

Gemini JPA 1.1.0 Release Review

Gemini JPA is a member of the Gemini and
Eclipse RT Projects

October 25, 2012

Review Specifics

- Review Date:
 - Oct 25-31, 2012
- Communication Channel:
 - Gemini Dev list (gemini-dev@eclipse.org)
- Project Home:
 - <http://www.eclipse.org/gemini/jpa>

Enterprise Modules Introduction

- Parent project (nicknamed “Gemini”)
- Subproject of Eclipse Runtime Project
- Umbrella of subprojects, each demonstrating runtime modularity of a standard enterprise technology
- Subprojects each derived from an OSGi Enterprise specification standard
- All projects are dual-licensed under EPL and Apache v2

Introduction to Gemini JPA

- Recognizes, processes, and supports JPA entities in an OSGi environment
- Supports installing JPA persistence units as modules (bundles in OSGi)
- Does most of the OSGi heavy lifting for the EclipseLink JPA provider
- Sources derived from Reference Implementation of OSGi 4.2 JPA specification

IP Cleanliness

- No new CQs
- No new major external code contributions
- Dependencies:
 - Does not ship any dependent JARs
 - Relies on OSGi Enterprise for OSGi JPA specification
 - Interface, properties and described methods
 - Java Persistence API (indirectly from EclipseLink)
- IP Log approval in progress

Features

- Weaving enabled in any compliant OSGi 4.3 framework
- Descriptor-less JPA - configuration can be defined using a Configuration Admin service
- Support for NoSQL data stores
- Multiple EntityManagerFactory instances per persistence unit
- Optional resolution using capabilities

Non-Code Aspects

- Readme file and relevant and applicable licensing files as required for EPL and Apache v2
- “Getting Started” document for new user quick uptake
- Sample applications (source plus execution instructions)
- User documentation (in English)

APIs

- All APIs are defined within existing specifications
 - OSGi 4.2 (and higher) JPA specification
 - Java Persistence API specification
- APIs that have been implemented match the specification definitions
- Some additional JPA properties are defined
- Extension properties exist to access runtime state

Architectural Issues

- Cohesive code design with loose coupling
- Gemini JPA uses EclipseLink as JPA provider
 - Integration through SPI properties
- Works with any OSGi framework
 - Uses standard OSGi mechanisms, (e.g. weaving hooks)

Standards

- Assumes presence of compliant OSGi v4.3 (or higher) Core framework layer
- Assumes presence of EclipseLink 2.4 (or higher) Java Persistence API 2.0 provider
- Implements and passes CT for JPA chapter in OSGi Enterprise specification
- Proxies classes in the JPA specification

Tooling

- Gemini JPA is a runtime project and no tooling is included in the project
- Users are expected to make use of existing JPA and bundle development tooling
 - PDE, Dali, etc.

Scheduling

- October 31, 2012 target for 1.1.0
- 2 intermediate milestone downloads were made available
- A release candidate, RC1, was promoted
- Modified release schedule early on to allow time for additional community-requested features

Bugs

- 32 bugs fixed/resolved
 - Additional test, build bug fixes to reflect added project maturity
- 19 bugs not fixed
 - A few outstanding (P3) bugs
 - Many enhancement requests
 - Some integration requests

Community - Committers

- All committers follow the Eclipse dev process
- Committers actively respond to forum posts and user questions
- Bi-weekly committer conference call
- Public mailing lists used for day-to-day communication

Community – Contributors

- Contributions from multiple sources
- Companies
 - SAP, Laeubi-Soft
- Adopters
 - Gyrex, EclipseLink
- Individuals
 - Eduardo Frazao, Cristiano Gaviao

Community – Adopters and Users

- Increased number of adopters and users
- Adopted by EclipseLink as their OSGi env strategy
- Adopted by Gyrex, another RT project
- User community is slowly growing
- Forum is semi-regularly posted to by users
- Users enter bugs and feature requests in Bugzilla

Summary

Gemini JPA:

- stable high quality software offering
- open and transparent development process
- contributing member of Eclipse ecosystem
- Smallish (but still growing) community
- 1.1.0 release marks new maturity plateau for the project