

Gemini JPA Graduation and 1.0.0 Release Review

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

February 6, 2011

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Review Specifics

- Review Date:
 - March 2-8, 2011
- 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 4.2 standard
- All projects are dual-licensed under EPL and Apache v2

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Introduction to Gemini JPA

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

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IP Cleanliness

- Source contributions from Apache v2 licensed OSGi RI
 - Originally written and contributed by project lead
- Dependencies:
 - Does not ship with any dependent JARs
 - Relies on OSGi Enterprise 4.2 (for OSGi JPA specification)
 - Interface, properties and described methods
 - Java Persistence API (indirectly from EclipseLink)

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IP Cleanliness

- IP Log fully approved by EMO

IP Log for `rt.gemini.jpa`

Graduation Release March 2011

Licenses

- Apache Software License, 2.0
- Eclipse Public License v1.0

Third-Party Code

CQ	Third-Party Code	License	Use
3864	OSGi Enterprise Specification APIs Version: 4.2	Apache License, 2.0	unmodified source & binary
3865	OSGi Core API 4.2	Apache License, 2.0	unmodified source & binary
3866	OSGi Compendium APIs Version: v 4.2	Apache License, 2.0	unmodified source & binary
4072	OSGi Service Platform Enterprise Specification Version: Release 4 Version 4.2 (PB CQ4046)	OSGi Specification License, Version 1.0	unmodified binary
4278	ASM 1.5.3 (PB CQ1605)	New BSD license	
4279	ANTLR 3.0 Runtime (PB CQ1695)	New BSD license	

No pre-req dependencies

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Features

- Supports standard JPA Bootstrap mode using Persistence class
- JPA provider service availability for container or 3rd party SPI uses
- Dynamic persistence unit detection
- Flexible persistence metadata file naming
- Embedded persistence JAR files

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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 application (source plus execution instructions)
- User documentation (in English)

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APIs

- All APIs are defined within existing specifications
 - OSGi 4.2 JPA specification
 - Java Persistence API specification
- APIs that have been implemented match the specification definitions
- No additional APIs are planned

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Architectural Issues

- Cohesive code design with loose coupling
- Gemini JPA uses EclipseLink as JPA provider
 - Integration is through a defined SPI
- Works with any OSGi framework when weaving is disabled
 - Equinox is required if weaving is enabled

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Standards

- Assumes presence of compliant OSGi 4.2 Core framework layer
- Assumes presence of compliant Java Persistence API 2.0 provider (EclipseLink)
- Implements and passes CT for JPA chapter in OSGi 4.2 Enterprise specification
- Proxies classes in the JPA specification

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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.
- PDE project was not very responsive to bugs
 - Gemini JPA project and its users suffered

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Scheduling

- March 10, 2011 target for 1.0.0
- 3 intermediate milestone downloads made available
- One RC planned
- Changed schedule during early phases of the project to allow sufficient time for community growth
- Project graduation to occur concurrently

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Bugs

- 21 bugs fixed/resolved
- 10 bugs not fixed (all are P3)
 - Many are enhancement requests
 - Some are integration issues

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Community - Committers

- All committers follow the Eclipse dev process
- Gemini JPA presentations at 4 conferences
- Eclipse webinar
- Committers are active in responding to forum posts and user questions
- Bi-weekly committer conference call
- Public mailing lists used for day-to-day communication

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Community – Adopters and Users

- Incubation currently the biggest hindrance to increasing number of adopters
- Will be (post graduation) adopted by EclipseLink as their OSGi env strategy
- User community much higher than adopters
- Forum is actively posted to by users
- Users are entering bugs in Bugzilla

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Summary

Gemini JPA:

- stable high quality software offering
- open and transparent development process
- contributing member of Eclipse ecosystem
- small-to-medium but growing community
- graduation and release will allow it to reach the next level of growth