Instantiation of Grails Development Environment

Campus Impact

The University of California, Riverside (UCR) Computing and Communications Department is relatively a small organization in comparison to other campuses. UCR has 120 employees, where other UC campuses are double in size. Other campuses have System Administrators with access to different development sites and can manage their work with little to no difficulty. Although UCR’s resources are small in number, we still have to produce the same systems and be as efficient as our counterparts. The Grails Development Environment allows our Developers to leverage an efficient development lifecycle, build and release systems faster and gain Application insights to meet the business and administrative needs of UCR.

Business Need

The Grails Development Environment provides efficiencies in moving code in Development, Test and Train environments that were previously a challenge before. This environment helps us reuse more code easily. We are also able to take web applications, specifications and requirements and move into production at a much faster rate. We are able to complete implementations with fewer bugs and better code maintainability. The Grails Development Environment provides better development tools and framework which allows us to build and release architecture and give us better management of our process. Our plan is to develop all new systems and retro-fit our existing systems in the Grails Development Environment.
Features and Highlights

**Database-less and SQL-less** – Reduces our Developers time exponentially to write code

**Instant Rollbacks** – With a click of a button a release can be rolled back if there is a major defect

**Improved Interface and Responsive Web Design** – Whether on a smart device, tablet or laptop it will render itself properly regardless of the tool used

**Ready-to-use development environment** – No longer a tedious process for our Developers to assemble development units or use traditional Java web toolkits

The Process: Technology and Implementation

UCR uses different tools that are widely used in the Technology field and positioned them together to create the Grails Development Environment. Our Developers uses IntelliJ IDEA, the software used to write code and GITLIB as a source code repository. Code is pushed up to the GITLIB server and it takes a snap shot version of the code. Also utilized is Jenkins, an open source integration tool that monitors GITLIB and builds the code. Subsequently, a war file is built and stored on Nexus where Tomcat hosts the web application server. To update Tomcat, our Developers uses Run Deck, an open source automation service tool to deploy a new version into Tomcat. Run Deck interfaces with Nexus and brings down the current version of code to replace the old version. Nexus stores a history of all the applications and provides access to an older version of code if needed.

**Technology Overview**
Grails provides a development environment that includes a web server to get our Developers started right away. All required libraries are part of the Grails distribution and Grails prepares the Java web environment for deployment automatically. The backend code does the processing and it separates the front end code which results in a good user experience.
UCR has created a Rapid Deployment Environment by utilizing common technology tools.

**Testimonial**

“The Compensation Team in Human Resources is extremely pleased with the forward-looking approach that UCR’s Computing and Communications team used in the creation of the job description system for our Career Tracks implementation. The new application reflects the latest technology, has a very effective and efficient user interface, and is mobile phone and tablet friendly.

The system design behind the interface will allow Human Resources and Organizational Units to create and/or edit job descriptions in significantly less time than in the previous system. The new application design also allows Human Resources to manage the creation of a job description in such a way that maintaining the integrity of the classification process that is at the core of the Career Tracks system is seamless and technology driven.

In the user acceptance testing and the demonstrations of the new Career Tracks system, the organizational units have been overwhelmingly positive about the tool and the impact that it will have on their work flows.”

– Linda Gaddie, Compensation Manager
Human Resources
Timeline

On the Web

Production site: https://careertracks.ucr.edu

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