

The latest open standards for WCM

Implemented in GX WebManager 9 - A technical overview

GX WebManager 9 uses the newest technologies and standards to offer the users of this leading web content management product the option to take full advantage of the dynamics and the developments in the online channel, on a robust and stable platform.

JSR 170 & JSR 283

For the persistence layer in GX WebManager 9, GX has chosen to adopt the JSR 170/283 standard. JSR 283 is the 2.0 version of the JSR 170: Content Repository for Java™ Technology API.

JSR 170/JSR 283 Motivation

As the number of vendors offering proprietary content repositories has increased, the need for a common programmatic interface to these repositories has become apparent. The aim of the Content Repository for Java Technology API specification is to provide such an interface and, in doing so, lay the foundations for a true industry-wide content infrastructure.

Application developers and custom solution integrators will be able to avoid the costs associated with learning the particular API of each repository vendor. Instead, programmers will be able to develop content-based application logic independently of the underlying repository architecture or physical storage.

Customers will also benefit by being able to exchange their underlying repositories without touching any of the applications built on top of them.

JSR 283

Since this JSR represents an enhancement of JSR 170, the same general goals apply to this JSR as to JSR 170:

In particular, the following functional areas will be reviewed by the expert group for possible inclusion in version 2.0:

- Extensions in the area of management of a content repository such as access control management, workspace and nodetype management, retention aspects of content or repository construction patterns.

- Improvement of content repository interoperability through the addition of new standardized node types, including node types for meta information and internationalization.
- Extensions to content modelling capabilities.
- Federation, cross-repository and cross-workspace functionality.
- Active development of existing query-languages, versioning and observation.
- Remoting and client/server protocol mappings.
- Possibly other enhancements.

Apache JackRabbit

GX WebManager 9 uses the open source Apache JackRabbit implementation of the JSR 170/283 standard.

Apache Jackrabbit is a fully conforming implementation of the Content Repository for Java Technology API (JCR). A content repository is a hierarchical content store with support for structured and unstructured content, full text search, versioning, transactions, observation, and more. Typical applications that use content repositories include content management, document management, and records management systems.

Gartner

"The two JSRs most relevant to Web Content Management are JSR 168, which provides an easy way to transfer content into portals, and JSR 170, which enables WCM systems to extract content from other repositories."

Links:

- JSR 170: What's in it for me? www.cmswatch.com/Feature/123
- JSR 170: www.jcp.org/en/jsr/detail?id=170
- JSR 283: www.jcp.org/en/jsr/detail?id=283
- Apache JackRabbit: jackrabbit.apache.org

Spring MVC Application Framework

MVC (Model-View-Controller) is a design pattern that helps to separate user interface logic from business logic.

Usage of a MVC based library offers a good approach to render the edit interface of GX WebManager 9 in a way that is supported by many open source standards. The current proprietary scripting language can contain both business logic and user interface logic in one and the same script.

For the implementation GX has chosen the open source Spring MVC Framework.

Forrester

"Spring Framework is an open source Java application framework that is gaining rapid popularity among Java developers. It simplifies development as well as deployment through its layered, modular architecture. It leverages other open source projects and provides support for a wide variety of Java application servers. Spring Framework's high degree of automation, simplification of development, and simplified testing make it a good choice for Java developers looking to simplify and accelerate their development process when building enterprise applications."

Links

- Spring 2.0: What's New and Why it Matters: www.infoq.com/articles/spring-2-intro
- Spring Application Framework: www.springframework.org
- Spring MVC Introduction: www.ociw.com/jnb/jnbOct2004.html

OSGi with Apache Felix

OSGi technology is *Universal Middleware*. OSGi technology provides a service-oriented, component-based environment for developers and offers standardized ways to manage the software lifecycle. These capabilities greatly increase the value of a wide range of computers and devices that use the Java™ platform.

Formed in 1999, the OSGi Alliance focused initially

on solutions for the Embedded Java and networked devices markets. As a result OSGi technology has been implemented and deployed in products and solutions throughout the world and across a range of markets. Today, OSGi technology also enjoys widespread acceptance in the Open Source community, as demonstrated by the Apache Felix and Derby projects, the Eclipse Callisto, Equinox and Corona projects, OSCAR, Knopflerfish, and others. As a result the core OSGi technology is now increasingly prevalent in the Enterprise, and it is also seen as the key component of a next generation Java Service Platform that enables the dynamic deployment of Web 2.0 services and Mashups.

Key Features of the OSGi Service Platform:

Flexible software component model

- Open integration of protocols and standards
- Reusability of software modules
- Dynamic software updates
- Remote control/maintenance/diagnosis
- Secure, authorization rules
- Platform-independence
- Horizontal deployment features

Links

- OSGi Alliance: www.osgi.org
- Apache Felix: incubator.apache.org/felix
- OSGi in a nutshell: gravity.sourceforge.net/servicebinder/osginutshell.html

Contact

If you would like more information about the way these technologies and open standards are implemented in GX WebManager 9, please contact GX at www.gxwebmanager.com.