Eclipse Tips

Eclipse is not widely used to Beam contributors, and the steps below are best-effort. If you're choosing a Java IDE, IntelliJ is a good choice.

Eclipse version

Use a recent Eclipse version that includes Buildship for Gradle integration. Currently we recommend Eclipse Oxygen. Start Eclipse with a fresh workspace in a separate directory from your checkout.

Initial setup

Before setting up Eclipse integration, verify that you can successfully build from the commandline by building a sample package:

```
./gradlew :examples:java:build
```

If you receive any errors, first verify your environment setup:

1. If running on Mac or Linux, launch Eclipse from a terminal. This is necessary to ensure that Eclipse has proper environment setup from user profile scripts, i.e. .bashrc.
2. Install Buildship Gradle Integration. This will allow importing and interacting with the Gradle build.
3. Open the project import wizard in Eclipse via "File" > "Import".
4. From the "Import" screen, select "Gradle" > "Existing Gradle Project", and click Next.
5. From the "Import Gradle Project" screen, fill in the Project root directory with your local git path, and click Finish.

Eclipse will scan the project tree and import each as a separate Package.

Verify that your workspace is correctly configured by invoking 'runners:direct-java:build' from the "Gradle Tasks" pane. The build should succeed with no errors.

Building

After your Eclipse workspace is properly setup, you will have a "Gradle Tasks" window with a set of operations. If you don't see the pane, open it from "Window" > "Show View" > Other.. > "Gradle" > "Gradle Tasks".

From the "Gradle Tasks" window, you can build any task registered with Gradle. For example, if you are working on Kinesis IO, select 'sdks:java:io:kinesis:build'.

Checkstyle

Eclipse supports checkstyle within the IDE using the Checkstyle plugin.

1. Install the Checkstyle plugin.
2. Configure the Checkstyle plugin by going to Preferences -> Checkstyle.
   a. Click "New…"
   b. Select "External Configuration File" for type
   c. Click "Browse…" and select `sdks/java/build-tools/src/main/resources/beam/checkstyle.xml`
   d. Enter "Beam Checks" under "Name:"
   e. Click "OK", then "OK"

Code Style

Eclipse supports code styles within the IDE. Use one or both of the following to ensure your code style matches the project's checkstyle enforcements.

1. The simplest way to have uniform code style is to use the Google Java Format plugin
2. You can also configure Eclipse to use `beam-codestyle.xml`
   a. Go to Preferences -> Java -> Code Style -> Formatter
   b. Click "Import…" and select `sdks/java/build-tools/src/main/resources/beam/beam-codestyle.xml`
   c. Click "Apply" and "OK"