Item 356
**git_comments:**

1. MarshalTo encodes a given value as JSON, and returns the bytes.
2. Unmarshal decodes a given value as JSON, and returns the bytes. The passed in element must be a pointer of the given type.
3. Package jsonx contains utilities for working with JSON encoded data. TODO(BEAM-9616): Delete this package once the SDK defaults to schemas.
4. 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.
5. UnmarshalFrom decodes a given value as JSON, and returns the bytes. The passed in element must be a pointer of the given type.
6. Marshal encodes a given value as JSON, and returns the bytes.

**git_commits:**

1. **summary:** [BEAM-9616] Consolidate Element and DoFn json impl (#12925)
   **message:** [BEAM-9616] Consolidate Element and DoFn json impl (#12925)

**github_issues:**

**github_issues_comments:**

**github_pulls:**

1. **title:** [BEAM-9616] Consolidate Element and DoFn json impl
   **body:** Consolidating the implementations of json encoding to a jsonx package, which will make it easier to replace with Schemas later. ------------------------ Thank you for your contribution! Follow this checklist to help us incorporate your contribution quickly and easily: - [ ] [**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) ---------------------------------------------------------------------------------------------------- Lang | SDK | Dataflow | Flink | Samza | Spark | Twister2 --- | --- | --- | --- | --- | --- | --- Go | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Go/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Go/lastCompletedBuild/) | --- | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Go_VR_Flink/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Go_VR_Flink/lastCompletedBuild/) | --- | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Go_VR_Spark/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Go_VR_Spark/lastCompletedBuild/) | --- Java | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Java/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Java/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Dataflow/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Dataflow/lastCompletedBuild/)<br>[![Build Status] (https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Dataflow_Java11/lastCompletedBuild/badge/icon)] (https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Dataflow_Java11/lastCompletedBuild/) | [! [Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Flink/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Flink/lastCompletedBuild/)<br>[![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Flink_Java11/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Flink_Java11/lastCompletedBuild/)<br>[![Build Status] (https://ci-beam.apache.org/job/beam_PostCommit_Java_PVR_Flink_Batch/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Java_PVR_Flink_Batch/lastCompletedBuild/)<br>[![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Java_PVR_Flink_Streaming/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Java_PVR_Flink_Streaming/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Samza/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Samza/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Spark/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Spark/lastCompletedBuild/)<br>[![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Java_PVR_Spark_Batch/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Java_PVR_Spark_Batch/lastCompletedBuild/)<br>[![Build Status](https://ci-

beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_SparkStructuredStreaming/lastCompletedBuild/badge/icon)] (https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_SparkStructuredStreaming/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Twister2/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Java_ValidatesRunner_Twister2/lastCompletedBuild/) Python | [![Build Status] (https://ci-beam.apache.org/job/beam_PostCommit_Python36/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Python36/lastCompletedBuild/)<br>[![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Python37/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Python37/lastCompletedBuild/)<br>[![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Python38/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Python38/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Py_VR_Dataflow/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Py_VR_Dataflow/lastCompletedBuild/)<br>[![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Py_VR_Dataflow_V2/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Py_VR_Dataflow_V2/lastCompletedBuild/)<br>[![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Py_ValCont/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Py_ValCont/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_Python_PVR_Flink_Cron/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_Python_PVR_Flink_Cron/lastCompletedBuild/)<br>[![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Python_VR_Flink/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Python_VR_Flink/lastCompletedBuild/) | --- | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_Python_VR_Spark/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_Python_VR_Spark/lastCompletedBuild/) | --- XLang | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_XVR_Direct/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_XVR_Direct/lastCompletedBuild/) | --- | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_XVR_Flink/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_XVR_Flink/lastCompletedBuild/) | --- | [![Build Status](https://ci-beam.apache.org/job/beam_PostCommit_XVR_Spark/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PostCommit_XVR_Spark/lastCompletedBuild/) | --- Pre-Commit Tests Status (on master branch) ---------------------------------------------------------------------------------------------- --- |Java | Python | Go | Website | Whitespace | Typescript --- | --- | --- | --- | --- | --- | --- Non-portable | [![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_Java_Cron/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_Java_Cron/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_Python_Cron/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_Python_Cron/lastCompletedBuild/)<br>[![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_PythonLint_Cron/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_PythonLint_Cron/lastCompletedBuild/)<br>[![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_PythonDocker_Cron/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_PythonDocker_Cron/lastCompletedBuild/) <br>[![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_PythonDocs_Cron/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_PythonDocs_Cron/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_Go_Cron/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_Go_Cron/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_Website_Cron/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_Website_Cron/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_Whitespace_Cron/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_Whitespace_Cron/lastCompletedBuild/) | [![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_Typescript_Cron/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_Typescript_Cron/lastCompletedBuild/) Portable | --- | [![Build Status](https://ci-beam.apache.org/job/beam_PreCommit_Portable_Python_Cron/lastCompletedBuild/badge/icon)](https://ci-beam.apache.org/job/beam_PreCommit_Portable_Python_Cron/lastCompletedBuild/) | --- | --- | --- | --- See [.test-infra/jenkins/README](https://github.com/apache/beam/blob/master/.test-infra/jenkins/README.md) for trigger phrase, status and link of all Jenkins jobs. GitHub Actions Tests Status (on master branch) ------------------------------------------------------------------------------------------------ [![Build python source distribution and wheels] (https://github.com/apache/beam/workflows/Build%20python%20source%20distribution%20and%20wheels/badge.svg?branch=master&event=schedule)](https://github.com/apache/beam/actions?query=workflow%3A%22Build+python+source+distribution+and+wheels%22+branch%3Amaster+event%3Aschedule) [![Python tests](https://github.com/apache/beam/workflows/Python%20tests/badge.svg?branch=master&event=schedule)](https://github.com/apache/beam/actions?query=workflow%3A%22Python+Tests%22+branch%3Amaster+event%3Aschedule) [![Java tests] (https://github.com/apache/beam/workflows/Java%20Tests/badge.svg?branch=master&event=schedule)](https://github.com/apache/beam/actions?query=workflow%3A%22Java+Tests%22+branch%3Amaster+event%3Aschedule) See [CI.md] (https://github.com/apache/beam/blob/master/CI.md) for more information about GitHub Actions CI.

**github_pulls_comments:**

1. R: @youngoli

2. cc: @dsnet

**github_pulls_reviews:**

**jira_issues:**

1. **summary:** [Go SDK] starcgen improvements
   **description:** The starcgen code generator works OK, but could do with some improvements. * Uniquifying imports (handling multiple imports with same short suffix) * Generating multiple iterNatives (eg when the normal symbol is already taken). * Keying off of beam.Register* calls rather than command line. **  Avoids duplicating lists of identifiers, and improves default behavior. ** Possibly have a new beam.RegisterDoFn which can take a list of DoFn and struct types a function or a struct, and key off those, reducing boiler plate somewhat. * Perhaps having a specific single import alias package for components required for import, rather than the current 3-4. * Generate efficient Beam Schema coders for registered types? * Handle SplittableDoFns properly.

**jira_issues_comments:**

1. This issue is P2 but has been unassigned without any comment for 60 days so it has been labeled "stale-P2". If this issue is still affecting you, we care! Please comment and remove the label. Otherwise, in 14 days the issue will be moved to P3. Please see https://beam.apache.org/contribute/jira-priorities/ for a detailed explanation of what these priorities mean.
2. This issue was marked "stale-P2" and has not received a public comment in 14 days. It is now automatically moved to P3. If you are still affected by it, you can comment and move it back to P2.
3. I've successfully got a RegisterDoFn function working, and have partly got starcgen keying off of that method. Currently working on properly detecting and handling duplicate package short names.
4. This issue is assigned but has not received an update in 30 days so it has been labeled "stale-assigned". If you are still working on the issue, please give an update and remove the label. If you are no longer working on the issue, please unassign so someone else may work on it. In 7 days the issue will be automatically unassigned.
5. This issue was marked "stale-assigned" and has not received a public comment in 7 days. It is now automatically unassigned. If you are still working on it, you can assign it to yourself again. Please also give an update about the status of the work.