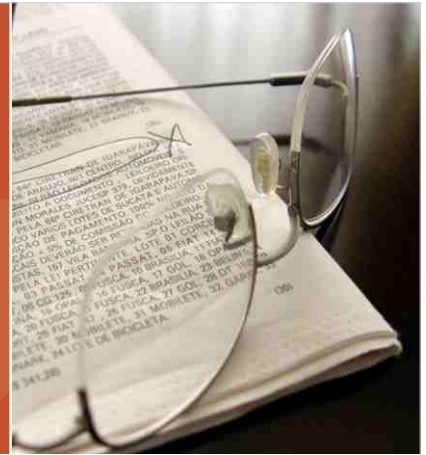


# Case Study

## Collaborative Software Development Management System using RoR



### ➤ THE CUSTOMER

A provider of project management software that enables effective collaboration and communication between disparate teams working on a project. Their product caters to organizations involved in software development activities, facilitating faster development.

### ➤ THEIR NEED

A reusable components repository and collaboration tools that would work together with the repository.

### ➤ OUR DEED

Aspire developed a collaborative software development management system. This enables reusable components to be stored and distributed using SVN configuration management system. Aspire also enabled blogs, forums, a bug tracking system and RSS feeds along with this repository.

### ➤ TECHNOLOGY AND TOOLS

**Language:** Ruby 1.8.6

**Framework:** Rails 2.0.2

**IDE:** RadRails 0.7

**Database:** MySQL 5.0

**Application Server:** Apache – Mongrel Cluster

**Configuration Management:** SVN repository

**Operating System:** Fedora Linux

**Plugins:** Feed Normalizer, rubyzip, ruby-net-ldap, SOAP4R

*Aspire developed a Collaborative Software Development Management System that allows for reusable components to be stored and distributed using SVN as the backend repository.*

## Collaborative Software Development Management System

Aspire chose to use Ruby on Rails to develop this system due to the following features of RoR:

- It is Agile, and can be easily used to change and extend the system
- Built-in APIs and support to connect to SVN configuration management system
- Reduces development time considerably, close to 40%
- Built-in features allow for Web 2.0 experience
- Integrated test environment and auto deployment

### Component Repository

The repository allows users to store, search and export components. A user can use



# Collaborative Software Development Management System using RoR



any choice of services in supporting their component(s), like discussion forums, blogs and RSS feeds.

## Load Balancing

Load balancing was done using Apache – mongrel cluster. In this system, four mongrel servers are used to facilitate faster responses to requests. The number of mongrel servers is scalable as per the requirements. Apache httpd server acts as a gateway to a cluster of mongrel\_rails processes, where the entire processing burden is taken up by the mongrel servers.

## Multi Database Connection

In order to increase the scalability, multiple database connections were used. Most frequently used tables were grouped into a single database. Some of the advantages of doing this were:

- Complete isolation – different database schemas and functionalities that don't affect the other databases could be separated out
- Lesser data means faster SQL queries
- No central database, hence each database could be located on a different box

Rails Active Record provides good support to multi-database connection and was used to accomplish this.

## LDAP Authentication

This was done towards improving read performance of authentication and search requests. This is especially true during periods of very high use and when the data is distributed across different servers.

## SVN Repository

SVN was preferred over other versioning systems due to its interoperability, authentication, wire compression and repository browser features. SVN also encourages continuous development revisions of the components.

## Benefits

This reusable components repository was built within a three-month period for the customer and enabled them to offer their clients enhanced quality of development output and improved productivity due to the use of the repository.

*Ruby on Rails was chosen as the technology to develop this system due to its **agility, built-in APIs and support** to connect to SVN. The reusable components repository is expected to **improve the quality and productivity of development output.***

# Collaborative Software Development Management System using RoR



## ABOUT ASPIRE SYSTEMS

Aspire Systems is an Outsourced Product Development firm committed to helping our customers build software products better and faster. We work with some of the world's most innovative Independent Software Vendors and software-enabled businesses, ranging from start-ups to established industry leaders, transforming the way software is built.

Aspire provides complete product lifecycle services, ranging from new product development and product advancement to product migration, re-engineering, sustenance and support. Our product development teams are spread between our Global Innovation Center in Chennai, India and offices in the United States.

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