

APPENDIX A

Open Source JPA Tools

This appendix provides descriptions of some of the most commonly used open source JPA tools, including:

- Eclipse Persistence Services Project (EclipseLink) JPA
- DataNucleus JPA
- Apache OpenJPA

Eclipse Persistence Services Project (EclipseLink) JPA

Eclipse Persistence Services Project, also known as EclipseLink, is the open source solution from the Eclipse Foundation. EclipseLink provides developers with a strong and extensible framework that helps them interact with various data services, including DB, web services, Object XML mapping (OXM), and Enterprise Information Systems (EIS). EclipseLink fully supports the Java Persistence API (JPA).

EclipseLink is one of the first comprehensive open source persistence solutions and it started from the same code base that was used to create TopLink. Some of the most important benefits of using EclipseLink JPA include its highly optimizable and precise configurations and its great performance. The EclipseLink JPA provides Java developers with standards-based, advanced support for relational databases and Java containers and specifically for object-relational persistence SQL or No-SQL solutions.

You can find the web page at <http://www.eclipse.org/eclipselink/#jpa>.

DataNucleus JPA

DataNucleus (formerly known as Java Persistent Objects JPOX) is an open source project under the Apache 2 license. It provides a Java data management solution. The DataNucleus project started in 2008.

The DataNucleus Access Platform is a fully compliant implementation of the Java Persistence API (JPA versions 1.0, 2.0, 2.1, and 2.2). DataNucleus is currently one of the most used vendors supporting the new version of JPA 2.2.

One of the most important benefits of using the DataNucleus JPA is of course the implementation support of the JPA standard version 2.2 to persist object-oriented data such as RDBMS datastores and other types of datastores.

The DataNucleus JPA solution, however, is not suggested when you:

- Need to bulk persist large amounts of data
- Need to tailor the precise query sent to some other datastore

The web page is found at http://www.datanucleus.org/products/accessplatform/jpa/getting_started.html.

Apache OpenJPA

Apache OpenJPA is an open source implementation (under the Apache 2.0 license) of the JPA API specification. It is a top-level project at the Apache Software Foundation that can help Java developers develop solutions dealing with standalone POJO persistence layers or solutions that are integrated into any Java EE-compliant container and Java frameworks like Tomcat and Spring.

You can find the web page at <http://openjpa.apache.org/>.

Check the integration link to see how OpenJPA works with the application server and container: <http://openjpa.apache.org/integration.html>.

OpenJPA offers nice design and runtime tools to perform tasks like schema mapping, generating metamodel classes, and migrating from other JPA providers. You can check out the tools at <http://openjpa.apache.org/tools.html>.