````java /** * Tracks the current value (and delta) for a Counter metric for a specific context and bundle. * * <p>This class generally shouldn't be used directly. The only exception is within a runner where * a counter is being reported for a specific step (rather than the counter in the current context). */ ````
81. In Python, it is generally a best-practice to avoid this pattern of declaring private versions of these member variables and define getters/setters. Is there a specific reason you do this here? Otherwise, I suggest storing these values directly (e.g. "self.sum = sum", "self.count = count") and removing the ````@property```` getters for sum, count min and max.
82. This should be `float(self.sum) / self.count` to return the correct return type (also, add a docstring indicating that the float mean is returned). In any case, do you want this property here or in a separate `DistributionResult` class? (cc: @bjchambers) In Java, there is a `DistributionResult` class separate from `DistributionData` which holds the result object when This is the docstring for `DistributionData`: ````java /** * Data describing the the distribution. This should retain enough detail that it can be combined * with other {@link DistributionData}. * * <p>This is kept distinct from {@link DistributionResult} since this may be extended to include * data necessary to approximate quantiles, etc. while {@link DistributionResult} would just include * the approximate value of those quantiles. */ ````
83. **body:** Can you make the docstring more explicit? "holds data" is very vague. This is the corresponding docstring for `DistributionData.java`: ````java /** * Data describing the the distribution. This should retain enough detail that it can be combined * with other {@link DistributionData}. * * <p>This is kept distinct from {@link DistributionResult} since this may be extended to include * data necessary to approximate quantiles, etc. while {@link DistributionResult} would just include * the approximate value of those quantiles. */ ```` What is the type of the values in this structure? We should be clear what is allowed by the API and explicitly cast input to this type in the constructor. @bjchambers: in your `DistributionData.java`, you use "long"s--is this an intended restriction of the values through this API?  
**label:** code-design
84. Note that the Java docstring is: ````java /** * Tracks the current value (and delta) for a Distribution metric. */ ````
85. **body:** In the Java version of this code, there are two classes: (1) `DistributionData` for accumulating partial distributions during pipeline execution and (2) `DistributionResult` for representing these results as a user API. For example, this means that the `.mean()` method should be removed from `DistributionData` (since it should never be called during accumulation of partial distributions) but included in `DistributionResult`; correspondingly, the `combine()` method should be included in `DistributionData` but not in `DistributionResult`. Should we do the same thing here? CC: @bjchambers for comment. ````java /** * Data describing the the distribution. This should retain enough detail that it can be combined * with other {@link DistributionData}. * * <p>This is kept distinct from {@link DistributionResult} since this may be extended to include * data necessary to approximate quantiles, etc. while {@link DistributionResult} would just include * the approximate value of those quantiles. */ ````  
**label:** code-design
86. You need to do the same dance as "new\_min" for max to be safe with None.
87. You can do: ````python new_min = next((x for x in (self.min, other.min) if x is not None), None) ````
88. **body:** Should this be `MetricAggregator` to be consistent with `CounterAggregator` and `DistributionAggregator` below?  
**label:** code-design
89. "Aggregator for Counter metric data during pipeline runtime."
90. "Aggregator for Distribution metric data during pipeline runtime."
91. The type coming into the aggregation should be enforced (e.g., "return int(x) + int(y)").
92. "Values aggregated should be int objects."
93. "Values aggregated should be `DistributionData` objects."
94. "Base class for aggregating Metric data during pipeline runtime."

95. "internal.py" is a very vague name. Because this file contains classes that are used for collecting metrics during pipeline execution, I suggest renaming this class "execution.py". Additionally, I suggest moving the MetricKey and MetricResult classes from "base.py" to this file (and renaming "base.py" to "metricbase.py" as described in the comments on that file).
96. Can you test that passing float values to DistributionData will clip the float values to be integers? For example, combining [3.1, 3.2, 3.3] here give would clip each value to int(3) first before accumulating into the distribution. Also maybe test that passing float('inf') raises an OverflowError. @bjchambers: since we don't have explicit typing in this API, does this seem reasonable to you? Do we want to keep the int restriction on values in the distribution metric?
97. This should is not really a base class for metrics; rather, it is used for execution and corresponds more to the classes defined in "internal.py".
98. SGTM.
99. Done.
100. Done.
101. Done.
102. Done.
103. Done.
104. Done.
105. Done.
106. Done.
107. Done.
108. Done.
109. Done.
110. Makes sense. Moved.
111. Agree. Moved.
112. Makes sense. Done.
113. Gotcha. Done.
114. Moved and detailed in pydoc.
115. Oops. Good catch. I don't know how I did that.
116. Good point. Changed.
117. Done.
118. Done.
119. I'm doing this so that users will know not to change these fields directly. Instead I've decided to create a `DistributionResult` class which is the one users are supposed to interact with.
120. Done.
121. Done.
122. Done.
123. Added.
124. I think you're correct. Done.
125. I've changed it back to `after\_modification()`.
126. Done.
127. Done.
128. Done.
129. Good point. Done.
130. Done.
131. Done.
132. Done.
133. This does not necessarily work, does it? If `self.min` is 2, and `other.min` is 1, then your suggestion would set `new\_min` to 2, no?
134. Added the dance for `max`, to be safe.
135. Oops. Yes.
136. Done.
137. Done.
138. Done.
139. Done.
140. Done.
141. Done.
142. After talking with Ben, it seems like, for now we'll enforce having integers, and decide to keep/change this later on if the requirements change.
143. I've added the test case.
144. Done.
145. I've added `ScopedMetricsContainer`, but it's not part of the direct runner yet.
146. We've decided to enforce an int-only restriction.
147. **body:** You're right. I wanted to simplify the class structure, but it does not seem worth it to remove `DistributionResult`. I've just added it.  
**label:** code-design
148. Done.
149. I'll bring this to Robert.
150. "udate" -> "update", comma after "First"
151. "false" -> "False"
152. Add extra newline before.

153. Add a Returns section to docstring: `` Returns: Whether ... ``
154. **body:** nit: uncapitalize "Metric cell" or capitalize throughout for consistency.  
**label:** code-design
155. comma after "Later"
156. period at end of sentence
157. Sorry. Thanks, you're right.
158. this will raise an error if no elements are in the distribution...not sure what the correct behavior should be though
159. **body:** nit: move zero to before combine to match method order in following classes.  
**label:** code-design
160. Python style suggests a one-line docstring, followed by a longer description. I suggest using: "Key used to identify instance of Metric.\n\n" followed by your existing comment.
161. "A Counter object."
162. "A Distribution object."
163. Done.
164. Done.
165. Done.
166. Done.
167. Done.
168. Done.
169. Done.
170. Done.
171. Done.
172. Done.
173. Done.
174. Done.
175. Done.
176. Done.
177. Done.
178. In Java there's no check for this either. I feel like raising an error or returning `None` are both decent options. Should we err on the side of consistency for this?

#### jira\_issues:

- summary:** Introduce an easy API for pipeline metrics  
**description:** The existing Aggregators are confusing both because of their name and because they serve multiple purposes. Previous discussions around Aggregators/metrics/etc: [Discussion on user list|[http://mail-archives.apache.org/mod\\_mbox/incubator-beam-user/201603.mbox/browser](http://mail-archives.apache.org/mod_mbox/incubator-beam-user/201603.mbox/browser)] [Discussion on dev list|[http://mail-archives.apache.org/mod\\_mbox/incubator-beam-dev/201603.mbox/browser](http://mail-archives.apache.org/mod_mbox/incubator-beam-dev/201603.mbox/browser)] Exact name still being bikeshedded. [Design document|<http://s.apache.org/beam-metrics-api>]  
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archives.apache.org/mod\_mbox/incubator-beam-dev/201603.mbox/browser] Exact name still being bikeshedded. [Design document|http://s.apache.org/beam-metrics-api]

7. **summary:** Introduce an easy API for pipeline metrics

**description:** The existing Aggregators are confusing both because of their name and because they serve multiple purposes. Previous discussions around Aggregators/metrics/etc: [Discussion on user list|http://mail-archives.apache.org/mod\_mbox/incubator-beam-user/201603.mbox/browser] [Discussion on dev list|http://mail-archives.apache.org/mod\_mbox/incubator-beam-dev/201603.mbox/browser] Exact name still being bikeshedded. [Design document|http://s.apache.org/beam-metrics-api]

**jira\_issues\_comments:**

1. **body:** I'd like to push back a little bit against this issue. The problem with the Aggregator API is that it is unclear where we want to take this -- there are many paths, and relatively little consensus. Once we finalize that, we should have a discussion about the proper name. For now, we seem to be trying to find a descriptive name for something that we don't yet know what it is or what it is going to be. This doesn't sound like the right way to go; and/or we'll find ourselves in a situation where the name no longer describes the concept well enough. Robert, what do you think? I wouldn't touch this for the time being, let Aggregators evolve in its own right.  
**label:** code-design
2. **body:** There is consensus that the name "Aggregators" is confusing, and it makes sense to rename it as part of the larger set of backwards incompatible changes rather than later. Thought the exact semantics of this features is still being pounded out, it seems well enough defined to give it a name at this point.  
**label:** code-design
3. Repurposing this issue to track the actual goal of having an easy-to-use API with an easy-to-discover name for reporting pipeline metrics.
4. GitHub user bjchambers opened a pull request: <https://github.com/apache/incubator-beam/pull/1024> [BEAM-147] Prototype of Metrics API for Java DirectRunner Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [\*] Make sure the PR title is formatted like: '[BEAM-<Jira issue #>] Description of pull request' - [\*] Make sure tests pass via 'mvn clean verify'. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [\*] Replace '<Jira issue #>' in the title with the actual Jira issue number, if there is one. - [\*] If this contribution is large, please file an Apache [Individual Contributor License Agreement](<https://www.apache.org/licenses/icla.txt>). --- You can merge this pull request into a Git repository by running: \$ git pull <https://github.com/bjchambers/incubator-beam-metrics> Alternatively you can review and apply these changes as the patch at: <https://github.com/apache/incubator-beam/pull/1024.patch> To close this pull request, make a commit to your master/trunk branch with (at least) the following in the commit message: This closes #1024 ---- commit 40961aa24468c810f5f3377620fe14bc7d40c55c Author: bchambers <bchambers@google.com> Date: 2016-09-20T19:44:39Z Initial prototype of Beam Metrics API This is labeled @Experimental since it is only supported by the Direct Runner and may change as it is implemented in other runners. Future work includes adding additional kinds of metrics and wiring them up to the various runners. commit 0c73cf2f2fb73eb1d171c911c10b36f79d564899 Author: bchambers <bchambers@google.com> Date: 2016-09-27T23:41:10Z squash! Prototype Distribution metrics ----
5. Github user asfgit closed the pull request at: <https://github.com/apache/incubator-beam/pull/1024>
6. GitHub user pabloem opened a pull request: <https://github.com/apache/incubator-beam/pull/1419> [BEAM-147] Adding Metrics API to Python SDK Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: '[BEAM-<Jira issue #>] Description of pull request' - [ ] Make sure tests pass via 'mvn clean verify'. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace '<Jira issue #>' in the title with the actual Jira issue number, if there is one. - [ ] If this contribution is large, please file an Apache [Individual Contributor License Agreement](<https://www.apache.org/licenses/icla.txt>). --- You can merge this pull request into a Git repository by running: \$ git pull <https://github.com/pabloem/incubator-beam-metrics-api> Alternatively you can review and apply these changes as the patch at: <https://github.com/apache/incubator-beam/pull/1419.patch> To close this pull request, make a commit to your master/trunk branch with (at least) the following in the commit message: This closes #1419 ---- commit 937cf69e958d4a82fb274f311de248930298db69 Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-22T21:32:33Z Fix multi-input named PTransforms. Now delegate the \_\_ror\_\_ logic entirely for the naming wrapper. commit 031c4cce0b9eae0d50a49f43ffeced1edbdf2f8f Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-22T21:34:58Z Move names out of transform constructors. sed -i -r 's/[] (\S+)([()'"'"']+[^'"'"']+.)(, +|([()]))| \2 >> \1(4/g' Small number of tests will need to be fixed by hand. commit 7c186ce4ce18c98cf3979b6f0f07c72a47b42ec9 Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-22T22:55:26Z Fix error messages for externally named PTransforms. commit 362f2e9e4398662d55a2a4e6399f43155c58ed24 Author: Ahmet Altay <altay@google.com> Date: 2016-07-22T23:03:08Z fix pipeline test commit 2ff5630be06034e25d60e105bbe1a718ae06b4d6 Author: Chamikara Jayalath <chamikara@google.com> Date: 2016-07-22T23:04:29Z Fixes examples commit 01830510bde3c22ddd96937f5d83547702a4385 Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-22T23:05:23Z Cleanup and fix combiners\_test. commit 2a59a121441a003bad949ae6a23d58a9cf2b3059 Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-22T23:24:48Z Fix label-sensitive test. commit b15d35ca6e585e75153e05d96403336889cc6894 Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-23T01:35:22Z Lint fixes. commit c5b5b14d35fc7f6b0a576f0fca19b730015e1282 Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-23T08:07:44Z fixup: failing tests expecting name commit e3c078fe28553b7e7317316b6df51b4c570573ba Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-23T08:32:23Z Final cleanup pass. commit 38d9dea2e62af280e4b9c258cedee70d6bcaa8ca Author: Robert Bradshaw <robertwb@gmail.com> Date: 2016-07-23T23:43:47Z Closes #718 commit ac3249fe51e9674149ae9cccd48c7290aa8bf34d Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-23T00:33:57Z Make DoFnRunner a Receiver. commit d20cf64287fdd22b1efa1a3afe346a0a1d5cf924 Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-23T07:37:42Z Receiver and LoggingContext adapters. This allows for cdef calls iff the right type is passed in. commit

- de35f28294dfb4f7b429635eff843b38279e240 Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-23T07:54:11Z Allow passing logging context directly. This is better than passing a logger module with a specific class. commit 153916fe9f641f5fe5e8d473caef67f449ee6bca Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-25T19:02:02Z Closes #721 commit 8a7bc71dee1e3f9f17c29e5e558870a6bc5f4880 Author: Charles Chen <ccy@google.com> Date: 2016-07-26T01:22:08Z Fix SDK name and version sent to the Cloud Dataflow service commit 76f3864b61ad9e2ac9a2e81e7a0d5993db5fde6c Author: Charles Chen <ccy@google.com> Date: 2016-07-26T01:36:45Z Update docstring. commit 26ff6579531d598e91b220fa21ec9bd7f9220f78 Author: Robert Bradshaw <robertwb@gmail.com> Date: 2016-07-26T04:11:31Z Closes #730 commit 2f4054ba37da1c1100f45a572d96e7a6e2e60152 Author: Charles Chen <ccy@google.com> Date: 2016-07-25T18:44:22Z Make TextFileReader observable This allows future implementation of size tracking for elements in side input sources. commit 53ab635c75e4b94b3930a601911a717ddc499efe Author: Robert Bradshaw <robertwb@gmail.com> Date: 2016-07-28T18:05:56Z Closes #726 commit adb3ed93053c83b4e28e7baa879e9aee82f02785 Author: Robert Bradshaw <robertwb@gmail.com> Date: 2016-07-27T17:09:49Z Better top implementation. When selecting the top k of n, it is common that  $k \ll n$ . Using a heap is  $O(n \log k)$  while select algorithms can achieve  $O(n + k \log k)$ . This also avoids the ugliness that heapq does not take the comparator as an argument, resulting in `_HeapItem` classes that were cumbersome and expensive to serialize. commit 866a09d6c5c4c1c3c39d3a1f2e7b4cb7ec319f6f Author: Robert Bradshaw <robertwb@gmail.com> Date: 2016-07-27T19:23:02Z Allow Top operations to take key argument rather than compare. Also support ordering by the natural ordering if neither is specified, and a reverse option. This is both an API and performance improvement. commit b4716d9dcf9c3f198fc72e181adc0bae8b6fa818 Author: Robert Bradshaw <robertwb@gmail.com> Date: 2016-07-28T18:08:06Z Closes #741 commit 7d2fb1f88d1a2370dd4053f3a1738cbb9838cc2f Author: Robert Bradshaw <robertwb@google.com> Date: 2016-07-28T01:29:59Z Optimize Map and Flatmap when there are no side inputs. varargs and kwargs are expensive, even when they're empty. This is especially true for otherwise one-argument Python calls which are special cased in CPython. commit 351c3831de1bdcfcb19b2f24f9f0b6a19e77e421 Author: Robert Bradshaw <robertwb@gmail.com> Date: 2016-07-28T18:09:49Z Closes #748 commit a1f1fa06ee8683273182548e7eb2d6612040d2bf Author: Marian Dvorsky <mariand@google.com> Date: 2016-07-28T20:02:15Z Increased the GCS buffer size from 1MB to 8MB and introduced a 128kB buffer for the pipe. commit c155ef0ebc88ac34a3681b8bff6152e1857da847 Author: Robert Bradshaw <robertwb@gmail.com> Date: 2016-07-29T01:17:43Z Closes #752 commit 889f700d4568773743ef0cfe0ca0fd8d55e56c99 Author: Ahmet Altay <altay@google.com> Date: 2016-07-29T20:45:57Z Fix typo in combiners test. commit 5541c0305c4129741579fbbcd54b3194f00e3cf6 Author: Dan Halperin <dhalperi@google.com> Date: 2016-07-29T20:55:22Z Closes #760 commit 7d50d8040585e0cea5bc02de4cb199f29c1472fc Author: Chamikara Jayalath <chamikara@google.com> Date: 2016-07-29T22:40:39Z Deletes some code that is not used by SDK. Also deletes corresponding tests. ---
7. Github user pabloem closed the pull request at: <https://github.com/apache/incubator-beam/pull/1419>
  8. GitHub user pabloem opened a pull request: <https://github.com/apache/incubator-beam/pull/1420> [BEAM-147] Adding Metrics API to Python SDK Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: '[BEAM-<Jira issue #>] Description of pull request' - [ ] Make sure tests pass via 'mvn clean verify'. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace '<Jira issue #>' in the title with the actual Jira issue number, if there is one. - [ ] If this contribution is large, please file an Apache [Individual Contributor License Agreement](<https://www.apache.org/licenses/icla.txt>). --- You can merge this pull request into a Git repository by running: \$ git pull <https://github.com/pabloem/incubator-beam-metrics-api> Alternatively you can review and apply these changes as the patch at: <https://github.com/apache/incubator-beam/pull/1420.patch> To close this pull request, make a commit to your master/trunk branch with (at least) the following in the commit message: This closes #1420 ---- commit d5ced340e83d850d2dfbe1cfed2b28100bf45d80 Author: Pablo <pabloem@google.com> Date: 2016-11-22T22:31:26Z Progress on Metrics API ----
  9. Github user pabloem closed the pull request at: <https://github.com/apache/incubator-beam/pull/1420>
  10. GitHub user pabloem reopened a pull request: <https://github.com/apache/incubator-beam/pull/1420> [BEAM-147] Adding Metrics API to Python SDK Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: '[BEAM-<Jira issue #>] Description of pull request' - [ ] Make sure tests pass via 'mvn clean verify'. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace '<Jira issue #>' in the title with the actual Jira issue number, if there is one. - [ ] If this contribution is large, please file an Apache [Individual Contributor License Agreement](<https://www.apache.org/licenses/icla.txt>). --- You can merge this pull request into a Git repository by running: \$ git pull <https://github.com/pabloem/incubator-beam-metrics-api> Alternatively you can review and apply these changes as the patch at: <https://github.com/apache/incubator-beam/pull/1420.patch> To close this pull request, make a commit to your master/trunk branch with (at least) the following in the commit message: This closes #1420 ---- commit d5ced340e83d850d2dfbe1cfed2b28100bf45d80 Author: Pablo <pabloem@google.com> Date: 2016-11-22T22:31:26Z Progress on Metrics API commit 5aa49dfe829debc38c2fcd48178bb93512dff026 Author: Pablo <pabloem@google.com> Date: 2016-11-23T18:49:48Z Refactoring to fix circle dependencies commit 74977da4c93944c8b673956c42d78fbca1e847d8 Author: Pablo <pabloem@google.com> Date: 2016-11-23T19:48:51Z Adding basic documentation. Implementing MetricsFilter commit b9a4fee7922d38a6413ed2bb1e55b03e853742eb Author: Pablo <pabloem@google.com> Date: 2016-11-23T22:20:11Z Fixing typo. Adding documentation commit 4b19e7d780a9c11260ad05d18aa8dea1f53472b3 Author: Pablo <pabloem@google.com> Date: 2016-11-23T22:47:56Z Fixing typo-s ----
  11. when will flink runner support metrics api? i'm urgent to use metrics in beam-flink
  12. See <https://issues.apache.org/jira/browse/BEAM-773> for more details on the status of the Flink implementation.
  13. Github user pabloem closed the pull request at: <https://github.com/apache/beam/pull/1420>
  14. GitHub user pabloem opened a pull request: <https://github.com/apache/beam/pull/1761> [BEAM-147] Adding proto buff matchers for dataflow client Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: '[BEAM-<Jira issue #>] Description of pull request' - [x] Make sure tests pass via 'mvn clean verify'. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace

`<Jira issue #>` in the title with the actual Jira issue number, if there is one. - [ ] If this contribution is large, please file an Apache [Individual Contributor License Agreement](https://www.apache.org/licenses/icla.txt). --- Adding these matchers to test changes to dataflow client - service communication in metrics. You can merge this pull request into a Git repository by running: \$ git pull https://github.com/pabloem/incubator-beam proto-matchers Alternatively you can review and apply these changes as the patch at: https://github.com/apache/beam/pull/1761.patch To close this pull request, make a commit to your master/trunk branch with (at least) the following in the commit message: This closes #1761 ---- commit e8be8fa28a1095c8e881a1d48bb4a0265ab42ed4 Author: Pablo <pabloem@google.com> Date: 2017-01-10T21:38:48Z Adding proto buff matchers for dataflow client ----

15. GitHub user pabloem opened a pull request: https://github.com/apache/beam/pull/1763 [BEAM-147] Adding sum of squares to distributions in metrics Be sure to do all of the following to help us incorporate your contribution quickly and easily: - [x] Make sure the PR title is formatted like: `[BEAM-<Jira issue #>] Description of pull request` - [x] Make sure tests pass via `mvn clean verify`. (Even better, enable Travis-CI on your fork and ensure the whole test matrix passes). - [x] Replace `<Jira issue #>` in the title with the actual Jira issue number, if there is one. - [ ] If this contribution is large, please file an Apache [Individual Contributor License Agreement](https://www.apache.org/licenses/icla.txt). --- You can merge this pull request into a Git repository by running: \$ git pull https://github.com/pabloem/incubator-beam sum-of-squares-distros Alternatively you can review and apply these changes as the patch at: https://github.com/apache/beam/pull/1763.patch To close this pull request, make a commit to your master/trunk branch with (at least) the following in the commit message: This closes #1763 - --- commit 933c3baca7997495b373829b341bdfb9b7f9e12f Author: Pablo <pabloem@google.com> Date: 2017-01-10T23:24:25Z Adding sum of squares to distributions in metrics ----
16. Github user asfgit closed the pull request at: https://github.com/apache/beam/pull/1761
17. Github user asfgit closed the pull request at: https://github.com/apache/beam/pull/1763